COMMON PRE-BOARD EXAMINATION

ENGINEERING GRAPHICS-Code No. 046

MARKING SCHEME

Class-XII-(2025-26)

SET: 1

Time allowed: 3 Hrs. **Maximum Marks: 70**

SECTION – A

Q.1 to Q.14: Answer the following multiple-choice questions. Print the correct choice on your drawing sheet. **14 × 1 = 14**

SECTION – A

Q.NO	ANSWERS
1	(b) Isometric scale
2	(c) Visible lines
3	(c) Rhombus of 40 mm sides
4	(b) Pitch
5	(b)(ii) and (iv) only
6	(c)1- (ii), 2-(iii), 3-(iv), 4-(i)
7	(b) (i), (ii) & (iii)
8	(b) 6 mm
9	(d) 1-(ii), 2-(iv), 3-(i), 4-(iii)
10	(a)(i) and (iv) only
11	(b) Gib and cotter joint
12	(c)
13	(c)The common axis is vertical.
14	(d) 1-(ii), 2-(iv), 3-(i), 4-(iii)

SECTION B

Q.NO	ANSWERS
15	(c) Allows all dimensions to appear in equal measure.
16	(a) 32.6 mm
17	(a) Circles become ellipses when inclined to all three axes
18	(b) Visualizing objects in 3D for assembly and presentation
19	(b) Hexagonal bolt with nut
20	(b) Smooth cylindrical shaft and rounded head
21	(c) Pan head rivet
22	(b) Easy assembly and disassembly

1 × 27 = 27

23. (a) GIB AND COTTER JOINT (Assembly)

(i) FRONT VIEW (Upper Half in Section) :

(a) Drawing upper half portion of strap, and rods (3), clearance between cotter and strap (1), clearance between gib and rod (1) (5)

(b) Drawing the lower half portion of the strap and rod (4)

(c) Drawing the Cotter and Gib (4)

(d) Drawing the hatching lines in the upper half portion of the strap and rod (2)

(ii) SIDE VIEW (Viewed from left side):

(a) Outlining strap and rod (2)

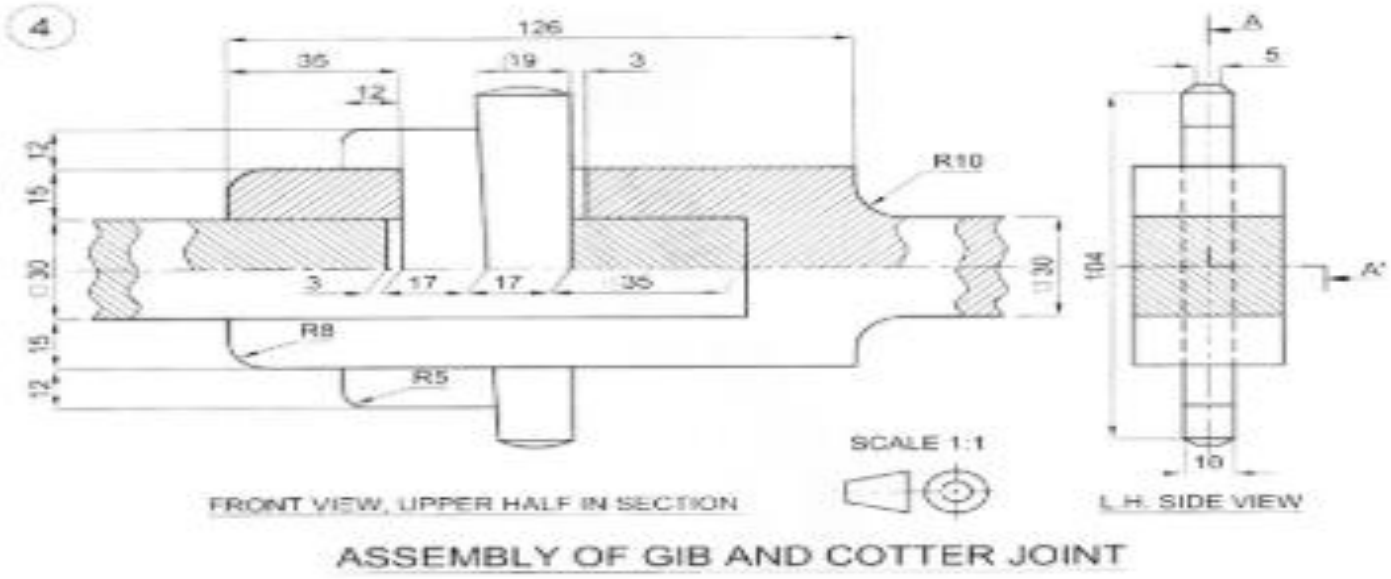
(b) Drawing hatching lines in the rod (1)

