DIRECTORATE OF EDUCATION
GOVT. OF NCT OF DELHI

Support Material
(2015-2016)

CLASS : XII

ECONOMICS

Under the Guidance of:

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Director (Education)

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Anil Kumar Sharma
PREFACE

It gives me immense pleasure to present before you the subject-wise supporting material for the students of classes X, XI and XII, prepared by the teams of dedicated and industrious teachers from the Directorate of Education. The objective of this material is impart sufficient practice to the students and to enable them to think analytically and rationally.

I hope that the students will find this study material useful and it will help them achieve academic excellence. I also hope that teachers will guide and motivate the students to use this material in preparing for examinations.

I would like to appreciate the efforts of the teams of teachers and group leaders under the enlightened guidance of the Director (Education).

Wishing best of luck to all the students.

(PUNYA SALILA SRIVASTAVA)
PREFACE

The Directorate of Education prepares Support Material for different subjects indigenously. Every year, experienced and knowledgeable teachers revise and update the material for children.

Support material is a boon especially for those children who cannot purchase the costly but substandard ‘guides’ available in the market. Prepared in-house, the material is not only much better in quality, it is also provided to the students free of cost.

The material can serve as a very handy tool for revision. I call upon the teachers give their students sufficient practice in it.

I must share with the students that this material has the potential to enhance your performance and output, remarkably. So, please make it a habit to go through the textbook first and then, practice from the Support Material.

I take this opportunity to thank all the learned teachers and HoSs who have contributed to the preparation/revision these works.

My best wishes!

(PADMINI SINGLA)
FOREWORD

I am delighted to present before you the latest issues of the support material for the students of classes X, XI and XII. During the last few years the content and quality of the support material has undergone subtle changes. Teams of subject experts have devoted their time, efforts and energy to prepare this material which facilitates the students while preparing for their exams. The material is updated according to the latest changes and improvements which have been carried out by the CBSE and NCERT.

I hope that our teachers will give sufficient practice to their students through this material which in turn will improve their creative and analytical skills.

I appreciate the hard work of all the teachers, group leaders and members of the Examinations Branch whose efforts have materialized in the form of these books.

I wish you all the best.

Dr. Sunita S. Kaushik
Addl. Director of Education
(School and Exam)
LIST OF MEMBERS WHO PREPARED SUPPORT MATERIAL FOR ECONOMICS
CLASS XII

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C.B.S.E. DELHI SYLLABUS ECONOMICS : 2015-16

SYLLABUS

Paper 1 100 Marks

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Periods</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part A : INTRODUCTORY MICRO ECONOMICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Introduction</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>II. Consumer Equilibrium and Demand</td>
<td>34</td>
<td>16</td>
</tr>
<tr>
<td>III. Producer Behaviour and Supply</td>
<td>34</td>
<td>16</td>
</tr>
<tr>
<td>IV. Forms of Market and Price Determination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under Perfect Competition with Simple Applications</td>
<td>31</td>
<td>12</td>
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<td></td>
</tr>
<tr>
<td>Part B : INTRODUCTORY MACROECONOMICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V. National Income and Related Aggregates</td>
<td>32</td>
<td>15</td>
</tr>
<tr>
<td>VI. Money and Banking</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>VII. Determination of Income and Employment</td>
<td>27</td>
<td>12</td>
</tr>
<tr>
<td>VIII. Government Budget and the Economy</td>
<td>17</td>
<td>8</td>
</tr>
<tr>
<td>IX. Balance of Payments</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td><strong>110</strong></td>
<td><strong>50</strong></td>
<td></td>
</tr>
</tbody>
</table>

PART - A

INTRODUCTORY MICRO ECONOMICS

(110 Periods)

Unit I: INTRODUCTION

(11 Periods)

Meaning of microeconomics and macroeconomics.
What is an economy? Central problems of an economy: what, how and for whom to produce; concepts of production possibility frontier and opportunity cost.

Unit II: CONSUMER EQUILIBRIUM AND DEMAND

(34 Periods)

Consumer’s equilibrium—meaning of utility, marginal utility, law of diminishing marginal utility, conditions of consumer’s equilibrium using marginal utility analysis. Indifference curve analysis of consumer’s equilibrium—the consumer’s budget (budget set and budget line), preference of the consumer (indifference curve, indifference map) and conditions of consumer’s equilibrium.
Demand, market demand, determinants of demand, demand schedule, demand curve and its slope, movement along the shifts in the demand curve; price elasticity of demand—factors affecting price elasticity of demand; measurement of price elasticity of demand—(a) percentage-change method and (b) geometric method (linear demand curve); relationship between price elasticity of demand and total expenditure.

Unit III: **PRODUCER BEHAVIOUR AND SUPPLY**  
*34 Periods*
Production function: Short-run & long run. Total Product, Average Product and Marginal Product.
Returns of a Factor.
Cost and Revenue: Short run costs—total cost, total fixed cost, total variable cost; Average fixed cost, average variable cost and marginal cost—meaning and their relationship.
Revenue—total, average and marginal revenue.
Producer’s equilibrium—meaning and its conditions in terms of marginal revenue-marginal cost.
Supply, market supply, determinants of supply, supply schedule, supply curve and its slope, movement along the shifts in supply curve, price elasticity of supply; measurement of price elasticity of supply—(a) percentage-change method and (b) geometric method.

Unit IV: **FORMS OF MARKET AND PRICE DETERMINATION UNDER PERFECT COMPETITION WITH SIMPLE APPLICATIONS**  
*31 Periods*
Perfect Competition—Features; Determination of market equilibrium and effects of shifts in demand and supply.
Other Market Forms—monopoly, monopolistic competition, oligopoly—their meaning and features.
Simple Applications of tools of Demand and Supply: Price ceiling, price floor.

**PART - B**
**INTRODUCTORY MACROECONOMICS**  
*110 Periods*

Unit V: **NATIONAL INCOME AND RELATED AGGREGATES**  
*32 Periods*
Some basic concepts: consumption goods, capital goods, final goods, intermediate goods; stocks and flows; gross investment and depreciation.
Circular flow of income; Methods of calculating National Income—Value Added or Product Method, Expenditure Method, Income Method.
Aggregates related to National Income:
Gross National Product (GNP), Net National Product (NNP), Gross and Net Domestic Product (GDP and NDP)—at market price, at factor cost; National Disposable Income (gross and net), Private Income, Personal Income and Personal Disposable Income; Real and Nominal GDP.

GDP and Welfare

Unit VI: **MONEY AND BANKING** (18 Periods)
Money—it's meaning and functions.
Supply of money—Currency held by the public and net demand deposits held by commercial banks. Money creation by the commercial banking system.
Central bank and its functions (example of the Reserve Bank of India): Bank of Issue, Govt. Bank, Banker’s Bank, Controller of Credit through CRR, SLR, Reverse Repo, Open Market Operations, Margin requirement.

Unit VII: **DETERMINATION OF INCOME AND EMPLOYMENT** (27 Periods)
Aggregate demand and its components.
Propensity to consumer and propensity to save (average and marginal).
Short-run equilibrium output; investment multiplier and its mechanism.
Meaning of full employment and involuntary unemployment.
Problems of excess demand and deficient demand; measures to correct them—change in government spending, taxes and money supply.

Unit VIII: **GOVERNMENT BUDGET AND THE ECONOMY** (17 Periods)
Government budget—meaning, objectives and components.
Classification of receipts—revenue receipts and capital receipts; classification of expenditure—revenue expenditure and capital expenditure.
Measures of government deficit—revenue deficit, fiscal deficit, primary deficit and their meaning.

Unit IX: **BALANCE OF PAYMENTS** (16 Periods)
Balance of payments account—meaning and components; balance of payments deficit—meaning,
Foreign exchange rate—meaning of fixed and flexible rates and managed floating. Determination of exchange rate in a free market.
## LATEST QUESTION PAPER DESIGN

**CLASS - XII (2015-16)**

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Typology of Questions</th>
<th>VSA MCQ (1M)</th>
<th>SA-II (3M)</th>
<th>SA-I (4M)</th>
<th>(LA) (6M)</th>
<th>Marks</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Remembering</strong> – (Knowledge based) Simple recall questions, to know specific facts, terms, concepts, principles, or theories; Identify, define, or recite, information</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>25</td>
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</tr>
<tr>
<td>2.</td>
<td><strong>Understanding</strong> – (Comprehension- to be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase, or interpret information)</td>
<td>3</td>
<td>2</td>
<td>1</td>
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<td>25</td>
</tr>
<tr>
<td>3.</td>
<td><strong>Application</strong> – (Use abstract information in concrete situation, to apply knowledge to new situations; Use given content to interpret a situation, provide an example, or solve a problem)</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
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</tr>
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<td>4.</td>
<td><strong>High Order Thinking Skills</strong> – (Analysis &amp; Synthesis classify, compare, contrast, or differentiate between different pieces of information; organise and/or integrate unique pieces of information from a variety of sources)</td>
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<td>5.</td>
<td><strong>Evaluation and Multi-Disciplinary</strong> – (Appraise, judge, and/or justify the value or worth of a decision or outcome, or to predict outcomes based on values)</td>
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<td>-</td>
<td>1</td>
<td>10</td>
<td>10</td>
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</tbody>
</table>

**TOTAL**

|       | 10×1=10 | 6×3=18 | 6×4=24 | 8×6=48 | 100 (30) | 100 |

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5 Class XII : Economics
# CONTENTS

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Units</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Introduction</td>
<td>7</td>
</tr>
<tr>
<td>2.</td>
<td>Consumer’s Equilibrium &amp; Demand</td>
<td>12</td>
</tr>
<tr>
<td>3.</td>
<td>Producer Behaviour and Supply</td>
<td>26</td>
</tr>
<tr>
<td>4.</td>
<td>Forms of Market and Price Determination</td>
<td>44</td>
</tr>
<tr>
<td>5.</td>
<td>National Income and Related Aggregates</td>
<td>53</td>
</tr>
<tr>
<td>6.</td>
<td>Money and Banking</td>
<td>76</td>
</tr>
<tr>
<td>7.</td>
<td>Determinations of Income &amp; Employment</td>
<td>81</td>
</tr>
<tr>
<td>8.</td>
<td>Government Budget and the Economy</td>
<td>96</td>
</tr>
<tr>
<td>9.</td>
<td>Balance of Payment</td>
<td>104</td>
</tr>
<tr>
<td>10.</td>
<td>Model Test Paper with Solution</td>
<td>113</td>
</tr>
<tr>
<td>11.</td>
<td>Model Test Paper 1 &amp; 2</td>
<td>118</td>
</tr>
</tbody>
</table>
UNIT I

INTRODUCTION

POINTS TO REMEMBER

- Study of Economics is divided into two branches:
  - (a) Micro economics
  - (b) Macro economics

- Micro economics studies the behaviour of individual economic units.

- Macro economics studies the behaviour of the economy as a whole.

- Economy is an Economic Organisation which provides sources to earn livelihood.

- Economic problem is the problem of basically making the choice of the use of scarce resources for satisfying unlimited human wants.

- Cause of economic problems are:
  - (a) Unlimited Human Wants
  - (b) Limited Economic Resources
  - (c) Alternative uses of Resources.

- Central Problems of an Economy
  
  Allocation of Resources

  What to produce?  How to produce?  For whom to produce?
  (Selection of goods)  (Selection of technique)  (Distribution of goods or income)

- For the selection of an opportunity, the sacrifice of next best alternative use is called opportunity cost.

- Production possibility frontier shows all possible combinations of two goods that an economy can produce with given resources and available technology, assuming that all resources are fully and efficiently utilised.
Economising of resources means use of resources in best possible manner.

Production Possibility Frontier

Features

(a) Slopes downward from left to right because if production of one good is to increase then production of other good has to be sacrificed.

(b) Concave to the origin because of increasing marginal opportunity cost or (MRT)

Rightward shift of PPF indicates increase in resources or improvement in technology.

Leftward shift of PPF indicates decrease in resources or degradation in technology.

Marginal Rate of Transformation (MRT) is the ratio of number of units of a good sacrificed to increase one more unit of the other good.

MRT can also called Marginal Opportunity Cost. It is defined as the additional cost in terms of number of units of a good sacrificed to produce an additional unit of the other good.

MULTIPLE CHOICE QUESTIONS (1 MARK)

1. Which of the following subject matter studies in Micro Economics.

   (a) Theory of consumers behaviour
   (b) Aggregate demand and supply
   (c) Govt. Budget
   (d) National Income
2. Which subject matter does not study in Macro Economics.
   (a) Employment level       (b) Aggregate demand & Supply
   (c) National Income        (d) Individual Firm
3. Economics problem arises because
   (a) Resources are scare   (b) wants are unlimited
   (c) Resources have alternative uses
   (d) above all
4. Which problem is not a central problem of an Economy?
   (a) What to produce       (b) How to produce
   (c) For whom to produce   (d) Indiscipline in students
5. Any point outside the boundary line of PPF shows:
   (a) under utilisation of Resource
   (b) unattainable combination of output
   (c) efficient utilisation of Resources
   (d) None of these
6. In which situation PPF shifts towards right
   (a) Resources are increased(b) Resources are reduced
   (c) Inefficient technology  (d) None of these
7. Slope of production possibility curve
   (a) Slope downward       (b) Parallel to X-axis
   (c) Slope upward         (d) Above all
8. An Economy produces two goods Wheat and Cloth. Find out marginal opportunity cost by the following table

<table>
<thead>
<tr>
<th>Wheat</th>
<th>Cloth</th>
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<tbody>
<tr>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>90</td>
<td>25</td>
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</table>
SHORT ANSWER TYPE QUESTIONS (3-4 MARKS)

1. Distinguish between microeconomics and macroeconomics. Give example.

2. Why does an economic problem arise? Explain the problem of 'How to Produce'?

3. Explain the problem of 'What to Produce' with the help of an example.

4. 'For whom to produce' is a central problem of an economy. Explain.

5. Define opportunity cost with the help of an example, how does it differ from marginal opportunity cost?

6. What is 'Marginal Rate of Transformation'? Explain with the help of an example.

7. Why is a production possibility curve concave? Explain.

HOTS

8. What is PP Frontier? Explain it with the help of an imaginary schedule and diagram.

9. Show the following situation with PPF (PPC)
   (a) Fuller utilisation of resources   (b) Growth of resources.
   (c) Under utilisation of resources.

10. An economy always produces on, but not inside a PPF. Defend or refute.

11. A lot of people die and many factories were destroyed because of a severe earthquake in a country. How will it affect the country’s PPF?

12. Calculate MRT from following table. What will be the shape of PPF and why?

   (a) 1    (b) .4
   (b) 10   (d) .25

Ans. 1. (a); 2. (d); 3. (d); 4. (d); 5. (b); 6. (a); 7. (a); 8. (b).
<table>
<thead>
<tr>
<th>Combinations</th>
<th>Green Chilly (Units)</th>
<th>Sugar Units</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>100</td>
<td>1</td>
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<tr>
<td>B</td>
<td>95</td>
<td>1</td>
</tr>
<tr>
<td>C</td>
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<td>D</td>
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<td>E</td>
<td>50</td>
<td>4</td>
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<tr>
<td>F</td>
<td>25</td>
<td>5</td>
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13. Why PPF is also called opportunity cost curve?

**HINTS [3 MARKS QUESTIONS]**

12.

<table>
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<th>Combinations</th>
<th>MOC</th>
</tr>
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<tbody>
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<td>A</td>
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<td>C</td>
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<td>D</td>
<td>15</td>
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<td>E</td>
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<td>F</td>
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**VALUE BASED QUESTIONS**

1. A farmer can earn Rs. 40,000 by producing indigo but he earns Rs. 30,000 by producing Wheat. What is the opportunity cost of producing Wheat? Why does he choose production of wheat?

2. If an Economy is not able to utilise its available resources efficiently, what will be the effect on PPF? What will you suggest for economic growth?

3. Recently a severe earthquake occurred in Nepal. How this incident will affect the PPF of Nepal?

4. Suppose the river Yamuna is now totally clean. It is going to affect the PPF of Delhi? Explain.
UNIT II

CONSUMER’S EQUILIBRIUM & DEMAND

POINTS TO REMEMBER

- **Consumer**: is an economic agent who consumes final goods and services.

- **Total utility**: It is the sum of satisfaction from consumption of all the units of a commodity at a given time.

- **Marginal Utility**: It is a net increase in total utility by consuming an additional unit of a commodity.

- **Law of Diminishing Marginal Utility**: As consumer consumes more and more units of commodity the Marginal utility derived from each successive units goes on declining.

- **Consumer’s Bundle**: It is a quantitative combination of two goods which can be purchased by a consumer from his given income.

- **Budget set**: It is quantitative combination of those bundles which a consumer can purchase from his given income at prevailing market prices.

- **Consumer Budget**: It states the real income or purchasing power of the consumer from which he can purchase the certain quantitative bundles of two goods at given price.

- **Budget Line**: Shows those combinations of two goods which a consumer can purchase expending his entire income.

- **Monotonic Preferences**: Consumer’s preferences are called monotonic when between any two bundles, one bundle has more of one good and no less of other good.

- **Change in Budget Line**: There can be parallel shift (leftwards or rightwards) due to change in income of the consumer and change in price of goods.
- **Marginal Rate of Substitution (MRS)**: It is the rate at which a consumer is willing to substitute good $Y$ for good $X$.

\[
MRS = \frac{\text{Loss of Good } Y}{\text{Gain of Good } X} \quad \text{or} \quad -\frac{\Delta Y}{\Delta X}
\]

- **Indifference Curve**: is a curve showing different combinations of two goods, each combinations offering the same level of satisfaction to the consumer.

- **Characteristics of IC**
  1. Indifference curves are negatively sloped.
  2. Indifference curves are convex to the point of origin.
  3. Indifference curves never touch or intersect each other.
  4. Higher indifference curve represents higher level of satisfaction.

- **Consumer's Equilibrium**: It is a situation where a consumer is spending his income in such a way that he is getting maximum satisfaction and has no tendency to change.

- **Condition of Consumer's Equilibrium**
  (a) **Cardinal approach (Utility Analysis)**: According to this approach utility can be measured. "Utils" is the unit of utility.

  Condition
  
  (i) In case of one community

  \[
  MUm = \frac{MUx}{Px} \quad \text{[if } MUm = 1, MUx = Px]}
  \]

  Where, $MUm$ = Marginal utility of money
  $MUx$ = Marginal utility of ‘$x$’, $Px$ = Price of ‘$x$’

  (ii) In case of two commodity.

  \[
  \frac{MUx}{Px} = \frac{MUy}{Py} = MUm
  \]
  
  and MU must be decreasing

  (b) **Ordinal approach (Indifference Curve Analysis)**: According to this approach utility can’t be measured but can be expressed in order or ranking.
- **Condition of Equilibrium:**

  (i) \[ \frac{MRS_{xy}}{P_y} = \frac{P_x}{P_y} \quad [P_x = \text{Price of 'x'}] \]
  
  or budget line must be tangent to indifference curve

  (ii) MRS must be decreasing or,

  Indifference curve must be convex to the origin.

- **Quantity Demanded:** It is that quantity which a consumer is able and is willing to buy at given price and in a given period of time.
- **Market Demand**: It is the total quantity purchased by all the consumers in the market at given price and in a given period of time.

- **Demand Function**: It is the functional relationship between the demand of a good and factors affecting demand.

- **Law of demand**: If remaining things are being constant as price of a com. increases demand of the com. decreases and as price of a com. decreases demand of the com. increases, it is called law of demand.

- **Change in Demand**: When demand changes due to change in any one of its determinants other than the price.

- **Change in Quantity Demanded**: When demand changes due to change in its own price.

- **Demand curve**: It is a graphical presentation of demand schedule, which shows there is inverse relation b/w price and demand of a com.

- **Demand curve and its slope**:

  ![Demand Curve Diagram]

  \[
  \text{slope of demand curve} = \frac{\text{Change in price}}{\text{Change in qty dd.}} = \frac{\Delta P}{\Delta Q}
  \]
- **Price Elasticity of Demand**: Price Elasticity of Demand is a measurement of change in quantity demanded in response to a change in price of the commodity.

### Methods of Measurement of Price Elasticity of Demand

- **Percentage Method**
  
  \[ E_p = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q} \]

  - \( E_p \rightarrow \) Elasticity of Demand
  - \( \Delta Q \rightarrow \) Change in quantity
  - \( \Delta P \rightarrow \) Change in Price
  - \( P \rightarrow \) Initial Price
  - \( Q \rightarrow \) Initial Quantity

  Or

  \[ E_p = \frac{\text{Percentage Change in Quantity demand of a com.}}{\text{Percentage Change in Price}} \]

- **Total Expenditure Method**: It measures price elasticity of demand on the basis of change in total expenditure incurred on the commodity by a household due to change in its price.

  There are three conditions:

  1. If the Total Expenditure on the commodity changes inversely with the price change, the demand is relatively elastic (ed > 1)

  2. If the total expenditure on the commodity remains the same as before and after change in price, then demand is said to be unitary elastic (ed = 1)

  3. If the total expenditure on the commodity increases with an increase in its price and decreases with a decrease in the price, then demand is relatively inelastic (ed < 1)
- **Geometric Method**: Elasticity of demand at any point is measured by dividing the length of lower segment of the demand curve with the length of upper segment of demand curve at that point.

- The value of $e_d$ is unity at mid point of any linear demand curve.

Diagram to show Geometric or point method:

Elasticity of demand at given point.

$$E_d = \frac{\text{Lower segment of the demand curve}}{\text{Upper segment of the demand curve}}$$

$D$ is mid point of the demand curve.

- **Factors effecting Price elasticity of Demand**

  (a) Nature of the Commodity.

  (b) Availability of Substitute goods.
(c) Income of the consumer.
(d) Price of the commodity.
(e) Share of the commodity in total expenditure.
(f) Use of the commodity.
(g) Behavior of the consumer.

**MULTIPLE CHOICE QUESTIONS (1 MARK)**

1. What shows by the above demand curve?
   (a) Increase in Demand  (b) Decrease in Demand
   (c) Extension of Demand  (d) Contraction of Demand

2. According by utility analysis, 'Utility is_______________.
   (a) catrdinal concept  (b) ordinal concept
   (c) cardinal and ordinal concept
   (d) None of these

3. It is ______ derived from the consumption of all the units of a commodity
   (a) marginal utility  (b) total utility
   (c) average utility  (d) consumer equilibrium
4. What term is used for additional utility an account of the consumption of an additional unit of a commodity.
   (a) Total utility        (b) average utility
   (c) marginal utility     (d) None of these

5. When marginal utility is negative, total utility ___________
   (a) TU starts increasing  (b) TU starts diminishing
   (c) TU becomes zero       (d) TU becomes negative

6. “As more and more units a commodity are consumed marginal utility derived from every additional unit must decline”, The name of law is ___________.
   (a) Law of diminishing marginal utility
       (b) Law of demand
       (c) Law of supply
       (d) consumer equilibrium

7. Which of the following condition implies in consumer equilibrium in case of one commodity?
   (a) \( \frac{MU_m}{MU_x} = P_x \)    (b) \( \frac{MU_x}{P_x} = MU_m \)
   (c) \( \frac{P_x}{MU_x} = MU_m \)    (d) None of these

8. Marginal utility of money in Marginal utility analysis.
   (a) constant    (b) increases
       (c) decreases   (d) None of these

9. What happens when \( \frac{MU_x}{P_x} > \frac{MU_y}{P_y} \)
   (a) increase in consumption of X & Y
       (b) decrease in consumption of X & Y
(c) increase in consumption of X
(d) increase in consumption of X and decrease in consumption of Y.

10. In case of two commodities a consumer strikes equilibrium when

\[
\frac{MU_x}{P_x} = \frac{MU_y}{P_y} = MU_m \quad \text{(a)}
\]
\[
\frac{MU_x}{P_x} > \frac{MU_y}{P_y} \quad \text{(b)}
\]
\[
\frac{MU_x}{P_x} < \frac{MU_y}{P_y} \quad \text{(c)}
\]
\[
\frac{P_x}{MU_x} = \frac{P_y}{MU_y} \quad \text{(d)}
\]

11. This shows different combinations of two goods which a consumer can attain by given his income and market prices of the goods.

(a) Budget set  
(b) indifference map  
(c) indifference curve  
(d) marginal rate of substitution

12. Which of the following is not a characteristic of indifference curve

(a) IC is convex to the origin  
(b) Higher IC indicates higher level of satisfaction  
(c) ICs do not intersect each other  
(d) Concave to the origin

13. Which of the following is not a determinations of individual demand function

(a) Distribution of Income  
(b) Price  
(b) Income of Consumer  
(d) Taste and preferences

14. | Price (Rs.) | Demand (Units) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

Name the type of demand by the above example

(a) contraction of demand  
(b) expansion of demand  
(c) increase in demand  
(d) decrease in demand
<table>
<thead>
<tr>
<th>Prices (Rs.)</th>
<th>Quantity Demanded (Units)</th>
<th>Total Expenditure (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>200</td>
<td>3200</td>
</tr>
<tr>
<td>20</td>
<td>160</td>
<td>3200</td>
</tr>
</tbody>
</table>

Answer about Elasticity by Expenditure method

(a) greater than unitary  (b) less than unitary elasticity
(c) unitary elastic demand  (d) Infinite

ANSWERS

1. (c); 2. (a); 3. (b); 4. (c); 5. (b); 6. (a); 7. (b); 8. (a); 9. (d); 10. (a); 11. (a); 12. (d); 13. (a); 14. (c); 15. (c)

SHORT ANSWER TYPE QUESTIONS (3-4 MARKS)

1. Explain the relation between total utility and marginal utility with the help of schedule?
2. Explain consumers equilibrium with utility approach in case of single good.
3. What do you mean by budget line? What are the reasons of change in budget line?
4. Explain the relationship between total utility and marginal utility with the help of schedule.

Or

What changes will take place in total utility when –
(a) Marginal utility curve remains above X–axis
(b) Marginal utility curve touches X–axis
(c) Marginal utility curve lies below X–axis.

5. State three features of indifference curve.
6. Why does two indifference curves not intersect each other?
7. Under what situations there will be parallel shift in budget line?

8. Explain the effect of a rise in the prices of ‘related goods’ on the demand for a good X.

9. Why does demand of a normal good increases due to increase in consumer’s income?

10. Explain following factors effecting Price Elasticity of Demand
   
   (a) Nature of commodity
   
   (b) Availability of substitutes
   
   (c) Postponement of the use

11. Distinguish between expansion of demand and increase in demand with the help of diagram.

12. Measure Price Elasticity of Demand on the following points of a straight line demand curve :

   (a) Centre point of the demand curve.
   
