

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 |

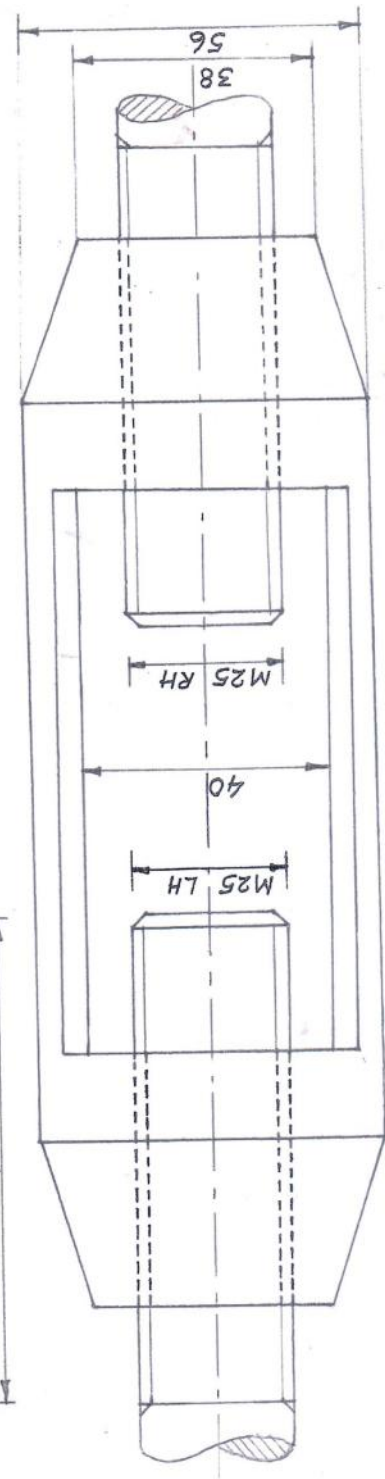
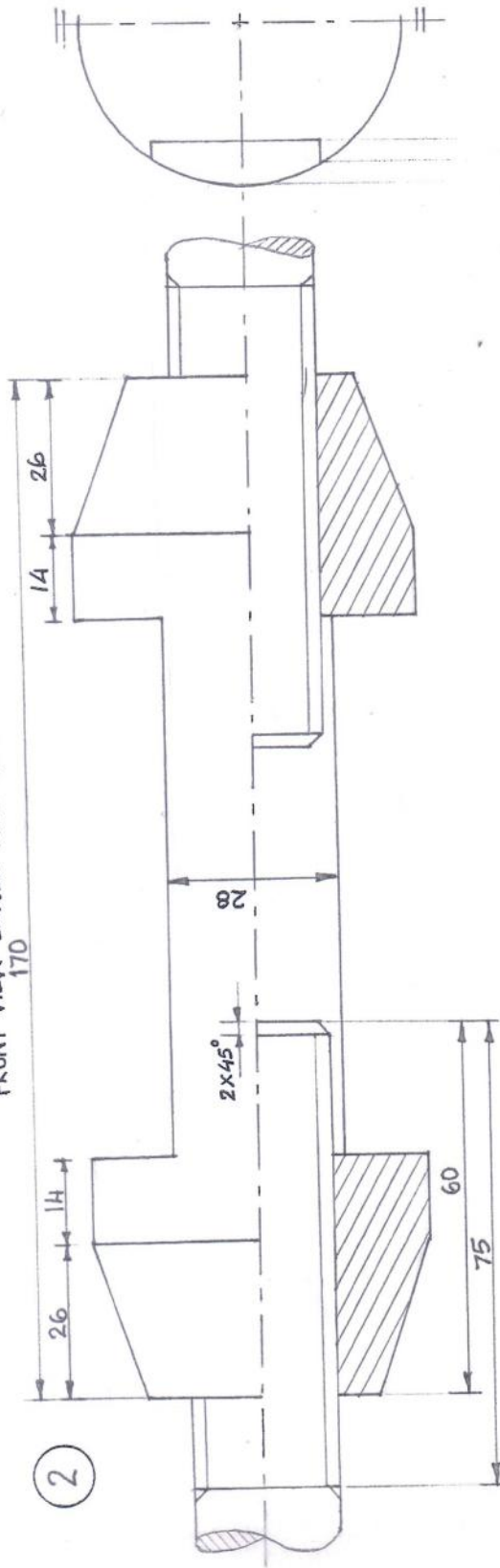
SECTION – B

