

ENGINEERING GRAPHICS – Code No. 046

MARKING SCHEME

CLASS - XII – (2025-26)

Time Allowed: 3 hours

Maximum Marks: 70

SECTION – A

Value Points

- | | |
|--|---|
| 1. (b) or Below Elevation | 1 |
| 2. (d) or 1:1 | 1 |
| 3. (c) or OA & OB | 1 |
| 4. (d) or Knuckle | 1 |
| 5. (b) or (ii) & (iii) | 1 |
| 6. (b) or A-(iv) B-(i) C-(iii) D-(ii) | 1 |
| 7. (c) or (i) & (iii) | 1 |
| 8. (c) or 15 mm | 1 |
| 9. (d) or A-(iii) B-(ii) C-(iv) D-(i) | 1 |
| 10. (b) or (iii) & (iv) | 1 |
| 11. (a) or Flange Pipe Joint | 1 |
| 12. (a) | 1 |
| 13. (c) or (i) & (iv) | 1 |
| 14. (b) or A-(iii) B-(iv) C-(i) D-(ii) | 1 |

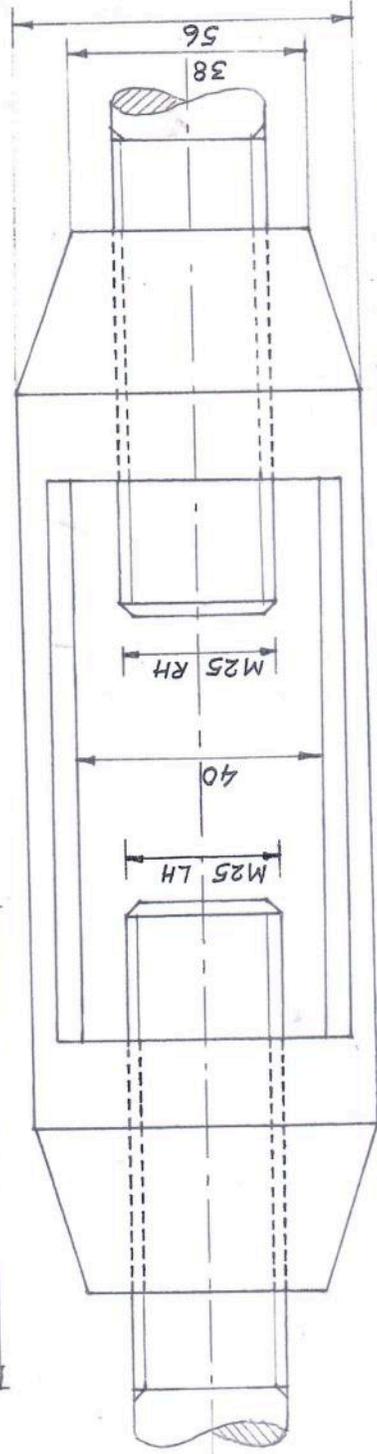
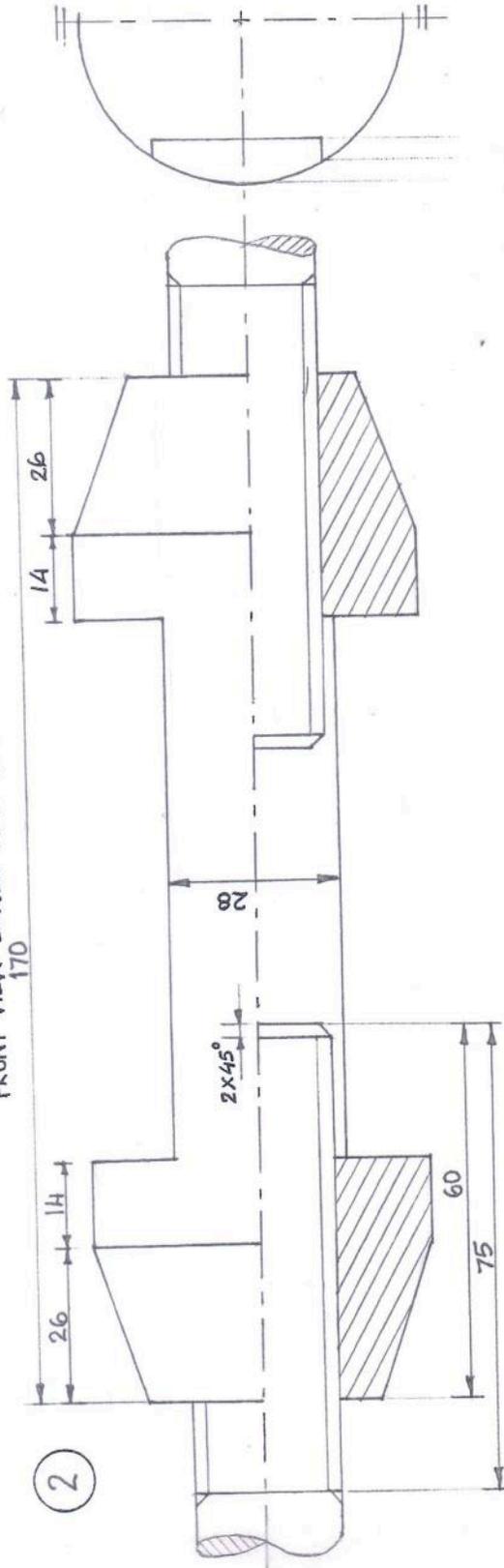
SECTION – B

