

SAMPLE QUESTION PAPER (2017-18)

ENGINEERING GRAPHICS (046)

Marking Scheme

VALUE POINTS

Q1	MULTIPLE CHOICE QUESTIONS	5
(i)	c OR 60°	1
(ii)	b OR Rivet	1
(iii)	a OR an ellipse	1
(iv)	c OR Crowning	1
(v)	b OR Two	1
Q2	(a) ISOMETRIC SCALE	4
(i)	Drawing 45° inclined lines showing true lengths	1
(ii)	Projections on 30° inclined line showing isometric length with one 1mm subdivisions	2
(iii)	Writing titles, sub titles and angles	1
	(b) ISOMETRIC PROJECTION OF PENTAGONAL PRISM	7
(i)	Helping figure	1
(ii)	Drawing isometric pentagons.	2
(ii)	Drawing face edges, parallel to horizontal axis.	2
(iii)	Indicating the axis, direction of viewing.	1
(iv)	Dimensions	1
	(c) ISOMETRIC PROJECTION OF COMBINATION OF SOLIDS	13
(i)	Helping figures	1
(ii)	Drawing isometric hexagons	2
(iii)	Drawing vertical lines indicating the faces	2
(iv)	Drawing triangular base of pyramid	2
(v)	Drawing slant edges	2
(vi)	Common axis, dimensioning, direction of viewing	4

Q3	(a) <u>BSW THREAD PROFILE</u>	8
	(i) Distance, equal to pitch, marked correctly and angles of 55° , drawn correctly.	2
	(ii) Curves for threads (minimum two), drawn correctly.	3
	(iii) Side edges (flanks), drawn correctly.	1
	(iv) Dimensions and hatching lines.	2

OR

	TEE HEADED BOLT	8
	FRONT VIEW	
	(i) Threaded and unthreaded portions of cylindrical shank with square neck.	3
	(ii) Head of bolt.	1
	SIDE VIEW	
	(i) Rectangle with one horizontal line.	1
	(ii) Two circles as per convention.	1
	Standard dimensions.	2

	(b) FEATHER KEY WITH GIB HEAD ON BOTH ENDS	5
	(i) Sketching front view	2
	(ii) Sketching top view and side view	2
	(iii) Standard dimensions	1

OR

	60° COUNTER SUNK HEAD RIVET	5
	(i) Sketching front view	2
	(ii) Sketching top view	2
	(iii) Standard dimensions	1

Q4	GIB AND COTTER JOINT (Assembly)	
	(a) <u>FRONT VIEW</u> (Upper Half in Section):	14
	(i) Drawing upper half of fork end and eye end with clearance.	5
	(ii) Drawing lower half of fork end and eye end.	3
	(iii) Drawing the gib and cotter.	4
	(iv) Hatching lines.	1

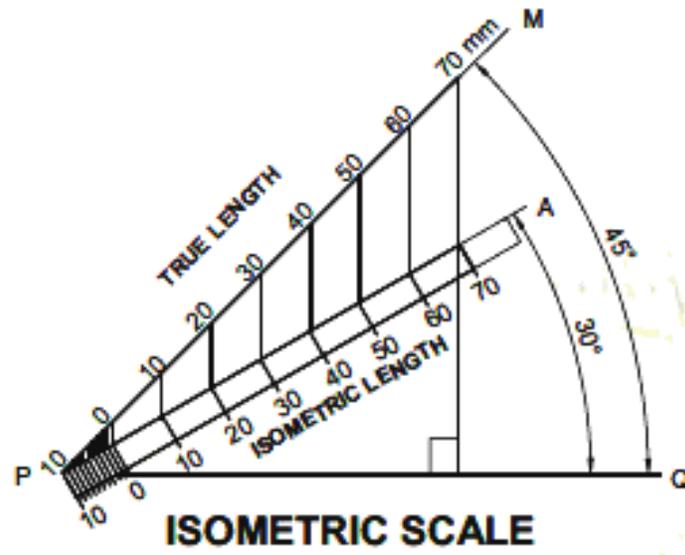
(v)	Broken ends of fork end and eye end.	1
(b)	<u>LEFT SIDE VIEW:</u>	8
(i)	Drawing fork end with conventional end in eye end of body.	4 ¹ / ₂
(ii)	Drawing gib and cotter with hidden lines	3
(iii)	Drawing cutting plane.	¹ / ₂
(c)	Printing titles of both (1), scale used (1), drawing projection symbol (1) and six dimensions (3)	6