- | | |
|--|---|
| 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

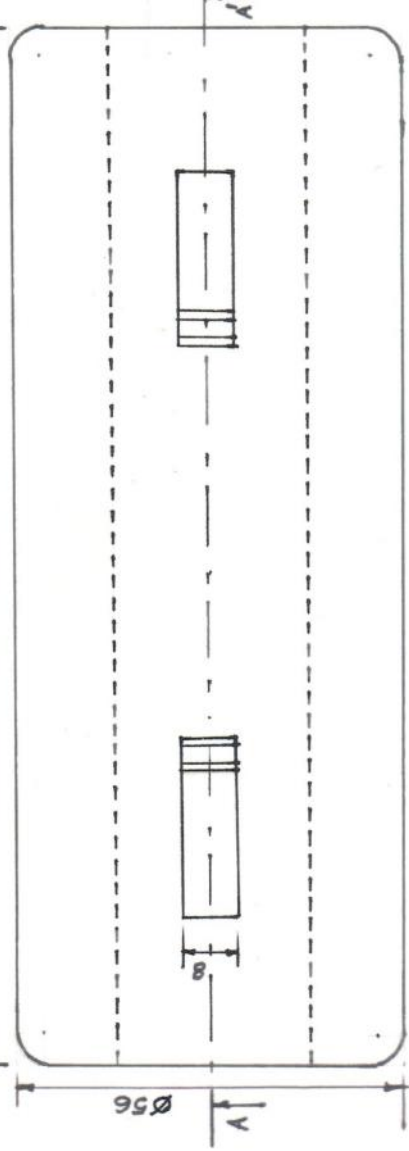
(II) ROD A

(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

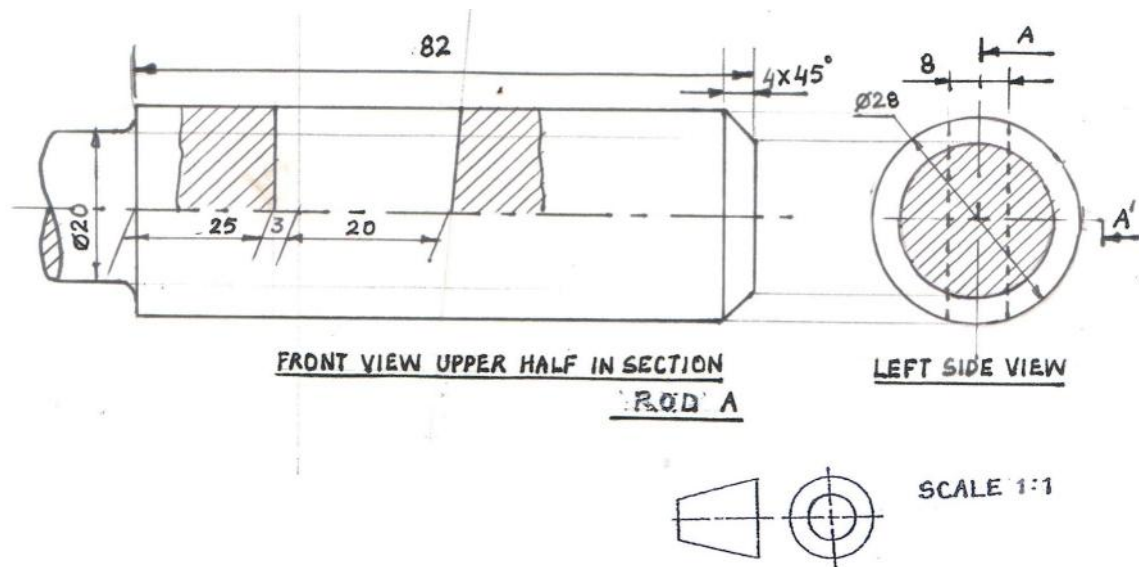
FULL SECTIONAL FRONT VIEW



TOP VIEW

SLEEVE

DIS ASSEMBLY OF SLEEVE AND COTTER JOINT



SECTION – C

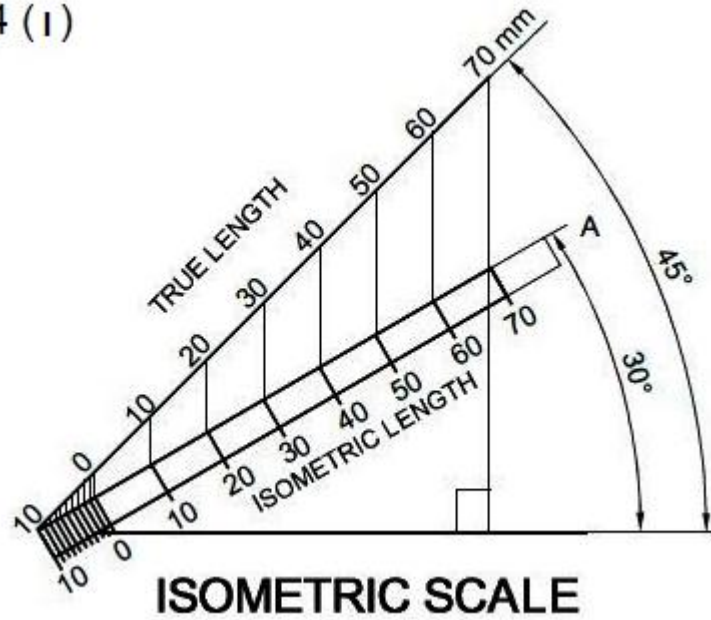
24.(I) ISOMETRIC SCALE 4

- (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