   (b) Demand curve intercepting y-axis
   
   (c) Demand curve intercepting x-axis.

13. Distinguish between change in demand and change in quantity demanded.

14. What will be the effect of following on elasticity of demand.

   (a) Income level of buyers (b) Habit of the consumer

15. What will be the slope of demand curve under following situations.

   (a) Perfectly elastic demand (b) Perfectly inelastic demand

   (c) Unit elastic demand.

16. State the factors of rightward shift of demand curve. Explain any one.

17. State the factors of leftward shift of demand curve. Explain any one.

18. How does ‘a portion of income spent on a good’ effect elasticity of demand.
19. What will be elasticity of demand if
   (a) Total expenditure increases due to increase in price.
   (b) Total expenditure increases due to fall in price.

20. When price of a good is Rs. 7 per unit a consumer buys 12 units. When price falls to Rs. 6 per unit he spends Rs. 72 on the goods. Calculate price elasticity of demand by using the percentage method. Comment on the likely shape of demand curve based on this measure of elasticity.

21. A consumer buys 09 units of a goods at a price of Rs. 10 per unit. At price of Rs. 09 per unit he buys 10 units. What is price elastically of demand? Use expenditure approach. Comment on the likely shape of demand curve on the basis of this measure of elastically.

22. A consumer buys 20 units of a good at a price of Rs. 5 per unit. He incurs an expenditure of Rs. 120 when he buys 24 units. Calculate price elasticity of demand of the percentage method. Comment on the likely shape of demand curve based on this information.

23. Price elastically of good X is known to be thrice that of Good Y. If price of the Good X increases by 20% and price of the good Y decreases by 40% then calculate percentage changes in demand in both the cases.

24. The price elasticity of goods X or Y are equal. The demand of X rises from 100 units to 250 units due to a 20 percent fall in its price. Calculate the percentage rise in demand of Y, it its price falls by 8 percentage.

25. Explain any four factors/determinates affecting price elasticity of demand.

26. Fill in the gaps in the following equations:

   \( \text{(i) } \text{MRS} = \frac{\Delta \text{?}}{\text{?}} \)

   \( \text{(ii) } \text{?} = \sum \text{MU} \)

   \( \text{(iii) } \text{MU}_n = \text{TU}_n - \text{?} \)

   \( \text{(iv) } e_d = \frac{\Delta Q}{Q} \times \frac{P}{Q} \)
27. Differentiate between:
   (i) Normal goods and Inferior goods
   (ii) Complimentary goods and substitute goods.

28. Why should the budget line be tangent to the indifference curve at the point of consumer’s equilibrium.

29. Why does consumer stop consumption in case where marginal utility is less than price of a good?

30. What is budget line? Why is it negatively sloped?

31. A consumer consumes only two goods x & y state & explain the conditions of consumer’s equilibrium with the help of utility analysis.

32. Explain the conditions determining how many units of a good the consumer will buy at a given price.

33. Define marginal rate of substitution. Explain why is an indifference curve convex?

**LONG QUESTIONS (6 MARKS)**

1. Explain the conditions of consumer’s equilibrium with the help of the indifference curve analysis. Represent the same in a diagram.

2. Explain the determination of consumers equilibrium with the help of a schedule in case of two commodities by using utility approach.

3. Why does demand curve slope downward?

4. Explain the determinants of price elasticity of demand.

5. With the help of diagrams, explain the effect of following changes on the demand of a commodity.
   (a) A fall in the income of its buyer.
   (b) A rise in price of complementary good.

6. What are the conditions of consumer’s equilibrium under the indifference curve approach? What changes will take place if the conditions are not fulfilled to reach equilibrium?

7. Explain the three properties of indifference curve.
H.O.T.S.

8. With the help of numerical example measure price elasticity of demand in the following conditions by total expenditure method:
   (i) Demand falls when price is constant.
   (ii) Price falls while demand is constant.

9. Whether the following statements are true or false? Give reasons.
   (i) Two indifference curves never intersects each other.
   (ii) Income effect of inferior good is positive.
   (iii) Change in quantity demanded is the explanations of law of demand.

10. Explain the concept of marginal rate of substitution (MRS) by giving an example. What happens to MRS when consumer moves downwards along the indifference curve? Give reasons for your answer.

11. Following statements are true or false give reasons:
   (i) Increase in number of consumers shifts the demand curve rightward.
   (ii) The demand of a commodity becomes elastic if its substitute good is available in the market.
   (iii) The price elasticity of demand is equal to unity at a point situated in the middle of a straight line demand curve.

VALUE BASED QUESTIONS

1. The demand for electricity is not falling in spite of regular hike in the price of electricity. What will be the elasticity of demand for electricity. Explain giving suitable reason in support of your answer?

2. Explain the other factors which one responsible for rise in demand of food products even when own price of food products in rising?
UNIT III

PRODUCER BEHAVIOUR & SUPPLY

POINTS TO REMEMBER

- **Production Function**: It shows the functional relation between physical inputs and physical output of a good. It can be expressed as \( Q = (f_1, f_2, f_3, \ldots, f_n) \). Where \( Q \) = Physical output of a good; \( f_1, f_2, f_3, \ldots \) \( f_n \) = Physical inputs.

- **Types of Production Function**:

  There are two types of Production Function.

  1. **Short-run Production Function**: In this production function one factor of production is variable and all others are fixed. So, law of return to a factor is applied. It is also called variable proportion type production function.

  2. **Long-run Production Function**: In this production function all the factors of production are variable. So, law of returns to scale is applied. It is also called constant proportion type production function.

- **Total production** refers to total amount of a good which is produced by a firm in a given period of time.

- **Average production** is the per unit output of variable factor (labour) employed.

  \[ AP = \frac{TP}{\text{Variable input}} \]

- **Marginal product** is addition to total product resulting from employing one additional unit of variable input. \( MP = \frac{\Delta TP}{\Delta L} \) or \( MP_n = TP_n - TP_{n-1} \)
Relation between Total, Average and Marginal Product

1. So long as marginal product rises, total product increases at increasing rate.
2. Marginal product starts falling but remains positive, total product rises at diminishing rate.
3. When MP=0, TP is maximum.
4. When marginal product becomes negative, then total product starts falling.

Relation between MP and AP

- When MP > AP, AP rises.
- When MP = AP, AP is maximum and constant.
- When MP < AP, AP falls.

Returns to a factor: In a short period when additional unit of variable factor are employed with fixed factors, then returns to a factor operates. Returns to a factor shows the changes in total products, of a good when only the quantity of one input is increased, while that of other inputs kept content.

Law of variable proportion: The law states that as we increase the quantity of only one variable input, keeping other inputs fixed, the total product increases at increasing rate in the beginning, then increases at decreasing rate and finally TP falls. According to this law, change in TP and MP are classify into three shares.

- Phase I: TP Increases at increasing rate: In the initial phase as more and more units of variable factor are employed with fixed factor total physical production increases at increasing rate, MP increases.
- Phase II: TP increases at decreasing rate: As more and more units of variable factors are employed with fixed factors then total product increases at diminishing rate, MP decreases but is positive. At the end of this phase TP maximum and MP becomes zero.
● **Phase III : TP falls** : As more and more units of variable factors are employed with fixed factors, total production starts decreasing and marginal product becomes negative.

● **Economic Cost** : It is the sum of direct (explicit cost) and indirect cost (explicit cost), including **Normal profit**.

● **Economic cost** : Explicit cost + implicit cost + Normal Profit.

● **Explicit Cost** : Actual money expenditure incurred by a firm on the purchase and hiring the factor inputs for the production is called explicit cost. For example-payment of wages, rent, interest, purchases of raw materials etc.

● **Implicit cost** is the cost of self owned resources of the production used in production process. Or estimated value of inputs supplied by owner itself.

### Short Term Costs

- **Total Cost** (TC)
- **Average Cost** (AC)
- **Marginal Cost** (MC)
- **Total Fixed Cost** (TFC)
- **Total Variable Cost** (TVC)
- **Average Fixed Cost** (AFC)
- **Average Variable Cost** (AVC)

- Total cost refers to total amount of money which is incurred by a firm on production of a given amount of a good.

- Total cost is the sum of total fixed cost and total variable cost.

\[
TC = TFC + TVC \quad \text{or} \quad TC = AC \times Q
\]

- Total fixed cost remains constant at all levels of output. It is not zero even at zero output level. Therefore, TFC curve is parallel to OX-axis.

\[
TFC = TC - TVC \quad \text{or} \quad TFC = AFC \times Q
\]
• Total variable cost is the cost which vary with the quantity of output produced. It is zero at zero level of output. TVC curve is parallel to TC curve.

\[ TVC = TC - TFC \quad \text{or} \quad TVC = AVC \times Q \]

• Average cost is per unit of production of a commodity. It is the sum of average fixed cost and average variable cost.

\[ AC = \frac{TC}{Q} \quad \text{or} \quad AC = AFC + AVC \]

• Average fixed cost is per unit of fixed cost of production of a commodity.

\[ AFC = \frac{TFC}{Q} \quad \text{or} \quad AFC = AC - AVC \]

• Average variable cost is per unit variable cost of production of a commodity.

\[ AVC = \frac{TVC}{Q} \quad \text{or} \quad AVC = AC - AFC \]

• Marginal Cost - It refers to change in TC, due to additional unit of a commodity is produced. \( MC = \frac{\Delta TC}{\Delta Q} \) or \( MCn = TCn - TCn-1 \). But under short run, it is calculated from TVC.

\[ MCn = TVC_n - TC_{n-1} \quad \text{or} \quad MC = \frac{\Delta TVC}{\Delta Q} \]

**Relation Between Short-Term Costs**

• Total cost curve and total variable cost curve remains parallel to each other. The vertical distance between these two curves is equal to total fixed cost.

• TFC curve remains parallel to X-axis and TVC curve remains parallel to TC curve.

• With increase in level of output, the vertical distance between AFC curve and AC curve goes on increasing. On contrary the vertical distance between AC curve and AVC curve goes on decreasing but these two curves never intersect because average fixed cost is never zero.
- Relation between MC and AVC.
  - When MC < AVC, AVC falls.
  - When MC = AVC, AVC is minimum and constant
  - When MC > AVC, AVC rises.

- Relation between MC and ATC
  - When MC < ATC, ATC falls.
  - When MC = ATC, ATC is minimum and Constant
  - When MC > ATC, ATC rises.

- Money received from the sale of product is called revenue.

- Total revenue is the total amount of money received by a firm from the sale of given units of a commodity at a market price.
  \[ TR = AR \times Q \quad \text{Or} \quad TR = \sum MR \]
  \[ TR = \text{Price} \times \text{Quantity Sold.} \]
  Price. = AR

- Per unit revenue received from the sale of given units of a commodity is called average revenue. Average revenue is equal to price. Per unit price of a commodity it also called AR.
  \[ AR = \frac{TR}{Q} \quad \text{or} \quad P \times \frac{Q}{Q} = P = \text{Price.} \]

- Marginal revenue is net addition to total revenue when one additional unit of output is sold.
  \[ MR = \frac{\Delta TR}{\Delta Q} \quad \text{Or} \quad MR_n = TR_n - TR_{n-1} \]

- Relation b/w TR, AR, and MR when more quantity sold at the same price: under perfect competition.
  - (a) Average revenue and marginal revenue remains constant at all levels of output and AR and MR curves are parallel to ox-axis. AR= MR
(b) Total revenue increases at constant rate MR is constant and TR curve is positively sloped straight line passing through the origin.

- Relation between TR, AR and MR when more quantity by sold at the lower price or there is monopoly or monopolistic competition in the market.

  (a) Average revenue and marginal revenue curves have negative slope. MR curve lies below AR curve. AR > MR

  (b) Marginal revenue falls, twice the rate of average revenue.

  \[ MR = \frac{1}{2} AR \]

  (c) So long as marginal revenue decreases and positive, total revenue increases at diminishing rate. When marginal revenue is zero, total revenue is maximum and when marginal revenue becomes negative, TR starts falling.

- Relation b/w AR and MR (General)
  - When MR > AR, AR rises.
  - When MR = AR, AR is maximum and constant.
  - When MR < AR, AR falls.

- Concept of Producer’s Equilibrium: If refers the stage where producer is getting maximum profit with given cost and he has no incentive to increase or decrease the level of output.

(A) MR and MC Approach: Conditions of producers equilibrium according to this approach are:

  (a) \( MC = MR \)

  (b) MC curve should cut the MR curve from below at the point of equilibrium.

  \( Or \)

MC should be more than MR after the equilibrium point, with increase in output.
• **Supply**: Refers to the amount of the commodity that a firm or seller is willing to offer or ready to sell at a certain price and in a given period of time.

• **Factors affecting supply of a commodity**:  
  - Price of the commodity.  
  - Prices of other related goods.  
  - Level of Technology.  
  - Prices of inputs.  
  - No. of firms.  
  - Government policy regarding Taxation and subsidies.  
  - Goals of the firm.

• **Individual Supply**: Refers to quantity of a commodity that an individual firm is willing and able to offer for sale at a certain price during a given period of time.

• **Market supply**: It is the sum total of quantity supplied of a commodity by all sellers or all firms in the market at a certain price and in a given period of time.

• **Stock**: Refers to the total quantity of a particular commodity available with the firm at a particular point of time.

• **Supply Schedule**: Refers to a tabular presentation which shows various quantities of a commodity that a producer is willing to supply at different prices, during a given period of time.

• **Supply curve**: Refers to the graphical representation of supply schedule which represents various quantities of a commodity that a producer is willing to supply at different prices during given period of time.
- **Slope of supply curve** = $\frac{\Delta P}{\Delta Q}$

- **Law of Supply**: States the direct relationship between price and supply of a commodity, keeping other factors constant.

- **Price Elasticity of Supply**: Refers to the degree of responsiveness of supply of a commodity with reference to a change in price of the commodity. It is always positive due to direct relationship between price and quantity supplied.

  Price Elasticity of Supply ($E_s$) = \( \frac{\text{Percentage change in quantity supplied}}{\text{Percentage change in price}} \)

- **Methods for measuring price elasticity of supply**:
  1. **Percentage Method**
     \[ E_s = \frac{\text{% change in a quantity supplied}}{\text{% change in price}} \]
     Or \[ E_s = \frac{\Delta Q \times P}{\Delta P \times Q} \]
  2. **Geometric Method**
     \[ E_s = \frac{\text{Supply curve intercept on X–axis}}{\text{Quantity supplied}} \]
There are three possibilities of Elasticity of Supply:

(a) If a straight line supply curve passes through the point of origin doesn't matter what it makes angles, Es at any point is equal to unity.

(b) If a straight line supply curve passes through left side of point of origin and intersect X-axis in its negative range, Es will be greater than one at any point.

(c) If a straight line supply curve passes through right side of point of origin and intersect X-axis in its positive range, Es will be less than one at any point.

**Change in Q. Supplied Vs change in Supply**

- **Change in Q. Supplied or Movement along supply curve**
  - due to change in price of Commodity other factors remain constant
  - Expansion of supply or Upward movement along with a supply curve

- **Change in Supply or Shift in supply curve**
  - Due to change in factors other than price of the commodity
  - Increase in supply or right ward shift in supply curve
  - Decrease in supply or leftward shift in supply curve

**Causes**

- (i) Fall in price of inputs
- (ii) Fall in price of related goods
- (iii) Improvement in tech.
- (iv) Increase in no. of firms

**Cases**

- (i) Rise in price of inputs
- (ii) Rise in price of related goods
- (iii) Obsolete tech.
- (iv) Decrease in no. of firms

**MULTIPLE CHOICE QUESTIONS (1 MARK)**

1. The cause of upward movement along a supply curve is

   (a) Decrease in Price. (b) Increase in Income
   (c) Decrease in Income (d) Increase in Price
2. When Total Revenue is maximum, marginal Revenue is :-
   (a) Minimum       (b) Maximum
   (c) Zero          (d) Constant

3. When percentage change in Price is equal to percentage change in supply:
   (a) Es > 1        (b) Es = 1
   (c) Es < 1        (d) Es = 0

4. The behaviour of Average Revenue when Total Revenue increases at constant rate is
   (a) Constant      (b) Increasing
   (c) Decreasing    (d) Zero

5. The Behaviour of Total Product when Marginal Product is zero is :-
   (a) Minimum       (b) Maximum
   (c) Constant      (d) Zero

6. Which cost curve is parallel to X-axis :-
   (a) AFC           (b) TVC
   (c) TFC           (d) TC

7. If supply curve is parallel to Y-axis :-
   (a) Es = 0        (b) Es = ∞
   (c) Es = 1        (d) Es > 1

8. When per unit price remains constant
   (a) AR > MR       (b) AR < MR
   (c) AR = MR       (d) non of above

9. When Total Product is falling then
   (a) MP is maximum (b) MP = Zero
   (c) MP becomes negative (d) MP is falling
10. When Average Product is maximum then
   (a) $MP > AP$  
   (b) $MP = AP$  
   (c) $MP < AP$  
   (d) non of above

**SHORT ANSWER TYPE QUESTIONS (3-4 MARKS)**

1. State the relation between AP and MP.

2. How does total product behave with change in marginal product?

3. Briefly explain the causes of increasing returns to a factor with the help of marginal product.

4. Explain the likely behaviour of total product. When only the unit of a variable factor is increased and keeping all other factor fixed. Use numerical example.

5. Distinguish between total fixed cost and total variable cost.

6. Explain with the help of a diagram the relationship between Average cost, Average variable cost and Marginal cost.

7. Why is short run average cost curve ‘U’ shaped?

8. Explain diagrammatically the relationship between Average cost, Average variable cost and Average fixed cost.

9. What changes will take place in total revenue when
   (a) Marginal revenue is falling but is positive.
   (b) Marginal revenue is zero.
   (c) Marginal revenue is negative.

10. Define marginal revenue. Explain the relationship between average and marginal revenue when price is constant at all levels of output.

11. How does marginal revenue effect total revenue when price decreases to increase sale. Use schedule.

12. What do you mean by producers equilibrium? State and briefly explain the conditions of producer’s equilibrium with Marginal Revenue and Marginal Cost approach use diagram.
13. Explain producers equilibrium with the help of a numerical example using marginal revenue and marginal cost approach.

14. Draw in a single diagram the average revenue and marginal revenue curves of a firm which can sell any quantity of the good at a lower price. Explain.

15. Complete the following table:

<table>
<thead>
<tr>
<th>Units of Variable Input</th>
<th>TP (Units)</th>
<th>AP (Units)</th>
<th>MP (Units)</th>
</tr>
</thead>
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<td>0</td>
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<td>–</td>
</tr>
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<td>–</td>
<td>–</td>
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<tr>
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<td>–</td>
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<tr>
<td>4</td>
<td>–</td>
<td>19</td>
<td>–</td>
</tr>
<tr>
<td>5</td>
<td>–</td>
<td>–</td>
<td>4</td>
</tr>
</tbody>
</table>

16. Identify the three phases in the law of variable proportion from following information:

<table>
<thead>
<tr>
<th>Units of Variable Input</th>
<th>Total Products (Units)</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
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<tr>
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<td>7</td>
<td>34</td>
</tr>
<tr>
<td>8</td>
<td>32</td>
</tr>
</tbody>
</table>
17. If the total fixed cost of a firm is Rs. 24, complete the following table:

<table>
<thead>
<tr>
<th>Output (Units)</th>
<th>AVC (Rs.)</th>
<th>TVC (Rs.)</th>
<th>MC (Rs.)</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. Define market supply. Explain its two determinants.

19. Distinguish between 'Change in Supply' and change in quantity supplied.

20. Explain briefly two causes of a rightward shift in supply curve.

21. Differentiate between contraction in supply and decrease in supply.

22. How does change in price of inputs affect the supply of a good.

23. Calculate the economic cost

   (i) Purchases of raw material 250
   (ii) Payment of wages and salaries 500
   (iii) Payment of rent 100
   (iv) Donations 100
   (v) Estimated value of services of owner 350
   (vi) Expected minimum profit 40
   (vii) Estimated abnormal profit 300

24. A firm produces 200 units of goods A. Actual money expenditure incurred on producing this good is Rs. 5350 cr. The owner supplies inputs worth of Rs. 550 cr. for which he does not receive any payment. The economic cost turned out to be Rs. 6000 cr. How do you account for difference?

25. Complete the following table:

<table>
<thead>
<tr>
<th>Output</th>
<th>Price (Rs.)</th>
<th>MR (Rs.)</th>
<th>TR (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>–</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
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<td>4</td>
<td>–</td>
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<tr>
<td>3</td>
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<td>–</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>–</td>
<td>(–) 3</td>
<td>–</td>
</tr>
</tbody>
</table>
26. When the price of commodity rises from 10 to 11 per unit, its quantity supplied rises by 100 units. If its price elasticity of supply is 2. Then find out its quantity supplied at increased price.

27. How does change in price of related goods affect the supply of given goods.

**H.O.T.S.**

28. State the causes by which marginal product of a variable factor change from increasing return to diminishing return.

29. What would be the shape of average revenue curve when total revenue is positively sloped straight line passing through origin. Explain with the help of schedule and diagram.

30. What is a supply schedule? Explain how does change in technology of producing a good affect the supply of that good.

31. Following statements are true or false. Give reasons:
   
   (a) At the stage of producer’s equilibrium, marginal cost will be decreasing.
   
   (b) AR curve always remain above MR curve.

32. Whether following statements are true or false. Give reasons.

   (a) Marginal revenue falls twice the rate at which average revenue falls.
   
   (b) Average cost starts increasing when rising portion of marginal cost intersects.

33. Following statements are true or false. Give reasons:

   (a) Diminishing returns to a factor is applicable only when average product starts falling.
   
   (b) AC and AVC curves do not intersect each other

34. Distinguish between leftward shift to supply curve and downward movement along a supply curve.

35. “The change in quantity supplied is explanation of law of supply”. Explain.

36. Either following statements are true or false. Give reasons.

   (a) Supply remains constant in market period.
   
   (b) When MP falls, AP falls.
37. Explain the geometric method of measuring price elasticity of supply with the help of diagram.

**LONG ANSWER TYPE QUESTIONS (6 MARKS)**

1. Explain diagrammatically the effect on total output when units of one factor is increased and all other inputs are held constant.

2. On the basis of following information identity level of output a producer will be in equilibrium using MR-MC appeared and also give reasons:

<table>
<thead>
<tr>
<th>Output (Units)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR (Rs.)</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>TC (Rs.)</td>
<td>8</td>
<td>15</td>
<td>21</td>
<td>26</td>
<td>33</td>
<td>41</td>
</tr>
</tbody>
</table>

3. What is producer’s equilibrium? Explain the conditions of producer’s equilibrium through the ‘marginal cost and marginal revenue’ approach. Use diagram.

4. State whether true or false. Give reasons.
   
   (a) Total product is the area under the marginal product curve.
   
   (b) When MR falls, AR falls.
   
   (c) For the first unit of output MC = AVC.

5. State whether True or False. Give reasons.

   (a) When marginal revenue is constant and not equal to zero, then total revenue will also be constant.
   
   (b) As soon as marginal cost rises, average variable cost also starts rising.
   
   (c) Total product always increases whether there is increasing returns or Diminishing return to a factor.

6. State whether the following statements are true or false. Give reasons for your answer.

   (a) When total revenue is constant average revenue will also be constant.
(b) Average variable cost can fall even when marginal cost is rising.

c) When marginal cost rises, average cost rises.

**VALUE BASED QUESTIONS**

1. How can the reduce the smoking through market? Explain use diagram.

2. Suppose a firm is producing under 3rd phase of law of variable production and it is facing heavy loss. Give suggestion to reduce its loss and assure maximum profit.

**SOLUTION**

15. 

<table>
<thead>
<tr>
<th>Unit of Variable input</th>
<th>TP (Units)</th>
<th>AP (Units)</th>
<th>MP (Units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>–</td>
</tr>
<tr>
<td>1</td>
<td>20</td>
<td>20</td>
<td>20</td>
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<td>2</td>
<td>46</td>
<td>23</td>
<td>26</td>
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<td>3</td>
<td>66</td>
<td>22</td>
<td>20</td>
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<td>4</td>
<td>76</td>
<td>19</td>
<td>10</td>
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<tr>
<td>5</td>
<td>80</td>
<td>19</td>
<td>4</td>
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</tbody>
</table>

16. 

<table>
<thead>
<tr>
<th>Unit of Variable input</th>
<th>TP (Units)</th>
<th>MP (Units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>1</td>
<td>4</td>
<td>4</td>
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<td>2</td>
<td>14</td>
<td>10</td>
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<td>3</td>
<td>22</td>
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<td>4</td>
<td>28</td>
<td>6</td>
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<tr>
<td>5</td>
<td>32</td>
<td>4</td>
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<tr>
<td>6</td>
<td>34</td>
<td>2</td>
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<tr>
<td>7</td>
<td>34</td>
<td>0</td>
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<tr>
<td>8</td>
<td>32</td>
<td>–2</td>
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</tbody>
</table>
17. | Output (Units) | AVC (Rs.) | TVC (Rs.) | MC (Rs.) |
<table>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>40</td>
<td>80</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>45</td>
<td>135</td>
<td>55</td>
</tr>
</tbody>
</table>

23. Economic cost = (i) + (ii) + (iii) + (v) + (vi)  
= 250 + 500 + 350 + 40 = Rs. 1240

24. Economic cost = Actual money expenditure (explicit cost)  
+ Estimate value of inputs supplied by owner (Implicit cost)  
+ Normal Profit  
6000 = 5350 + 550 + Normal  
Normal Profit = 6000 – 5900 = Rs. 100 Cr.

25. | Output | Price (Rs.) | MR (Rs.) | TR (Rs.) |
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>10</td>
<td>10</td>
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<td>2</td>
<td>7</td>
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<td>3</td>
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<td>4</td>
<td>3</td>
<td>(-3)</td>
<td>12</td>
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</table>

26. | Price (Rs.) | Qty. Supplied (Units) |
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<th></th>
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</thead>
<tbody>
<tr>
<td>10</td>
<td>Q</td>
</tr>
<tr>
<td>11</td>
<td>Q₁</td>
</tr>
</tbody>
</table>

ΔP = 11 – 10 = ΔQ = Q₁ – Q = 100,  Es = 2  
Quantity supplied at increased price = Q₁ – Q = 100  
= Q₁ – 500 = 100  
= Q₁ – 600 units.
### LONG ANSWER TYPE QUESTIONS

<table>
<thead>
<tr>
<th>Output</th>
<th>AR (Rs.)</th>
<th>TR (Rs.)</th>
<th>TC (Rs.)</th>
<th>MC (Rs.)</th>
<th>MR (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>7</td>
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<tr>
<td>6</td>
<td>7</td>
<td>42</td>
<td>41</td>
<td>8</td>
<td>7</td>
</tr>
</tbody>
</table>

The producer will be in equilibrium at 5th units of output because here all conditions of producer’s equilibrium is satisfied *i.e.*, (i) $MR = MC$ and (ii) $MC > MR$ after $MR = MC$ level of output.
UNIT IV

FORMS OF MARKET & PRICE DETERMINATION

POINTS TO REMEMBER

- Market is a system through which the buyers and sellers of a commodity or service come to contact with each other and complete the act of sale and purchase of the commodity or service on specific price.