OR

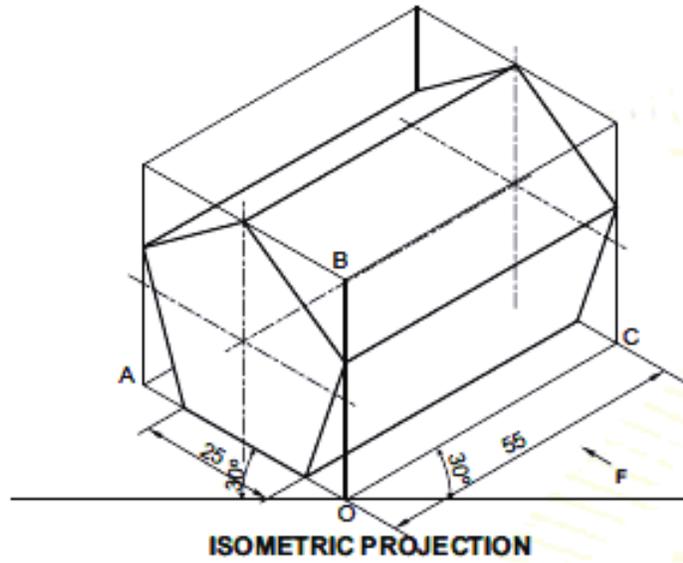
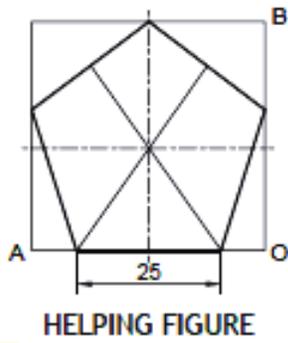
OPEN BEARING (Dis-assembly)

(1)	BODY	
(a)	<u>FRONT VIEW</u> (Left Half in Section):	8
(i)	Drawing left half with mounting hole and recess at bottom.	4
(ii)	Drawing right half.	3
(iii)	Hatching lines.	1
(b)	<u>TOP VIEW:</u>	7
(i)	Drawing boundary with four vertical lines.	3
(ii)	Hidden lines.	1 ¹ / ₂
(iii)	Drawing both mounting holes.	2
(iv)	Drawing cutting plane.	¹ / ₂
(2)	BUSH	
(a)	<u>FRONT VIEW</u> (Left Half in Section):	4
(i)	Drawing left half.	1 ¹ / ₂
(ii)	Drawing right half.	1 ¹ / ₂
(iii)	Hatching lines.	1
(b)	<u>LEFT SIDE VIEW:</u>	3
(i)	Drawing complete view with hidden lines.	3
(3)	Printing titles of both (1), scale used (1), drawing projection symbol (1) and six dimensions (3).	6

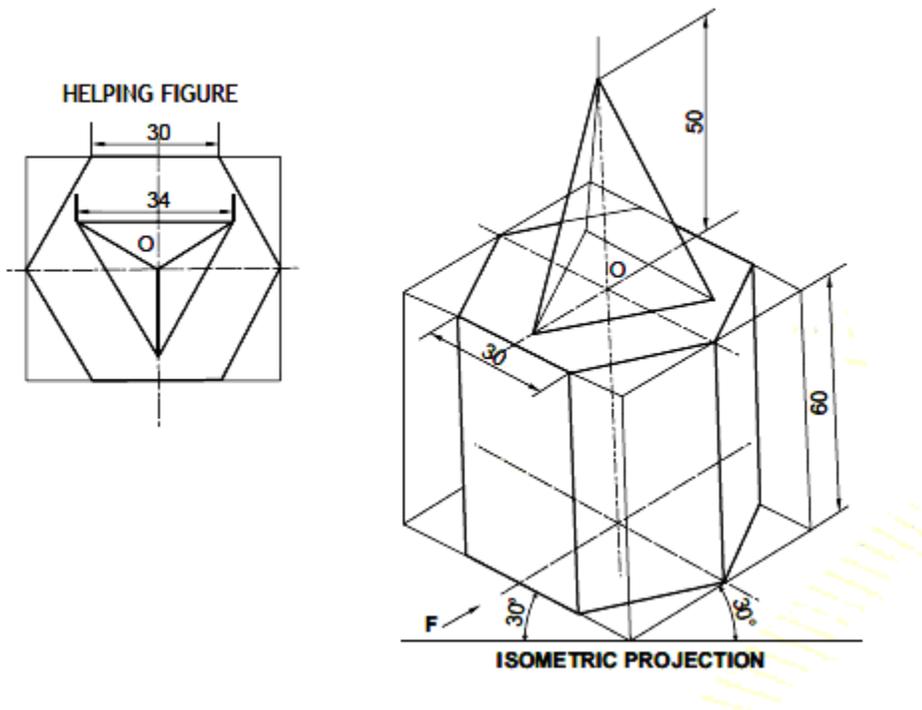
Q2 (a)