(c) Drawing cotter and gib with hidden lines. (2 ½)

(d) Cutting plane. (½)

(iii) DETAILS :

Printing title(1), scale used(1), drawing projection symbol(1) and six dimensions(3).



ASSEMBLY OF GIB AND COTTER JOINT

OR

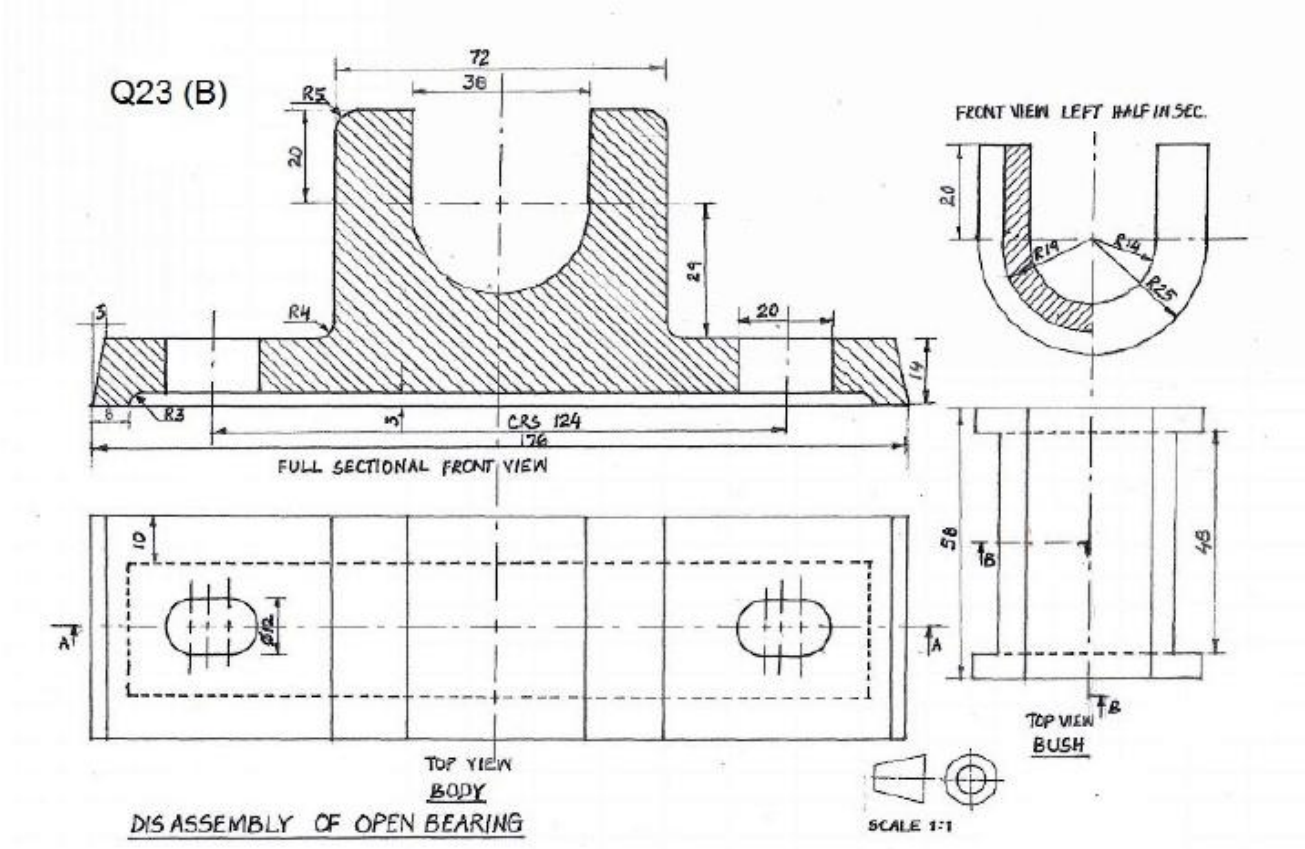
23.(b) DIS-ASSEMBLY OF OPEN BEARING

(a) BODY
(i) Full sectional front view
a. Outlining the body, drawing two bolt holes indicating CRS, recess. (7)
b. Hatching lines (1)

(ii) Top View.
a. Outlining the body (3)
b. Holes and recess (2½)