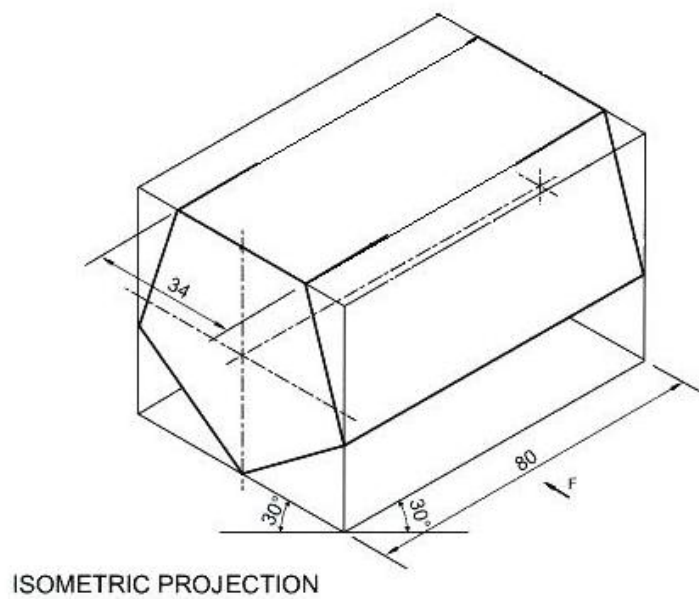
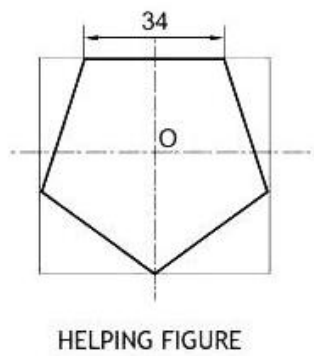
24. (II) ISOMETRIC PROJECTION OF PENTAGONAL PRISM 9

- (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)



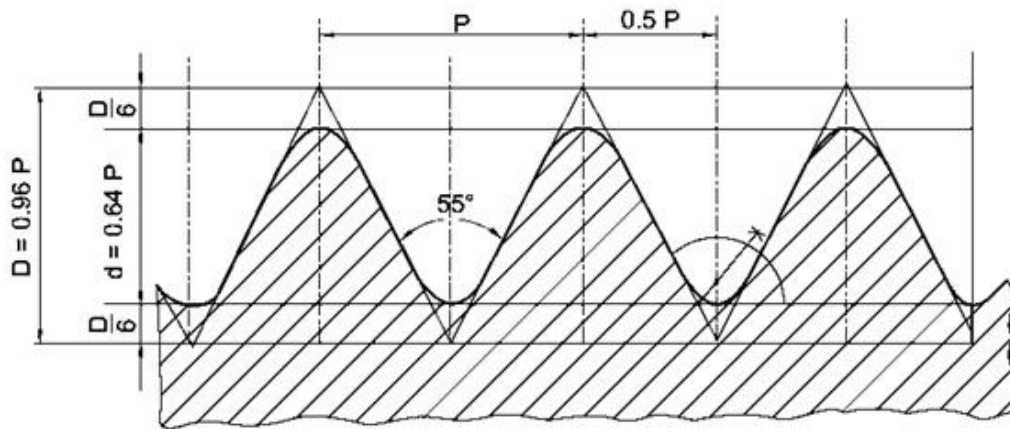
Q24 (II)



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

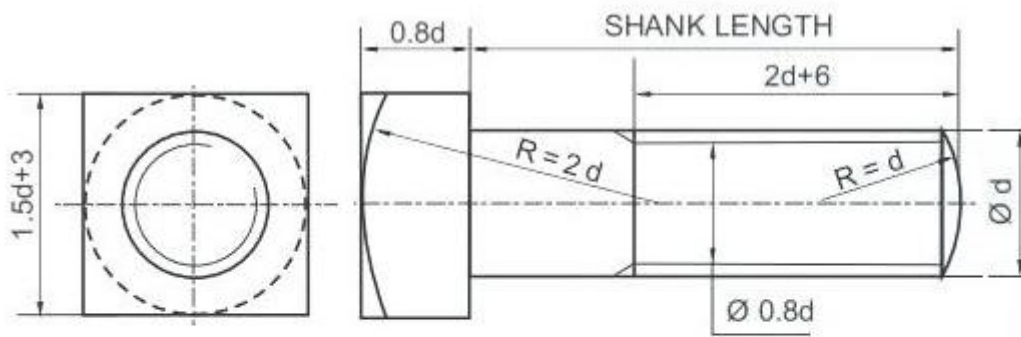
STANDARD PROFILE OF B.S.W. SCREW THREAD

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