- | | |
|--|---|
| 15. (b) or Equally inclined axes | 1 |
| 16. (a) or Dimetric, Trimetric | 1 |
| 17. (a) or A circle of true dimensions | 1 |
| 18. (d) or Triangle on a rectangle | 1 |

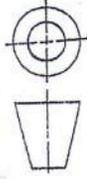
19. (a) or Hexagonal bolt, hexagonal nut	1
20. (c) or Collar Stud	1
21. (a) or Snap head rivet	1
22. (b) or 10:8	1
23. (A) ASSEMBLY OF TURN BUCKLE	
(I) FRONT VIEW LOWER HALF IN SECTION	13
(i) Drawing the entire outline of upper body correctly	4
(ii) Drawing the entire outline of lower body correctly with section lines	5
(iii) Drawing two threaded rods	4
(II) TOP VIEW	8
(i) Drawing body with helping view	5
(ii) Drawing two threaded rods	3
(III) OTHERS	6
(i) Six Important Dimensions	3
(ii) Printing title, Projection symbol and Scale used	3

HELPING VIEW

FRONT VIEW LOWER HALF IN SECTION



SCALE 1:1



TOP VIEW

ASSEMBLY OF TURN BUCKLE

OR

23. (B) DIS-ASSEMBLY OF SLEEVE AND COTTER JOINT

(I) SLEEVE

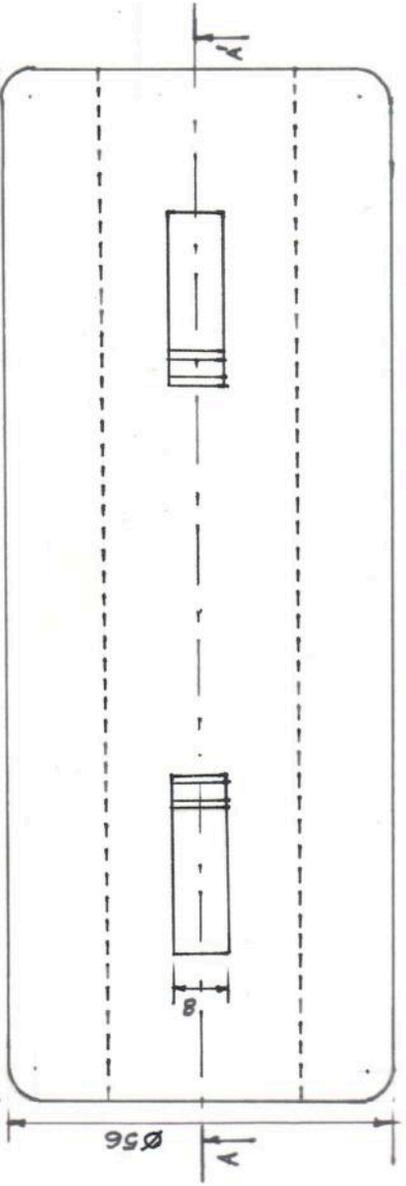
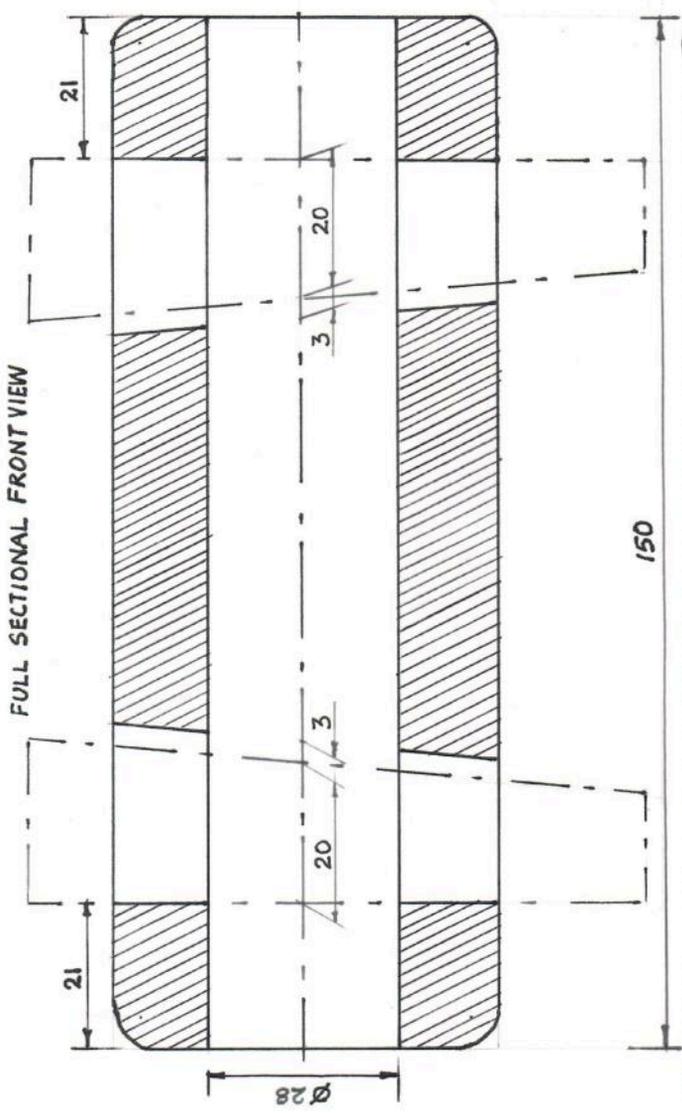
- | | |
|---|----------|
| (i) Full sectional front View | 8 |
| a. Drawing the entire outline of the sleeve | 4 |
| b. Cotter slots | 2 |
| c. Hatching lines | 2 |
|
 | |
| (ii) Top View. | 6 |
| a. Drawing the entire outline of the sleeve | 2 |
| b. Hidden edges | 2 |
| c. Cotter slot | 1½ |
| d. Cutting plane | ½ |

(II) ROD A

- | | |
|---|----------|
| (i) Front view upper half in section | 4 |
| a. Rod with conventional end | 2 |
| b. Slot with hatching | 2 |
|
 | |
| (ii) Left Side View | 3 |
| a. Both circles with hatching of conventional end | 1½ |
| b. Hidden lines | 1 |
| c. Cutting plane | ½ |