c. Cutting plane (½)

(b) BUSH
(i) Front view, left half in section (4)
(ii) Top View (3)

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



SECTION C

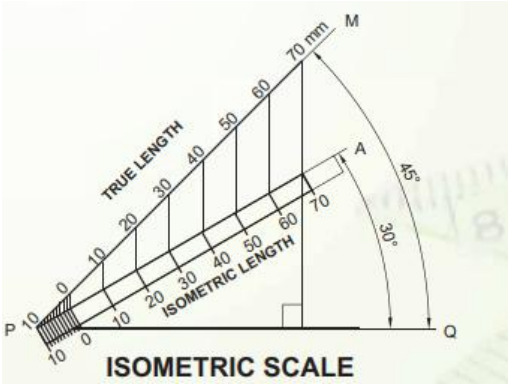
1 × 4 = 4

24. (a) ISOMETRIC SCALE

a. Drawing 45 45-degree inclined line showing true lengths (1)

b. Projections on a 30-degree inclined line showing isometric length with 1mm subdivisions in one part (2)

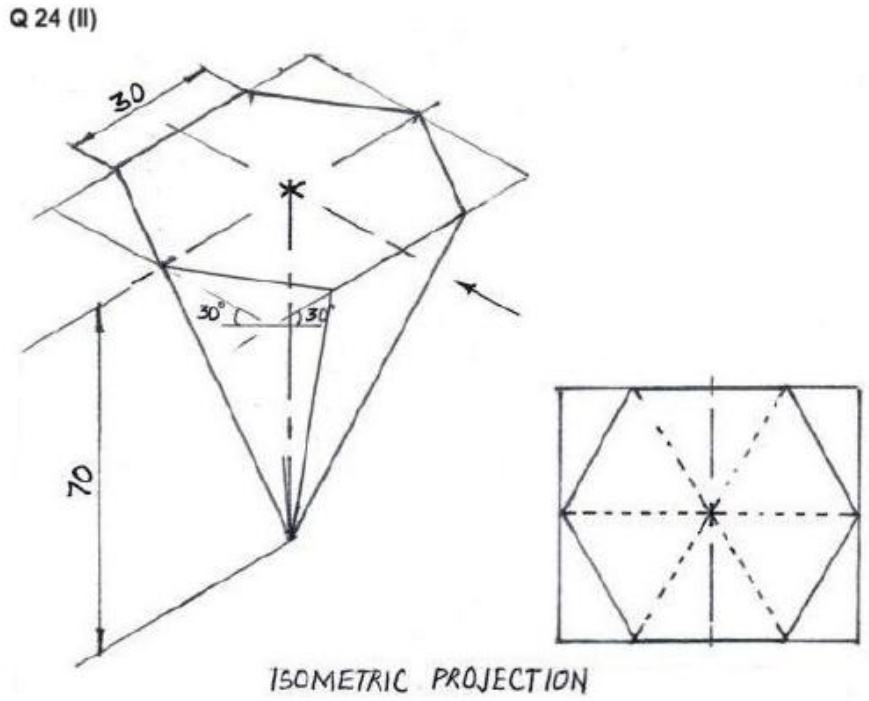
c. Writing title, subtitles, and angles (1)



