INDIAN SCHOOL AL WADI AL KABIR

CLASS: XII **ASSESSMENT -1 (2025-2026)** MAX MARKS:70
DATE:25/09/25 TIME: 3 HOURS

ENGINEERING GRAPHICS (046)

MARKING SCHEME

Set - 1

14 × 1 = 14

SECTION – A

Q.NO	ANSWERS
1	(a) The line will appear as a straight line, foreshortened.
2	(b) Above HP and in front of VP
3	(b) Orthographic
4	(d)
5	(c) Square thread
6	(c) The solid is resting on its apex when its axis is parallel to VP.
7	(b) A-(iii) B-(iv) C-(ii) D-(i)
8	(b) (ii) & (iii)

9	(a) 26 mm
10	(d) A-(ii), B-(iv), C-(i), D-(iii)
11	(c) (ii) and (iv) only
12	(b) (i) and (iii) only
13	(b) journal
14	(c) A-(iii) B-(iv) C-(i) D-(ii)

SECTION B

Q.NO	ANSWERS
15	(b)One vertical and two axes at 30° to the horizontal
16	(c)Converting true lengths to isometric lengths for accurate representation
17	(c)As an ellipse
18	(c)No face is shown in its true shape
19	(d) Snap head rivet
20	(c) No head to damage during thermal cycling
21	(b) Stud with hexagonal nut
22	(d) Machine screws