MARKET–STRUCTURE

Perfect Competition → Imperfect Competition

- Perfect Competition
- Monopoly
- Monopolistic competition
- Oligopoly

- Perfect competition is that type of market in which there are very large no. of buyers and sellers. Sellers sell homogenous product at constant price.

- Under perfect competition, price remains constant therefore, average and marginal revenue curves coincide each other and becomes parallel to x-axis.
- Under perfect competition price is determined by an industry with the forces of demand and supply. No individual firm or buyer can influence the price of the product. So industry is price maker and firm is price taker.

Feature of perfect competition:

(a) Very large no. of buyers and sellers.

(b) Homogeneous product.

(c) Free entry and exit of firms in the market.

(d) Perfect knowledge.

**MONOPOLY MARKET**

- Monopoly is that type of market where there is a single seller, selling a product which does not have close substitutes.

**Features**: (a) Single seller

(b) Restrictions on the entry of new firms.

(c) No close substitute products

(d) Full control over price

(e) Price discrimination

**AR or MR Curve in Monopoly market**:

- AR (Demand) Curve is left to right downward sloping curve and less elastic than that of monopolistic competition.

- \( AR = 2MR \)
A monopolist either decides price or output. He can’t decides both at a time.

**MONOPOLISTIC COMPETITION**

It is that type of market in which there are large number of buyers and sellers. Sellers sell differentiated product to the consumer who have imperfect knowledge about the product.

**Features**:
(a) Large no. of buyers and sellers
(b) Product Differentiation: In this feature every firms make it product that rivals on the basis of colour, taste, packing, size and shape.
(c) Selling Cost: Cost on advertisement and sales promotion.
(d) Freedom of entry and exit of new firm.
(e) Lack of perfect knowledge

**AR or MR in Monopolist Market**:

- AR (Demand) Curve is left to right downward sloping curve and more elastic / more flatter than that of monopoly.
- \( AR = 2MR \)

**OLIGOPOLY**

- Oligopoly is the form of market in which there are few sellers or few large firms, mutually dependent for taking price and output decisions.

**Features of Oligopoly**
(a) Few Sellers
(b) All the firms under oligopoly produce homogeneous or differentiated product.

(c) Under oligopoly demand curve is undefined.

(d) All the firms are interdependent in respect of price determination under oligopoly market.

- On the basis of production, oligopoly can be categorised in two categories.

  (i) Collusive oligopoly is that form of oligopoly in which all the firms determine price and quantity of output on the basis of cooperative behaviour.

  (ii) Non-collusive oligopoly is that form of oligopoly in which all the firms determine the price and quantity of output according to the action and reaction of the firms.
(iii) **Perfect Oligopoly**: If firms produce homogeneous product of then it is called perfect oligopoly.

(iv) **Imperfect Oligopoly**: If firms produce heterogeneous product it is called imperfect oligopoly.

- **Equilibrium Price**: Which corresponds to the equality between market demand and market supply of a commodity.
- Equilibrium quantity which correspondence to the equilibrium price in the market.
- Market equilibrium is a state in which market demand is equal to market supply. There is no excess demand and excess supply in the market.

![Diagram](image)

**Application of Demand of Supply**

(a) **Maximum Price Ceiling**: It means the maximum price the producers are allowed to charge less than equilibrium price. Government imposes such a ceiling when it finds that the demand for necessary goods exceeds its supply. That is, when consumers are facing shortages and equilibrium price is too high. Government does it in the interest of consumers.

![Diagram](image)
(b) **Minimum Price Ceiling**: It means that producers are not allowed to sell, the good below the price fixed by Government. When government finds equilibrium price is too low for the producer then Govt. fixed a price ceiling higher than equilibrium price to prevent the possible loss of the producers. The price is also called minimum support price.

### MULTIPLE CHOICE QUESTIONS (1 MARK)

1. In which market AR = MR
   - (a) Monopoly
   - (b) Perfect Market
   - (c) Monopolistic Market
   - (d) Oligopoly

2. In which market restrictions on entry of new firm
   - (a) Perfect Market
   - (b) Monopolistic Market
   - (c) Monopoly
   - (d) None of the above.

3. Under which market firm is price taker
   - (a) Perfect Market
   - (b) Monopoly
   - (c) Monopolistic Market
   - (d) Oligopoly

4. Under Oligopoly
   - (a) Large no of sellers
   - (b) Few sellers
   - (c) Single seller
   - (d) None of above.

5. A price of which a consumer is willing to buy and a seller is willing to sell the commodity is called.
   - (a) Minimum Price
   - (b) Maximum Price
   - (c) equilibrium price
   - (d) None of the above.

6. When a monopoly firm charges different prices from different consumers for the same product is called:
   - (a) Quantity discrimination
   - (b) Product differential
7. Quantity of a commodity which is bought and sold at the equilibrium price is called?
   (a) Maximum quantity   (b) Minimum quantity
   (b) Both (a) and (b)   (d) Equilibrium quantity

8. At a given price, when demand for commodity is more than supply of the commodity then it is called excess demand or shortage. Here given price is:
   (a) less than equilibrium price.
   (b) more than equilibrium price
   (c) less than or equal to equilibrium price.
   (d) More than or equal to equilibrium price.

9. Maximum ceiling price refers to:
   (a) Max. retail price
   (b) Max. price the buyer is willing to pay
   (c) Max. price at which seller is willing to sell.
   (d) Max . price the producer is legally allowed to charge.

10. Fixation of minimum wage below the equilibrium wage rate leads to:
    (a) Unemployment   (b) Over employment
    (c) Neither (a) nor (b)   (d) Either (a) or (b)

**SHORT ANSWER TYPE QUESTIONS (3-4 MARKS)**

1. Why is firm under perfect competition a price taker and under monopolistic competition is price maker. Explain?

2. How is the demand curve under monopolistic competition different from demand curve of a firm under perfect competition?

3. Why is a firm under perfect competition a price taker? Explain.

4. Explain three features of perfect competition.
5. Explain the implication of large number of seller feature of perfect competition.

6. What will happen if the price prevailing in the market is above the equilibrium price.

7. Distinguish between monopoly and oligopoly.

8. Explain the concept of excess demand with the help of diagram.

9. Differentiate between ‘Collusive and non-collusive oligopoly.

10. Explain the determination of equilibrium price under perfect competition with the help of schedule.

11. Explain why is the equilibrium price determined only at the output level at which market demand and market supply are equal.

**H.O.T.S.**

12. MR = AR in perfect competition but MR < AR in monopoly and monopolistic competition why?

13. In which condition decrease in demand can not change the price of commodity?

14. Explain how firms are interdependent in an oligopoly market.

15. In which competition the availability of close substitutes is present? How does it effect the price?

16. Explain the implication of ‘freedom of entry and exit to the firms’ under perfect competition.

**LONG ANSWER TYPE QUESTIONS (6 MARKS)**

1. Explain the characteristics of monopolistic competition.

2. Market for a good is in equilibrium. There is ‘increase’ in supply of that good. Explain the chain of effects of this change. Use a numerical example.

3. Explain the term market equilibrium. Explain the series of changes that will take place if market price is higher than the equilibrium price.
4. How will a fall in the price of tea affect the equilibrium price of coffee? Explain the chain of effects.

5. Explain the following features of perfect competition.
   (i) Large number of firms or Sellers and Buyers
   (ii) Homogeneous Product.


7. Explain how change in price of a substitute commodity would affect market equilibrium of the commodity X.

8. With the help of a diagram explain the effect of “decrease” in demand of a commodity on its equilibrium price and quantity.

9. There is simultaneous decrease in demand and supply of a commodity, when it result in
   (i) no change in equilibrium price
   (ii) a fall in equilibrium price

**VALUE BASED QUESTIONS**

1. Suppose under a competitive market equilibrium price is too high for an average consumer in case of essential items. Give suggestion to bring down the equilibrium price up to afford level for a common man.

2. Now suppose government reduces the rate of excise duty and raise subsidies. What is the likely to be impact of those on the market of a product. Explain with diagram.

**ANSWERS**

Multiple choice questions : (1 Mark)

1.(b) 2.(c) 3.(a) 4.(b) 5.(c) 6.(c) 7.(d) 8.(a) 9.(d) 10.(c)
UNIT V

NATIONAL INCOME AND RELATED AGGREGATES

POINTS TO REMEMBER

- **Good**: In economics a good is defined as any physical object, man-made, that could command a price in the market.

- **Consumption Goods**: Those final goods which satisfy human wants directly.

- **Capital Goods**: Those final goods which help in production. These goods are used for generating income.

- **Final Goods**: are those goods which are used either for final consumption or for investment.

- **Intermediate Goods** refers to those goods and services which are used as a raw material for further production or for resale in the same year. These goods do not fulfill needs of mankind directly.

- **Investment**: Addition made to the physical stock of capital during a period of time is called investment. It is also called capital formation.

- **Depreciation**: means fall in value of fixed capital goods due to normal wear and tear and expected obsolescence.

- **Gross Investment**: Total addition made to physical stock of capital during a period of time. It includes depreciation.

- **Net Investment**: Net addition made to the real stock of capital during a period of time. It excludes depreciation.

\[
\text{Net Investment} = \text{Gross investment} - \text{Depreciation.}
\]

- **Stocks**: Variables whose magnitude is measured at a particular point of time are called stock variables. Eg. National Wealth, Inventory etc.
- **Flows**: Variables whose magnitude is measured over a period of time are called flow variable. Eg. National income, change in stock etc.

- **Circular flow of income**: It refers to continuous flow of goods and services and money income among different sectors in the economy. It is circular in nature. It has neither any end and nor any beginning point.

- **Leakage**: It is the amount of money which is withdrawn from circular flow of income. For eg. Taxes, Savings and Import.

- **Injection**: It is the amount of money which is added to the circular flow of income. For e.g. Govt. Exp., investment and exports.

- **Economic Territory**: Economic (or domestic) Territory is the geographical territory administrated by a Government within which persons, goods, and capital circulate freely.

- **Scope of Economic Territory**:
  
  (a) Political frontiers including territorial waters and airspace.

  (b) Embassies, consulates, military bases etc. located abroad.

  (c) Ships and aircraft operated by the residents between two or more countries.

  (d) Fishing vessels, oil and natural gas rigs operated by residents in the international waters.

- **Normal Resident of a country**: is a person or an institution who normally resides in a country and whose centre of economic interest lies in that country.

---

**NATIONAL INCOME AGGREGATES**

**Domestic Aggregates**

- **Gross domestic Product at Market Price** ($GDP_{MP}$) is the market value of all the final goods and services produced by all producing units located in the domestic territory of a country during an Accounting year.

- **Net Domestic Product at Market Price** ($NDP_{MP}$): $NDP_{MP} = GDP_{MP} - \text{Depreciation (consumption of Fixed capital)}$
• **Domestic Income** : \( \text{NDP}_\text{FC} \) : It is the factor income accruing to owners of factors of production for supplying factor services with in domestic territory during an accounting year.

**NATIONAL AGGREGATES**

• **Gross National Product at Market Price** (\( \text{GNP}_{\text{MP}} \)) is the market value of all the final goods and services produced by normal residents (in the domestic territory and abroad) of a country during an accounting year.

\[
\text{GDP}_{\text{MP}} + \text{NFIA} = \text{GNP}_{\text{MP}}
\]

• **National Income** (\( \text{NNP}_{\text{FC}} \)) : It is the sum total of all factors incomes which are earned by normal residents of a country in the form of wages, rent, interest and profit during an accounting year.

\[
\text{NNP}_{\text{FC}} = \text{NDP}_{\text{FC}} + \text{NFIA} = \text{National Income}.
\]

### Methods of Estimation of National Income

1. **Income Method**
   - **Step 1**: Net Domestic Product at Factor Cost (\( \text{NDP}_{\text{FC}} \))
     - Compensation of employees
     - Operating surplus
     - Mixed income for self-employed person

2. **Value Added/Product Method**
   - **Step 1**: Gross Domestic Product at Market Price (\( \text{GDP}_{\text{MP}} \))
     - Value added by Primary Sector
     - Value added by Secondary sector
     - Value added by Tertiary sector

3. **Expenditure Method**
   - **Step 1**: Gross Domestic Product at Market Price (\( \text{GDP}_{\text{MP}} \))
     - Private Final Consumption
     - Government Final Consumption
     - Investment (Gross Domestic Capital Formation)
     - Net Export (E - M)

### Conversion Hints

\[
\text{NI} + \text{NIT} = \text{MP} = \text{FC}
\]

\[
\text{Gross} + \text{Dep} = \text{Net}
\]

\[
\text{NP} + \text{NFIA} = \text{DP}
\]

\[
\text{Dep} = \text{Depreciation}
\]

\[
\text{FC} = \text{Factor Cost}
\]

\[
\text{NI} = \text{Net indirect tax} = (\text{Indirect Taxes} - \text{Subsidies})
\]

**National Income at Current Prices** : It is also called nominal National income. When goods and services produced by normal residents within
and outside of a country in a year valued at current years prices i.e. current prices is called national income at current prices.

- **National Income at Constant Prices**: It is also called as real national income. When goods and services produced by normal residents within and outside of a country in a year valued at constant price i.e. base year's prices is called **National Income at Constant Prices**.

- **Value of Output**: Market value of all goods and services produced by an enterprise during an accounting year.

- **Value added**: It is the difference between value of output of a firm and value of inputs bought from the other firms during a particular period of time.

- **Problem of Double Counting**: Counting the value of a commodity more than once while estimating national income is called double counting. It leads to overestimation of national income. So, it is called problem of double counting.
- Ways to solve the problem of double counting.
  
(a) By taking the value of only final goods.

(b) By value added method.

**Components of Domestic Income**

1. Compensation of Employees
   - a. Wages and salaries (Cash/or kinds)
   - b. Employers Contribution to Social security Schemes

2. Operating surplus
   - Rent
   - Interest
   - Profit
   - Corporate Tax
   - Dividend
   - Undistributed corporate profit

**Net Factor Income from Abroad**

NFIA = It is difference b/w factor income received/earned by normal residents of a country and factor income paid to non-residents of the country.

**Components of NFIA**

1. Net Compensation of Employees
2. Net Income from Property and entrepreneurship
3. Net Retained earning of resident companies abroad

**Hints**: NFIA : Net Factor Income Earned from Abroad.

NFIA = Factor Income Received from Abroad.

– Factor Income Paid to Abroad.

OR

NFIA = Net compensation of Employees

+ Net income from property and entrepreneurship.

+ Net retained earning of resident companies abroad.

- **Net National Disposable Income (NNDI)**: It is defined as net national product at Market price ($\text{NNP}_{\text{MP}}$) plus net current transfer from rest of the world.

\[ \text{NNDI} = \text{NNP}_{\text{MP}} + \text{Net current transfers from rest of the world} \]

OR
= National income + net indirect tax + net current transfers from the rest of the world.

- Gross National Disposable Income (Gross NDI)
  = \( GNP_{MP} + \text{Net current Transfers from rest of the world.} \)

- Net National Disposable Income (Net NDI)
  = \( NNP_{MP} + \text{Net current Transfers from rest of the world.} \)

OR

= Gross NDI − Depreciation.
1. Value output = Sales + Change in Stock. or value of output = price × qty. sold + ΔS.
2. Gross value added at market price (GVA\text{MP}) = Value of output – Intermediate consumption.
3. Net value added at market price (NVA\text{MP}) = GVA\text{MP} – Depreciation.
4. Net value added at factor cost (NVA\text{FC}) = NVA\text{MP} – Net indirect tax.

**Note:** By adding up NVA\text{FC} of all the sectors, we get NDP\text{FC} or Domestic Income.

**Personal Disposable Income from National Income (NNP\text{FC})**

\[
\text{National Income (NNP}_{\text{FC}}) \downarrow - \text{NFIA} \\
\text{Domestic Income (NDP}_{\text{FC}}) \\
\quad \downarrow (-) \text{Income from property and enterprenureship} \\
\quad \quad \text{accruing of govt. administrative department} \\
\quad \downarrow (-) \text{Savings of non departmental enterprises} \\
\quad \text{Domestic Factor Income Accruing to Private Sector} \\
\quad \quad (+) \text{NFIA} \\
\quad \quad (+) \text{Interest on National debt} \\
\quad \quad (+) \text{Current transfers from Govt.} \\
\quad \quad (+) \text{Net Current transfers from R.O.W.} \\
\quad \text{Private Income} \\
\quad \quad (-) \text{Corporate Profit tax} \\
\quad \quad (-) \text{Undistributed Corporate profit} \\
\quad \text{Personal Income} \\
\quad \quad (-) \text{Direct personal tax} \\
\quad \quad (-) \text{Misc. receipts of govt. administrative deptt.} \\
\text{Personal Disposable Income} \\
\quad \text{Personal Consumption} \\
\quad \downarrow \text{Personal Saving}
● **Private Income**: Private income is estimated income of factor and transfer incomes from all sources to private sector within and outside the country.

● **Personal Income**: It refers to income received by household from all sources. It includes factor income and transfer income.

● **Personal Disposable Income**: It is that part of Personal income which is available to the households for disposal as they like.

● **GDP and Welfare**: In general GDP and Welfare are directly related with each other. A higher GDP implies that more production of goods and services. It means more availability of goods and services. But more goods and services may not necessarily indicate that the people were better off during the year. In other words, a higher GDP may not necessarily mean higher welfare of the people. There are two types of GDP:

   ● **Real GDP**: When the goods and services are produced by all producing units in the domestic territory of a country during an a/c. year and valued these at base year’s prices or constant price, it is called real GDP or GDP at constant prices. It changes only by change in physical output not by change price level. It is called a true indicator of economic development.

   ● **Nominal GDP**: When the goods and services are produced by all producing units in the domestic territory of a country during an a/c. year and valued these at current year’s prices or current prices, it is called Nominal GDP or GDP at current prices. It is influenced by change in both physical output and price level. It does not consider a true indicator of economic development.

Conversion of Nominal GDP into Real GDP

\[
\text{Real GDP} = \left( \frac{\text{Nominal GDP}}{\text{Price index}} \right) \times 100
\]

Price index plays the role of deflator deflating current price estimates into constant price estimates. In this way it may be called GDP deflator.

● **Welfare**: mean material well being of the people. It depends on many economic factors like national income, consumption level quality of goods etc and non-economic factor like environmental pollution, law and order etc. the welfare which depends on economic factors is called economic
welfare and the welfare which depends on non-economic factor is called non-economic welfare. The sum total of economic and non-economic welfare is called social welfare. Conclusion thus GDP and welfare directly related with each other but this relation is incomplete because of the following reasons.

Limitation of percapita real GDP/GDP as a indicator of Economic welfare:

- Non-monetary exchange
- Externalities not taken into GDP but it affects welfare.
- Distribution of GDP.
- All product may not contribute equally to economic welfare.
- Contribution of some products may be negative.
- Inflation may give falls impression of growth of GDP.

**MULTIPLE CHOICE QUESTIONS (1 MARK)**

1. Which one of the following is final expenditure:
   
   (a) Purchased computer by school.
   
   (b) Purchased scooter by scooter dealer.
   
   (c) Purchased vegetable by restaurant.
   
   (d) Purchased milk by tea shop.

2. Which one of the following is flow variable:
   
   (a) Capital formation
   
   (b) Change in inventory
   
   (c) GDP<sub>MP</sub>
   
   (d) All of the above.

3. When goods and services are produced in a year valued at current years prices is called:
   
   (a) Real GDP
   
   (b) GDP at constant prices
   
   (c) National Product
   
   (d) GDP at current prices.
4. Which is correct?
   (a) GNPmp > GDPmp when NFIA < 0.
   (b) GNPmp > GDPmp when NFIA = 0.
   (c) GNPmp > GDPmp when FIFA < FITA.
   (d) GNPmp > GDPmp when NFIA > 0.

5. Which of the following is not a transfer payment?
   (a) Indirect taxes  (b) Subsidy
   (c) Scholarship  (d) None of the above.

6. When the value of a product is counted more than once then it is called double counting. As a result national income is:
   (a) Under-estimated  (b) Over-estimated
   (c) Correctly-estimated  (d) None of the above.

7. Which is not a component of NFIA?
   (a) Net compensation of employees.
   (b) Net income from property and entrepreneurship.
   (c) Net retained earning of resident companies abroad.
   (d) Net export.

8. Which one of the following is not a component of Gross Domestic Fixed Capital formation?
   (a) Gross Public Investment
   (b) Inventory investment
   (c) Gross residential construction investment
   (d) Gross business fixed investment

9. Which one of the following leakage?
   (a) export  (b) import
   (c) investment  (d) both (a) and (b)
10. A person (or an institution) who is normally resides in a country and whose centre of economic interest lies in that country is called

(a) Non-resident   (b) Normal resident
(c) Both (a) and (b) (d) None of the above.

**SHORT ANSWER TYPE QUESTIONS (3 MARKS)**

1. Distinguish between real and nominal gross domestic product.

2. Explain the basis of classifying goods into intermediate and final goods. Give suitable examples.

3. Distinguish between consumer goods and capital goods with examples?

4. Explain how distribution of G.D.P. is its limitation as a measure of economic welfare.

5. Explain the meaning of “Domestic Territory of a country”.

6. Distinguish between ‘factor income’ and ‘transfer income’.

7. Classify the following into stock and flow:

   (i) Money supply   (ii) Depreciation
   (iii) Investment   (iv) Pocket money
   (v) Video and Video camera (vi) Deposits in saving account of bank.

8. Why does exports include in GDP_{MP}?

9. How can externalities be a limitation of using gross domestic product as an index of welfare.

10. Giving reasons, classify the following into intermediate and final goods:

   (i) Machines purchased by a dealer of machines.
   (ii) A car purchased by a household.

11. Distinguish between stock and flows. Give an example of each.
12. What is meant by a normal resident? State which of the followings are treated as normal resident of India.

(i) An American working in the office of WHO located in India.
(ii) Indian working in U.S.A. embassy located in India.

13. Which of the following is factor income from abroad for an Indian resident and why?

(a) Interest income received by Indian resident on the bonds of companies operating in USA.
(b) Remittances by Indians settled abroad to their families in India.

14. Explain why subsidies are added to and indirect taxes deducted from domestic product at market price to arrive at domestic product at factor cost.

15. Giving reasons, explain how are the following treated in estimating national Income by the income method.

(a) Interest on a car loan paid by an individual
(b) Interest on a car loan paid by a Govt. owned company.

16. Why do we include the imputed value of goods but not services while estimating production for self consumption?

17. Define NFIA., write its components.

18. Distinguish between domestic product and national product. When can domestic product be more than National Product.
LONG ANSWER QUESTIONS (6 MARKS)

1. How will you treat the following while estimating national income of India.

   (a) Dividend received by an Indian from his investment in shares of a foreign company.

   (b) Money received by a family in India from relatives working abroad.

   (c) Interest received on loan given to a friend for purchasing a car.

2. How will you treat the following while estimating national income of India? Give reason for your answer?

   (a) Dividend received by a foreigner from investment in shares of an Indian Company.

   (b) Money received by a family in India from relatives working abroad.

   (c) Interest received on loan given to a friend for purchasing a car.

3. Explain the problem of double counting in estimating national income, with the help of an example. Also explain two alternative ways of avoiding the problem.


5. How will you treat the following in estimating national income of India? Give reasons for your answer.

   (a) Value of bonus shares received by share holders of a company.

   (b) Fees received from students.

   (c) Interest received on loan given to a foreign company in India.

6. Explain the steps of measuring national income by income method.

7. Giving reasons, categories following into transfer payment and factor payments.

   (a) financial help gives to flood victims
(b) Old age pension.
(c) Imputed rent.

8. Calculate private income:

<table>
<thead>
<tr>
<th></th>
<th>Rs. (Crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) National interest</td>
<td>10</td>
</tr>
<tr>
<td>(ii) Personal disposable income</td>
<td>150</td>
</tr>
<tr>
<td>(iii) Corporate Profit Tax</td>
<td>25</td>
</tr>
<tr>
<td>(iv) Personal Taxes</td>
<td>50</td>
</tr>
<tr>
<td>(v) Retained earnings of private corporations</td>
<td>05</td>
</tr>
</tbody>
</table>

9. Giving reasons explain whether the following are included in domestic product of India.
   (i) Profit earned by a branch of foreign bank in India.
   (ii) Payment of salaries to its staff by an embassy located in New Delhi.
   (iii) Interest received by an Indian resident from firms abroad.

10. How will you treat the following while estimating national income. Give reasons for your answer.
    (i) Capital gain on sale of house.
    (ii) Prize won is lottery.
    (iii) Interest on public debt.

