

SAMPLE QUESTION PAPER
MARKING SCHEME
XII – (2022-23)
ENGINEERING GRAPHICS (046)

Time Allowed: 3 hours

Maximum Marks: 70

SECTION – A

Value Points

- | | |
|--|---|
| 1. d) Orthographic Projection | 1 |
| 2. a) A cone filled with ice-cream | 1 |
| 3. b) | 1 |
| 4. b) check leakage of fluid in pipes | 1 |
| 5. b) Turn Buckle / Tie Rod Joint | 1 |
| 6. a) Centre to centre distance | 1 |
| 7. d) Pitch circle diameter | 1 |
| 8. c) 1 in 30 | 1 |
| 9. b) The pentagonal ends are parallel to VP | 1 |
| 10. c) Axis of cone is perpendicular to HP, axis of prism is perpendicular to VP | 1 |
| 11. 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 | 1 |
| 12. c) Two vertical solids with one base edge of the pyramid away from observer and parallel to VP | 1 |
| 13. b) The length of common axis is iso 65mm | 1 |
| 14. b) A horizontal solid placed on a horizontal solid | 1 |
| 15. c) A is true but R is false | 1 |
| 16. c) Temporary Fastener | 1 |
| 17. a) Headless Bolt | 1 |
| 18. a) Collar | 1 |
| 19. d) 1.5 d | 1 |
| 20. c) 20mm | 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 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. METRIC THREAD (INTERNAL)	8
(i) Distance equal to pitch, and angles of 60°	2
(ii) Flat edges and curves for threads	2
(iii) Side edges / flanks	2
(iv) Dimensions	2

OR

HEXAGONAL NUT	8
(i) Drawing front view with details	3
(ii) Drawing top view with details	3
(iii) Dimensions and titles	2

23. ASSEMBLY OF OPEN BEARING

(a) FRONT VIEW RIGHT HALF IN SECTION	13
(i) Drawing right half body with hole	4
(ii) Drawing left half body	2 ^{1/2}
(iii) Hatching in body	1
(iv) Drawing right half bush	1 ^{1/2}
(v) Drawing left half bush.	3
(vi) Hatching in bush	1
(b) TOP VIEW	8
(i) Drawing outline of body with two vertical lines	2
(ii) Drawing two holes with center lines	2
(iii) Drawing bush	2
(iv) Hidden lines	1 ^{1/2}
(v) Cutting plane	1/2
(c) OTHERS	6
(i) Important Dimensions	3
(ii) Printing title, Projection symbol and Scale used	3

OR

DIS-ASSEMBLY OF GIB AND COTTER JOINT

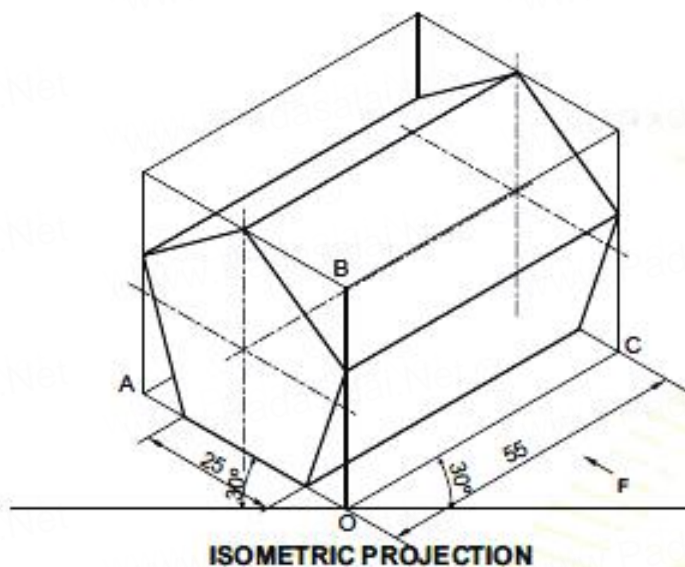
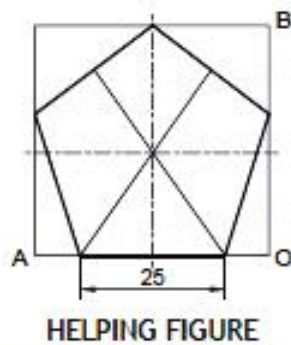
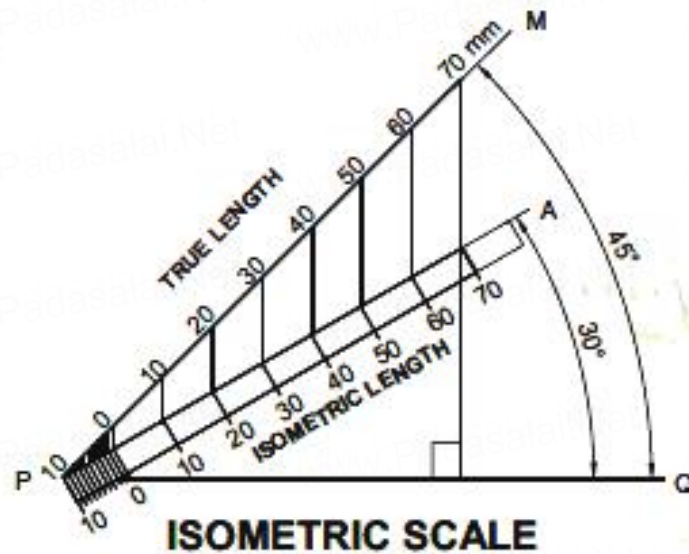
(a) FORK END	
(i) FRONT VIEW UPPER HALF IN SECTION	9
a. Drawing body with conventional end	6
b. Drawing hole (2) and hatching in upper half	3
(ii) Top View.	6
a. Drawing body with two vertical lines	4
b. Drawing hole	2

