

SAMPLE QUESTION PAPER
MARKING SCHEME
XII – (2023-24)
ENGINEERING GRAPHICS (046)

Time Allowed: 3 hours

Maximum Marks: 70

SECTION – A

Value Points

- | | |
|--|---|
| 1. (a) or 15° | 1 |
| 2. (b) or on the left side of front view | 1 |
| 3. (d) or orthographic projection | 1 |
| 4. (d) or 120° | 1 |
| 5. (c) or B and C only | 1 |
| 6. (b) or B and C only | 1 |
| 7. (a) | 1 |
| 8. (a) | 1 |
| 9. (d) or B and D only | 1 |
| 10. (a) | 1 |
| 11. (a) or Journal | 1 |
| 12. (d) or 60° | 1 |
| 13. (c) or Nut | 1 |
| 14. (c) or three | 1 |
| 15. (a) or 1-iii, 2-iv, 3-ii, 4-i | 1 |
| 16. (b) or Machine screws are temporary fasteners whereas rivets are permanent fasteners | 1 |
| 17. (b) or collar head | 1 |
| 18. (a) or 1.6d | 1 |
| 19. (a) or Snap head rivet | 1 |
| 20. (b) or one visible and one invisible (dotted) circle | 1 |

SECTION – B

21. (a) ISOMETRIC SCALE	5
(i) Drawing 45° inclined line showing true lengths	1
(ii) Projections on 30° inclined line showing isometric length with 1mm subdivisions in one part	3
(iii) Writing titles, sub titles and angles	1
21. (b) ISOMETRIC PROJECTION OF TRIANGULAR PRISM	10
(i) Helping figure	1
(ii) Drawing both the iso-triangles	4
(iii) Drawing three long/face edges	3
(iv) Dimensions	1
(v) Indicating the axis and direction of viewing	1
22. B.S.W. THREAD	8
(i) Distance equal to pitch, and angles of 55°	2
(ii) Curves for threads	2
(iii) Side edges / flanks	2
(iv) Dimensions	2

OR

ASSEMBLY OF SQUARE BOLT AND NUT (Front view)	8
(i) Drawing front view of square bolt with details	4
(ii) Drawing front view of square nut assembled properly with details	2
(iii) Dimensions	2

23. ASSEMBLY OF GIB AND COTTER JOINT

(a) FRONT VIEW UPPER HALF IN SECTION	13
(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
(b) SIDE VIEW, SEEN FROM RIGHT	8
(i) Drawing fork end with conventional end in the eye end of body	4 ¹ / ₂
(ii) Drawing gib and cotter with hidden lines	3
(iii) Drawing cutting plane	¹ / ₂
(c) OTHERS	6
(i) 6 Important Dimensions	3
(ii) Printing title, Projection symbol and Scale used	3

OR

DIS-ASSEMBLY OF TURNBUCKLE

(a) BODY	
(i) Front View Upper Half In Section	9
a. Drawing body with conical ends and hatching lines in upper half	6
b. Drawing space for rods with internal threads	3
(ii) Top View.	6
a. Drawing body with conical ends and correct vertical and horizontal lines	4
b. Drawing hidden lines for internal threads and space for rods	2

(b) ROD – A

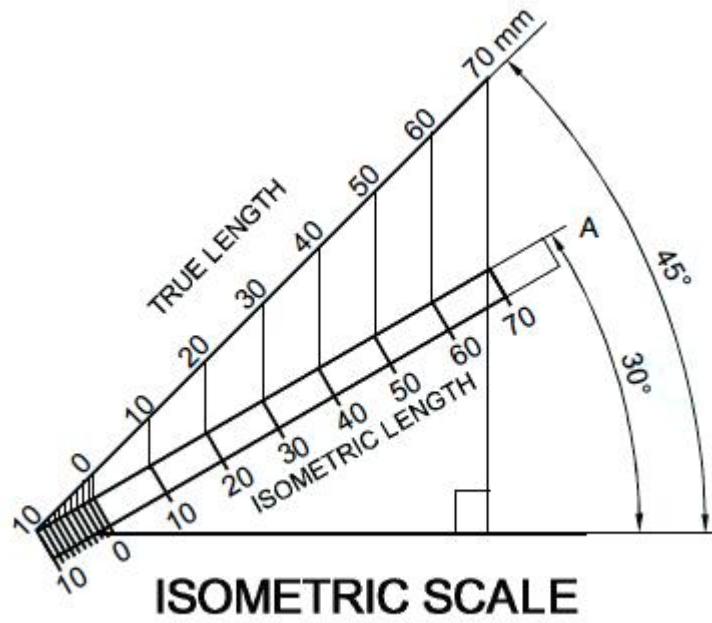
- (i) Front View **4**
 - a. Drawing rod with conventional broken end and threads as per convention 4