11. While estimating national income. How will you treat the following. Give reason for your answer.
    (i) Imputed rent of occupied house.
    (ii) Interest received on debentures.
    (iii) Financial help received by flood victims.
NATIONAL INCOME AND RELATED AGGREGATES

NUMERICAL EXERCISE

1. Calculate GVA\textsubscript{MP} from the following \((Rs. \text{ Crore})\)
   (i) Purchases by firm X from firm Y 100
   (ii) Purchases by firm Y from firm X 150
   (ii) Sales by firm X 200
   (iv) Sales by firm Y 300
   (v) Exports by firm Y 30
   (vi) Change in stock of firm X –20
   (vii) Change in stock of firm Y 10

2. Calculate NVA\textsubscript{FC} from the following data \((Rs.\text{ Crore})\)
   (i) Subsidy 40
   (ii) Sales 800
   (iii) Depreciation 30
   (iv) Exports 100
   (v) Closing stock 20
   (vi) Opening stock 50
   (vii) Intermediate purchases 500
   (viii) Purchases of machinery for own use 200
   (ix) Import of raw material 60

3. From the following information about a firm in an economy, calculate GVA\textsubscript{MP} of the firm. \((Rs. \text{ Crore})\)
   (i) Domestic Sales 300
   (ii) Exports 100
(iii) Production for self-consumption 50
(iv) Purchases from firm X 110
(v) Purchases from firm Y 70
(vi) Imports of raw materials 30
(vii) Change in stock 60

4. Calculate Gross National Disposable Income and NNP\textsubscript{FC} from the given data (Rs. Crore)

(i) Personal Tax 100
(ii) Net Indirect Tax 90
(iii) Corporate Tax 40
(iv) Personal disposable Income 1100
(v) Savings of non-departmental enterprises 60
(vi) Net factor income from abroad 5
(vii) Consumption of fixed capital 70
(viii) National Debt Interest 30
(ix) Retained earning of private corporate sector 10
(x) Net current transfer to the rest of the world 10
(xi) Current transfer from government 50
(xii) Income from property and enterprenuership accruing to govt.admitt.deptt. 80

5. Calculate (a) NDP\textsubscript{FC} by expenditure method and (b) NNP\textsubscript{FC}, by value added method (Rs. Crore)

(i) Net domestic capital formation 250
(ii) Net Export -50
(iii) Private final consumption expenditure 900
(iv) Value of output
(v) (a) Primary sector 900
     (b) Secondary sector 800
     (c) Tertiary sector 400

(v) Value of intermediate consumption :
     (a) Primary sector 400
     (b) Secondary sector 300
     (c) Tertiary sector 100

(vi) Consumption of fixed capital 80

(vii) Indirect Tax 100

(viii) Government final consumption expenditure 100

(ix) Subsidy 10

(x) Net factor income from abroad (-)20

6. From the following data calculate National Income by income and expenditure method: (Rs. crore)

   (i) Government final consumption expenditure 100
   (ii) Subsidies 10
   (iii) Rent 200
   (iv) Wages and salaries 600
   (v) Indirect Taxes 60
   (vi) Private final consumption expenditure 800
   (vii) Gross domestic capital formation 120
   (viii) Social security contribution by employers 55
   (ix) Royalty 25
   (x) Net factor income paid to abroad 30
   (xi) Interest 20
7. A farmer purchases Rs. 2000 worth of seeds, Rs. 3000 worth of fertilizers and pays Rs. 1500 as water charges to raise a wheat corp. He produces 100 quintals of wheat and sells the same at Rs. 200 per quintal. Calculate value added by the farmer.

8. Calculate Net National Disposable Income and $\text{NNP}_{FC}$ from the following data:

| (i)  | Factor income earned from Abroad | 300 |
| (ii) | Private Final Consumption expenditure | 600 |
| (iii) | Depreciation | 50 |
| (iv) | Govt. Final Consumption expenditure | 200 |
| (v)  | Net current transfer to Abroad | -5 |
| (vi) | Net domestic fixed capital formation | 110 |
| (vii) | Net factor income earned from Abroad | 10 |
| (viii) | Net import | -20 |
| (ix) | Net indirect Tax | 70 |
| (x)  | Change in stock | -10 |

9. Calculate (a) $\text{GDP}_{\text{MP}}$ (b) Factor income earned from Abroad:

| (i)  | $\text{GNP}_{\text{FC}}$ | 2500 |
| (ii) | Profit | 500 |
| (iii) | Export | 40 |
| (iv) | Compensation of Employees | 1500 |
| (v)  | Change in stock | 50 |
| (vi) | Net indirect Tax                  | 250 |
| (vii) | Net domestic capital formation   | 650 |
| (viii) | Gross domestic fixed capital formation | 700 |
| (ix) | Net current transfers from row   | 90  |
| (x) | Factor income paid to abroad     | 120 |
| (xi) | Interest                        | 400 |
| (xii) | Rent                           | 300 |

10. Calculate NDP\textsubscript{FC} accruing to the private sector: (Rs. crore)

| (i) | National income | 4000 |
| (ii) | Income from property and entrepreneurship accruing to the government administrative departments | 80 |
| (iii) | National debt interest | 10 |
| (iv) | Net factor income from abroad | (-) 20 |
| (v) | Savings of non-departmental enterprises | 50 |
| (vi) | Current transfers from the government | 30 |

11. From the following data calculate (a) Private income (b) Personal income (c) Personal disposable income. (Rs. Crore)

| (i) | Income from property and entrepreneurship accruing to the Govt. administrative Dept. | 100 |
| (ii) | Saving of non-departmental enterprises | 80 |
| (iii) | Factor income from NDP occurring to Private sector | 500 |
| (iv) | Corporation tax | 30 |
| (v) | Saving of Pvt. corporate sector | 65 |
| (vi) | Direct taxes paid by house hold | 20 |
| (vii) | Current transfers from Govt. Administrative departments | 10 |
| (viii) | Current transfer from Row | 20 |
12. Calculable value of output from the following data (Rs. crore):

<table>
<thead>
<tr>
<th>Item</th>
<th>Value (Rs. crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) NVA&lt;sub&gt;FC&lt;/sub&gt;</td>
<td>100</td>
</tr>
<tr>
<td>(ii) Intermediate consumption</td>
<td>75</td>
</tr>
<tr>
<td>(iii) Excise duty</td>
<td>20</td>
</tr>
<tr>
<td>(iv) Subsidy</td>
<td>5</td>
</tr>
<tr>
<td>(v) Depreciation</td>
<td>10</td>
</tr>
</tbody>
</table>

13. Calculate NDP<sub>FC</sub> and Private income from the following (Rs. crore):

<table>
<thead>
<tr>
<th>Item</th>
<th>Value (Rs. crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Domestic product accruing to government sector</td>
<td>300</td>
</tr>
<tr>
<td>(ii) Wages and salaries</td>
<td>1000</td>
</tr>
<tr>
<td>(iii) Net current transfer to abroad</td>
<td>-20</td>
</tr>
<tr>
<td>(iv) Rent</td>
<td>100</td>
</tr>
<tr>
<td>(v) Interest on public debt</td>
<td>30</td>
</tr>
<tr>
<td>(vi) Interest paid by production unit</td>
<td>130</td>
</tr>
<tr>
<td>(vii) Corporation Tax</td>
<td>50</td>
</tr>
<tr>
<td>(viii) Current transfer by government</td>
<td>40</td>
</tr>
<tr>
<td>(ix) Contribution to social security by employers</td>
<td>200</td>
</tr>
<tr>
<td>(x) Dividends</td>
<td>100</td>
</tr>
<tr>
<td>(xi) Undistributed profit</td>
<td>20</td>
</tr>
<tr>
<td>(xii) Net factor income from abroad</td>
<td>-10</td>
</tr>
</tbody>
</table>

14. Calculate GDP<sub>FC</sub> and factor income from abroad from the following data (Rs. crore):

<table>
<thead>
<tr>
<th>Item</th>
<th>Value (Rs. crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Compensation of employees</td>
<td>800</td>
</tr>
</tbody>
</table>

[Ans.: (a) 520 Crore (b) 425 Crore (c) 405 Crore]
(ii) Profit 2000
(iii) Dividends 50
(iv) Gross National Product at market price 1400
(v) Rent 150
(vi) Interest 100
(vii) Gross Domestic fixed capital formation 200
(viii) Net domestic capital formation 200
(ix) Change in stock 50
(x) Factor income from abroad 60
(xi) Net indirect taxes 120

**VALUE BASED QUESTIONS**

1. Governments provide many services free to the people especially to the weaker section of the society. What should be the status of these services in National income? Explain.

2. Undoubtedly, industrialization leads to rise in real GDP but at the same time it also creates many harmful effects in the environmental like pollution, deforestation etc. Critically examine this statement in the light of adequacy of GDP as an indicator of welfare.

**HINT**

(3-4 MARKS QUESTIONS)

7. (a) Stock (b) Flow
   (c) Flow (d) Stock
   (e) Stock (f) Stock

10. (a) Intermediate good because it is for resale
    (b) final good because purchased by ultimate consumer.

15. (a) Not include as paid for consumption expd.
    (b) Included as paid for production expd.
NUMERICAL QUESTIONS (6 MARKS)

1. Value added by firm X = (iv) + (vi) - (i)
   = 250 + (-20) - 100
   = Rs. 80 cr.

Value added by firm Y = (iv) + (vii) - (ii)
= 300 + 10 - 150
= Rs160 cr

\[ GVA_{MP} = \text{Value added by X + value added by Y} \]
= 80 + 160 = Rs. 240 cr.

2. \[ NVA_{FC} = \text{Sales} + \Delta S - I C - NIT - Dep. \]
= 800 + (-30) - 500 + 40 + 30
= Rs. 280 lakh.

3. \[ GVAMP = (i) + (ii) + (iii) + (vii) - (iv) - (v) - (vi) \]
= Rs 300 crore.

4. \[ NNP_{FC} = (iv) + (iii) + (ix) + (i) + (v) + (xii) - (vi) - (viii) + (x) - (xi) + (vi) \]
= Rs 1320 Cr.

\[ GNDI = 1320 + (ii) - (vii) + (x) = 1470 \text{ Cr.} \]

5. \[ NDP_{FC}, \text{ (Exp. method)} = (i) + (ii) + (iii) - (vii) + (ix) + (vii) = Rs.1110 \text{ crore.} \]

\[ MNP_{Fc} \text{ (value added method)} = (iv) - (v) - (vi) - (vii) + (ix) + (x) = Rs.1110 \text{ crore.} \]

= 600 + 55 + 200 + 25 + 20+130 + (-30)
= Rs. 1000 crore.

Class XII : Economics
National income (Exp. Method) = (vi) + (i) + (vii) + (xv) - (vii - xiii) - (v - ii) + (xi)
800 + 100 + 120 + 70 - 10 - 50 + (-30)
= Rs. 1000 crore.

7. Value of output
= Price × qty. sold
= 200 × 100 = Rs 20000 crore.
Intermediate consumption
= 2000 + 3000 + 1500 = Rs. 6500 crore.

Value added by farmer
Value of output - intermediate consumption
= 20000 - 6500 = Rs. 13500 crore.

8. \(N_{NP_{FC}}\)
= (ii) + (iv) + (vi) + (x) - (viii) - (ix) - (vii)
= 840 Cr.

NNDI
= 840 + 70 - (-5) = 915 Cr.

9. \(GDP_{MP} = 3050 \text{ Cr.}\)

FiFA = 120 Cr.

10. \(NDP_{FC} \text{ accruing to the private sector}\)
= (i) - (iv) - (ii) - (v)
= 4000 - (-20) - 80 - 50
= 4000 + 20 - 130 = Rs. 3890 crore

11. (a) Private Income
= Rs. 520 crore
(b) P.I.
= Rs. 425 crore (c) P.D.I. = Rs. 405 crore

12. V.O.
= Rs. 200 crore

13. \(NDP_{FC} \text{ Cr.}\)
= Rs. 1600 Cr.; Private Income = 1380 Cr.

14. \(GDP_{FC}\)
= Rs. 1300 Cr.

Factor Income to abroad
= Rs. 80 crore.


UNIT VI

MONEY AND BANKING

POINTS TO REMEMBER

- **Money**: Money may be defined as anything which is generally acceptable as a medium of exchange and also acts as common measures of value store of value and standard of deferred payment.

  ![Diagram of Money Functions]

- **Barter Exchange**: It is a system of exchange in which goods are directly exchanged one with other without the use of money.

- **Difficulties involved in the Barter Exchange**
  1. Absence of a common unit.
  2. The lack of double coincidence of wants
  3. Lacks of any satisfactory units to engage in contracts involving future payments.
  4. Does not provide for any method of storing generalised purchasing power.
  5. Lack of divisibility.
• **Supply of Money**: Total stock of money (currency notes, coins and demand deposits of banks) in circulation are held by the public at a given point of time.

• **Measures of Money Supply** = Currency held by Public + Demand Deposit of a Bank

• **Commercial Banks**: Commercial Banks is a financial institution who accepts deposits from the general public and provide loans facilities for investment with the aim of earning profit.

**Central Banks**: The central Bank is the apex institution of monetary and banking system of country. It makes monetary policy of the country in public interest. It manages, supervises and facilitates the banking system of the country.

![Diagram of Bank, Central Bank, and Commercial Bank relationships]

**Functions of Central Banks**

1. Bank of Issue
2. Banker of the Government
4. Controller of credit.

**MONEY CREATION OR CREDIT CREATION BY COMMERCIAL BANKS**

Commercial bank's demand deposits are a part of money supply. Commercial banks lend money to the borrowers by opening demand deposit account in their names. The borrowers are free to use this money by writing cheques. According to definition demand deposits are a part of money supply. Therefore, by creating additional demand deposits bank create money. Money creation depends upon two factor: Primary deposits and Legal Reserve Ratio (LRR). Deposit Multiplier = 1/LRR Total Deposit creation = Initial deposit X 1/LRR.
Repo rate: It is the rate of interest at which the Central Bank gives short-period loan to the commercial banks.

Reverse repo rate: It is the rate of interest at which the central bank of a country borrows money from commercial banks.

MULTIPLE CHOICE QUESTIONS

1. The merit of issuing notes with RBI can be seen in
   (a) Uniformity in note issue (b) Stability in currency
   (c) Control of credit (d) All of the above.

2. Money supply consists of
   (a) Currency (b) Deposits
   (c) Both currency & Deposits (d) None of the above.

3. Which are is qualitative instrument of RBI?
   (a) Cash Reserve Ratio (b) Repo rate
   (c) Moral suasion (d) Open market operation

4. Which is the legal tender money?
   (a) Cheque (b) Credit Card
   (c) Rupees (d) Demand Draft

5. There is inflationary situation in India, what step RBI should take?
   (a) Issuing more currency (b) Increase in Bank rate
   (c) Decrease in CRR (d) Decrease in SLR

Answer (MCQ)

1. (d) 2. (c) 3. (c) 4. (c) 5. (b)
SHORT ANSWER TYPE QUESTIONS (3-4 MARKS)

1. Explain the function of money as 'Unit of account'.

2. How does money solve the problem of double coincidence of wants?

3. Explain ‘Store of Value’ function of money.

4. What are open market operations? What is their effect on availability of credit?

5. Explain the concepts of reporate and reverse reporate.

6. Distinguish between SLR and CRR. Explain the Role of SLR and CRR in credit control.


8. State the role of Central Bank as a banker of the Government.

9. State any four functions of money.

10. Explain the ‘Standard of Deferred Payment’.

11. How Central Bank is controller of credit?

12. Explain how does followings helps to control the credit creation.
   
   (i) Open market operation
   
   (ii) Margin requirement of loans

H.O.T.S.

13. What is meant by statutory liquidity ratio (SLR)? State the effect of rise in rate of SLR on creation of credit.

14. Explain ‘currency authority’ and ‘controller of credit’ functions of central bank.

15. Explain effect of increase in bank rate on credit creation by commercial banks.
LONG ANSWER TYPE QUESTIONS (6 MARKS)

1. Define Central Bank. What are the functions of Central Bank?

2. Explain any four functions of money.

3. How does a central bank influence credit creation by commercial banks through 'open market operation'. Explain.

4. Explain the process of credit creation or money creation by commercial banks with the help of numerical example.
UNIT VII

DETERMINATIONS OF INCOME & EMPLOYMENT

POINTS TO REMEMBER

- AD refers to total value of all final goods and services that are planned to buy by all the sectors of the economy at a given level of income during a period of time. AD represents the total expenditure on goods and services in an economy during a period of time.

- Components of Aggregate demand are:
  (i) Household consumption expenditure (C).
  (ii) Investment expenditure (I).
  (iii) Govt. consumption expenditure (G).
  (iv) Net export \((X - M)\).

  Thus, \(AD = C + I + G + (X - M)\)
  
  In two sector economy \(AD = C + I\).

- AS refers to total value of all final goods and services that are planned to be produced by all the producing units in the economy during a given period of time. It is also the value of total output available in an economy during a given period of time.

  \(AS = C + S\)

- Aggregate supply represents the national income of the country.

  \(AS = Y\) (National Income)

- Consumption function shows functional relationship between consumption and Income.

  \(C = f(Y)\)
where \( C = \) Consumption

\( Y = \) National Income

\( f = \) Functional relationship.

Equation of Consumption Function

\[ C = \bar{C} + \text{MPC} \times Y \]

\( \bar{C} = \) Autonomous consumption.

\( \bar{C} \) does not changed/affected by change in income. Consumption expenditure at zero level of income is called autonomous consumption. It is income inelastic.

- Induced consumption is the expenditure which is affected by change in income. It is indicated by \( \text{MPC} \times Y \).

- Consumption function (propensity to consume) is of two types:
  
  (a) Average propensity to consume (APC)

  (b) Marginal propensity to consume (MPC)

- **Average propensity to Consume (APC)**: It refers to the ratio of consumption expenditure to the corresponding level of income.

\[
\text{APC} = \frac{\text{Consumption(C)}}{\text{Income(Y)}} = \frac{C}{Y}
\]

**Important Points about APC**

(i) **APC is more than 1**: as long as consumption is more than national income before the break-even point, APC > 1.

(ii) **APC = 1**, at the break-even point, consumption is equal to national income.

(iii) **APC is less than 1**: beyond the break-even point. Consumption is less than national income.

(iv) **APC falls with increase in income**.

(v) **APC can never be zero**: because even at zero level of national income, there is autonomous consumption.

- **Marginal Propensity to Consume (MPC)**: Marginal propensity to consume refers to the ratio of change in consumption expenditure to change in income.
\[ MPC = \frac{\text{Change in Consumption}}{\text{Change in Income}} = \frac{\Delta C}{\Delta Y} \]

**Important Points about MPC**

1. **Value of MPC varies between 0 and 1**
   - If the entire additional income is consumed, then \( \Delta C = \Delta Y \), making MPC = 1. However, if entire additional income is saved, than \( \Delta C = 0 \), making MPC = 0
   - Saving function refers to the functional relationship between saving and national income.
     \[ S = f (y) \]
     - Equation of Saving function
     \[ S = -\bar{C} + \text{MPS}.Y \]
     - Where \( S \) = saving
     \[ Y = \text{National Income} \]
     \[ f = \text{Functional relationship.} \]

2. Saving function (Propensity to Save) is of two types.
   - (i) **Average Propensity to Save (APS)**
   - (ii) **Marginal propensity to Save (MPS)**

3. **Average Propensity to Save (APS)**: Average propensity to save refers to the ratio of savings to the corresponding level of income.
   \[ APS = \frac{\text{Savings}}{\text{Income}} = \frac{S}{Y} \]

4. **Important Point about APS**
   - (1) **APS can never be 1 or more than 1**: As saving can never be equal to or more than income.
   - (2) **APS can be zero**: At break even point \( C = Y \), hence \( S = 0 \)
   - (3) **APS can be negative**: At income levels which are lower than the break-even point, APS can be negative when consumption exceeds income.
(4) APS rises with increase in income.

- **Marginal Propensity to Save (MPS)**: Marginal propensity to save refers to the ratio of change in savings to change in total income.

  \[ \text{MPS} = \frac{\text{Change in Savings}}{\text{Change in Income}} = \frac{\Delta S}{\Delta Y} \]

- **MPS varies between 0 and 1**
  
  (i) MPS = 1 if the entire additional income is saved. In such a case, \( \Delta S = \Delta Y \), then MPS = 1

  (ii) MPS = 0 If the entire additional income is consumed. In such a case, \( \Delta S = 0 \), then MPS = 0

- **Relationship between APC and APS**

  The sum of APC and APS is equal to one. It can be proved as under we know:

  \[ Y = C + S \]

  Dividing both sides by \( Y \), we get

  \[ \frac{Y}{Y} = \frac{C + S}{Y} \]

  \[ 1 = \text{APC} + \text{APS} \]

  APC + APS = 1

  because income is either used for consumption or for saving.

- **Relationship between MPC and MPS**

  The sum of MPC and MPS is equal to one. It can be proved as under:

  We know

  \[ \Delta Y = \Delta C + \Delta S \]

  Dividing both sides by \( \Delta Y \), we get
\[
\frac{\Delta Y}{\Delta Y} = \frac{\Delta C}{\Delta Y} + \frac{\Delta S}{\Delta Y}
\]

\[
1 = MPC + MPS
\]

\[
\therefore \frac{\Delta C}{\Delta Y} = MPC, \quad \frac{\Delta S}{\Delta Y} = MPS
\]

MPC + MPS = 1 because total increment in income is either used for consumption or for saving.

- Investment refers to the expenditure incurred on creation of new capital assets.

- The investment expenditure is classified under two heads:
  - (i) Induced investment
  - (ii) Autonomous investment.

**Induced Investment**: Induced investment refers to the investment which depends on the profit expectations and is directly influenced by income level (only for reference).

**Autonomous Investment**: Autonomous investment refers to the investment which is not affected by changes in the level of income and is not induced solely by profit motive. It is income inelastic.

**Ex-Ante Savings**: Ex-ante savings refer to the amount of savings which all the household intended to save at different levels of income in the economy at the beginning of the period. It is also known as planned savings.

**Ex-Ante Investment**: Ex-ante investments refer to the amount of investment which all the firms plan to invest at different levels of income in the economy at the beginning of the period. It is also known as planned investment.

**Ex-Post Saving**: Ex-post savings refer to the actual or realised savings in an economy during a financial year at the end of the period.

**Ex-Post Investment**: Ex-post investment refers to the actual or realised investment in an economy during a financial year at the end of the period.

Equilibrium level of income is determined only at the point where AD = AS or S = I. But it cannot always be at full employment level also as it can be at less than full employment.

Full employment is a situation when all those who are able and willing to work at prevailing wage rate, get the opportunity to work.

Voluntary unemployment is a situation where person is able to work but not willing to work at prevailing wage rate.
Involuntary unemployment is a situation where worker is able and willing to work at prevailing wage rate but does not get work.

Under employment is a situation where AD is less than required AS at full employment level.

Investment multiplier ($K$) is the ratio of change in income ($ΔY$) due to change in investment $ΔI$.

$$K = \frac{ΔY}{ΔI} \quad \text{or} \quad K = \frac{1}{1-\text{MPC}} \quad \text{or} \quad K = \frac{1}{\text{MPS}}$$

Value of investment multiplier lies b/w 1 to infinitive.

Excess demand refers to a situation when aggregate demand exceeds aggregate supply corresponding to full employment.

Inflationary gap is the gap by which actual aggregate demand exceeds the level of aggregate demand required to establish full employment. It measures the amount of excess of aggregate demand.

**Deficient Demand:** When AD falls short of AS at full employment it is called deficient demand.

Deflationary gap is the gap by which actual aggregate demand is less than the level of aggregate demand required to establish full employment. It measures the amount of deficiency of aggregate demand.

**Methods to control excess demand or deficient demand**

1. Fiscal Measures or Fiscal Policy
   - Change in Tax
   - Change in Public expenditure
   - Change in Public borrowing
   - Deficit financing (Printing new notes)

2. Monetary Measures or Monetary Policy
   - Quantitative measures
     - Bank rate
     - Repo rate
     - Reverse repo rate
     - Open Market operation
     - Legal Reserve Ratio
   - Qualitative/Selective measures
     - Marginal requirement
     - Rationing of credit
     - Direct Action
**MULTIPLE CHOICE QUESTIONS (1 MARK)**

1. When all the able and bodied people who are willing to work at prevailing wage rate but not getting work then it is called
   (a) Voluntary Unemployment  (b) Involuntary unemployment
   (c) Under employment      (d) None of the above

2. Which of the following can become negative
   (a) APC   (b) APS
   (c) MPC   (d) MPS

3. Consumption function is the functional relation b/w
   (a) income and saving
   (b) price level and consumption
   (c) income and consumption
   (d) income, saving and consumption

4. Value of investment multiplier directly related with MPC but universally related with
   (a) APC  (b) MPS
   (c) APS  (d) None of the above.

5. Excess demand leads to inflationary pressure in the economy because
   (a) fall in unintended inventory
   (b) rise in unintended inventory
   (c) fall in national income
   (d) none of the above

6. Which one of the following is the quantitative measures of monetary policy?
   (a) Repo rate
   (b) open market operation
7. When AD falls short of AS at full employment level of output then it is called
   (a) excess demand (b) deficient demand
   (c) inflationary gap (d) all of the above

8. When value of MPC is 0.75 then the value of investment multiplier is
   (a) K = 4 (b) K = 5
   (c) K = 2 (d) K = 3

9. At the break even point
   (a) APC = 1 (b) C = 4
   (c) saving = 0 (d) all of the above

10. The consumption expenditure which is affected by change in income is called
    (a) Autonomous consumption (b) Minimum consumption
    (c) Induced consumption (d) None of the above

**SHORT ANSWER TYPE QUESTIONS (3-4 MARKS)**

1. Define aggregate demand. State its components.

2. Distinguish between average propensity to consume and marginal propensity to consume with the help of numerical examples.

3. Define full employment, voluntary unemployment and involuntary unemployment.

4. What is meant by investment multiplier? Explain the relationship between MPC and K?

5. State briefly the effect of excess demand on output, employment and price.

6. Explain the concept of inflationary gap with the help of a diagram?
7. Explain the situation of deficient demand in an economy with the help of a diagram.

8. Explain the role of Bank rate in influencing the availability of credit in an economy.

9. Give the meaning of excess demand? Explain any two fiscal measures to correct excess demand.

10. State the steps of derivation consumption current from saving current.

11. What do you mean by repo rate and reverse repate rates. How do these help to control deficient demand.

12. Explain with the help of diagram the concept of under-employment equilibrium.

13. Distinguish between voluntary and involuntary unemployment.

14. Explain the concept of consumption function.

15. Briefly explain the relationship between MPC and MPS.

16. Giving reasons, state whether the following statements are true or false:
   (i) When marginal propensity to consume is zero, the value of investment multiplier will also be zero.
   (ii) Value of average propensity to save can never be less than zero.

17. Can an economy be in equilibrium when there is unemployment in the economy? Explain.

18. How does change in marginal requirement controls the situations of excess and deficient demand?

19. What do you mean by open market operations? How does it control the availability of credit in the economy?

H.O.T.S.


21. What happens if AD > AS prior to the full employment level of output?
22. State whether the following statement are true or false. Give reasons for your answer

(a) When investment multiplier is 1, the value of MPC is zero.

(b) The value of average propensity to save can never be greater than 1.

23. Giving reasons, state whether the following statements are true or false:

(i) When marginal propensity to consumer is zero, the value of investment multiplier will also be zero.

(ii) Value of average propensity to save can never be less than zero.