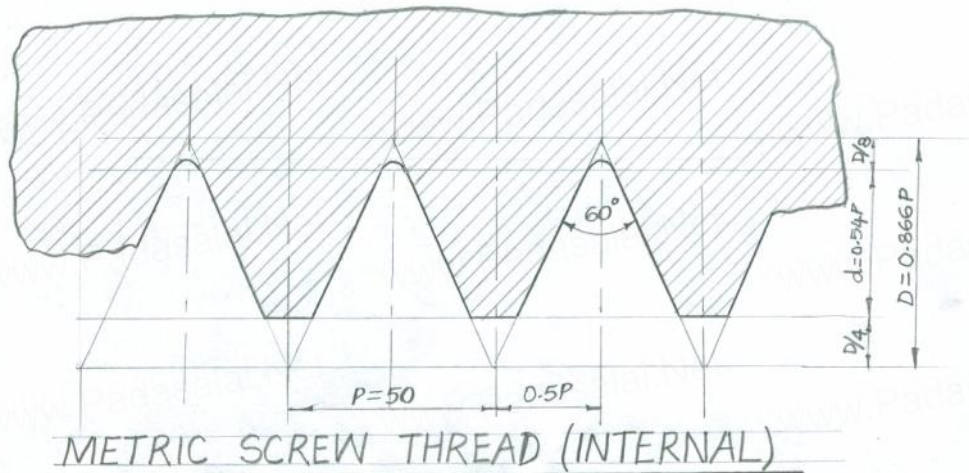
(b) GIB

- | | |
|-----------------------------------|----------|
| (i) Front View | 4 |
| a. Drawing body (2) and taper (2) | 4 |
| (ii) Side View | 2 |

(c) OTHERS

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

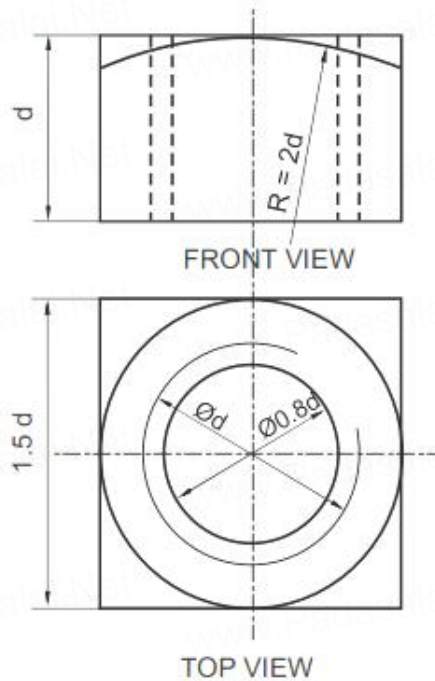




P	0.5P	d	D	D/8	D/4
50	25	27	43	6.25	12.5

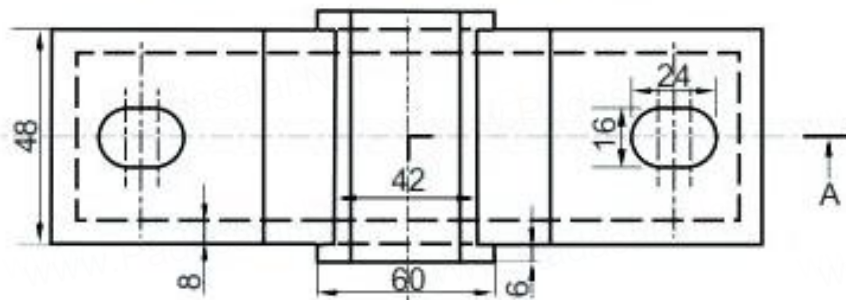
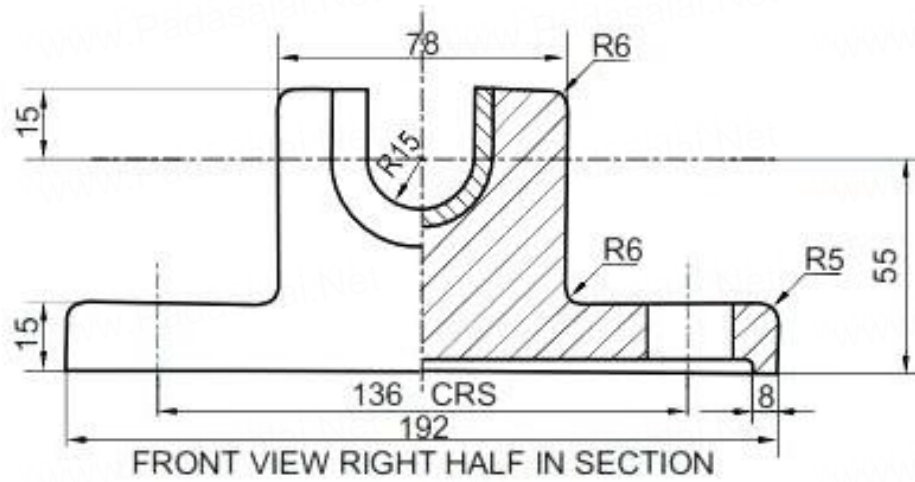
FIG - 1.4