(III) OTHERS **6**

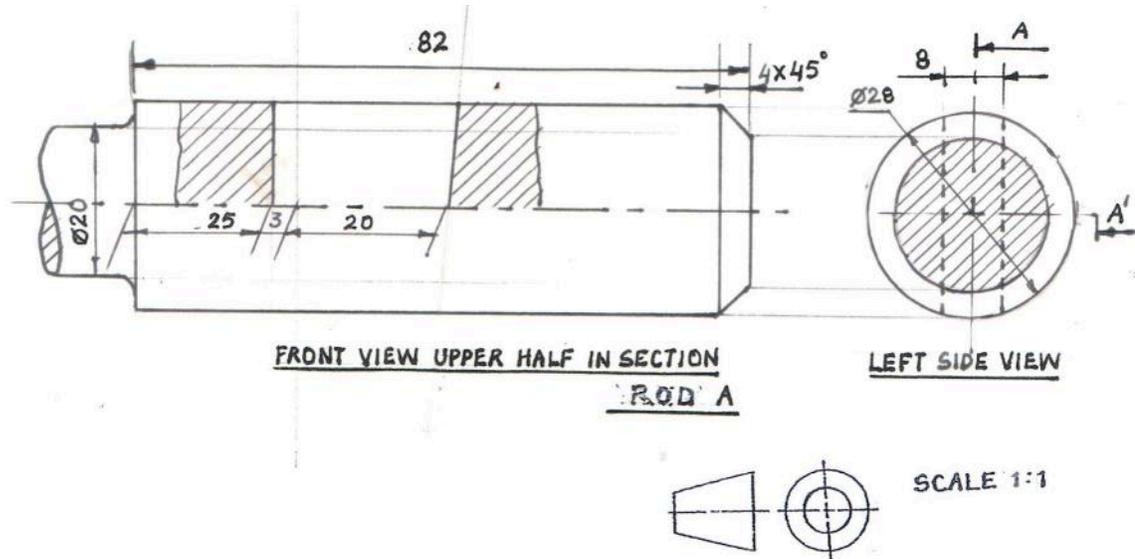
- | | |
|--|---|
| (i) 6 Important Dimensions. | 3 |
| (ii) Printing titles, Symbol of Projection and Scale used. | 3 |



23

FULL SECTIONAL FRONT VIEW

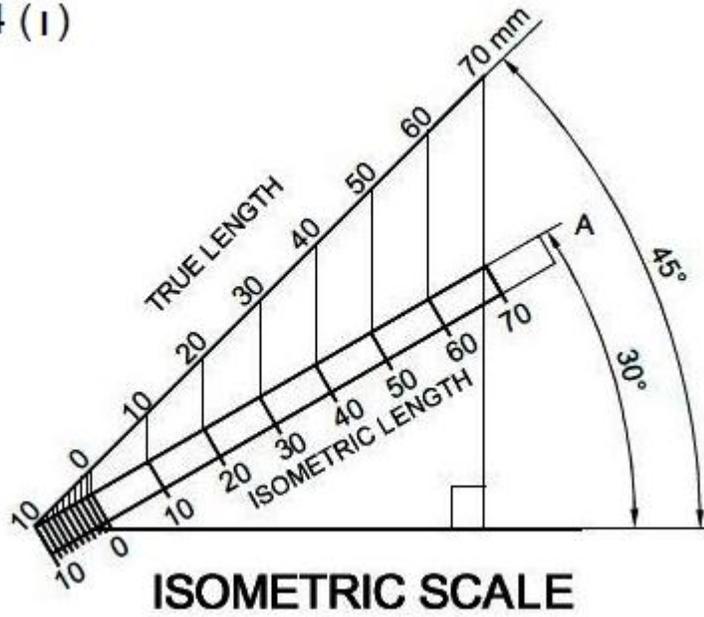
TOP VIEW
SLEEVE
 DIS ASSEMBLY OF SLEEVE AND COTTER JOINT



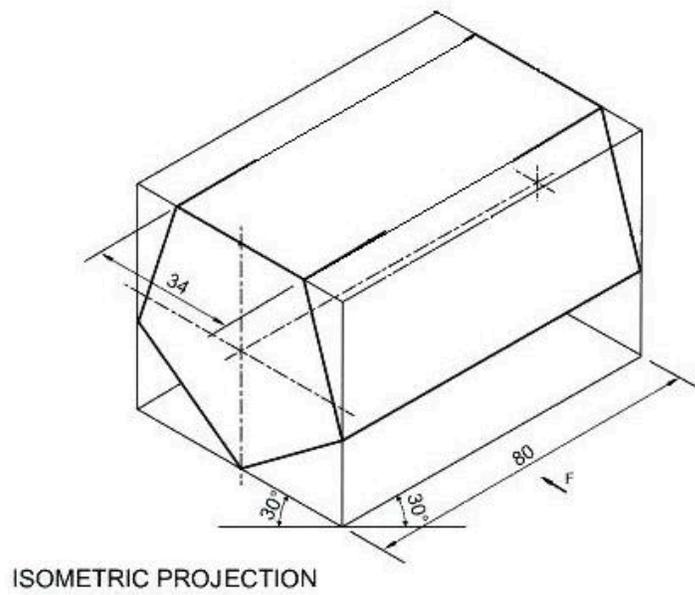
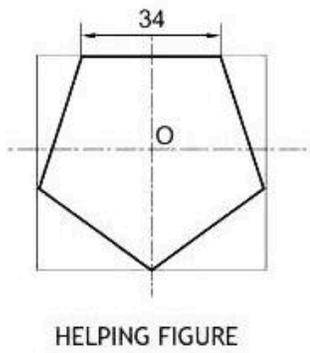
SECTION – C