24. Find national income from the following: autonomous consumption = Rs. 100, marginal propensity to consume = 0.80, investment = Rs. 50

25. Calculate APS and MPS from the following table:

<table>
<thead>
<tr>
<th>Income (Rs. 000) :</th>
<th>0</th>
<th>100</th>
<th>200</th>
<th>300</th>
<th>400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumption (Rs. 000):</td>
<td>40</td>
<td>120</td>
<td>200</td>
<td>280</td>
<td>360</td>
</tr>
<tr>
<td>Expenditure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

26. Complete the table

<table>
<thead>
<tr>
<th>Income (Rs.)</th>
<th>MPC (Rs.)</th>
<th>Savings (Rs.)</th>
<th>APS (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-</td>
<td>-90</td>
<td>-</td>
</tr>
<tr>
<td>100</td>
<td>0.6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>200</td>
<td>0.6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>300</td>
<td>0.6</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**LONG ANSWER TYPE QUESTIONS (6 MARKS)**

1. Why must aggregate demand be equal to aggregate supply at the equilibrium level of income and output? Explain with the help of a diagram?

2. Explain the equilibrium level of income with the help of saving and investment curves. If planned saving exceed planned investment, what changes will bring about the equality between them?

3. Explain the working of multiplier with the help of a numerical example.
4. When planned investment is more than planned savings, what will be its impact on income and employment. Explain with the help of diagram.

5. How does Central Bank use repo rate and inverse repo rate in controlling excess demand?

6. Can there be equilibrium in case of underemployment. Explain with the help of a diagram?

7. Distinguish between excess demand and deficient demand.

8. In an economy \( S = -50 + 0.5Y \) is the saving function (where \( S \) = saving and \( Y \) = national income) and investment expenditure is 7000. Calculate.
   (i) Equilibrium level of national income
   (ii) Consumption expenditure at equilibrium level of national income.

9. If an economy consumption function \( (C) = 75 + 0.9y \) and investment expenditure is Rs. 400 crore. Calculate :
   (i) Equilibrium level of income.
   (ii) Saving at equilibrium level of national income.

10. Given below is the consumption function in an economy.
    \[ C = 100 + 0.5Y \]
    with the help of a numerical example show that in this economy, as income increase APC will decrease.

**HOTS (6 MARKS QUESTIONS)**

11. Draw a straight line saving curve from the consumption curve, explaining the method of derivation. Show a point on the consumption curve at which APC is equal to 1.

12. How increase in investment will effect income level of an economy? Explain with the help of an example and diagram.

13. Briefly explain the concept of under employment equilibrium with the help of diagram. How increase in investment helps in achieving, full employment equilibrium?

14. What is ‘deficient demand’ in macroeconomics? Explain the role of open market operations in correcting it.
15. Explain the step taken in derivation of the saving curve from the consumption curve use. Use diagram.

16. Can an economy be in equilibrium when \( S = -40 + 0.25 \, Y \) and investment of Rs. 60.

17. If MPC in the economy is 0.8. Complete the following table:

<table>
<thead>
<tr>
<th>Income (Rs.) (Y)</th>
<th>Consumption (Rs.) (C)</th>
<th>Saving (Rs.) (S)</th>
<th>Investment (Rs.) (I)</th>
<th>AD (C+I)</th>
<th>AS (C+S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-60</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td></td>
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<tr>
<td>200</td>
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<td>300</td>
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<tr>
<td>600</td>
<td></td>
<td>40</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>700</td>
<td></td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. If an economy total autonomous spending \( A + I \) is Rs. 50 and MPS is 0.2. Equilibrium level of income is Rs. 400 crore, find planned AD and also explain that is economy in equilibrium?

19. State whether the following statement are true or false Give reasons for your answer
   
   (a) When investment multiplier is 1, the value of MPC is zero.
   
   (b) The value of average propensity to save can never be greater than 1.

20. Giving reasons, state whether the following statements are true or false:
   
   (i) When marginal propensity to consumer is zero, the value of investment multiplier will also be zero.
   
   (ii) Value of average propensity to save can never be less than zero.

21. At a result of increase in investment by Rs. 100 crore, national income rises by Rs. 500 crore. Find out marginal propensity to consume and value of investment multiplier.
22. We know that value of investment multiplier directly depends upon MPC. More MPC means more value of investment multiplier. It leads to more generation of national income. Why does underdeveloped economy underdeveloped even though there is more MPC? Explain.

23. ‘Inflation is unjust, deflation is inexpedient but out of these two deflation is worst. Do you agree? Give reasons.

Answers: 1. (b), 2. (b), 3. (c), 4. (b) 5. (a) 6. (d) 7. (b) 8. (a) 9. (d) 10. (c).

3 MARKS QUESTIONS

24. \( K = \frac{1}{1 - MPC} = \frac{1}{1 - 0.8} = \frac{1}{0.2} = 5 \)

\( \Delta Y = K \times \Delta I = 5 \times 50 = Rs. 250 \text{ crore} \)

25. Income Consumption Expenditure MPC APS

<table>
<thead>
<tr>
<th>Income (Rs. 1000)</th>
<th>Consumption Expenditure (Rs. 1000)</th>
<th>MPC ((\Delta C/\Delta Y))</th>
<th>APS (S/Y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>40</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>100</td>
<td>120</td>
<td>0.8</td>
<td>–0.2</td>
</tr>
<tr>
<td>200</td>
<td>200</td>
<td>0.8</td>
<td>0</td>
</tr>
<tr>
<td>300</td>
<td>280</td>
<td>0.8</td>
<td>0.067</td>
</tr>
<tr>
<td>400</td>
<td>360</td>
<td>0.8</td>
<td>0.1</td>
</tr>
</tbody>
</table>

26. Income MPC Savings APS

<table>
<thead>
<tr>
<th>Income (Rs. 1000)</th>
<th>MPC</th>
<th>Savings</th>
<th>APS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>–</td>
<td>–90</td>
<td>–</td>
</tr>
<tr>
<td>100</td>
<td>0.6</td>
<td>150</td>
<td>–0.5</td>
</tr>
<tr>
<td>200</td>
<td>0.6</td>
<td>210</td>
<td>–0.05</td>
</tr>
<tr>
<td>300</td>
<td>0.6</td>
<td>270</td>
<td>–0.1</td>
</tr>
</tbody>
</table>

6 MARKS QUESTIONS

8. (a) Y = Rs. 1500 (b) C = Rs.800

9. (a) Y = Rs. 4750 (b) S = Rs. 400
17. | Income (Y) | Consumption (C) | Saving (S) | Investment (I) | AD (C+1) | AS (C+S) |
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>60</td>
<td>-60</td>
<td>40</td>
<td>100</td>
<td>0</td>
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<tr>
<td>100</td>
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<td>40</td>
<td>180</td>
<td>100</td>
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<td>200</td>
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<td>40</td>
<td>260</td>
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<td>540</td>
<td>60</td>
<td>40</td>
<td>580</td>
<td>600</td>
</tr>
<tr>
<td>700</td>
<td>620</td>
<td>80</td>
<td>40</td>
<td>660</td>
<td>700</td>
</tr>
</tbody>
</table>

18. Given MPS = 0.2

\[\text{MPC} = 0.8 \quad \text{C} = \bar{C} + 0.84\]

\[\text{AD} = \text{C} + 1 \quad \text{Given}\]

\[= \bar{C} + 0.84 + I \quad \bar{C} + I = \bar{A} = 50\]

\[= \bar{C} + 0.84\]

\[\text{AD} = 50 + 0.84\]

**In Equilibrium**

\[\text{AS} = \text{AD}\]

\[\text{Y} = \text{AD}\]

\[4000 = 50 + 0.8 \times 4000\]

\[4000 = 50 + 3200\]

\[4000 \neq 3250\]

An economy will not be in equilibrium because AD is not equal to AS.

21. \[K = \frac{\Delta Y}{\Delta I} = \frac{500}{100} = 5\]

\[K = 5\]
\[ K = \frac{1}{1 - \text{MPC}} \]

\[ 5 = \frac{1}{1 - \text{MPC}} \]

\[ 5 - 5 \text{ MPC} = 1 \]

\[ 5 = 1 + 5 \text{ MPC} \]

\[ 5 - 1 = 5 \text{ MPC} \]

\[ 4 = 5 \text{ MPC} \]

\[ \text{MPC} = \frac{4}{5} = 0.8 \]

\[ \text{MPC} = 0.8 \]
UNIT VIII

GOVERNMENT BUDGET AND THE ECONOMY

POINTS TO REMEMBER

- Budget is a financial statement showing the expected receipt and expenditure of Govt. for the coming fiscal or financial year.
- Main objectives of budget are:
  (i) Reallocation of resources.
  (ii) Redistribution of income and wealth.
  (iii) Economic Stability.
  (iv) Management of public enterprises.
  (v) Economic Growth.
- There are two components of budget:
  (a) Revenue budget
  (b) Capital budget.
- Revenue Budget consists of revenue receipts of Govt. and expenditure met from such revenue.
- Capital budget consists of capital receipts and capital expenditure.

BUDGET RECEIPTS

Revenue Receipts

Tax

Direct Tax
- Income Tax
- Corporate Tax
- Wealth 

Property Tax

Indirect Tax
- Sale Tax
- Service Tax
- Excise duty
- Custom Duty

Non-Tax

Commercial Revenue
- Interest
- Dividend, Profits
- External Grants
- Administrative Revenues
- Fee
- Licence Fee
- Fines, Penalties

Capital Receipts

- Borrowing & other liabilities
- Recovery of Loans
- Other receipts
  (Dis-investments)
• **Direct Tax**: When Government imposes a tax on a person and paid by the same person is called direct tax. Its burden cannot be shifted to others.

• **Indirect Tax**: When Government imposes a tax on a person but partially or wholly paid by other person is called indirect tax. Its burden can be shifted to others.

• **Revenue Receipts**:
  
  (i) Neither creates liabilities for Govt.
  
  (ii) Nor causes any reduction in assets.

• **Capital Receipts**:
  
  (i) It creates liabilities or
  
  (ii) It reduces assets.

---

**BUDGET EXPENDITURE**

**Revenue Expenditure**

*e.g.*, Interest Payment, subsidies etc.

**Capital Expenditure**

*e.g.*, Construction of school building
* Repayment of loans etc.

• **Revenue Expenditure**:
  
  (i) Neither creates assets
  
  (ii) Nor reduces liabilities

• **Capital Expenditure**:
  
  (i) It creates assets
  
  (ii) It reduces liabilities.

• **Revenue Deficit**: Total revenue expenditure > Total revenue receipts

• Revenue deficit when total revenue expenditure excess total revenue receipts.

• **Implications of Revenue Deficit are**:
  
  (i) It leads to repayment burden in future without investment.
  
  (ii) It shows wasteful expenditures of Govt. on administration.
  
  (iii) It increase the burden of taxes.

• **Fiscal Deficit**: Total expenditures > Total Receipts excluding borrowing.
• **Fiscal Deficit**: When total expenditure exceeds total receipts excluding borrowing.

• **Implications of Fiscal Deficits are**: 
  (i) It leads to inflationary pressure.
  (ii) A country has to face debt trap.
  (iii) It reduces future growth and development.

• **Primary Deficit**: Fiscal deficit – Interest payments.

• **Primary Deficit**: By deducting Interest payment from fiscal deficit we get primary deficit.

• **Budgetary Deficit**: Total Expenditure > Total Receipts.

**MULTIPLE CHOICE QUESTIONS**

1. Budget is a ..........  
   (a) Financial statement  (b) Political statement  
   (c) Monetary statement (d) None of the above

2. Which one is Direct tax  
   (a) Service tax  (b) Excise duty  
   (c) Corporation tax (d) Entertainment tax

3. If budgetary deficit is nil and borrowings and other liabilities are 70 crore, what is the amount of fiscal deficit?  
   (a) Nil  (b) 30 crore  
   (c) Can't say (d) 70 crore

4. Payment of interest is  
   (a) Revenue expenditure  (b) Capital expenditure  
   (c) Primary deficit  (d) Fiscal deficit
5. If in a budget, Revenue deficit is Rs. 50,000 and borrowings are Rs. 75,000 crore. How much is the fiscal deficit?
   (a) 50,000 crore (b) 75,000 crore
   (c) 25,000 crore (d) 1,25,000 crore

6. If borrowing and other liabilities are added to the budget deficit, we get...
   (a) Revenue deficit (b) Capital deficit
   (c) Primary deficit (d) Fiscal deficit

7. Which is the example of Administrative non-tax Revenue of Central Government?
   (a) Profit from PSUs (b) Disinvestment
   (c) Excise duty (d) Recovery of loan

8. Capital receipt may come from
   (a) Market borrowing (b) Provident fund
   (c) Recoveries of loan (d) All the above

9. Which are is capital expenditure of govt.
   (a) Salaries of Staff (b) Payment of Interest
   (c) Purchase of machinery (d) Subsidy

10. Fiscal Deficit always leads to
    (a) Increase in borrowings (b) Inflationary Pressure
    (c) Crowding out (d) All the above

Answers (MCQ)
1. (a) 2. (c) 3. (d) 4. (a) 5. (b) 6. (d) 7. (a) 8. (d) 9. (c) 10. (d)

SHORT ANSWER TYPE QUESTIONS (3-4 MARKS)

1. Explain the allocation of resources objective of Govt. budget.

2. What is the difference between revenue budget and capital budget?
3. What is meant by revenue receipts? Explain the components of revenue receipts of the Govt.

4. Distinguish between direct tax and indirect tax.

5. What do you mean by capital receipts? What are the main components of the capital receipts?

6. Give the meaning of revenue deficit and fiscal deficit. What problems can the fiscal deficit create?

7. What is fiscal deficit? What are its implications?

8. Distinguish between revenue expenditure and capital expenditure with an example of each.

9. Explain the “redistribution of income” objective of Govt. budget.

10. Explain the ‘Economic stability’ objective of Govt. budget.

**HOTS (3-4 MARKS)**

11. Under which situations deficit budget is beneficial for the economy.

12. Are fiscal deficits necessarily inflationary? Give reasons in support of your view.

13. Discuss the issue of deficit reduction.

14. How can surplus budget be used during inflation.

15. Giving reasons, classify the following as direct and indirect taxes.
   - (i) Entertainment tax
   - (ii) Corporation tax
   - (iii) Excise tax
   - (iv) Capital gains tax.

16. From the following data about a government budget find (a) revenue deficit, (b) fiscal deficit and (c) primary deficit.

   (Rs. arab)
   - (i) Plan capital expenditure 120
   - (ii) Revenue expenditure 100
   - (iii) Non-plan capital expenditure 80

Class XII : Economics 100
(iv) Revenue receipts 70
(v) Capital receipts net of borrowing 140
(vi) Interest payments 30

17. Distinguish between:
   (i) Capital expenditure and Revenue expenditure
   (ii) Fiscal deficit and Primary deficit.

18. Why does the Fiscal Deficit equal to borrowings.

**LONG ANSWER QUESTION**

19. Classify the following into revenue receipts and capital receipts give reasons

   (a) Dividends earned from Indian Oil Corporation.
   (b) Loan taken from USA for the infrastructural developments.
   (c) Receipt of grant from Bill gates foundation for AIDS patients.
   (d) Profit of ONGC, a public enterprises.
   (e) Funds raised from public in the form of National Saving certificates.
   (f) License and court fee received by the Govt. of India during year 2014-15.

20. Classify the following into revenue expenditure Give reasons.

   (i) Repayment of loan to the World Bank
   (ii) Salary paid to Army Officer
   (iii) Interest paid on National Debt
   (iv) Construction of roads under the Pradhan Mantri’s Gramin Sadak Yojnas
   (v) Financial grant given to Nepal for earthquake tragedy
   (vi) Expenditure on constructions of Bullet train.
15. (i) Indirect tax  
(ii) Direct tax  
(iii) Indirect tax  
(iv) Direct tax  

16. (a) Revenue deficit = £ 30 arab  
(b) Fiscal deficit = £ 90 arab  
(c) Primary deficit = £ 60 arab  

19. (a) Revenue Receipts  
(b) Capital Receipts  
(c) Revenue Receipts  
(d) Revenue Receipts  
(e) Capital Receipts  
(f) Revenue Receipts  

20. (i) Capital Expenditure  
(ii) Revenue Expenditure  
(iii) Revenue Expenditure  
(iv) Capital Expenditure  
(v) Revenue Expenditure  
(vi) Capital Expenditure
VALUE BASED QUESTIONS

1. Do you think that Bullet train is essential for India's economic development and growth, as it requires a huge sum of investment? How will it affect Indian Govt.'s budget?

2. Unseasonal rain has damaged essential foodgrain crops, due to this reason, price will remain high of foodgrains. Which measure of budget will you support to reduce the prices of these foodgrains.

3. In each year's budget, Finance Minister raises excise duty on liquor and tobacco products as these products are harmful to our health. Which objective of budget Finance Minister wants to achieve by raising taxes?
UNIT IX

BALANCE OF PAYMENT

POINTS TO REMEMBER

• The balance of payment is a comprehensive and systematic records of all economic transaction between normal residents of a country and rest of the world during an accounting year.

ACCOUNTS OF BALANCE OF PAYMENTS

Current Account
The current account records exports and imports of goods and services and unilateral transfers.

Capital Account
It records of all such transactions between normal residents of a country and rest of the world which relate to sale and purchase of foreign assets and liabilities during an accounting year.

Components of Current Account
1. Visible items (import and export of goods)
2. Invisible items (import and export of services.)
3. Unilateral transfers.

Components of Capital Account
1. Foreign Direct investment.
2. Loans
3. Portfolio investment.
4. Banking capital transactions.

• The components of current account do not cause a change in assets or Liabilities status of the residents of a country or its Government.

• The components of capital accounts cause in change in assets or Liability status of the residents and the Government of a country.
• Balance of trade is the net difference of Import and export of all visible items between the normal residents of a country and rest of the world.

• Autonomous items are those items of balance of payment which are related to such transaction as are determined by the motive of profit maximisation and not to maintain equilibrium in balance of payments. These items are generally called ‘Above the Line items’ in balance of payment.

• Accommodating item refers to transactions that take place because of other activity in Balance of Payment. These transactions are meant to restore the Balance of Payment identity. These items are generally called ‘Below the Line items’.

• **Deficit of Bop Account**: When total inflows of foreign exchange on account of autonomous transactions are less than total outflows on account such transaction then there is a deficit in Bop.

• Foreign exchange rate refers to the rate at which one unit of currency of a country can be exchanged for the number of units of currency of another country.

**SYSTEM OF EXCHANGE RATE**

- Fixed exchange rate
- Flexible exchange rate

• In fixed exchange rate system, the rate of exchange is officially fixed or determined by Government or Monetary Authority of the country.

• **Merits of Fixed Exchange Rate**
  1. Stability in exchange rate
  2. Promotes capital movement and international trade.
  3. No scope for speculation.

• **Demerits of Fixed Exchange Rate**
  1. Need to hold foreign exchange reserves.
  2. No automatic adjustment in the ‘Balance of payments.’
  3. Enhance dependence on external sources.
• In a system of flexible exchange rate (also known as floating exchange rates), the exchange rate is determined by the forces of market demand and supply of foreign exchange.

• The demand of foreign exchange have inverse relation with flexible exchange rate. If flexible exchange rate rise the demand of foreign exchange falls. Vice versa.

• **Sources of Demand for Foreign Exchange**
  
  (a) To purchase goods and services from the rest of world.
  
  (b) To purchase financial assets (*i.e.*, to invest in bonds and equity shares) in a foreign country.
  
  (c) To invest directly in shops, factories, buildings in foreign countries.
  
  (d) To send gifts and grants to abroad.
  
  (e) To speculate on the value of foreign currency.
  
  (f) To undertake foreign tours.

• The supply of foreign exchange have positive relation with foreign exchange rate. If foreign exchange rate rises the supply of foreign exchange rate also rises and vice versa.

• **Sources of Supply of Foreign Exchange**
  
  (i) Direct purchase by foreigners in domestic market.
  
  (ii) Direct investment by foreigners in domestic market.
  
  (iii) Remittances by non-residents living abroad.
  
  (iv) Flow of foreign exchange due to speculative purchases by N.R.I.
  
  (v) Exports of goods and services.

• **Merits of Flexible Exchange Rate**
  
  (i) No need to hold foreign exchange reserves
  
  (ii) Leads to automatic adjustment in the ‘balance of payments’.
  
  (iii) To increase the efficiency in the economy by achieving optimum resources allocation.
(iv) To remove obstacles in the transfer of capital and trade.

- **Demerits of Flexible Exchange Rate**
  
  (i) Fluctuations in future exchange rate.
  
  (ii) Encourages speculation.
  
  (iii) Discourages international trade and investment.

- **Determination of Equilibrium Foreign Exchange Rate**: Equilibrium FER is the rate at which demand for and supply of foreign exchange are equal. Under free market situation, it is determined by market forces i.e. demand for and supply of foreign exchange. There is inverse relation between demand for foreign exchange and exchange rate. There is direct relationship b/w supply of foreign exchange and exchange rate. Due to above reasons demand curve downward sloping and supply curve is upward sloping curve Graphically intersection of demand. Curve and supply curve determines the equilibrium foreign exchange rate (i.e. or)

![Equilibrium Foreign Exchange Rate Diagram](image)

- **Devaluation of a currency**: When government or monetary authority of a country officially lowers the external value of its domestic currency (in respect of all other foreign currency) is called devaluation of a currency. It takes place by government order under fixed exchange rate system.

- **Revaluation of a currency**: When government or monetary authority of a country officially raises the external value of its domestic currency is called revaluation. It takes place by government order under fixed exchange rates system.

- **In currency depreciation** there is a fall in the value of domestic currency, in term of foreign currency due to change in demand and supply of the currency under flexible exchange rate system.

- **In currency appreciation**, there is a rise in the value of domestic currency in terms of foreign currency due to change in demand and supply of the currency under flexible exchange rate system.
Managed floating system is a system in which the central bank allows the exchange rate to be determined by market forces but intervenes at times to influence the rate. When central bank finds the rate is too high, it starts selling foreign exchange from its reserve to bring down it. When it finds the rate is too low. It starts buying to raise the rate.

**MULTIPLE CHOICE QUESTIONS**

1. Which item is an intangible item in balance of payments statement?
   
   (a) Export of food grains  
   (b) Import of crude oil  
   (c) Banking services provided in other countries  
   (d) Import of steel by steel industry

2. Which one is deals with debts and claims of a country?
   
   (a) Balance of capital account  
   (b) Balance of trade account  
   (c) Balance of current account  
   (d) Balance of services

3. Capital account may be
   
   (a) Private capital  
   (b) Banking capital  
   (c) Official Capital  
   (d) All the above

4. Current account of BOP records transactions is relating to
   
   (a) Exchange of goods  
   (b) Exchange of services  
   (c) Unilateral transforms  
   (d) All the above

5. In currency depreciations, there is
   
   (a) Fall in the value of domestic currency in terms of foreign currency  
   (b) No change in the value of domestic currency  
   (c) Rise in the value of domestic currency in terms of foreign currency  
   (d) Decrease in the production of goods in domestic country.
6. Major functions of foreign exchange market are
   (a) International transfer of foreign currency
   (b) Providing credit for foreign trade
   (c) Hedging foreign exchange rate
   (d) All of the above

7. Buyers and Sellers of foreign exchange are
   (a) Central Bank    (b) Commercial Bank
   (c) Brokers        (d) All the above

8. Which one country manipulates exchange rate against the interest of other country, is known as
   (a) Managed floating    (b) Dirty floating
   (c) Wide band          (d) Crawling peg.

9. How exports are affected during appreciations of currency?
   (a) Increases           (b) Decreases
   (c) Remains constant    (d) None of the above

10. Increase in the value of domestic currency by the govt. is called
    (a) Depreciation       (b) Devaluation
    (c) Revaluation        (d) Appreciation

Answers (MCQ)
1. (c) 2. (a) 3. (d) 4. (d) 5. (a) 6. (d) 7. (d) 8. (b) 9. (a) 10. (c)

SHORT ANSWER TYPE QUESTIONS (3-4 MARKS)

1. Write any three points of difference between BOT and BOP.
2. Distinguish between current account and capital account of BOP.
3. How can deficit in BOP be financed?
4. What are the components of the current account of the balance of payment account?

5. For the given exchange rates state which currency is appreciating and which one is depreciating

<table>
<thead>
<tr>
<th>Old Exchange Rate</th>
<th>New Exchange Rate</th>
<th>Appreciating Currency</th>
<th>Depreciating Currency</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) 1£ = $1</td>
<td>1£ = $2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(ii) 1€ = 3$</td>
<td>1€ = 2$</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(iii) 1HK$ = ₹20</td>
<td>1HK$ = ₹18</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(iv) 1US$ = 100¥</td>
<td>1US$ = 102¥</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

6. Distinguish between autonomous and accommodating transaction in the balance of payment account. Give an example each.

7. Give three reasons why people desire to have foreign exchange.

8. Give any three/four sources of supply of foreign exchange.

9. Explain the relationship between foreign exchange rate and demand for it.

10. Explain the relationship between foreign exchange rate and supply of foreign exchange.

11. Explain the terms ‘appreciation and depreciation of currency.’

12. Explain the merits and demerits of fixed exchange rate.

13. Explain the merits and demerits of flexible exchange rate.

14. How is flexible exchange rate determined in a free market economy? Explain with the help of diagram.

15. Higher the foreign exchange rate, lower the demand for foreign exchange. Explain why?

16. Lower the foreign exchange rate, higher the demand for foreign exchange. Explain why?

17. Explain the impact of Devaluation of domestic currency on the export and imports of an economy.
18. Give the meaning of fixed, flexible and managed floating exchange rate.

19. Why the demand for foreign exchange falls when the foreign exchange rate rises explain with the help of an example.

**6 MARKS QUESTIONS**

1. Explain the distinction between Autonomous and Accommodating transactions in balance of payments. Also explain the concept of balance of payments ‘deficit’ in this context.

2. What is balance of payments account? Name three components each of its current account and capital account.

3. How is balance of trade different from balance of payments? State the items not included in balance of trade.

4. Classify whether the following transactions are to be accounted in the current account or capital accounts of India’s BOP
   (a) Purchase of TISCO shares by a foreign resident
   (b) Sale of Indian Skirts in Germany
   (c) Infosys borrowing from a US Bank
   (d) Money sent by an Indian to her friend in Canada
   (e) Purchase of Land in England
   (f) Gifts received from a relative in USA

**HOTS**

20. What is the impact of appreciation of currency on the demand for foreign exchange?

21. What is the impact of appreciation of currency on the supply of foreign exchange?

22. What is the impact of depreciation of currency on the demand for foreign exchange?

23. What is the impact of depreciation of currency on the supply of foreign exchange?
24. Distinguish between devaluation and depreciation of domestic currency.