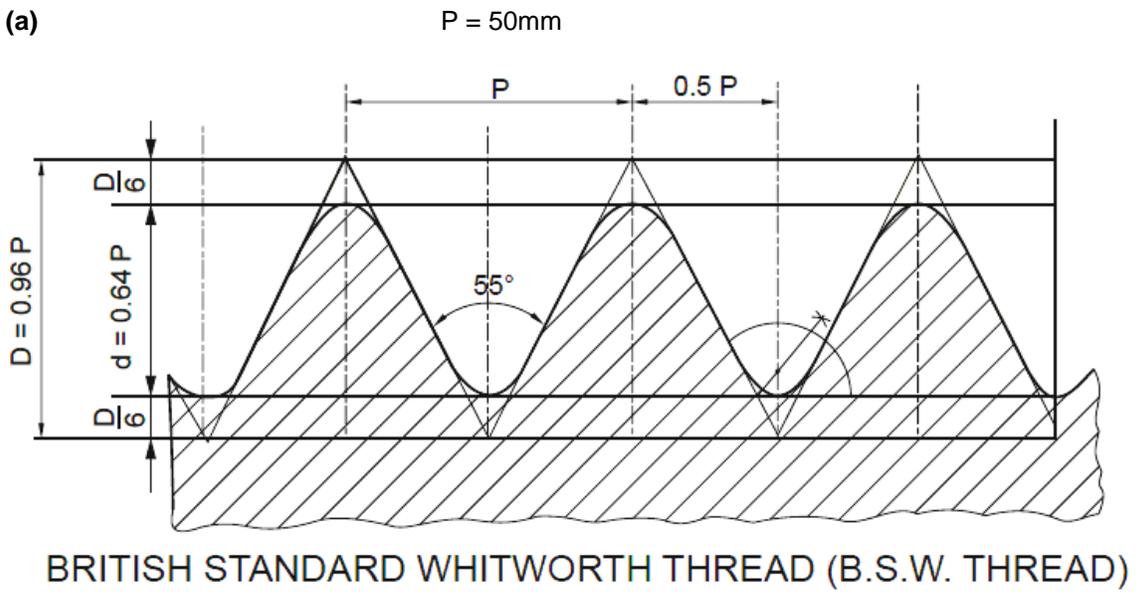
Q2 (b)



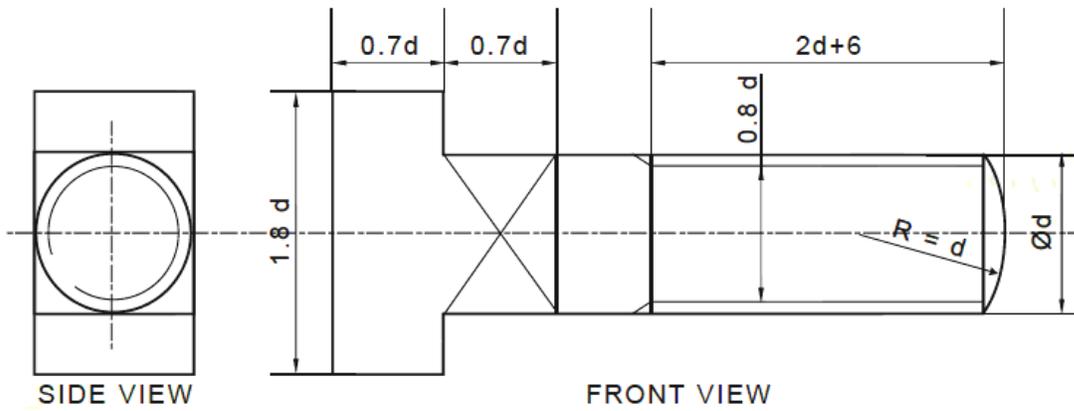
Q2 (c)



Q3 (a)