- (ii) Right Side View **2**
 - a. Drawing two circles as per conventions 2

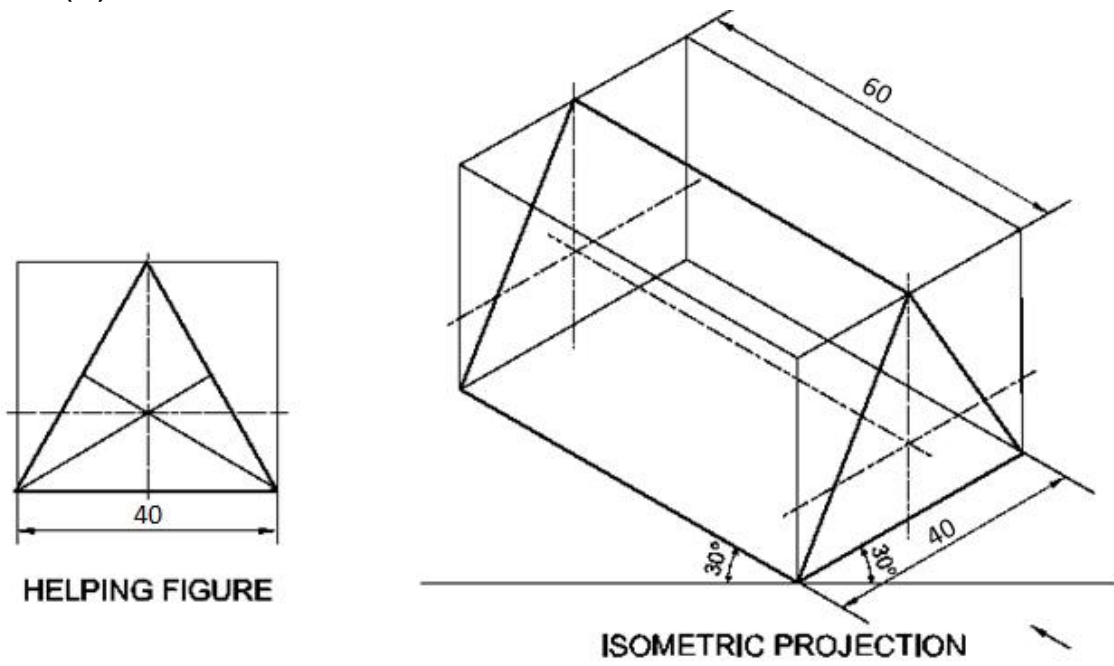
(c) OTHERS **6**

- (i) 6 Important Dimensions. 3
- (ii) Printing titles, Symbol of Projection and Scale used. 3

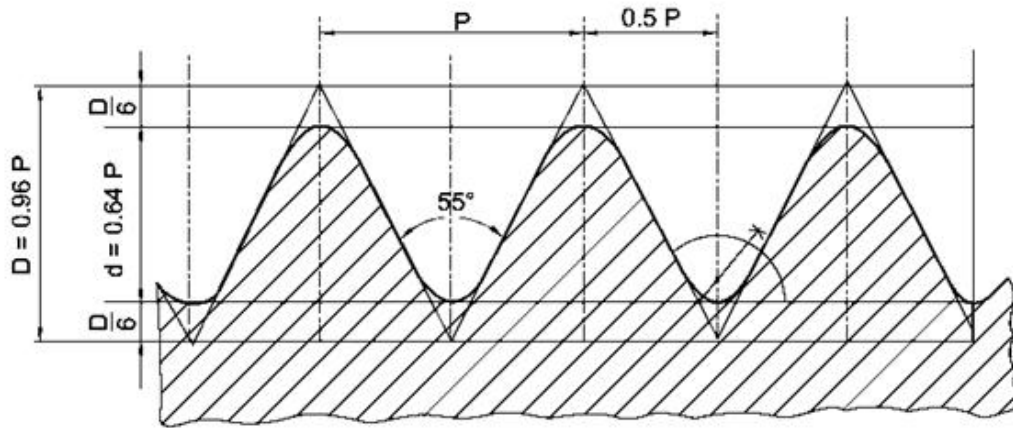
Q21 (a)