25. Giving reasons state whether the following statements are true or false:

(i) Excess of foreign exchange receipts over foreign exchange payments on account of accommodating transactions equals deficit in the balance of payments.

(ii) Export and import of machines are recorded in capital account of the balance of payments account.

**HINTS**

5. | Appreciating currency | Depreciating currency |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) £</td>
<td>$</td>
</tr>
<tr>
<td>(ii) $</td>
<td>€</td>
</tr>
<tr>
<td>(iii) ₹</td>
<td>HK $</td>
</tr>
<tr>
<td>(iv) US $</td>
<td>¥</td>
</tr>
</tbody>
</table>

**LONG QUESTIONS HINT**

4. Capital account - (a), (c) and (e)
   Current account (b), (d) and (f)

**VALUE BASED QUESTIONS**

1. Recently, India has given financial help to Nepal, which has been affected by a severe earthquake. How will it affect India’s BOP?

2. Indian currency has been appreciated against US($) for the last six-seven months, how will it affect the imports and fiscal deficits of the Government of India?

3. For the last many months, price of crude oil in international market has decreased, how will it affect, India’s current account deficit?
SECTION “A”

1. If x and y are two perfect substitute goods its indifference curve will be
   (a) Negatively sloped concave to the origin.
   (b) Negatively sloped convex to the origin.
   (c) Negatively sloped straight line.
   (d) Straight line parallel to y axis.

2. In which form of market, the elasticity of demand curve is less
   (a) Monopolistic Compt.   (b) Oligopoly
   (c) Monopoly            (d) Perfect competition.
3. Which of the following curve is not a u-shaped curve.

   (a) AVC       (b) AFC
   (c) AC        (d) MC

4. How does AC behave when MC rises.

   (a) AC rises   (b) AC may fall or rise.
   (c) AC falls   (d) AC is constant.

5. A consumer buys 18 units of a goods at the price of Rs. 9 per unit. The Price elasticity of demand for the goods is (-) 1. How many units the consumer will by at a price of Rs. 10 per unit?

6. “Scarcity of resources is the cause root of all economic problem”. Explain

7. Why are the firms said to be interdependent in an oligopoly market? Explain.

8. State the relationship between MC & AVC. (use diagram)

9. How does a consumer decide, what amount of a good he should purchase at a given price.

10. Explain the effects of a “Price ceiling”.

11. Explain why an indifference curve is convex to the origin?

   or

What is “excess demand” for a good in a market?

   Explain its chain of effects.

12. (a) Explain how technological progress and input price change are determinants of supply of a good.

   (b) Why is Average revenue always equal to price?

13. Explain the behaviour of marginal product in different phases with the help of suitable diagram.

14. From the following schedule, find the firm’s equilibrium output in terms of marginal cost and marginal revenue. Give reason in support of your answer. Also calculate profit at this output.
<table>
<thead>
<tr>
<th>Output (units)</th>
<th>Total Revenue</th>
<th>Total cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>24</td>
<td>23</td>
</tr>
<tr>
<td>4</td>
<td>32</td>
<td>31</td>
</tr>
<tr>
<td>5</td>
<td>40</td>
<td>41</td>
</tr>
</tbody>
</table>

15. Market of a Commodity is in equilibrium. Number of consumer in the market decreases. Explain the chain of effects of this change till the market again reaches equilibrium

or

Explain the conditions of consumer’s equilibrium with the help of indifference curve analysis.

SECTION ‘B’

16. Loans to state govt. are a part of

(a) Revenue Receipt  
(b) Capital receipts

(c) Capital expenditure  
(d) Plan revenue expenditure

17. Which of the following is an indirect tax

(a) Corporation tax  
(b) Wealth tax

(c) Interest tax  
(d) Service tax

18. ............. is what buyers pay, and not what production units actually receive.

(a) GDPmp  
(b) NDPFc

(c) NNPFc  
(d) NNPmp

19. If MPC is equal to MPS the value of ‘K’ is

(a) 2  
(b) 0

(c) ∞  
(d) 1
20. Distinguish between real and nominal GDP.

21. Explain the role of central bank as the “Banker’s Bank”.

22. How does Central Bank Controls Credit Creation in the economy through open market operation”. Explain.

23. Distinguish between Autonomous items and Accommodating items of BOP.

24. Define “Supply of Money” State its components.

25. Tax rates on higher income group have been increased. Which economic value does it reflect? Explain.

26. What is consumption function? Outline the steps required to be taken in deriving the consumption curve from the given saving. Use diagram.

27. How does increase in foreign direct investment affect the price of foreign exchange? Use diagram. Also, explain its effect on aggregate demand and national income.

28. Complete the task :-

<table>
<thead>
<tr>
<th>Income</th>
<th>Savings</th>
<th>APC</th>
<th>MPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>-20</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>100</td>
<td>0</td>
<td>-</td>
<td>0.6</td>
</tr>
<tr>
<td>150</td>
<td>30</td>
<td>0.8</td>
<td>-</td>
</tr>
<tr>
<td>200</td>
<td>50</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

29. Calculate “NNP<sub>PC</sub>” and “Private Income” from the following Rs. Arab

(i) National debt interest 60
(ii) Wages & salaries 600
(iii) Net Current transfer to abroad 20
(iv) Rent 200
(v) Transfer Payment by govt. .70
(vi) Interest 300
(vii) Net domestic product at factor cost accruing to govt. 400
(viii) Social security contribution by employees 100
(ix) Net factor income paid to abroad 50
(x) Profits 300

HINTS

(1) c (2) c (3) b (4) b
(5) 16 units

(14) Producer will be in equilibrium at 4 units of outputs.

\[
\text{Profits} = TR - TC = 32 - 31 = \text{Rs. } 1
\]

(16) c (17) d (18) a (19) a

(28) \begin{tabular}{c|c}
APC & MPC \\
- & - \\
1.4 & 0.6 \\
1 & 0.6 \\
.8 & 0.4 \\
.75 & 0.6 \\
\end{tabular}

(29) \[\text{NNP}_{\text{FC}} = (\text{ii} + \text{viii}) + (\text{iv}) + (\text{vi}) + (\text{x}) - (\text{ix})\]
\[= \text{Rs. } 1450 \text{ arab}\]

Private Income
\[= \text{NNP}_{\text{FC}} - (\text{vii}) + (\text{i}) + (\text{v}) - (\text{iii})\]
\[= \text{Rs. } 1160 \text{ arab}\]
MODEL TEST PAPER

Time : 3 Hours
Maximum Marks : 100

General Instructions :

(i) All question in both the sections are compulsory
(ii) Marks for questions are indicated against each question.
(iii) Question No. 1 to 5 and 16 to 20 are multiple choice question (MCQs) carrying 1 marks each.
(iv) Question No. 6 to 8 and 21 to 23 short answer questions carrying 3 marks each. Answer to them should not normally exceed 60 words each.
(v) Question No. 9 to 11 and 24 to 26 are also short answer question carrying 4 marks each. Answer to them should not normally exceed 70 words each.
(vi) Question No. 12 to 15 and 27 to 30 are long answer question carrying 6 marks each. Answer to them should not normally exceed 100 words each.
(viii) Answer should be brief and to the point and the above word limit be adhered to as far as possible.

SECTION - A

1. A budget line can shift if :
   (a) Price of the good on x-axis changes
   (b) Price of the good on y-axis changes
   (c) Income of the consumer changes
   (d) Any of the above
2. If price of good 'X' rises and it leads to a fall in demand for good 'Y', the two goods are:
   (a) Substitutes  (b) Complementary
   (c) Normal      (d) Inferior

3. When AP is maximum, MP is equal to
   (a) AP  (b) TP
   (c) Zero  (d) One

4. All the curves are U-shaped, except
   (a) AVC  (b) AFC
   (c) AC    (d) MC

5. The market supply of a commodity is affected by
   (a) State of technology  (b) Number of firm
   (c) Government policy  (d) All of the above

6. Why does the problem of 'how to produce' arise? Explain

7. Explain the effect of technological progress on supply of a good. or
   Explain the effect of tax imposed on a good on the supply of the good.

8. Recently, in Nepal a lot of people died and many factories were destroyed in the earthquake. How will it affect the PPF of the economy of Nepal?

9. Define marginal utility. Explain the relation between total utility and marginal utility.

10. A consumer spends Rs. 500 on a good priced at Rs. 4 per unit. When the price rises by 25% the consumer continues to spend Rs. 500 Calculate the price elasticity of demand by percentage method.

11. Define cost. Distinguish between explicit cost and implicit cost or
Draw average revenue and marginal revenue curves in a single diagram of a firm which can sell more units of a good explain.

12. Explain the conditions of consumer’s equilibrium using indifference curve analysis use diagram.  

13. Explain the law of variable proportion with the help of TP and MP curves.  

14. How are the firms in an oligopoly market inter department on earth other? Explain.  

15. Market for a good is in equilibrium. There is simultaneous “increase” both in demand and supply of the good. explain its effect on market price.  

OR  

Market for a good is in equilibrium. There is simultaneous “decrease” both in demand and supply of the good. Explain its effect on market price.

16. Operating surplus is equal to  
(a) Profit  
(b) Profit + Rent + Interest  
(c) Profit + Rent  
(d) Profit + Rent + Royalty + Interest  

17. Which will be included in national Income?  
(a) Winning from lottery  
(b) Milk purchase by a dairy shop  
(c) National Debt Interest  
(d) None of these  

18. Which of the following will increase the money supply  
(a) Fall in repo rate  
(b) Decrease in CRR  
(c) Purchase of securities in open market  
(d) All of these

19. Demand deposit are  
(a) Chequable deposits  
(b) Non-chequable deposits  
(c) Deposits which can be withdrawn on demand  
(d) Both (a) and (c) withdrawn on demand
20. Balance of Trade equals:
   (a) Exports less imports
   (b) Exports of goods less imports of goods
   (c) Exports of services less
   (d) None of the above

21. Explain how ‘distribution of gross domestic product’ is a limitation in taking GDP as an index of welfare.

OR

Distinguish between stocks and flows with the help of examples.

22. What are ‘autonomous’ and ‘accommodating’ transactions in balance of payment account? Give an example of each.

23. What will impact fall on the expenditure of an American citizen who comes to India for medical treatment if foreign exchange rate is increased?

24. Calculate $NVA_{FC}$ from the following data:
   (i) Subsidy 40
   (ii) Sales 800
   (iii) Depreciation 300
   (iv) Exports 100
   (v) Closing stock 20
   (vi) Opening stock 50
   (vii) Intermediate purchases 500
   (viii) Purchase of machinery for own use 200
   (ix) Import of raw material 60

25. Explain the ‘allocation of resources’ objective of Government budget.

OR

Explain the ‘redistribution of income’ objective of Government budget.

27. Explain the concept of ‘excess demand’ in macroeconomics. Also explain the role of ‘open market operation’ in correcting it.  

OR

Explain the concept of ‘deficient demand’ in macroeconomics. Also explain the role of repo rate in correcting it.  

28. Explain the process of money creation by the commercial bank with the help of a numerical example.  

29. Complete the following table  

<table>
<thead>
<tr>
<th>Income (Rs.)</th>
<th>Consumption expenditure (Rs.)</th>
<th>MPS</th>
<th>APS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>80</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>100</td>
<td>140</td>
<td>0.4</td>
<td>-</td>
</tr>
<tr>
<td>200</td>
<td>-</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>240</td>
<td>-</td>
<td>0.20</td>
</tr>
<tr>
<td></td>
<td>260</td>
<td>0.8</td>
<td>0.35</td>
</tr>
</tbody>
</table>

30. Find out (a) National Income  
   (b) Net National Disposable Income  

(Rs. Crore)  

(i) Factor income from abroad  
(ii) Private final consumption Expenditure  
(iii) Consumption of fixed capital  
(iv) Government final Consumption expenditure  
(v) Net Current transfer to abroad  
(vi) Net domestic fixed capital formation  
(vii) Net factor income to abroad  

Class XII : Economics  122
(viii) Net imports  (-) 20
(ix) Net indirect tax  70
(x) change in stocks  (-) 10

MARKING SCHEME

SECTION - A

1. (a)  1
2. (b)  1
3. (a)  1
4. (b)  1
5. (d)  1
6. It arises due to availability of alternative technique of production.  1
   (i) Labour intensive techniques
   (ii) Capital intensive techniques
7. Technological progress, by raising productivity, bring down per unit cost. Price remains unchanged, profit increases. This induces producer to supply more.  3

   OR

   Imposition of tax raises cost. Price remain unchanged, profit falls. So producers supply less
8. PPF of economy of Nepal will shift to the left due to decrease of resources in the economy.  3
9. Correct definition  1
10. Price | Total expenditure | Quantity
    4    | 500          | 125
    5    | 500          | 100
         |              | 1½
\[ \Delta P = 1 \quad \Delta Q = -25 \]

\[ Ed = \frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q} \]

\[ = \frac{-25}{4} \cdot \frac{1}{125} \]

\[ Ed = -0.80 \]

11. Correct definition.

Difference between explicit cost + implicit cost

OR

Correct diagram

Correct explanation

12. Conditions

(i) \( MRS_{xy} = \frac{P_x}{P_y} \)

(ii) \( MRS_{xy} \) is continuously falling

Explanation

Correct diagram 2 (No need for explanation)

13. Correct curves of TP & MP

Correct explanation

14. Correct explanation

15. There are three possibilities

(i) If the relative increase in demand is less than increase in supply, price will rise.

(ii) If the relative increase in demand is less than increase in supply, price will fall
Price will fall due to excess supply

(iii) If the relative increase in demand is equal to the increase in supply, price will remain unchanged.

Price will remain unchanged because there is neither excess demand nor excess supply

OR

Similar possibilities but is opposite direction

SECTION - B

16. (d) 1
17. (d) 1
18. (d) 1
19. (d) 1
20. (b) 1
21. It is possible that with rise in GDP, inequalities in the distribution of income may also increase. It means gap between rich and poor increases. So, the welfare of the people may not rise as much as the rise in GDP. 3

OR

Stocks : Variables whose magnitude is measured at a particular point of time are called stock variables. Example - capital

Flows : Variables whose magnitude is measured over a period of time are called flow variable. Example - Investment 1/2

22. Autonomous transactions are made independently of the state of the balance of payments; does't matter wheather it is in deficit or in surplus. 1

Example - Export, import (anyone) 1/2

Accommodating transactions are undertaken to cover up the deficit/surplus in the BOP. 1

Example - Official reserves, Borrowing from IMF (anyone) 1/2
23. Expenditure on treatment will reduce because of increasing foreign exchange rate, his purchasing power will increase 3

24. \[ NVA_{FC} = (\text{ii})+(\text{v-vi})-\text{vii}-(-\text{i})-\text{iii} \]
\[ = 800+(20-50)-500-(-40)-30 \]
\[ = 840-560 \]
\[ = 280 \]

25. Correct explanation 4

or

Correct explanation 4

26. Fiscal deficit : When total expenditure exceeds total receipts excluding borrowing 1

Implication : Any three 1×3

(i) It leads to inflationary pressure
(ii) A country has to face debt trap
(iii) It reduces future growth and development

27. Correct explanation of excess demand 3

Rule of open market operation 3

Or

Correct explanation of deficient demand 3

Rule of repo rate 3

28. Correct explanation of money creation 3

Correct numerical example 3

29. 1×6 = 6

Income = 300, 400 Consumption expenditure = 200

MDS = 0.4, 0.6 ADS = -0.4
30. \[ NI = ii + iv + (vi + x) - viii - ix - vii \]
\[ = 600 + 200 + (110 + (-10) - (-20) - 70 - 10) \]
\[ = 600 + 200 + 100 + 20 - 70 - 10 \]
\[ = 840 \]

\[ NNDI = NI + ix - v \]
\[ = 840 + 70 + (-5) \]
\[ = 915 \]
Q. 1 Why is a production possibility curve concave? Explain.

Ans. The production possibility curve being concave means that MRT increases as we move downward along the curve. MRT increases because it is assumed that no resource is equally efficient in production of all goods. As resources are transferred from one good to another, less and less efficient resources have to be employed. This raises cost and raises MRT.

Q.2 Explain properties of a production possibility curve.

Ans. There are two properties of a production possibility curve.

(1) Downward sloping : It is because as more quantity of one good is produced some quantity of the other good must be sacrificed.

(2) Concave to the origin : It is because the marginal rate of transformation increases as more of one good is produced.

Q. 3 Explain the problem of ‘what to produce’.

Ans. An economy can produce different possible combinations of goods and services with given resources. The problem is that, out of these different combinations, which combination is produced. If production of one good increases then less resources will be available for other goods.

Q.4 What is ‘Marginal Rate of Transformation’? Explain with the help of an example.

Ans. MRT is the rate at which the units of one good have to be sacrificed to produce one more unit of the other goods in a two goods economy. Suppose an economy produces only two goods X and Y. Further suppose that by employing these resources fully and efficiently, the economy produces 1X + 10Y. If the
economy decides to produce 2X, it has to cut down production of Y by 2 units. Then 2Y is the opportunity cost of producing 1X. Then 2Y: IX is the MRT.

Q. 5 Explain the problem ‘How to produce’.

Ans. Broadly, there are two techniques of production.

(i) **Labour Intensive Technique** : Under this technique, production depends more on the use of labour.

(ii) **Capital Intensive Technique** : Under this technique, production depends more on the use of machines (called capital). Efficient technique of production is that which uses minimum possible inputs for a given amount of output. So that, cost per unit of output is minimised.
UNIT II

CONSUMER EQUILIBRIUM AND DEMAND

3 - 4 MARKS QUESTIONS

Q.1 Distinguish between ‘increase in demand and ‘increase in quantity demanded’ of a commodity.

Ans. When demand increases at given price then it is called ‘increase in demand’. On the other hand, when demand increases by decrease in the price of a commodity then it is called increase in quantity demanded.

Q.2 Given price of a good, how does a consumer decide as to how much of that good to buy?

Ans. Consumer purchases upto the point where marginal utility is equal to the price (MU=P). So long as marginal utility is greater than price, he keeps on purchasing. As he makes purchases MU falls and at a particular quantity of the good MU becomes equal to price. Consumer purchases upto this point.

Q.3 A consumer consumes only two goods X and Y. State and explain the conditions of consumer’s equilibrium with the help of utility analysis.

Ans. There are two conditions of consumer equilibrium.

Explain:

(i) \( \frac{MU_x}{P_x} = \frac{MU_y}{P_y} \)

If \( \frac{MU_x}{P_x} > \frac{MU_y}{P_y} \) the consumer is not in equilibrium because he can raise his total utility by buying less of Y and more of X and vice versa in case of \( \frac{MU_x}{P_x} < \frac{MU_y}{P_y} \)

(ii) **MU falls as consumption increases**: If MU does not fall as consumption increases the consumer will end up buying only good which is unrealistic or consumer will never reach the equilibrium position.
Q.4 Explain how the demand for a good is affected by the price of its substitute goods. Give examples.

Ans. Related goods are either substitutes or complementary.

**Substitute Goods**: When price of a substitute falls, it becomes cheaper than the given good. So the consumer substitutes it for given good then demand of given good will decrease.

Similarly, a rise in the price of substitute will result in increase in the demand for given good. *For example*: Tea and Coffee.

Q.5. What do your mean by inferior goods. Give example also.

Ans. **Inferior Goods**: These are the goods the demand for which decreases as income of buyer rises. Thus, there is negative relationship between income and demand or income effect is negative. Example: coarse grain, coarse cloth.

Q.6 Explain any four factors that affect price elasticity of demand.

Ans.

1. **Nature of Commodity**: Necessasities like Salt, Kerosene oil etc. have inelastic demand and luxuries have elastic demand.

2. **Availability of substitutes**: Demand for goods which have close substitute is relatively more elastic and goods without close substitutes have less elastic demand.

3. **Different uses**: Commodities that can be put to different uses have elastic demand for instance electricity has different uses.

4. **Habit of the consumer**: Goods to which consumers become habitual will have inelastic demand.

*Examples* - Liquor and Cigarette.

Q.7 Explain relationship between total utility and marginal utility with help of a schedule.

Ans.

<table>
<thead>
<tr>
<th>Quantity (Units)</th>
<th>Total Utility</th>
<th>Marginal Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>18</td>
<td>-2</td>
</tr>
</tbody>
</table>
(1) As long as MU decreases but is positive, TV increases at decreasing rate.

(2) When marginal utility is equal to zero then total utility is maximum.

(3) When marginal utility is negative. Total utility starts diminishing.

Q.8 Define marginal utility. State the law of diminishing marginal utility.

Ans. Marginal Utility: It is addition to the total utility as consumption is increased by one more unit of the commodity.

Law of Diminishing Marginal Utility: It states that as consumer consumes more and more units of a commodity, the utility derived from each successive unit goes on decreasing. According to this law TU increases at decreasing rate and MU decreases.

6 MARKS QUESTIONS

Q.1 Explain the three properties of indifference curves.

Ans. Three properties of indifference curves are as follows:

1. **Slopes downward from left to right**: To consume more of one good the consumer must give up some quantity of the other good so that total utility remains the same.

2. **Convex towards the origin**: MRS declines continuously due to the operation of the law of diminishing marginal utility.

3. **Higher indifference curves represents higher utility**: Higher indifference curve represent large bundle of goods. Which means more utility because of monotonic preference.

Q.2 Explain the conditions of consumer’s equilibrium using indifference curve analysis. Use diagram.

Ans. There are two conditions for consumer’s equilibrium.

(i) **MRS = Px/Py**

(ii) **MRS is continuously falling.**

Explanation
Suppose there are two goods X and Y. The first condition of consumer’s equilibrium is MRS must be equal to the ratio of prices of two goods \( \frac{P_X}{P_Y} \).

If MRS > \( \frac{P_X}{P_Y} \), it means consumer values X more than what market values and willing to give more price than market price he will purchase more of X this cause fall in MRS and it will continue until that when MRS = \( \frac{P_X}{P_Y} \).

If MRS < \( \frac{P_X}{P_Y} \). It means consumer values X less than what market values. Consumer is willing to give less price then market price and he will purchase less of X, by this MRS will increase and it will continue till MRS = \( \frac{P_X}{P_Y} \).

(ii) MRS is continuously falling unless the equality between the MRS and \( \frac{P_X}{P_Y} \) will not be reached.

Consumer is in equilibrium at point E. OX of X and OY of Y is optimum bundle of both goods.
UNIT III

PRODUCER BEHAVIOUR AND SUPPLY

3-4 MARKS QUESTIONS

Q.1 Explain the likely behaviour of total product under the phase of increasing return to a factor with the help of numerical example.

Ans. Increasing return to a factor is the first phase of the Law of return to a factor. When more and more units of a variable factor is combined with fixed factor up to a certain level total physical product increases with increasing rate.

<table>
<thead>
<tr>
<th>Machine</th>
<th>Unit of labour</th>
<th>Total Physical Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>42</td>
</tr>
</tbody>
</table>

Q.2 With the help of example distinguish between total fixed cost and total variable cost.

Ans. Total Fixed Cost Total Variable Cost

1. Fixed cost remains constant at each level of output i.e. it do not change with change in level of output.
2. it can not be zero when output is zero.
3. its curve is parallel to X-axes.
4. Example : Rent, wages of permanent staff.

1. Variable cost changes with the changes in level output. it increase or decrease as the output change.
2. it is zero when output is zero
3. Its curve is parallel to the curve of total cost.
4. Example : cost of raw material wages of casual labour.
Q.3 Draw average cost, average variable cost and marginal cost curves on a single diagram and explain their relations.

Ans.

Relation of AC, AVC and MC

1. MC intersects AC and AVC at their minimum level.
2. AC and AVC decreases before the intersection by MC, but remain greater than MC.
3. AC and AVC starts to increase after the intersection by MC, and becomes less than MC.
4. As output increase, AC and AVC tends to be closer but the difference between AC and AVC can never be zero.

Q.4 Draw average cost, average variable cost and average fixed cost curves on a single diagram and explain their relation.
1. AC is the vertical summation of AVC and AFC.

2. The difference between AC and AVC falls as output increase but the difference of AC and AFC increase.

3. As output increases AC and AVC tends to be closer but their curves do not intersect each other because AFC always remains more than zero.

Q.5 Explain the relation between average revenue and marginal revenue when a firm can sell an additional unit or a good by lowering the price.

Ans. 1. AR and MR both decreases.

2. MR decrease at the rate of twice than AR.

3. MR become zero and negative but AR can never be zero,

Q.6 Distinguish between change in quantity supplied and change in supply.

Ans.  

<table>
<thead>
<tr>
<th>Change in Quantity Supplied</th>
<th>Change in Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It refers the change in supply due to change in price of the good</td>
<td>1. it refer’s the change in supply due to the change in the determinates of supply other than price.</td>
</tr>
<tr>
<td>2. Determinants of supply other than price remains unchanged</td>
<td>2. Price of the good remains unchanged</td>
</tr>
<tr>
<td>3. Law of supply apply.</td>
<td>3. Law of supply does not apply.</td>
</tr>
<tr>
<td>4. There is upward and downward movement alongwith curve in this situation.</td>
<td>4. Supply curve shifted to leftward or rightward under this supply condition</td>
</tr>
</tbody>
</table>

Q.7 Explain how does change in price of input affect the supply of a good.

Ans. **Increase in Price of Input** : Increase in price of input is cause of a decrease in the supply of a good because the production cost of a good will increase due to increase in price of input. It will reduced the profit. So producer will decrease the supply of the good.

**Decrease in the good** : Decrease in price of input is cause of increase in supply because when the price of input decrease the production cost of a good also decreases. Decreases in cost increases the profit margin. It motivate to producer to increase the supply of the good.
Q.8 Explain how changes in prices of other products influence the supply of a given product.

Ans. The supply of a good is inversely influenced with the change in price of other product which can explain as follows:

A. **Rice in Price of Other product:** When there is rise in the price of other product the production of these product become more profitable due to unchanged cost in comparison of the production of given produce. As a result the producer will produce more quantity of other product so the supply of given good will decrease.

B. **Fall in the Price of Other Product:** When there is fall in the price of other product the production of these product become less profitable due to unchanged cost in comparison of the production of given product. As a result producer will produce less quantity of other product so the factors of production shifted for the production of given good. It cause an increase in supply of given good.

Q.9 Explain how technology advancement brings a positive impact in the supply of a given product. It reduces per unit cost and increase the productivity of given factors of production. Due to these reasons production of given production becomes more profitable.

6 MARKS QUESTIONS

Q.1 Explain the law of variable proportion with the help of diagram/schedule.