- | | |
|--|----------|
| 24. (I) ISOMETRIC SCALE | 4 |
| (i) Drawing 45° inclined line showing true lengths | 1 |
| (ii) Projections on 30° inclined line showing isometric length with 1mm subdivisions in one part | 2 |
| (iii) Writing title, sub titles and angles | 1 |
| | |
| 24. (II) ISOMETRIC PROJECTION OF PENTAGONAL PRISM | 9 |
| (i) Helping figure | 1 |
| (ii) Drawing isometric pentagons | 4 |
| (iii) Drawing face edges | 2 |
| (iv) Dimensions | 1 |
| (v) Indicating the axis and direction of viewing | 1 |

Q24 (I)



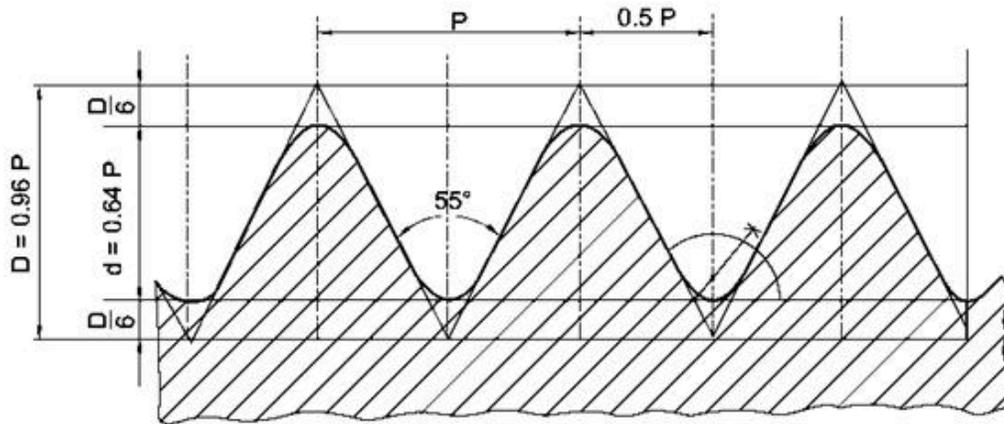
Q24 (II)



25. (A) B.S.W. THREAD PROFILE

8

- (i) Distance equal to pitch and other ratios 2
- (ii) Crest, roots and slant edges 3
- (iii) Hatching lines with conventional break 1
- (iv) Standard dimensions 2



P	D	d	D/6
50	48	32	8

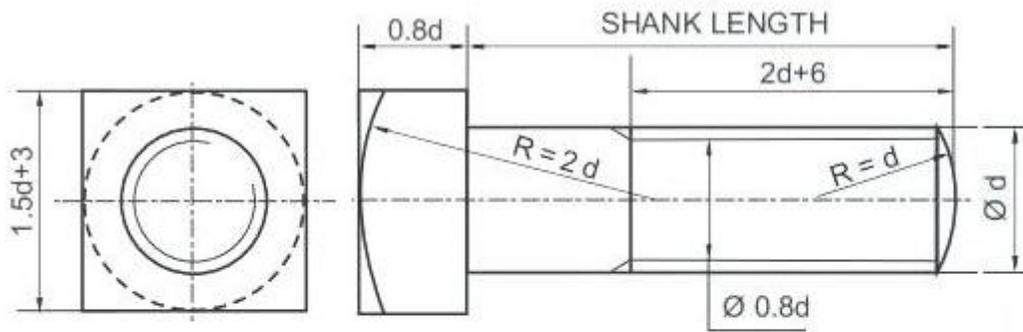
STANDARD PROFILE OF B.S.W. SCREW THREAD

OR

25. (B) SQUARE BOLT

8

- (i) Front view 3
- (ii) Side view 3
- (iii) Standard dimensions 2



SIDE VIEW

FRONT VIEW

d	0.8d	1.5d+3	2d+6	2d
24	19.2	39	54	48

SQUARE BOLT