Q21 (b)



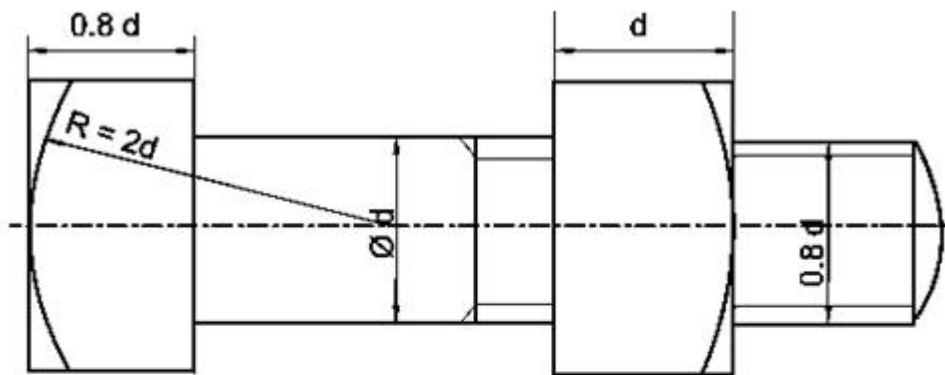
Q22



P	D	d	D/6
50	48	32	8

STANDARD PROFILE OF B.S.W. SCREW THREAD

OR

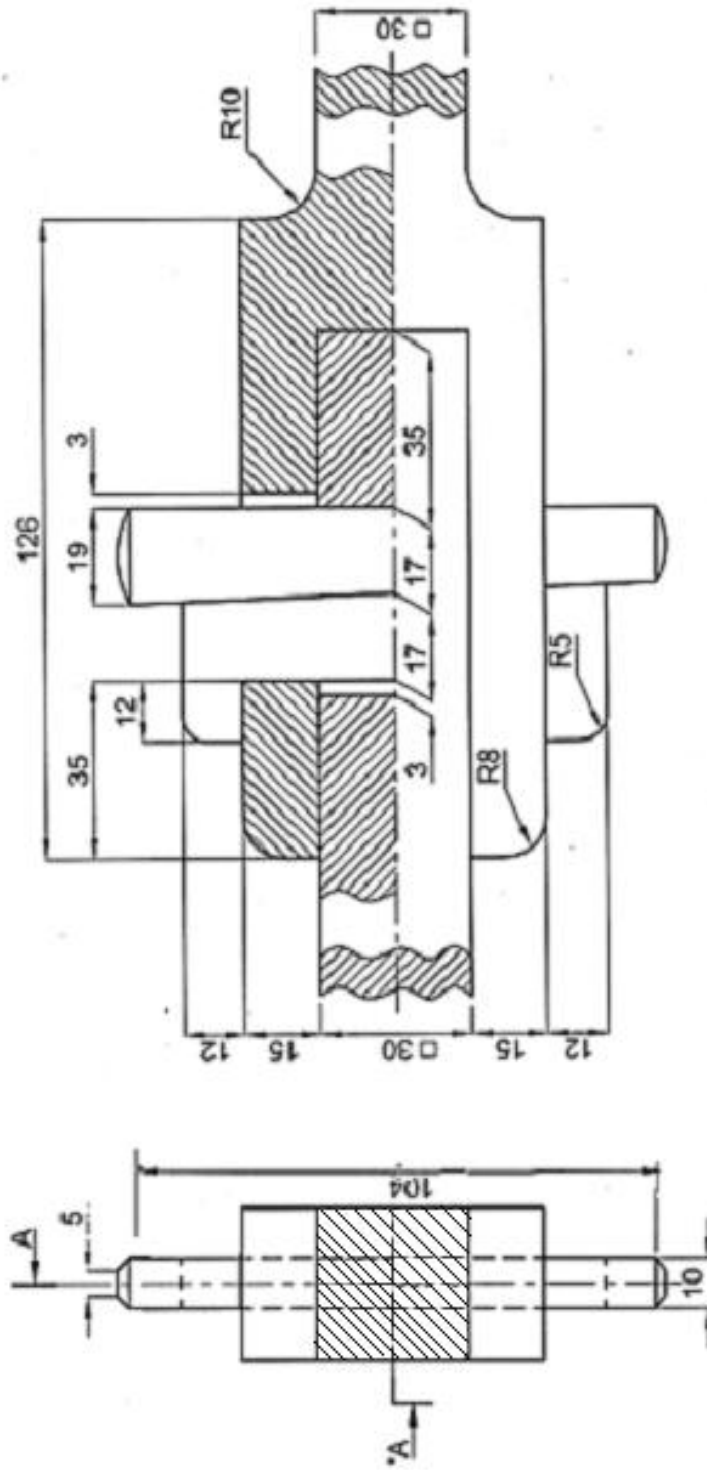


FRONT VIEW

d	0.8d	1.5d	2d	2d+6
24	19.2	36	48	54

ASSEMBLY OF SQUARE BOLT AND SQUARE NUT

Q23



FRONT VIEW, UPPER HALF IN SECTION

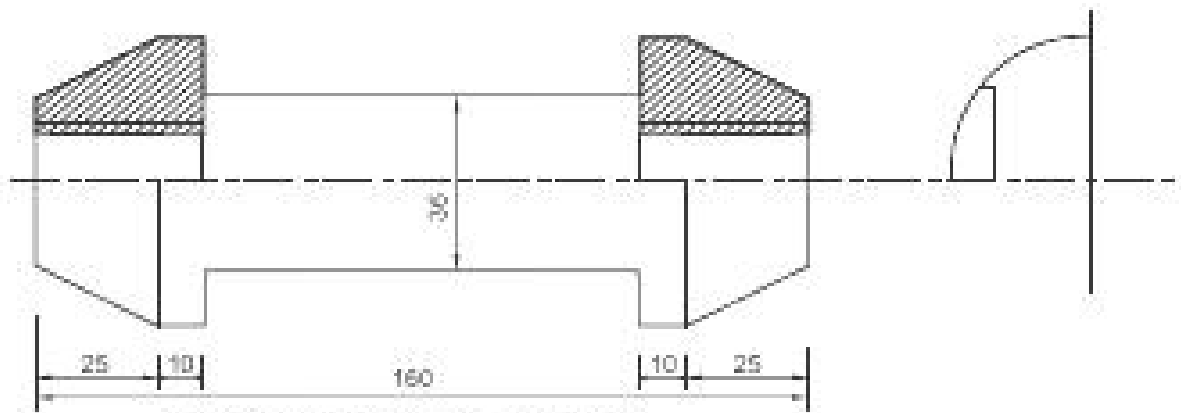
R.H. SIDE VIEW

