

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. (b) or C, A, D, E, B | 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

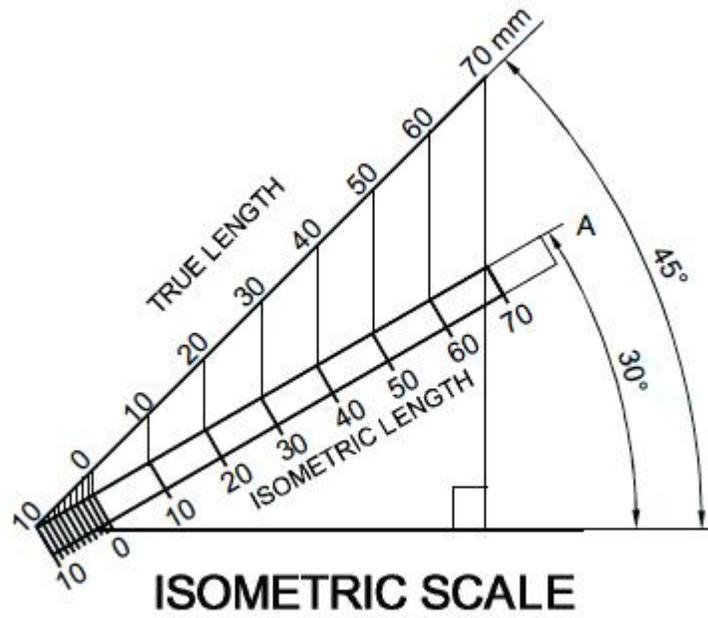
- (i) Front View **4**
 - a. Drawing rod with conventional broken end and threads as per convention 4

