



COMMON PRE-BOARD EXAMINATION: 2022-23
Class-XII Subject: ENGINEERING GRAPHICS (046)



Date: 22/01/2023

MARKING SCHEME

XII – (2022-23)

ENGINEERING GRAPHICS (046)

Time Allowed: 3 hours

Maximum Marks: 70

SECTION – A

Value Points

1*20=20

1. . a) Non isometric lines
2. . b) $\sqrt{3} : \sqrt{2}$
- 3 b) Plates together
4. d) To provide the bearing surface
5. a) 0.96P
6. d) Pitch circle diameter
7. b) Journal
8. c) Knuckle thread
9. d) A pentagonal prism is resting on top of hexagonal disc. Axis of prism is parallel to VP and that of disc is perpendicular to HP.
10. b) Square prism is horizontal and cylinder is kept with its axis perpendicular to VP
11. c)
12. a) The common axis is perpendicular to HP and parallel to VP
13. a) The common axis is perpendicular to HP and two of the base edges of the prism are perpendicular to VP
14. b) A vertical cylinder of base diameter 40 mm is placed centrally on a pentagonal prism which is resting on HP with one of its long edges on it.
15. c) **A is true but R is false.**
16. d) An ellipse
17. a) 550mm
18. a) It remains same
19. a) same in all dimensions
20. a) 200mm

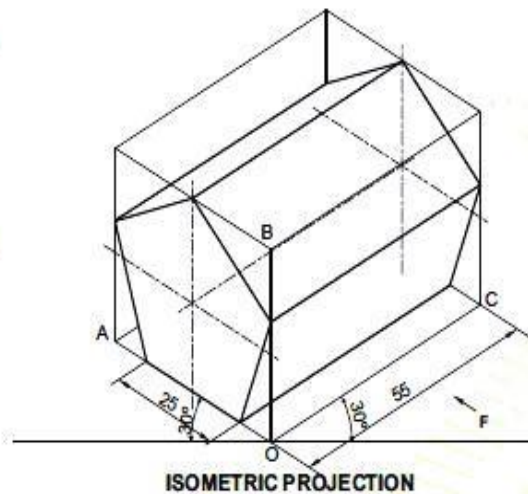
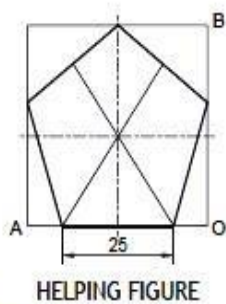
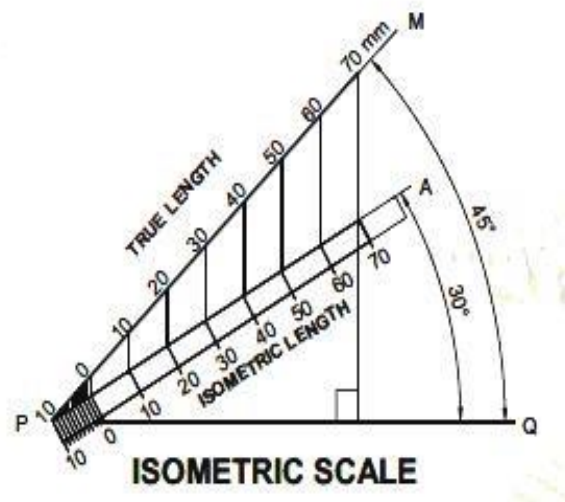
21. (a) ISOMETRIC SCALE

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 PENTAGONAL PRISM 10

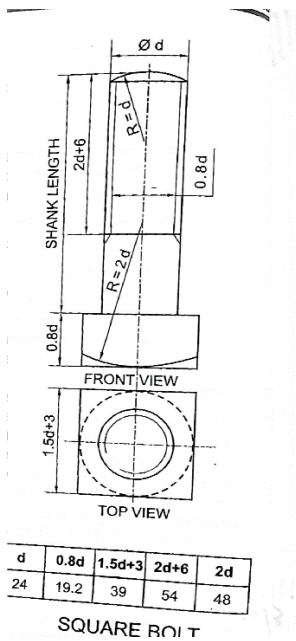
- (i) Helping figure 1 (ii) Drawing both the iso-pentagons 4
- (iii) Drawing four face edges 3
- (iv) Dimensions 1
- (v) Indicating the axis and direction of viewing 1



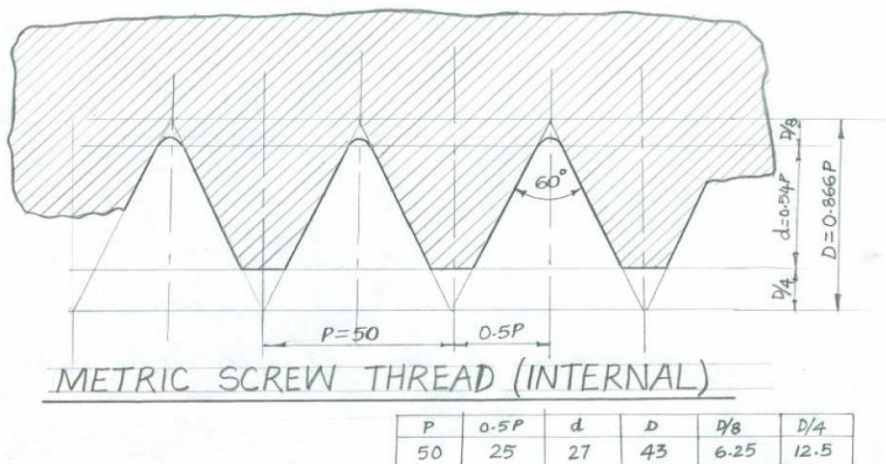
22.