SCALE 1:1

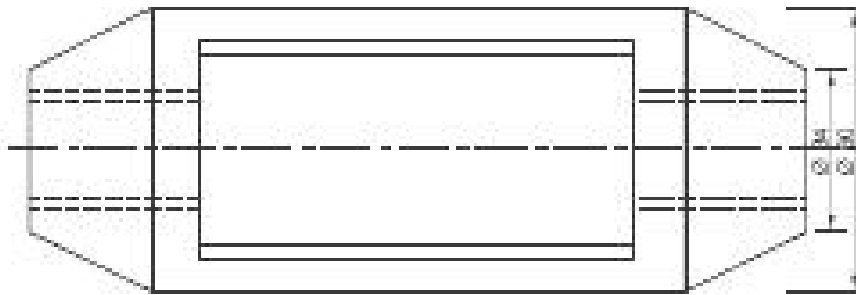


ASSEMBLY OF GIB AND COTTER JOINT

OR

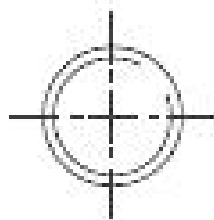


FRONT VIEW UPPER HALF IN SECTION

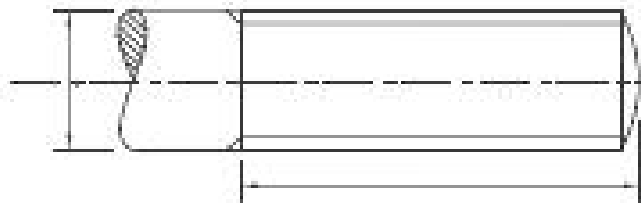


TOP VIEW

BODY



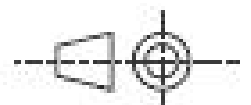
RH SIDE VIEW



FRONT VIEW

ROD - A

SCALE 1:1



DISASSEMBLY OF TURNBUCKLE