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

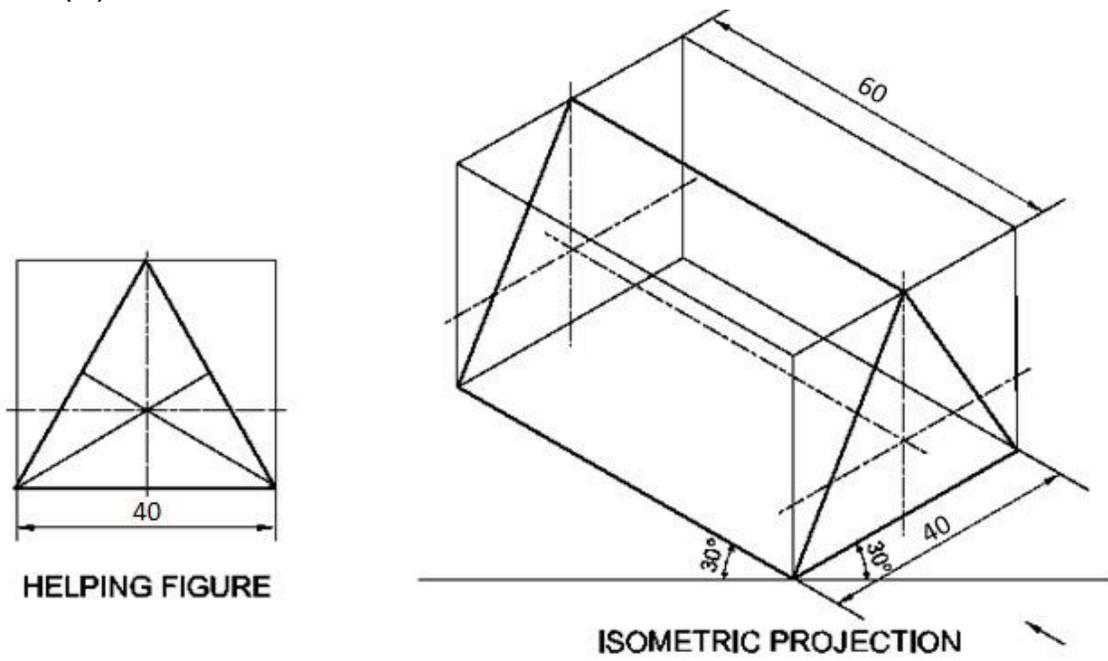
(c) OTHERS **6**

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

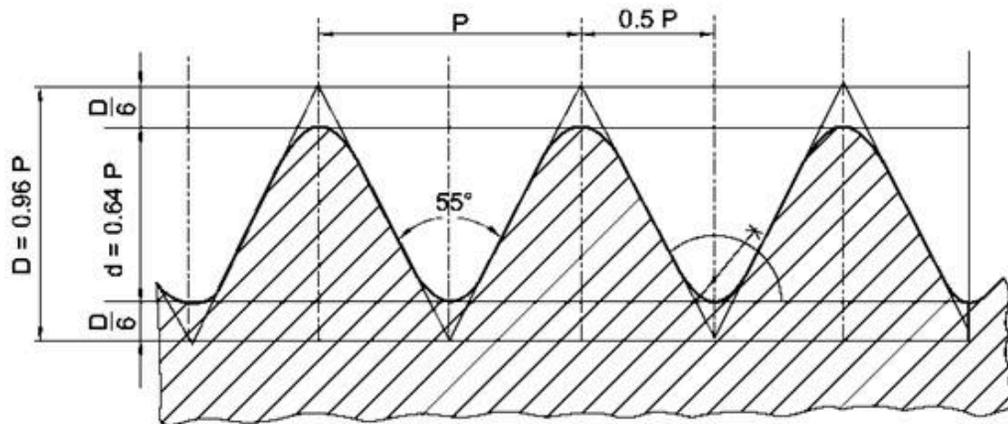
Q21 (a)



Q21 (b)