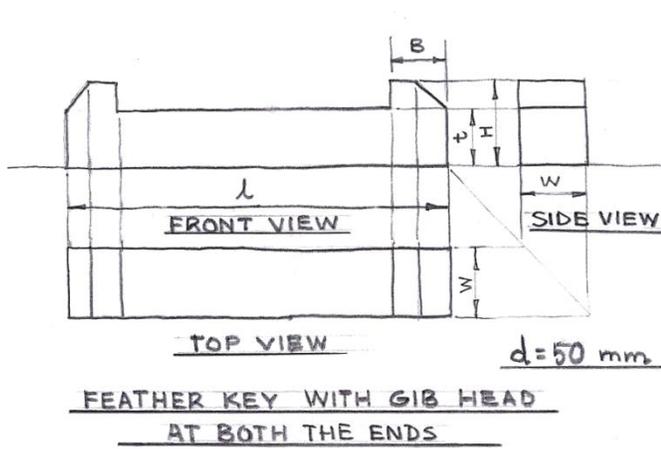
OR



T-HEADED BOLT

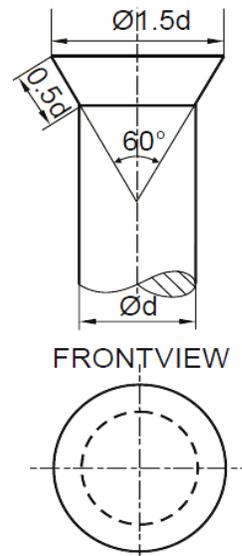
$d = 25\text{mm}$

Q3 (b)



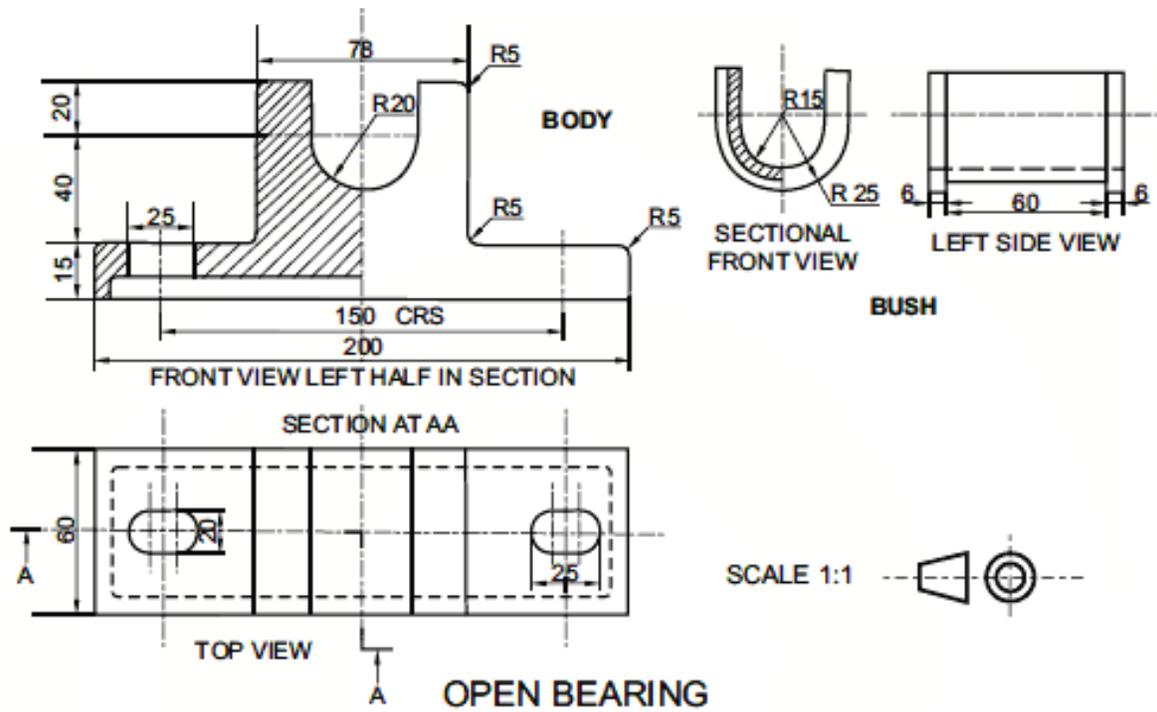
FEATHER KEY WITH GIB HEAD AT BOTH THE ENDS

OR



TOP VIEW
 $d = 20\text{mm}$

60°CSK HEAD RIVET



NOTE:- Follow the SP:46-2003(revised) codes only, to draw the solutions.