1 × 9 = 9

24. (b) ISOMETRIC PROJECTION OF INVERTED HEXAGONAL PYRAMID

a. Helping figure (1)
b. Drawing an upper isometric hexagon (3)
c. Drawing slant edges (3)
d. Dimensions (1)
e. Indicating the axis and direction of viewing (1)



1 × 8 = 8

25.(a) METRIC THREAD EXTERNAL

(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 = 0.86P	d = 0.61P	D/8	D/6
50	43	30.5	5.3	7.1

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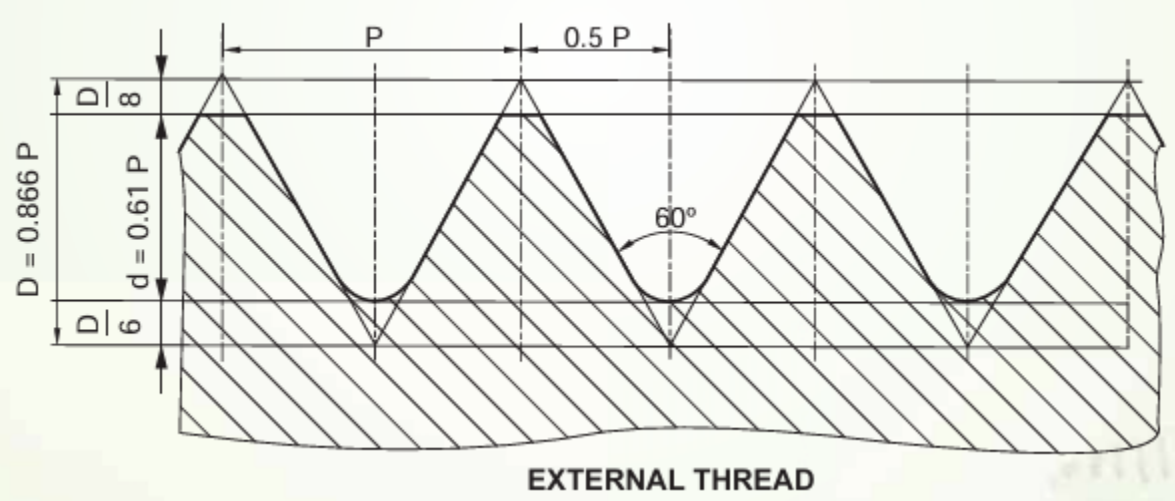


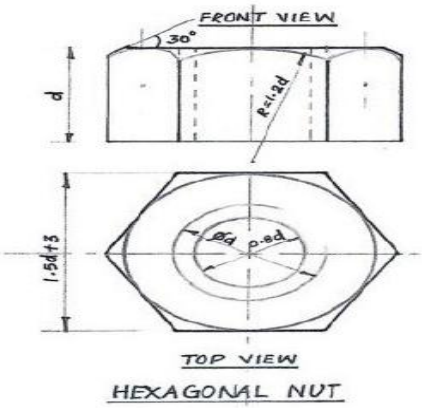
OR

25.(b) HEXAGONAL NUT

(i) Front view (3)

(ii) Top view (3)

(iii) Standard dimensions (2)



d	0.8d	1.5d +3	1.2d
25	20	40.5	30