OR



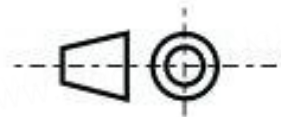
SQUARE NUT ACROSS FLAT

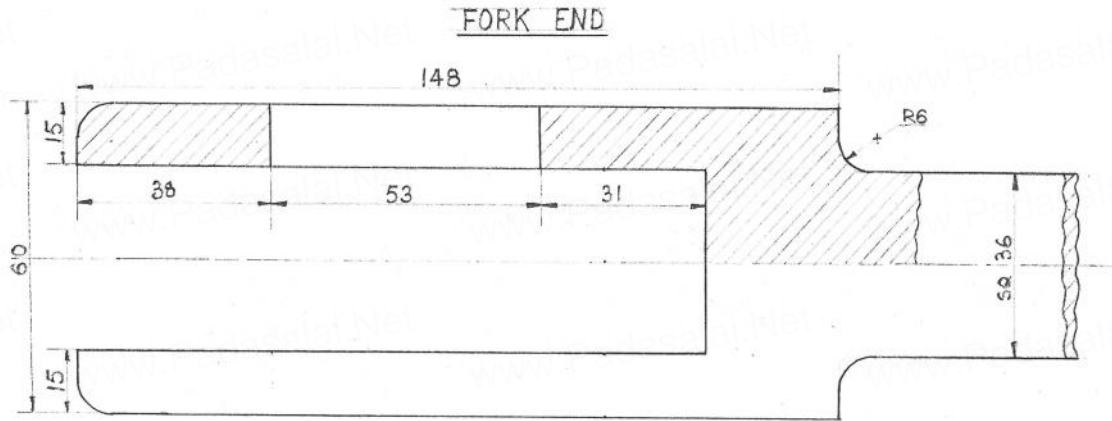
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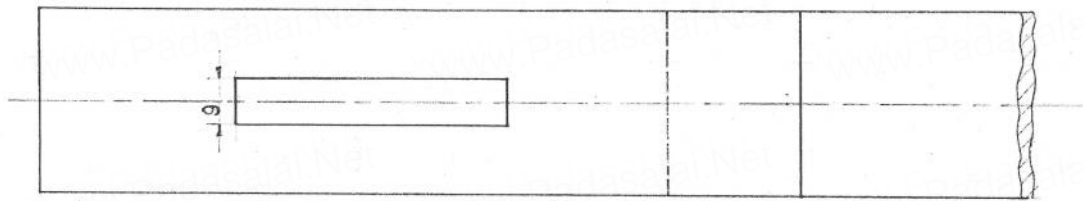
OPEN BEARING

SCALE 1:1

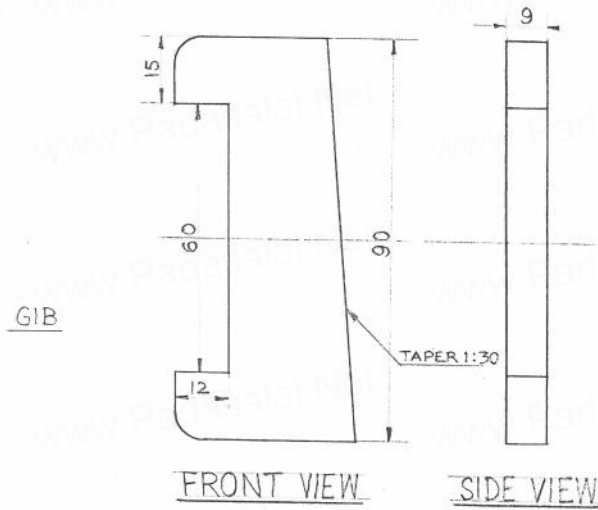




UPPER HALF SECTIONAL FRONT VIEW



TOP VIEW



GIB