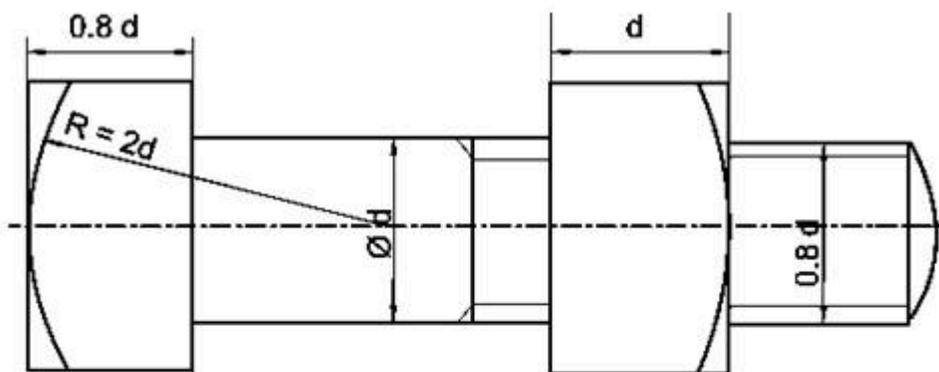
Q22



P	D	d	D/6
50	48	32	8

STANDARD PROFILE OF B.S.W. SCREW THREAD

OR

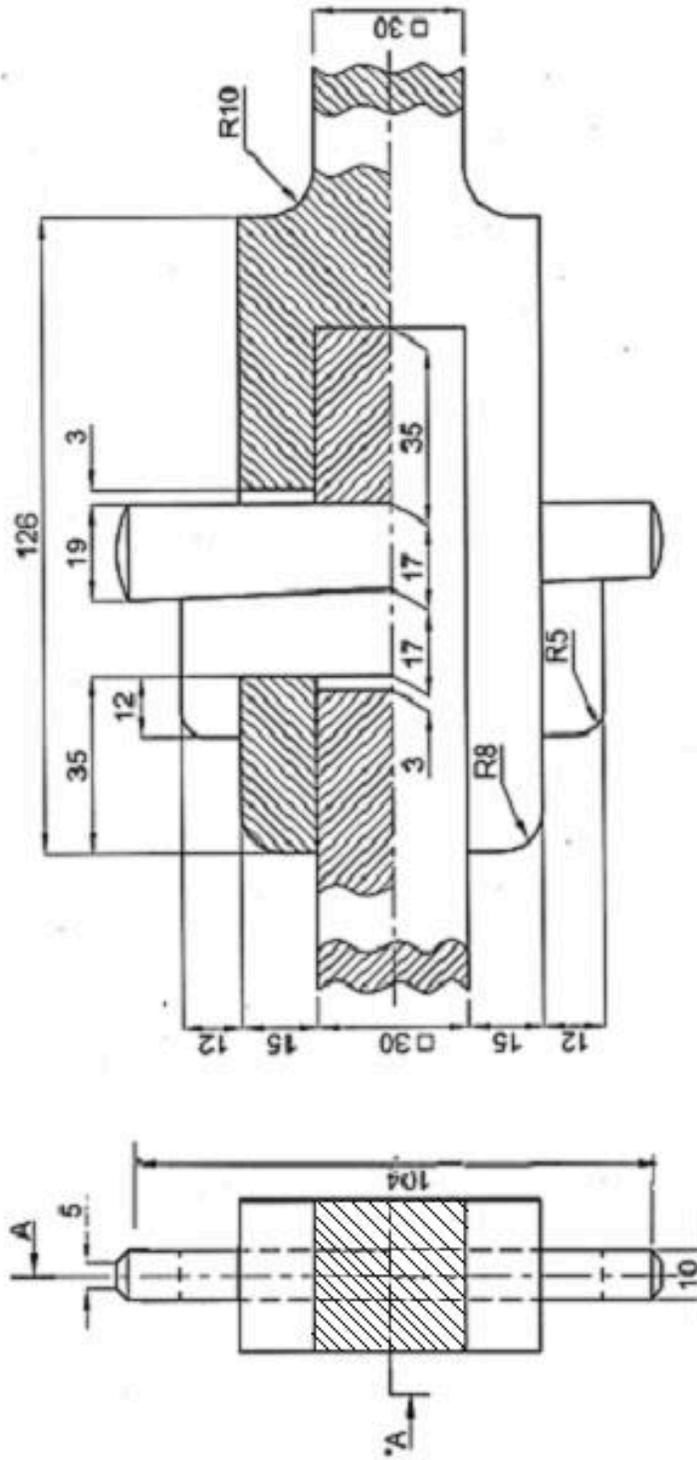


FRONT VIEW

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

ASSEMBLY OF SQUARE BOLT AND SQUARE NUT

Q23



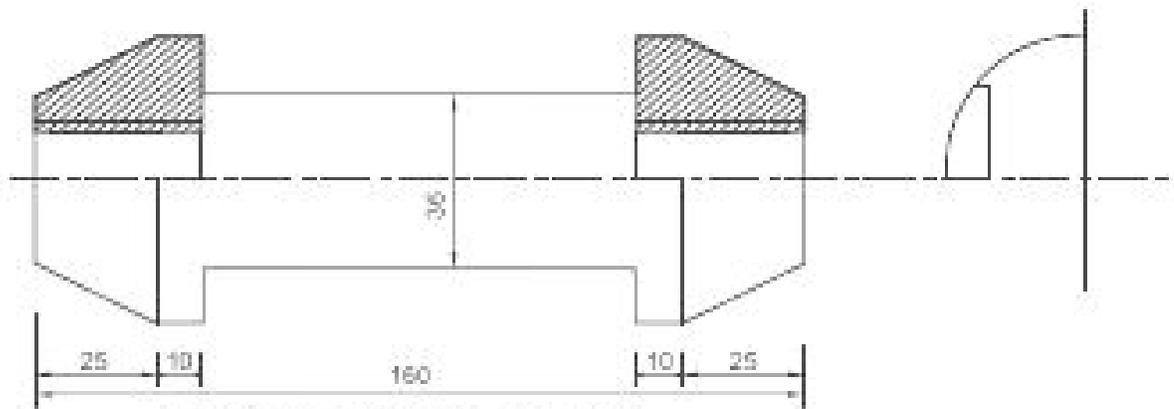
SCALE 1:1

FRONT VIEW, UPPER HALF IN SECTION

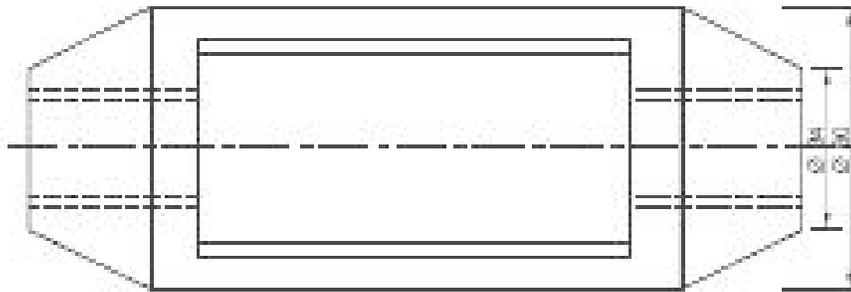
R.H. SIDE VIEW

ASSEMBLY OF GIB AND COTTER JOINT

OR

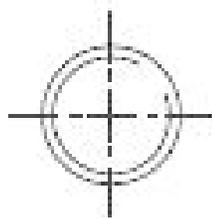


FRONT VIEW UPPER HALF IN SECTION

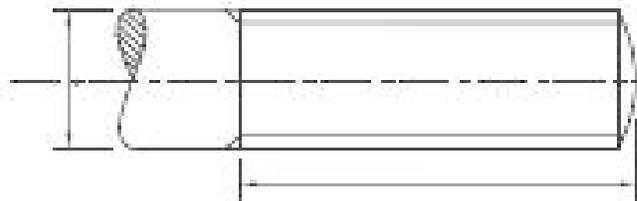


TOP VIEW

BODY



RH SIDE VIEW



FRONT VIEW

ROD - A

SCALE 1:1



DISASSEMBLY OF TURNBUCKLE