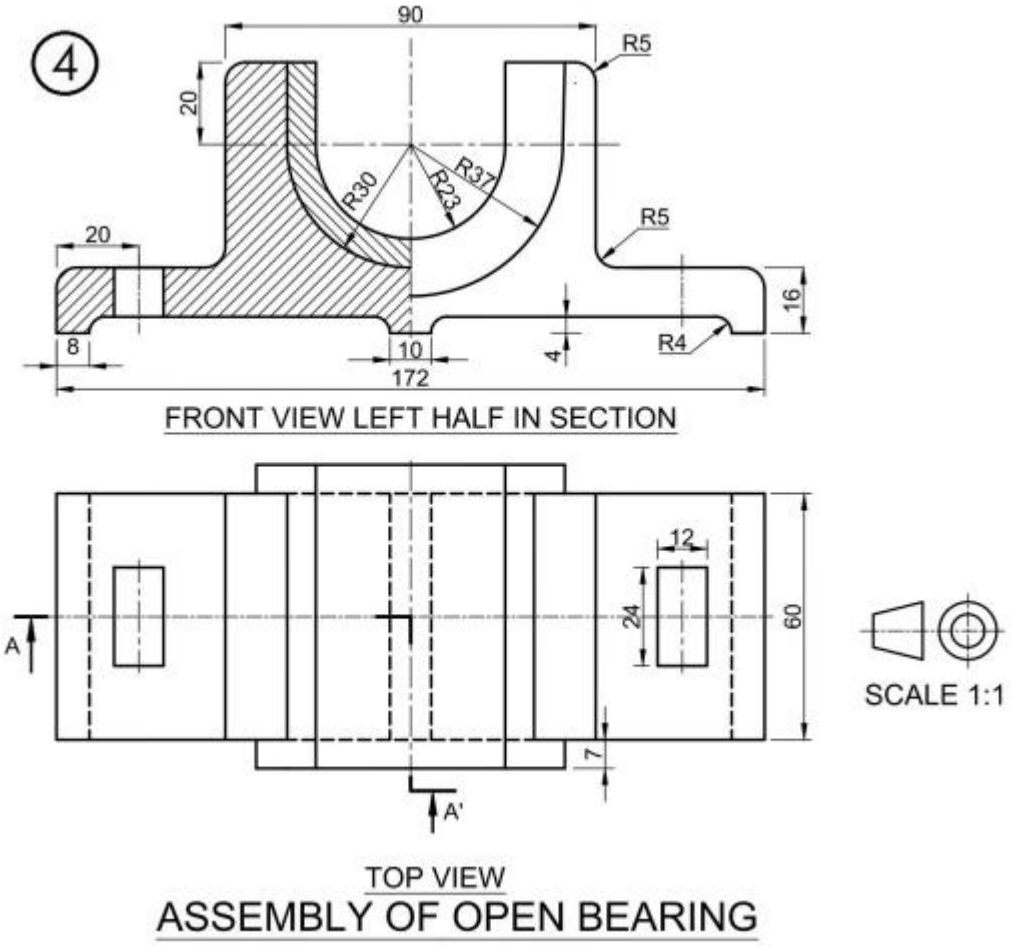
1 × 27 = 27

23.(a) **ASSEMBLY OF OPEN BEARING**

(i) Front view left half in section (13)

(ii) Top view (8)

(iii) Print the title and scale used. Draw projection symbol. Give 6 important dimensions. (6)



OR

23.(b) **DIS-ASSEMBLY OF BUSHED BEARING**

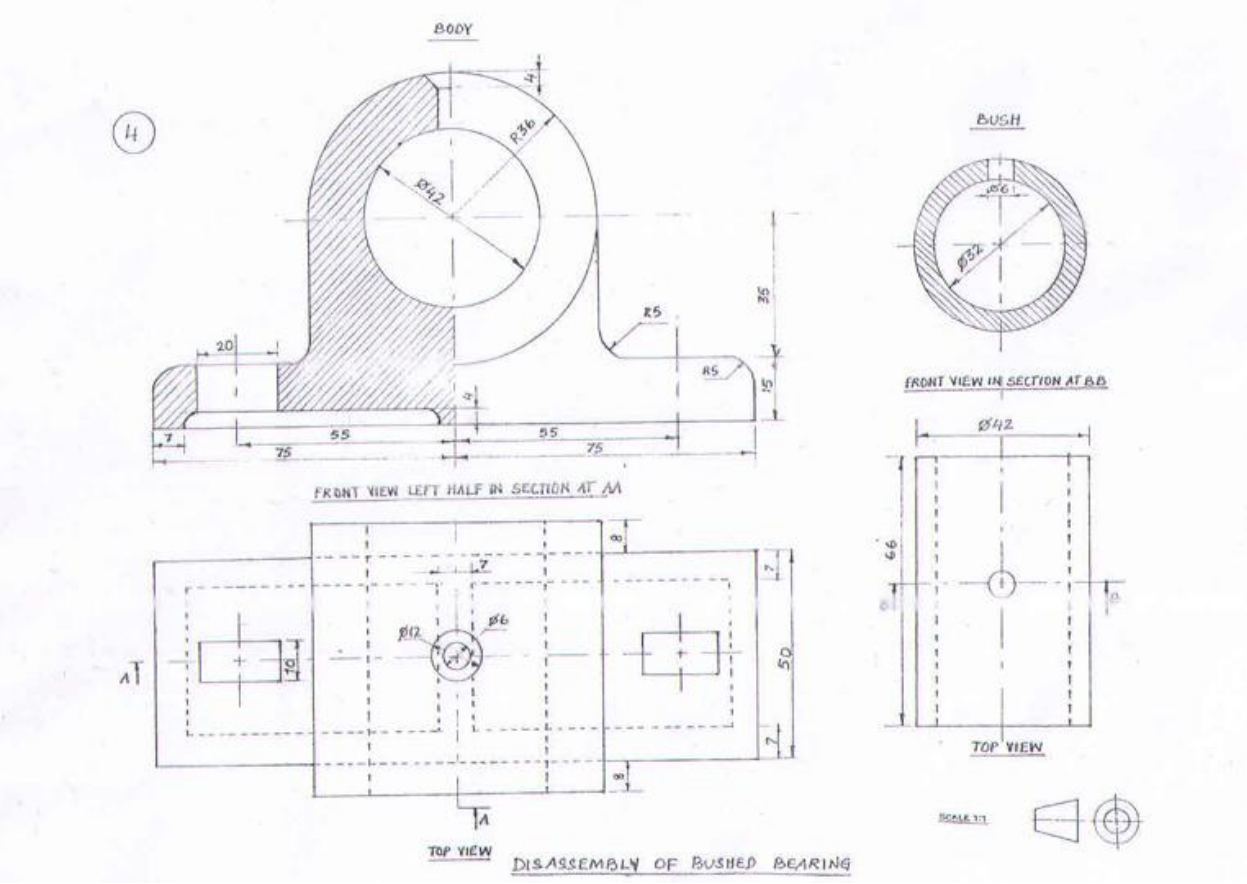
(i) Body:

(a) Front view, left half in section. (8)
(b) Top view. (6)

(ii) Bush:

(a) Full sectional front view. (4)
(b) Top view. (3)

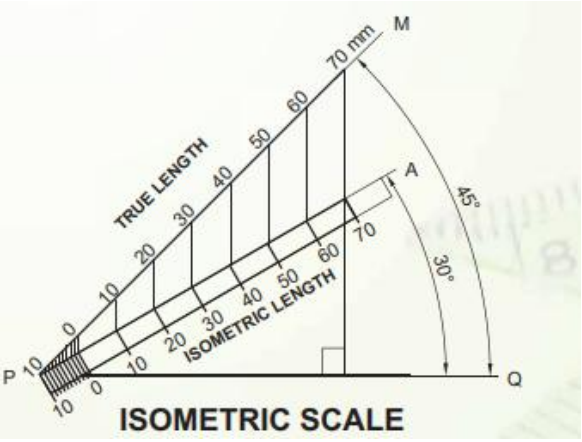
(iii) Print the titles of both and scale used. Draw the projection symbol. Give 6 important dimensions. (6)



SECTION C

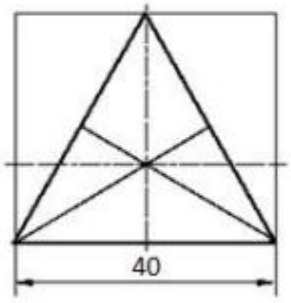
1 × 4 = 4

24.(a) Construct an isometric scale.

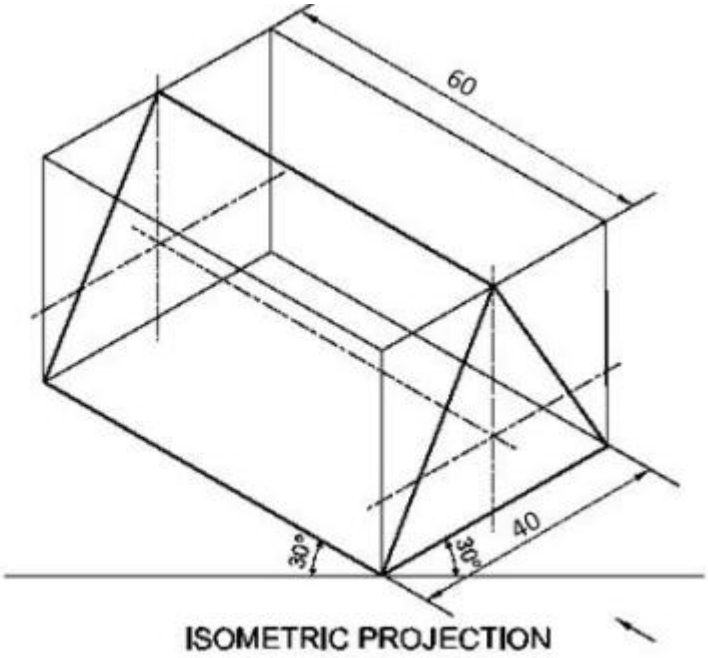


1 × 9 = 9

24. (b) Draw the isometric projection of a triangular prism (base edge 40 mm, axial length 60mm) resting on its rectangular face on H.P. Its axis is perpendicular to V.P. Indicate the direction of viewing. Give all the dimensions.