OR

What the likely behaviour of total product/marginal product when only one input is increased for increasing production? Use diagram/Schedule.

Ans. Law of variable proportion state the impact of change in unit of a variable factor on the physical output. When more and more unit of a variable factor combined with fixed factor then total product increases at increasing rate in the beginning, then increases at decreasing rate and finally it starts falling.

Phase I : TP increase at an increasing rate

Phase II : TP :increases at diminishing rate

Phase III : TP falls
Behaviour of MP

Phase I  MP increases and becomes maximum.
Phase II MP decreases and becomes zero.
Phase III MP becomes negative.

<table>
<thead>
<tr>
<th>Machine</th>
<th>Unit of Labour</th>
<th>TPP (unit)</th>
<th>MPP (unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>22</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>21</td>
<td>−1</td>
</tr>
</tbody>
</table>
First Phase: TP increases with increasing rate upto A point. MPP also increase and becomes maximum of point C.

Second Phase: TPP increases with diminishing rate and it is maximum on point B. MPP start to decline and becomes zero at D point.

Third phase: TPP starts to decline and MPP becomes negative.

• Important instruction for giving the answer of above question.

• Do not use diagram for the explanation of this question if it is instructed to use schedule and do not schedule if the explanation of this question asked with the help of diagram.

• Do not explain the behaviour of marginal product with the help of schedule and diagram. If their is instruction to explain only the behaviour of total product.

• Do not explain the behaviour of total product with help of schedule and diagram if there is instruction to explain only the behaviour of marginal product.

Q.2 What is producer’s equilibrium? Explain the conditions of produce’s equilibrium through the ‘marginal cast and marginal revenue’ approach. Use diagram/schedule.

Ans. Producer’s equilibrium refer’s the stage under which with the help of given factor’s of production producer attain the level of production of which he is getting maximum profit. The conditions of producer’s equilibrium through he the marginal cost and marginal revenue approach are as follows.

1. Marginal cost should be equal to marginal revenue.

2. With the increase in output after equilibrium marginal cost should be greater than marginal revenue.

<table>
<thead>
<tr>
<th>Output (units)</th>
<th>MR (Rs.)</th>
<th>MC (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
OR

<table>
<thead>
<tr>
<th>Output (units)</th>
<th>MR (Rs.)</th>
<th>MC (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

**Explanation of Conditions**

(i) So longs as MC is less than MR, it is profitable for the producer to go on producing more because it adds to its profits. He stops producing more when MC becomes equal to MR.

(ii) When MC is greater than MR after equilibrium it means the profit will decline if producer will produce more units of the good.

**Important instruction for giving the answer of the above question:**

- Use only one schedule/diagram given as above for the explanations.

- Do not use diagram for the explanation of this question if it is instructed to use schedule and do not use schedule if the explanation of this questions is asked with the help of diagram.
UNIT IV

FORMS OF MARKET AND PRICE DETERMINATION

3-4 MARKS QUESTIONS

Q.1 Explain the implication of large number of buyers in a perfectly competitive market.

Ans. The implication is that no single buyer is in a position to influence market price on its own because an individual buyer’s purchase for negligible proportion of the total purchase of the good in the market.

Q.2 Explain why are firms mutually interdependent in an oligopoly market

Ans. Firms are mutually interdependent because an individual firm’s decision about price and output after considering the possible reaction by the rival firms.

Q.3 Explain the implication of ‘freedom of entry and exit to the firms’ by perfect competition.

Ans. The firms enter the industry when they find that the existing firm is earning super normal profits. Their entry raises output of the industry bringing down the market price and thus reduce profits. The entry continues till profits are reduced to normal (or zero). The firms start leaving; industry when they are facing losses. This reduces output of the industry raises market price and reduces losses. The exit continues till the losses are wiped out.

Q.4 Explain the implication of ‘perfect knowledge about market’ perfect competition.

Ans. Perfect knowledge means that both buyers and sellers are fully informed about the market price. Therefore no firm is in a position to charge different price and no buyer will pay a higher price. As a result uniform price prevails in the market.
Q.5 Why is the demand curve more elastic under monopolistic competition than under monopoly.

Ans. The elasticity of demand is high when the product has close substitute and that elasticity of demand tends to be low when the product have no close substitutes. As we know in monopolistic competition large number of close substitutes and in monopoly there is no close substitutes. Hence the demand curve under monopolistic competition is more elastic than that under monopoly.

Q.6 Why is a firm under perfect competition a price taken v monopoly a price market? Explain in brief.

Ans. A firm under perfect competition a price taken by the following reasons:

1. **Number of Firms**: The number of firms under perfect competition is so large that no individual firm by changing sale, can cause any meaningful change in the total market supply. Hence, market price remains unaffected.

2. **Homogeneous Product**: All firms in a perfectly competitive industry produce homogeneous product. Hence, price remains same.

3. **Perfect Knowledge**: All the buyers and sellers have perfect knowledge about market price so no firm charge a different price than market price. Hence a uniform price prevails in the market.

A firm under monopoly a price maker by the following reasons:

1. A monopolist is a single seller of the product in the market. Hence it has full control over supply.

2. There are no close substitutes of the monopoly product, hence the demand is less elastic or ‘inelastic.’

3. There are legal, technical and natural barriers to the entry of new firms so that there is no fear of increase in market supply.

Q.7 Differentiate between price discrimination and product differentiation.

Ans. **Price Discrimination**: Price discrimination is a situation when a monopolist charges different price from different buyers of the same product. This is generally done to maximise profits.
**Product Differentiation:** Product differentiation is a situation when different producers under monopolistic competition, try to differentiate their product in terms of its shape, size, packaging, trade mark or brand name. This is done to attract buyers from the rival firms in the market.

**Q.8** Distinguish between perfect competition and monopoly.

**Ans.**

<table>
<thead>
<tr>
<th>Perfect Competition</th>
<th>Monopoly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Large number of buyers and sellers</td>
<td>1. One seller &amp; large no. of buyers.</td>
</tr>
<tr>
<td>2. Products are homogeneous.</td>
<td>2. There is no close substitutes of goods.</td>
</tr>
<tr>
<td>3. Free Entry and exit</td>
<td>3. Barriers to entry</td>
</tr>
<tr>
<td>4. There is no control over price</td>
<td>4. There is full control over market price.</td>
</tr>
</tbody>
</table>

**Q.9** Differentiate between Monopoly and Monopolistic Competition.

**Ans.**

<table>
<thead>
<tr>
<th>Monopoly</th>
<th>Monopolistic competition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Single seller and large</td>
<td>1. Large number of buyers and sellers.</td>
</tr>
<tr>
<td>2. No close substitutes</td>
<td>2. There is product differentiation.</td>
</tr>
<tr>
<td>3. Products Barriers to entry</td>
<td>3. Free entry and exit.</td>
</tr>
<tr>
<td>4. Selling cost is zero.</td>
<td>4. Heavy selling costs are incurred.</td>
</tr>
</tbody>
</table>

**Q.10** What is oligopoly? State its main properties/features.

**Ans.** **Oligopoly:** It is a form of the market in which there are a few big sellers of a commodity and a large number of buyers. There is a high degree of interdependence among the sellers regarding their price and output policy.

Following are some principal features of oligopoly:

1. A few firms
2. High degree of interdependence.
3. Non-price competition.
4. Entry barriers.
5. Formation of cartels.
6 MARKS QUESTIONS

Q.1 Distinguish between collusive and non-collusive oligopoly. Explain how the oligopoly firms are interdependent in taking price and output decisions.

Ans. Collusive oligopoly is one in which the firms cooperate with each other in deciding price and output where as, non-collusive oligopoly is one in which the firms compete with each other.

The firms are interdependent because each firm takes into consideration the likely reactions of its rival firms when deciding its output and price policy.

It makes a firm dependent on other firms. The firm may have to reconsider the change in the light of the likely reactions.

Q.2 Market for a good is in equilibrium. There is an ‘increase’ in demand for this good. Explain the chain of effects of this change. Use diagram.

- Increase in demand shifts the demand curve from \( D_1 \) to \( D_2 \) to the right leading to excess demand \( E_1 F \) at the given price \( OP_1 \).

- Since the consumers will not be able to buy all they want to buy at this price, there will be competition among buyers leading rise in price.

- As price rises, demand starts falling (along \( D_2 \)) and supply, starts rising (along \( S \)) as shows by arrows in the diagram.

- The quantity rises to \( OQ \) and price to \( OP_2 \).

Q.3 Market for a good is in equilibrium. There is simultaneous ‘decrease’ both in demand and supply of the good. Explain its effect on market price.
Ans. There are three possibilities:

1. If the relative (percentage) decrease in demand is greater than the decrease in supply, price will fall. The price will fall because of excess supply in the market.

2. If the relative (percentage) decrease in demand is less than the decrease in supply price will rise.

3. If the relative (percentage) decrease in demand is equal to the decrease in supply price will remain unchanged.

   The price will remain unchanged because there is neither excess demand nor excess supply in the market.

Q.4 Explain why the equilibrium price of commodity is determined at that level of output at which its demand equals its supply.

Ans. Suppose demand is greater than supply. Since the buyers will not be able to buy all what they want, there will be competition among the buyers. It will have on upward influence on the price. As a result demand will start falling and supply rising. It will go on till demand is equal to supply again.,

It demand is less than supply. Since the sellers will not able to sell all what they want, there will be competition among the sellers. It will have a downward influence on the price. As a result demand will start rising and supply falling. It will go on till demand is equal to supply again.

Hence, the equilibrium price of a commodity is determined at that level of output at which its demand equals its supply.
UNIT V

NATIONAL INCOME AND RELATED AGGREGATES

MULTIPLE CHOICE QUESTIONS (1 MARK)

Q.1. Milk is purchased by family is:
   (a) Single use consumer goods
   (b) Durable use consumer goods
   (c) Single use capital goods
   (d) Durable use capital goods.

Q.2. GNP is:
   (a) inclusive of depreciation
   (b) inclusive of indirect tax.
   (c) Exclusive of subsidies
   (d) all of the above.

Q.2. Video and Video Camera are:
   (a) both flows variables
   (b) both stocks variables
   (c) Video is stock and video camera is flow variable.
   (d) Video is flow and video camera is stock variable.

Q.4. If \( \text{GDP}_{MP} \) Rs. 200 subsidies = 10 and depreciation = 20, then \( \text{NDP}_{FC} \) equals.
   (a) Rs. 190,         (b) Rs. 200
   (c) Rs. 210          (d) Rs. 230
Q.5. Purchase of A/c by a restaurant is:
(a) Consumption expenditure on durable goods
(b) Consumption expenditure on non-durable goods.
(c) Intermediate expenditure.
(d) Final expenditure.

Q.6 Value added is
(a) Sale price – Purchase price
(b) sales + Stock – Purchase
(c) Sales + change in Stocks – Intermediate costs
(d) Value of output – Purchases.

Q.7. Operating surplus is:
(a) Profit + Interest (b) Profit + Rent
(c) Profit + Rent + Interest (d) Profit + Rent + Royalty + Interest

Q.8. Growing sugar Cane is a part of this sector of the economy.
(a) Primary Sector (b) Secondary Sector
(c) Territory Sector (d) None of the above.

Q.9. Welfare of the country is determined by
(a) Real GDP (b) Per Capital real GDP
(c) Nominal GDP (d) Per Capital real GDP and lost of their factor

Q.10. Reduction of Production of liquor:
(a) Increase Welfare (b) reduces welfare
(c) both (a) and (b) (d) No effect on Welfare

Answers
1(a); 2(d); 3(d); 4(a); 5(d); 6(c); 7(d); 8(a); 9(d); 10(d)
3/4 MARKS QUESTIONS WITH ANSWERS

Q.1 Calculate gross value added of factor cost:

(i) Units of output gold (units) 1000
(ii) Price per unit of output (Rs.) 30
(iii) Depreciation (Rs.) 1000
(iv) Intermediate cost (Rs.) 12000
(v) Closing Stock (Rs.) 3000
(vi) Opening Stock (Rs.) 2000
(vii) Excise (Rs.) 2500
(viii) Sales Tax (Rs.) 3500

Ans. \[ GVA_{FC} = (i \times ii) + vi – iv – vii – viii \]
\[ = (1000 \times 30) + 3000 – 2000 – 12000 – 2500 – 3500 = Rs. 13000 \]

Q.2 Calculate Net Value added at factor cost:

(i) Consumption of Fixed Capital (Rs.) 600
(ii) Import Duty (Rs.) 400
(iii) Output sold (units) 2000
(iv) Price per unit of output (Rs.) 10
(v) Net change in stock (Rs.) (-)50
(vi) Intermediate cost (Rs.) 10000
(vii) Subsidy (Rs.) 500

Ans. \[ NVA_{FC} = (iii \times iv) + v – vi – ii + vii – i \]
\[ = (2000 \times 10) + (-50) – 10000 – 400 + 500 – 600 \]
\[ = Rs. 9450. \]
Q.3. Find Net Value added at market price:

(i) Output sold (units) 800
(ii) Price per unit of output 20
(iii) Excise 1600
(iv) Import duty 400
(v) Net Change in Stock (−)500
(vi) Deficiation 1000
(vii) Intermediate Cost 8000

Ans.

\[ \text{NVAmp} = (i \times ii) + v - vii - vi \]
\[ = (800 \times 20) + (−500) - 8000 - 1000 = \text{Rs. 6500}. \]

Q.4. Giving reasons classify the following into intermediate products and final products:

(i) Computer purchased by a school.

(ii) Cold drinks purchased by a school canteen.

Ans. (i) It is final product because it is purchased for final investment.

(ii) These are intermediate products because these are taken to be resale in the same year.

Q.5 Giving reasons, explain the treatment assigned to the following which estimating national income.

(i) Family members working free on the farm owned by the family.

(ii) Payment of interest on borrowings by general government.

Ans. (i) Imputed salaries of these members will be included in national income.

(ii) It will not be included in national income because it is non-factor payment as general government borrows only for consumption purpose.

Q.6 Giving reasons, explain the treatment assigned to the following which estimating national income.
(i) Payment of pocket money by parents.

(ii) Interest free loan given by employer to employee.

Ans. (i) Not included, as it is transfer payment from firm to government.

(ii) Included, as it is treated in national income because it is part of company of employee in kinds.

Q.7. Explain the basis of classifying goods into intermediate and final goods. Give suitable examples.

Ans. Goods which are purchased by a production unit from other production units and meant for resale or for using up completely during the same year are called intermediate goods for example: raw material.

Goods which are purchased for consumption and investment are called final goods for example: Purchase of machinery for installation in factory.

Q.8. Giving reason classify the following into intermediate and final goods. (i) Machine purchased by a dealer of machine. (ii) A car purchased by a household.

Ans. (i) It is an intermediate good because it is meant for resale in the market.

(ii) It is a final good because it is meant for final consumption

Q.9. How will you treat the following in estimating national income of India? Give reasons for your answer.

(i) Value of bonus shares received by shareholders of a company.

(ii) Interest received on loan given to a foreign company in India.

Ans. (i) It is not included in national income because it is the return of financial capital and not of the goods and services.

(ii) It is included in the national income as interest is a factor income and a part of domestic income.

6 MARKS QUESTIONS

Q.1 How will you treat the following which estimating national income of India? Give reasons.
(a) Dividend received by an Indian from his investment in shares of a foreign company.

(b) Money received by a family in India from relatives working abroad.

(c) Interest received on loans given to a friend for purchasing a car.

(d) Dividend received by a foreigner from investment in shares of an Indian company.

(e) Profit earned by a branch of an Indian Bank in Canada.

(f) Scholarship given to Indian students studying in India by a foreign company.

(g) Fees received from students.

(h) Profits earned by branch of a Forcing Bank.

(i) Interest paid by an individual on a loan taken to buy a car.

(j) Expenditure on machines for installation in a factory.

(k) Profit earned by a branch of foreign bank in India.

(l) Payment of salaries to its staff by an embassy located in New Delhi.

(m) Interest received by an Indian resident from firms abroad.

(n) Salaries received by Indians working in branches of foreign abroad.

(o) Profits earned by an Indian bank from its branches abroad.

(p) Rent paid by embassy of Japan in India to an Indian resident.

(q) Imputed rent of self occupied house

(r) Interest received on debentures

(s) Financial help received for flood victims.

Q.2 How will you treat the following which estimating domestic factor of India? Give reasons.

(i) Remittances from non-resident Indian to their families in India.

(ii) Rent paid by the embassy of Japan in India to a resident Indian.
(iii) Profit earned by branches of Foreign Bank of India.

(iv) Payment of salaries to its staff by embassy located in India.

(v) Interest received by an Indian resident from firms abroad.

Q.3. Are the following part of a country’s net domestic product at market price? Explain.

(a) Net Indirect Tax        (b) Net Export
(c) NFIA                  (d) Consumption of Fixed Capital

Ans. 1 (a) It is factor income from abroad so will be included in national income.

(b) It is transfer receipts, so it is not included in national income.

(c) Not included in national income, because it is a non-factor receipt as is not used for production for consumption.

(d) Included as it is a factor income to abroad.

(e) It is a part of NFIA and will be included in national income.

(f) It is transfer receipts, so it is not included in national income.

(g) It is included in national income because it is a part of the private/ final consumption expenditure of the house hold.

(h) Included in national income because it is part of domestic factor income of India.

(i) Not included because it is a non-factor income as loan is not used for production but for consumption.

(j) Included because it results in flow of income through productive activities.

(k) Included, because it is a part of domestic product of India.

(l) Not included because it is not a part of domestic product of India.

(m) Included as it is the part of NFIA.

(n) Included because it is earned in domestic territory of India.
(o) Included because it is part of NFIA.

(p) Included as it is paid to an Indian resident out side the domestic territory of a country. It will be included in NFIA.

(q) Included as a part of rent as it is payment to self for housing services.

(r) Included because it is a factor earning.

(s) Not included as it is a transfer payment.

Ans.2. (i) Not included as it is a transfer payment

(ii) Not included because Japanese embassy in India does not fall within the domestic territory of India.

(iii) Included because it falls within the domestic territory of India.

(iv) Not included as an embassy located in India is not fall within the domestic territory of India.

(v) Not included in domestic product but it is the part of NFIA.

Ans.3. (a) Yes, because market price = factor cost + Net Indirect Tax

(b) Yes, because NDP_M includes net exports.

(c) No, because domestic means it excludes NFIA.

(d) No, net means consumption of fixed capital is excluded.
UNIT VII

MONEY AND BANKING

3 - 4 MARKS QUESTIONS

Q.1 Explain the significance of the ‘Store of Value’ function of money.

OR

State the importance of the ‘Store of Value’ function of money.

Ans. People save a part of their earnings for use in future. But in what form? Money fulfills this need of the people. Money as a store of value means that money is an asset and can be stored for use in future one can hold one’s earnings until the time one wants to spend it. This is the store of value function of money.

Q.2 Explain the ‘Unit of Account’ function of money?

Ans. The ‘Unit of Account’ function of money is also called the ‘measure of value’ function. Money as a unit of account means a standard unit for quoting prices. It makes money a powerful medium of comparing prices of goods and services.

Q.3 Explain the ‘Medium of Exchange’ function of money?

Ans. Money as a medium of exchange means money as a means of payment for exchange of goods and services. Goods and services are exchanged for money when people sell things. Money is exchanged for goods and services when people buy things. The medium of exchange function of money solves the problem of double coincidence of wants inherent in the barter system of trade.

Q.4 Explain the “Government’s Bank” function of a Central Bank.

Ans. A Central Bank conducts the banking account of government departments. It performs the same banking functions for the government as Commercial Bank performs for its customers. It accepts their deposits and undertakes
inter-bank transfers. It also gives loans to the government. A Central Bank also provides various services as agent of the government. It manages public debt. It also gives advice to the government regarding money market, capital market, government loans and economic policy matters.

6 MARKS QUESTIONS WITH ANSWERS

Q.1 What do you mean by credit/money creation? Explain the process of money creation by the commercial banks with the help of a numerical example.

Ans. Money creation is a process in which a Commercial Bank creates total deposits many times the initial deposits.

The capacity of Commercial Bank to create depends on two factors:

1. Amount of initial fresh deposit
2. Legal Reserve Ratio LRR

Money multiplier = \( \frac{1}{\text{LRR}} \)

Money Creation = Initial Deposit x Money multiplier.

Two Working: Suppose (i) Initial Deposit = Rs. 1000 (ii) LRR = 20%

As required, the bank keeps 20% i.e. Rs. 200 as cash reserve and lend the remaining Rs. 800. Those who borrow use the money for making payments. As assumed those who receive these payments put the money back into their bank accounts. This creates a fresh deposit of Rs. 800. The bank again keep 20% i.e. Rs. 160 and lend Rs. 640. In this way the money goes on multiplying leading to total money creation of Rs. 5000.

Money creation = Initial Deposit x \( \frac{1}{\text{LRR}} \)

= 1000 \( \frac{1}{0.2} \)
UNIT VII

DETERMINATION OF INCOME AND EMPLOYMENT

MULTIPLE CHOICE QUESTIONS (1 MARK)

1. Theory of Determination of Income and Employment is based on:
   (a) Ex-ante   (b) Ex-post
   (c) both (a) and (b)   (d) None of the above.

2. MPS equals:
   (a) \( \frac{S}{Y} \)   (b) \( \frac{\Delta C}{\Delta Y} \)
   (c) \( \frac{\Delta S}{\Delta Y} \)   (d) \( \frac{S}{Y} \)

3. Which unemployment is not taken into account for determining the labour force of the country:
   (a) Disguised unemployment   (b) Involuntary Unemployment
   (c) Voluntary Unemployment   (d) Seasonal Unemployment

4. The slope of AD curve is
   (a) Parallel to X-axis   (b) downward sloping
   (c) Upward rising   (d) Parallel to Y-axis

5. The Consumption curve is a straightline because:
   (a) APC is falling while MPC is rising.
   (b) APC is falling and MPC is also falling.
   (c) APC is falling but MPC is constant.
   (d) APC is constant and MPC is rising.
6. Inflationary gap is corrected by Control bank by
   (a) raising bank rate  (b) raising repo rate
   (c) raising LRR      (d) all of the above

7. Which one is the fiscal measure of correcting the gap between AD and AS at full employment
   (a) Moral suasion    (b) Marginal requirement
   (c) Public expenditure (d) Direct action

8. When the equality occurs between AD and AS before full employment equilibrium then it is called
   (a) over full employment equilibrium
   (b) under employment equilibrium
   (c) equilibrium remain unchanged
   (d) both (a) and (b)

9. As a result of increase in investment of Rs. 1000 in the economy, total national raises by Rs. 5000. What is the value of investment multiplier?
   (a) 4  (b) 3
   (c) 5  (d) 2

10. During deficient demand situation which one is not adversely affected:
    (a) Output level (b) Price level
    (c) Employment  (d) None of the above.

**Ans.: 1.(a); 2.(c); 3.(c); 4.(c); 5.(c); 6.(d); 7.(b); 8.(b); 9.(c); 10.(d)**

### 3-4 Marks Questions with Answers

**Q.1** In an economy the MPC is 0.75. Investment expenditure in the economy increase by Rs. 75 crore. Calculate total increase in national income.

**Ans.**

\[ K = \Delta Y / \Delta I = 1 - MPC \]

\[ \Delta Y = \Delta I \times 1 / (1 - MPC) \]
\[
= 75 \times 1/1-0.75
\]
\[
= 300 \text{ crore.}
\]

Q.2 An economy is in equilibrium. Its consumption function is \( C = 300 + 0.8Y \) and investment is 700 find national income.

Ans.
\[
C = 300 + 0.8Y
\]
\[
Y = C + 1
\]
\[
Y = 300 + 0.8Y + 700 = \text{Rs.1250}
\]

Q.3 Giving reasons, state whether the following statements are true or false.

(1) When MPC is zero, the value of investment multiplier will also be zero.

(2) Value of APS can never be less than zero

(3) When MPC > MPS, the value of investment multiplier will be greater than 5.

(4) The value of MPS can never be negative.

(5) When investment multiplier is 1, then value of MPC is zero.

(6) The value of APS can never be greater than 1.

Ans.

(1) False because when MPC = 0
\[
\text{Value of investment multiplier is one } K = 1/1 - \text{MPC} = 1/1 - 0 = 1
\]

(2) False because APS is negative when there are dissavings

(3) True, if MPC is greater than 0.8 or false if MPC > 0.5 but not greater than 0.8.

\[
\text{Or}
\]

(4) True, since \( MPS = \Delta S/\Delta Y \) if \( \Delta S = 0 \) than MPS can at the most be zero.

(5) True, because \( K = 1/1 - \text{MPC} = 1/1 - 0 = 1 \)

Q.4 Explain the distinction between voluntary and involuntary employment.

Ans. Voluntary unemployment is that part of the working force not willing to engage itself is gainful occupation. Involuntary unemployment is that part
of labour force which is willing and able to work at the prevailing wage rate but is out of work.

Q.5 Explain the relationship between investment multiplier and MPC?

Ans. \( K = \frac{1}{1-MPC} \), it shows direct relationship between MPC and the value of multiplier. Higher the proportion of increased income spend on consumption, higher will be value of investment multiplier. Higher the proportion of increased income spend on consumption, higher will be value of investment multiplier.

### 6 MARKS QUESTIONS WITH ANSWERS

Q.1 Explain the role of the following in correcting deficient demand in an economy.

(1) Open Market Operation
(2) Bank Rate

Ans. (1) Open market operation refer to the sale and purchase of securities by the Central Bank in case of deficient demand when AD falling short of AS at full employment, the Central Bank buys securities in the open market and makes payment to the sellers. The money flows out of the Central Bank and reaches the Commercial Bank as deposits. This raises the lending capacity of the banks, people can borrow more. This will raise AD.

(2) In case of deficient demand Central Bank decrease the bank rate which the Central Bank charges on the loan given to commercial bank. This forces the Commercial Banks to reduce lending rate. Since borrowing become cheaper and people borrow more Arises.

Q.2 Explain the role of the following in correcting ‘Excess Demand in an Economy’.

(1) Bank Rate (2) Open Market Operation

Ans. (1) To correct excess demand Central Bank can rise the bank rate. This forces Commercial Bank to increase lending rates. This reduces demand for borrowing by the public for investment and consumption. Aggregate demand falls.
(2) When there is excess demand Central Bank sells securities. This leads to flow of money out of the Commercial Banks to the Central Bank when people make payment by cheques. This reduces deposits with the banks leading to decline in their lending capacity. Borrowing decline. AD declines.