SQUARE HEADED BOLT**8**

- (i) Drawing front view with details 3
- (ii) Drawing top view with details 3
- (iii) Dimensions and titles 2

**OR****METRIC THREAD (INTERNAL)****8**

- (i) Distance equal to pitch, and angles of 60° 2
- (ii) Flat edges and curves for threads 2
- (iii) (iii) Side edges / flanks 2
- (iv) Dimension 2



23. ASSEMBLY OF TURN BUCKLE

(a) FRONT VIEW LOWER HALF IN SECTION 13

(i) Drawing bottom half turnbuckle	4
(ii) Drawing top half turnbuckle	3
(iii)Hatching in turnbuckle	2
(iv)Drawing rod A	2
(v) Drawing rod	2

(b)TOP VIEW 8

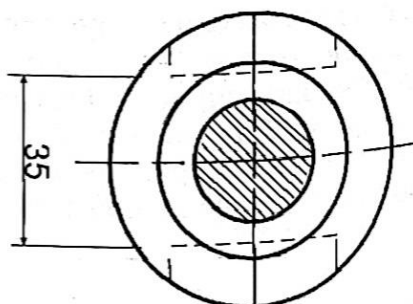
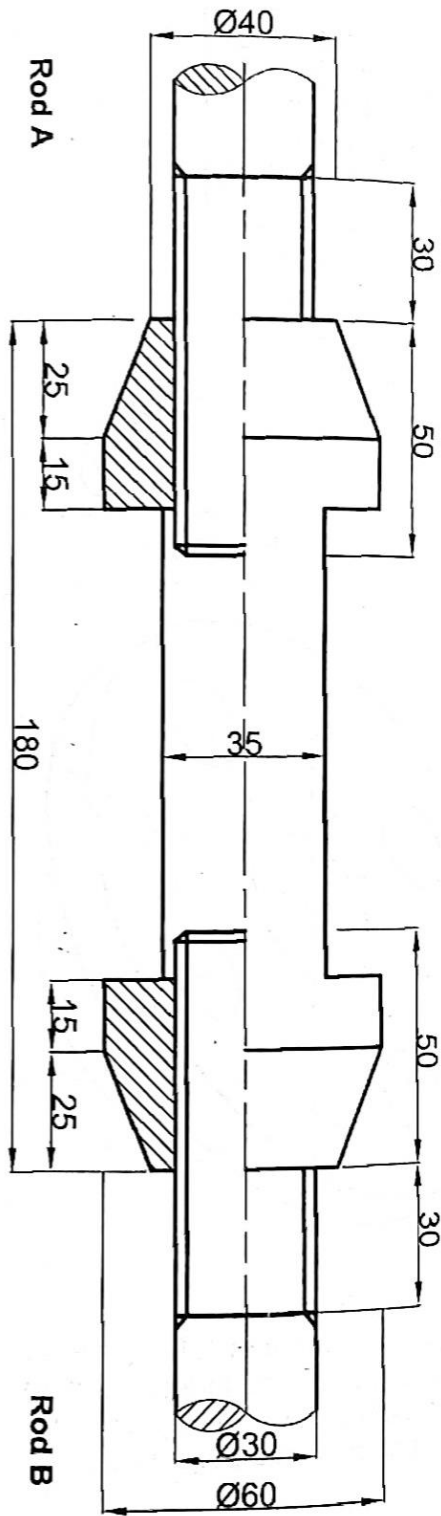
(i) Drawing turn buckle	4
(ii)Drawing rods	2
(iii)Hidden lines	1 1/2
(iv) Cutting plane	1/2

(c) OTHERS 6

(i) Important Dimensions	3
(ii)Printing title, Projection symbol and Scale used	3

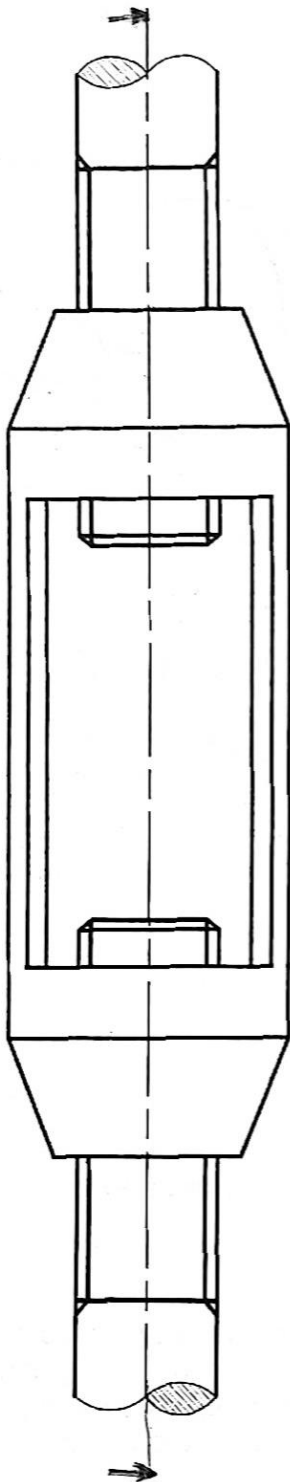
TURN BUCKLE

ASSEMBLY



LOWER HALF SECTION FRONT VIEW

L.H VIEW



TOP VIEW



SCALE 1:1

OR

DIS-ASSEMBLY OF SLEEVE AND COTTER JOINT

(a) SLEEVE

- (i) FRONT VIEW LOWER HALF IN SECTION **7**
 a. Drawing sleeve and hatching in lower half **7**
- (ii) Right side View. **4**
 a. Circles with cotter hole **4**

(b) ROD B

- (i) Front View bottom half in section **6**
 Drawing rod with hatching at bottom **6**
- (ii) left Side View **4**

(c) OTHERS

6

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



SLEEVE AND COTTER