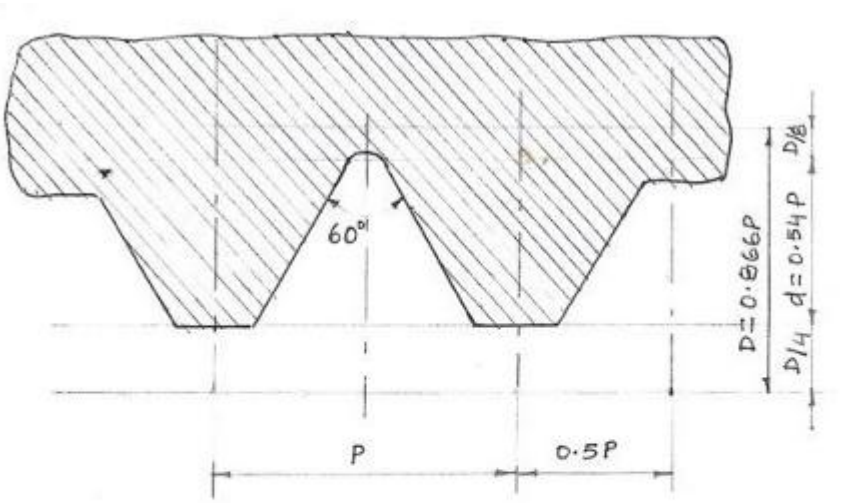
HELPING FIGURE



ISOMETRIC PROJECTION

1 × 8= 8

25.(a) Draw to scale 1:1, the standard profile of the Metric thread internal with the enlarged pitch as 40mm. Give standard dimensions.



P	0.5P	D= 0.866P	D/4	D/8	d = 0.54P
40	20	34.64 =35	8.66 =9	4.33 = 4	21.60 = 22

METRIC THREAD INTERNAL

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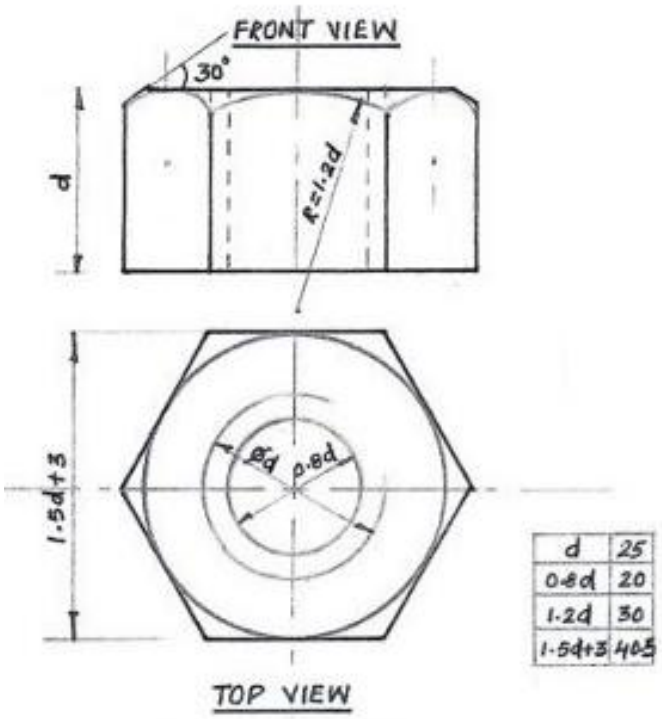
OR

25.(b) Draw to scale 1:1, the front view and top view of a vertical Hexagonal Nut of nominal diameter 25 mm. Give the standard dimensions.



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

HEXAGONAL NUT