Q.3. Explain the role of following in correcting the deflationary gap in an economy.

(1) Govt. Expenditure
(2) Legal Reserve Ratio

Ans.

(1) In a situation of deflationary gap or deficient demand. The govt. should raise its expenditure i.e. there will be more economic activities in the economy like, building of roads, bridges, canal etc. This will raise the level of employment. It will in turn increase the income and the purchasing power. Thus aggregate demand will rise.

(2) During deficient demand, Central Bank reduces the CRR. The result of reducing CRR will be seen in the surplus cash reserves with the banks which can be offered for credit. The bank’s credit bank reduces SLR, this will have expansionary effect on the credit position of the banks leading to increase in their leading capacity borrowing increases and AD increases.

Q.4 Explain the role of margin requirements for correcting the deflationary gap.

Ans. Deflationary gap refers to a situation when at full employment level of income AD falls short of AS. It is called deficient demand.

Margin requirements refers to the margin on the security provided by the borrower. When margin is lower, the borrowing capacity of the borrower is higher. When Central Bank lowers the margin the borrowing capacity of the borrowers increase. This raise AD.

Q.5 In an economy 75% of the increase in income is spent on consumption. Investment increased by Rs. 1000 crore. Calculate.

(1) Total increase in income
(2) Total increase in consumption expected. Ans. MPC = 75 % = 75/100 = 3/4

Ans. MPC = 75% = 75/100 = 3/4
MPC = 1 – 3/4 = 1/4 \ K = 4

(1) \ \Delta Y = \Delta 1 \times K
    = \Delta X = \Delta Y - \Delta 1
    = 4000 - 1000
    = \text{Rs. 3000 Crore}

Q.6 In an economy the equilibrium level of income is \text{rs. 1200 crore}.

MPC : MPS = 3 : 1

\Delta 1 = \ ?

\text{Ans.} \quad \text{New Equilibrium income = Rs. 20000 crore}

= 20000 - 12000 = 8000 crore

K = 1/MpS = 1/0.25 = 4

\Delta 1 = \Delta Y/K = 8000/4

= \text{Rs. 2000 crore.}
UNIT VIII

GOVERNMENT BUDGET AND THE ECONOMY

Q.1 Explain the ‘redistribution of income’ objective of a government budget.

Or

Explain how the government budget can help in a fair distribution of income in the economy.

Ans. Budgetary policies are useful medium to reduce inequalities of income or the fair distribution of income. Government can use tax policy and public expenditure as a tool. Government can reduce the disposable income and wealth of Rich by imposing heavy tax and can spend more on providing free services to the poor. It raise the disposable income and welfare of the poor.

Q.2 Explain the “Reallocation of resources” objective of a government budget.

Ans. Through its Budgetary policy the government directs the allocation of resources in a manner such that there is a balance between the goal or of profit maximisation and social welfare. Government can provide subsidy and reduction in tax rate to motivate investment into areas where private sector initiative is not coming. Production of goods which are injurious to social life is discouraged through heavy taxation.

Q.3 Distinguish between revenue receipts and capital receipts with the help of example:

Ans. Revenue Receipts Capital Receipts
1. These receipts do not create any liability for the government. 1. These receipts create liability for the Govt.
2. These receipts do not cause any reduction in assets. 2. These receipts cause a reduction in assets of the Govt.

Class XII : Economics 162
Q.4  Distinguish between Revenue Expenditure and Capital Expenditure with the help of example :

**Ans.**

<table>
<thead>
<tr>
<th>Revenue Expenditure</th>
<th>Capital Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. These expenditure do not increase govt. assets</td>
<td>1. These expenditure increase the govt. assets</td>
</tr>
<tr>
<td>2. These expenditure do not cause any reduction in govt. liability</td>
<td>2. These expenditure cause reduction in govt. liability.</td>
</tr>
</tbody>
</table>

Q.5. Distinguish between Direct and Indirect Tax :

**Ans.**

<table>
<thead>
<tr>
<th>Direct Tax</th>
<th>Indirect Tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Direct tax is a tax whose liability to pay and incidence lie on the same person</td>
<td>1. The liability to pay and incidence of indirect tax do not lie on the same person.</td>
</tr>
<tr>
<td>2. Its incidence can not be shifted to some other person.</td>
<td>2. Its incidence can be shifted to some other person.</td>
</tr>
</tbody>
</table>

Q.6. What is meant by fiscal deficit. Write its implications.

**Ans.**  Fiscal deficit is equal to excess of total expenditure over the sum of revenue receipts and capital receipts excluding borrowings i.e. Fiscal deficit means borrowing of the government.

Fiscal Deficit: Total expenditure – Total receipts net of borrowings.

Implication of Fiscal Deficit:

1. It increase the supply of money in the economy.
2. It increase financial burden for future generation.
3. It is cause of inflation.
Q.7  What is revenue deficit? State its implications

Ans.  Revenue deficit is the excess of total revenue expenditure over total revenue receipts

   **Implication:**

   1. It implies that government is dis-saving.
   2. It implies that the government is spending more than the current income.
   3. A high revenue deficit gives a warning signal to the government to either curtail its expenditure or increase its revenue.
UNIT IX

BALANCE OF PAYMENTS

Q.1 Define foreign exchange rate.
Ans. Foreign exchange rate is the price of a foreign currency in terms of domestic currency.

Q.2 What is foreign exchange?
Ans. Any currency other than the domestic currency.

Q.3 What is balance of payment accounts?
Ans. It is a systematic record of all economic transactions between the residents of a country and the rest of the world in a given period (one year) of time.

Q.4 State two sources of supply of foreign exchange.
Ans. Exports and Foreign Tourism.

Q.5 State two sources of demand of foreign exchange.
Ans. Import of goods and services and to get education in abroad.

Q.6 What does a deficit in balance of trade indicate.
Ans. Deficit in balance of trade indicates that the imports of good are greater than the exports.

Q.7. What is fixed exchange rate?
Ans. When rate of exchange is fixed by the government in an economy.

Q.8 Define flexible exchange rate.
Ans. The rate of exchange in terms of other currencies are determined by market forces of demand and supply.

Ans. It is a system in which the Central Bank or government allow the exchange rate to determined by market forces but they take decisions to intervene whenever they feel it appropriate.

Q.10 State the components of capital account of balance of payment.
Ans. 1. Borrowing and lending to and from abroad.
2. Investment to and from abroad.
3. Change in foreign exchange reserves.

Q.11 Which transactions determine the balance of trade? When is balance of trade in surplus?
Ans. Exports of goods and imports of goods determines BOT. When the value of exports of goods is greater than the value of imports of goods.

Q.12. What are the components of current account of the BOP account?
Ans. (1) Exports and imports of goods
(2) Exports and imports of services
(3) Unilateral transfers

Q.13 Explain the meaning of deficit in BOP.
Ans. When autonomous foreign exchange payments exceeds autonomous foreign exchange receipts, the difference is called balance of payments deficit.

Q.14 Distinguish between devaluation and depreciation of domestic currency.
Ans. When government or authorities reduce the price of domestic currency in terms of all foreign currencies is called devaluation. The fall in market price of domestic currency (due to demand supply in the market) in terms of a foreign currency is called depreciation.

Q.15 When price of a foreign currency rises its supply also rises. Explain? Why?
Ans. If exchange rate increases, this will make domestic country's goods cheaper to foreigners. The demand for our exports will rise. It implies more supply of foreign exchange.
Q.16 Distinguish between autonomous and accommodating transaction in the Balance of Payment account? Give an example of each.

Ans. Autonomous transactions are made independently of the state of the balance of payments is deficit or surplus in the BOP. These are also known as above the line items.

Example: Exports

Accommodating transactions are undertaken to cover up the deficit or surplus in the BOP. These are also known as below the line items.

Example: Borrowing from IMF
SECTION A

1. Give equation of Budget Line.
2. When income of the consumer falls the impact on price-demand curve of an inferior good is: (choose the correct alternative)

(a) Shifts to the right.
(b) Shifts to the left.
(c) There is upward movement along the curve.
(d) There is downward movement along the curve.

3. If Marginal Rate of Substitution is constant throughout, the Indifference curve will be: (choose the correct alternative)

(a) Parallel to the x-axis.
(b) Downward sloping concave.
(c) Downward sloping convex.
(d) Downward sloping straight line.

4. Giving reason comment on the shape of Production Possibilities curve based on the following schedule:

<table>
<thead>
<tr>
<th>Good X (units)</th>
<th>Good Y (units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

5. What will be the impact of recently launched ‘Clean India Mission’ (Swachh Bharat Mission) on the Production Possibilities curve of the economy and why?

Or

What will likely be the impact of large scale outflow of foreign capital on Production Possibilities curve of the economy and why?
6. The measure of price elasticity of demand of a normal good carries minus sign while price elasticity of supply carries plus sign. Explain why?

7. There are large number of buyers in a perfectly competitive market. Explain the significance of this feature.

8. Explain the effects of ‘maximum price ceiling’ on the market of a good. Use diagram.

For the blind candidates only in lieu of Q. No. 8.

What is price ceiling? Explain the effects of maximum price ceiling.

9. A consumer spends Rs. 1000 on a good priced at Rs. 8 per unit. When price rises by 25 per cent, the consumer continues to spend Rs. 1000 on the good. Calculate price elasticity of demand by percentage method.

10. Define cost. State the relation between marginal cost and average variable cost.

   Or

   Define revenue. State the relation between marginal revenue and average revenue.

11. A consumer consumes only two goods X and Y both priced at Rs. 3 per unit. If the consumer chooses a combination of these two goods with Marginal Rate of Substitution equal to 3, is the consumer in equilibrium? Give reasons. What will a rational consumer do in this situation? Explain.

   Or

   A consumer consumes only two goods X and Y whose prices are Rs. 4 and Rs. 5 per unit respectively. If the consumer chooses a combination of the two goods with marginal utility of X equal to 5 and that of Y equal to 4, is the consumer in equilibrium? Give reasons. What will a rational consumer do in this situation? Use utility analysis.

12. State the different phases of changes in Total Product and Marginal Product in the Law of Variable Proportions. Also show the same in a single diagram.

   For the blind candidates in lieu of Q. No. 12 only.

   State, on the basis of a numerical example, different phases of changes in Total Product and Marginal Product in the Law of Variable Proportions.
13. Why is the equality between marginal cost and marginal revenue necessary for a firm to be in equilibrium? Is it sufficient to ensure equilibrium? Explain.

14. Market for a good is in equilibrium. The demand for the good ‘increases’. Explain the chain of effects of this change.

**SECTION B**

15. What is ‘aggregate supply’ in macroeconomics?

16. The value of multiplier is: (choose the correct alternative)

   (a) \( \frac{1}{MPC} \)

   (b) \( \frac{1}{MPS} \)

   (c) \( \frac{1}{1-MPS} \)

   (d) \( \frac{1}{MPC-1} \)

17. Borrowing in government budget is: (choose the correct alternative)

   (a) Revenue deficit

   (b) Fiscal deficit

   (c) Primary deficit

   (d) Deficit in taxes

18. The non-tax revenue in the following is: (choose the correct alternative)

   (a) Export duty

   (b) Import duty

   (c) Dividends

   (d) Excise
19. Other things remaining unchanged, when in a country the price of foreign currency rises, national income is: (choose the correct alternative)

(a) Likely to rise
(b) Likely to fall
(c) Likely to rise and fall both
(d) Not affected

20. If Real GDP is Rs. 200 and Price Index (with base - 100) is 110, calculate Nominal GDP.

21. Name the broad categories of transactions recorded in the ‘capital account’ of the Balance of Payments Accounts.

Or

Name the broad categories of transactions recorded in the ‘current account’ of the Balance of Payments Accounts.

22. Where will sale of machinery to abroad be recorded in the Balance of Payments Accounts? Give reasons.

23. Explain the ‘bank of issue’ function of the central bank.

Or

Explain ‘Government’s Bank’ function of central bank.

24. Government of India has recently launched ‘Jan-Dhan Yojna’ aimed at every household in the country to have at least one bank account. Explain how deposits made under the plan are going to affect national income of the country.

25. An economy is in equilibrium. Calculate national income from the following:

Autonomous consumption = 100
Marginal propensity to save = 0.2
Investment expenditure = 200

26. Giving reason explain how should the following be treated in estimation of national income:
(i) Expenditure by a firm on payment of fees to a chartered accountant
(ii) Payment of corporate tax by a firm
(iii) Purchase of refrigerator by a firm for own use

27. Explain the concept of Inflationary Gap. Explain the role of Repo Rate in reducing this gap.

Or

Explain the concept of Deflationary Gap and the role of ‘Open Market Operations’ in reducing this gap.

28. Explain the role the government can play through the budget in influencing allocation of resources.

29. Calculate National Income and Personal Disposable Income:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value (Rs. crores)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Personal tax</td>
<td>80</td>
</tr>
<tr>
<td>(ii) Private final consumption expenditure</td>
<td>600</td>
</tr>
<tr>
<td>(iii) Undistributed profits</td>
<td>30</td>
</tr>
<tr>
<td>(iv) Private income</td>
<td>650</td>
</tr>
<tr>
<td>(v) Government final consumption expenditure</td>
<td>100</td>
</tr>
<tr>
<td>(vi) Corporate tax</td>
<td>50</td>
</tr>
<tr>
<td>(vii) Net domestic fixed capital formation</td>
<td>70</td>
</tr>
<tr>
<td>(viii) Net indirect tax</td>
<td>60</td>
</tr>
<tr>
<td>(ix) Depreciation</td>
<td>14</td>
</tr>
<tr>
<td>(x) Change in stocks</td>
<td>(-)10</td>
</tr>
<tr>
<td>(xi) Net imports</td>
<td>20</td>
</tr>
<tr>
<td>(xii) Net factor income to abroad</td>
<td>10</td>
</tr>
</tbody>
</table>
MARKING SCHEME - ECONOMICS (DELHI)

(SET -I)

EXPECTED ANSWERS/VALUE POINTS

General Instructions :

1. Please examine each part of a question carefully and then allocate the marks allotted for the part as given in the marking scheme below. TOTAL MARKS PCJR ANY ANSWER MAY BE PUT IN A CIRCLE ON THE LEFT SIDE WHERE THE ANSWER ENDS.

2. Expected suggested answers have been given in the Marking Scheme. To evaluate the answers the value points indicated in the marking scheme be followed.

3. For questions asking the candidate to explain or define, the detailed explanation and definition have been indicated alongwith the value points.

4. For mere arithmetical errors, there should be minimal deduction. Only ½ mark be deducted for such an error.

5. Wherever only two/three or a “given” number of examples/factors/points are expected only the first two/three or expected number should be read. The rest are irrelevant and must not be examined.

6. There should be no effort at “moderation” of the marks by the evaluating teachers. The actual total marks obtained by the candidate may be of no concern to the evaluators.

7. Higher order thinking ability questions are assessing student’s understanding/analytical ability.

General Note: In case of numerical question no mark is to be given if only the final answer is given.
1. \[ p_1x_1 + p_2x_2 = m \]

2. (a) Shifts to the right.

3. (d) Downward sloping straight line

4. | Good X (Units) | Good Y (Units) | MRT |
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>1Y:1X</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>2Y:1X</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>3Y:1X</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>4Y:1X</td>
</tr>
</tbody>
</table>

Since MRT is increasing, the PP curve is downward sloping and Concave to the origin. (Diagram not required) 1½

5. Cleanliness reduces chances of people falling ill and, thus can ensure better health. This in turn will reduce forced absenteeism from work, raise efficiency level and thus raise country’s production potential. Rise in this potential shifts PP curve to the right. (Diagram not required) 3

OR

Large scale outflow of foreign capital from the economy will reduce resources and thus production potential of the country will fall. Fall in production potential in turn will shift the PP-Curve downwards. (Diagram not required) 3

6. The measure of price elasticity of demand has a minus sign because there is inverse relation between price and demand of a normal good, while the measure of price elasticity of supply has plus sign because there is direct relation between price and supply of a good. 3
The feature signifies that the number of buyers, in a perfectly competitive market is so large that any individual buyer is not in a position to influence the market price on its own by purchasing more or less. It is because the individual buyer’s share in total purchase in the market is insignificant.

Maximum price ceiling refers to imposition of upper limit on the price of a good by the government. For example, in the diagram OP is price ceiling while equilibrium price is OP₁. At this price the producers are willing to supply only PA (Or OQ₁) while consumers demand PB (Or OQ₂). The effect of the ceiling is that shortage, equal to AB (Q₁Q₂), is created, which may further lead to black marketing.

For blind Candidates Only:

Price ceiling means putting the upper limit by the government on the price that can be charged by the producers of a good from the buyers.

Maximum price ceiling, is lower than equilibrium price, leads to rise in demand and fall in supply. This creates shortage of the good in the market.

This may lead to black marketing.

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<td>1000</td>
<td>100</td>
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A1 Expected Answer/Value Points Distribution of Marks

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<td>10</td>
<td>1000</td>
<td>100</td>
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</tbody>
</table>
\[
E_p = \frac{P \times \Delta Q}{Q \times \Delta P}
\]
\[
= \frac{8}{125} \times \frac{-25}{2}
\]
\[
= -0.8
\]

**A1**

<table>
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\]
\[
= \frac{8}{125} \times \frac{-25}{2}
\]
\[
= -0.8
\] | 1 |

**10**

Cost in economics refers to the sum of actual money expenditure on inputs and the imputed expenditure in the form of inputs supplied by the owners including normal profit.

If MC < AVC, then AVC falls

If MC = AVC, then AVC is constant

If MC > AVC, then AVC rises

(Diagram not required)

OR

Revenue in Economics refers to the market value of output produced or receipts from sale of output produced.

If MR > AR, AR rises

If MR = AR, AR is constant

If MR < AR, AR falls.

(Diagram not required)

**11**

Given \(P_x = 3\), \(P_y = 3\) and \(MRS = 3\), a consumer is said to be in equilibrium when

\[
MRS = \frac{P_x}{P_y}
\]

Substituting values we find that

\[
3 > \frac{3}{3}
\]

i.e. \(MRS > \frac{P_x}{P_y}\)

Therefore consumer is not in equilibrium.
MRS > \( \frac{P_x}{P_y} \) means that consumer is willing to pay more for one more unit of X as compared to what market demands.

- The consumer will buy more units of X.
- As a result MRS will fall due to the Law of Diminishing Marginal Utility
- This will continue till \( MRS = \frac{P_x}{P_y} \) and consumer is in equilibrium

\[(\text{Diagram not required})\]

OR

Given \( P_x = 4 \), \( P_y = 5 \) and \( MU_x = 5 \), \( MU_y = 4 \), a consumer will be in equilibrium when

\[\frac{MU_x}{P_x} = \frac{MU_y}{P_y}\]

Substituting values, we find that

\[\frac{5}{4} > \frac{4}{5}\] or \[\frac{MU_x}{P_x} > \frac{MU_y}{P_y}\]

Since per rupee \( MU_x \) is higher than per rupee \( MU_y \), consumer is not in equilibrium.

The consumer will buy more of X and less of Y. As a result \( MU_x \) will fall and \( MU_y \) will rise. The reaction will continue till

\[\frac{MU_x}{P_x} \text{ and } \frac{MU_y}{P_y}\] are equal and consumer is in equilibrium.

12

The Phases are:

**Phase I** TP rises at increasing rate i.e. upto A in diagram.
MP rises i.e. upto ‘a’

**Phase II** TP rises at decreasing rate i.e. between A and B.
MP falls and remains positive between ‘a’ and ‘b’.

<table>
<thead>
<tr>
<th>A1</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MRS &gt; ( \frac{P_x}{P_y} ) means that consumer is willing to pay more for one more unit of X as compared to what market demands.</td>
<td>3</td>
</tr>
</tbody>
</table>

- The consumer will buy more units of X.
- As a result MRS will fall due to the Law of Diminishing Marginal Utility
- This will continue till \( MRS = \frac{P_x}{P_y} \) and consumer is in equilibrium

\[(\text{Diagram not required})\]
Phase : III  TP falls i.e. after B. MP falls and is negative i.e. after 'b'

(Diagram on single axis is also correct)

For blind Candidates Only:

<table>
<thead>
<tr>
<th>Variable input (Units)</th>
<th>TP (Units)</th>
<th>MP (Units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>32</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>40</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>40</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>37</td>
<td>-3</td>
</tr>
</tbody>
</table>

Or any other relevant numerical example

Phases:

(1) TP increases at increasing rate and MP rises upto 2 units.

(2) TP increases at decreasing rate and MP falls but remains positive from 3 to 5 units.

(3) TP falls and MP becomes negative from 6 unit onwards.

13 The producer’s equilibrium conditions are : (i) MC = MR and (ii) MC > MR after equilibrium.
Suppose $MC > MR$. In this situation it will be profitable for the firm to produce more or less depending upon relative changes in $MC$ and $MR$ till $MC = MR$.

Suppose $MC < MR$. It will be profitable for the producer to produce more till $MC = MR$.

$MC = MR$ is not a sufficient condition to ensure equilibrium. Given $MC = MR$, suppose the behaviour of $MC$ and $MR$ is such that if one more unit is produced, $MC$ becomes less than $MR$.

Then in this case it will be profitable for the firm to produce more. Therefore, in this case though $MC = MR$ the producer is not in equilibrium. However, if after $MC = MR$ output $MC$ becomes greater than $MR$, it will be most advantageous for the firm to produce only up to $MC = MR$.

14 - Given equilibrium, demand increases.
   - Price remaining unchanged, excess demand emerges.
   - This leads to competition among buyers causing price to rise.
   - Rise in price causes fall (contraction) in demand and rise (expansion) in supply.
   - The price continues to rise till the market is in equilibrium again at a higher price

15 Aggregate supply is the value of total quantity of final goods and services planned to be produced in an economy during a period.

16 (b) $\frac{1}{MPS}$

17 (b) Fiscal deficit
### A1. Expected Answer/Value Points Distribution

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>(c) Dividends</td>
<td>1</td>
</tr>
<tr>
<td>19</td>
<td>(a) Likely to rise</td>
<td>1</td>
</tr>
<tr>
<td>20</td>
<td>Real GDP = ( \frac{\text{Nominal GDP}}{\text{Price Index}} \times 100 )</td>
<td>1½</td>
</tr>
<tr>
<td></td>
<td>( 200 = \frac{\text{Nominal GDP}}{110} \times 100 )</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Nominal GDP = ( \frac{200 \times 110}{100} ) = 220</td>
<td>½</td>
</tr>
<tr>
<td></td>
<td>(No marks if only the final answer is given)</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>(1) Borrowings from and to abroad</td>
<td>1×3</td>
</tr>
<tr>
<td></td>
<td>(2) Investments from and to abroad.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3) Decreases and increases in foreign exchange reserves.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1) Exports and imports of goods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2) Exports and imports of services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3) Factor income receipts from abroad and payments to abroad.</td>
<td>1×3</td>
</tr>
<tr>
<td></td>
<td>(4) Transfers from and to abroad. (Any Three)</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Sale of machinery to abroad is export of goods and thus recorded in the Current Account.</td>
<td>1½</td>
</tr>
<tr>
<td></td>
<td>Sale of machinery to abroad brings in foreign exchange and thus recorded on the credit side.</td>
<td>1½</td>
</tr>
<tr>
<td></td>
<td>(No marks if the reasons are not given)</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>The central bank is the sole authority for the issue of currency in the country. It promotes efficiency in the financial system. Firstly, because it leads to uniformity in the issue of currency, Secondly, because it gives Central Bank control over money supply.</td>
<td>4</td>
</tr>
</tbody>
</table>
OR
The Central Bank acts as a banker to the government. The central bank accepts receipts and makes payments for the government and carries out exchange, remittance and other normal banking operations for the government. The central bank manages public debt and also lends to government.

(To be marked as a whole)

24
- Opening more bank accounts means more bank deposits.
- More deposits means increase in the lending capacity of the commercial banks.
- More lending by banks means more investment in the country.
- More investment means more national income.

25
\[ Y = \bar{C} + MPC(Y) + I \]
\[ Y = 100 + (1 - 0.2)Y + 200 \]
\[ 0.2V = 300 \]
\[ Y = 1500 \]

(No marks if only the final answer is given)

26
(i) Payment of fees to chartered accountant by a firm is intermediate cost to the firm and, therefore not included.
(ii) Payment of corporate tax by a firm is included in national income. It is because that it is part of profit. Profit is a component of operating surplus. It is included according in income method.
(iii) Purchase of a refrigerator by a firm for own use is investment expenditure and thus included.

(No marks if reason is not given)

27
The Inflationary Gap is the amount by which the aggregate demand exceeds aggregate supply at the full employment level. It is called inflationary because it leads to rise in price level.
A1 Expected Answer/Value Points

Repo Rate is the rate of interest at which central bank lends to commercial banks for a short period. When central bank raises Repo Rate, the borrowings by the commercial banks become costly. This forces the commercial banks to raise their lending rates. People borrow less, and therefore spend less. This helps in reducing inflationary gap.

(Diagram not required)

OR

Deflationary Gap is the amount by which the aggregate demand falls short of aggregate supply at the full employment level. It is called deflationary because it leads to a fall in price level.

(Diagram not required)

Open Market Operations refer to buying and selling of government securities by the central bank in the open market. Central bank can reduce deflationary gap by buying securities. Those who sell receive payments by cheques from the central bank. The money flows out from Central bank into the commercial banks. This raises lending capacity of commercial banks. Banks lend more. Spending rises which reduces deflationary gap.

Distribution of Marks

<table>
<thead>
<tr>
<th>A1</th>
<th>Expected Answer/Value Points</th>
<th>Distribution of Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>4</td>
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<td></td>
<td>(Diagram not required) OR</td>
<td>2</td>
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<tr>
<td></td>
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</tr>
<tr>
<td>28</td>
<td>Government can influence allocation of resources by influencing market mechanism through taxes, subsidies and direct participation in production. Heavy taxes can be imposed on production units engaged in producing harmful products like liquor, cigarettes etc. Tax concessions and subsidies can be given to encourage production of products useful for the masses. Government can directly produce goods and services normally ignored by the private sector due to lack of enough profits. (To be marked as a whole)</td>
<td>6</td>
</tr>
<tr>
<td>29</td>
<td>[N.I. = ii + v + (vii + x) - xi — viii — xii] [= 600 -1- 100 + 70 + (-10) - 20 - 60 - 10] [= Rs. 670 Crore.] [PDI = iv — vi — iii — i] [= 650-50 -30-80] [= Rs. 490 Crore] (No marks if only the final answer is given)</td>
<td>1 ½ 1 ½</td>
</tr>
</tbody>
</table>