INDIAN SCHOOL AL WADI AL KABIR

Second Rehearsal Examination 2025 2026

CLASS: XII	**MARKING SCHEME**	MAX MARKS: 70
DATE:25/01/26		TIME: 3 HOURS

General Instructions:

(i)   Attempt all the questions.
(ii) Use both sides of the drawing sheet, if necessary.
(iii) All dimensions are in millimeters.
(iv) Missing and mismatching dimensions, if any, may be suitably assumed.
(v)   Follow the SP: 46 – 2003 revised codes. (with first angle method of projection)
(vi) In question 23, hidden edges or lines are to be shown in views without section.
(vii) In question 24, no hidden edges or lines required.

14 × 1 = 14

SECTION – A

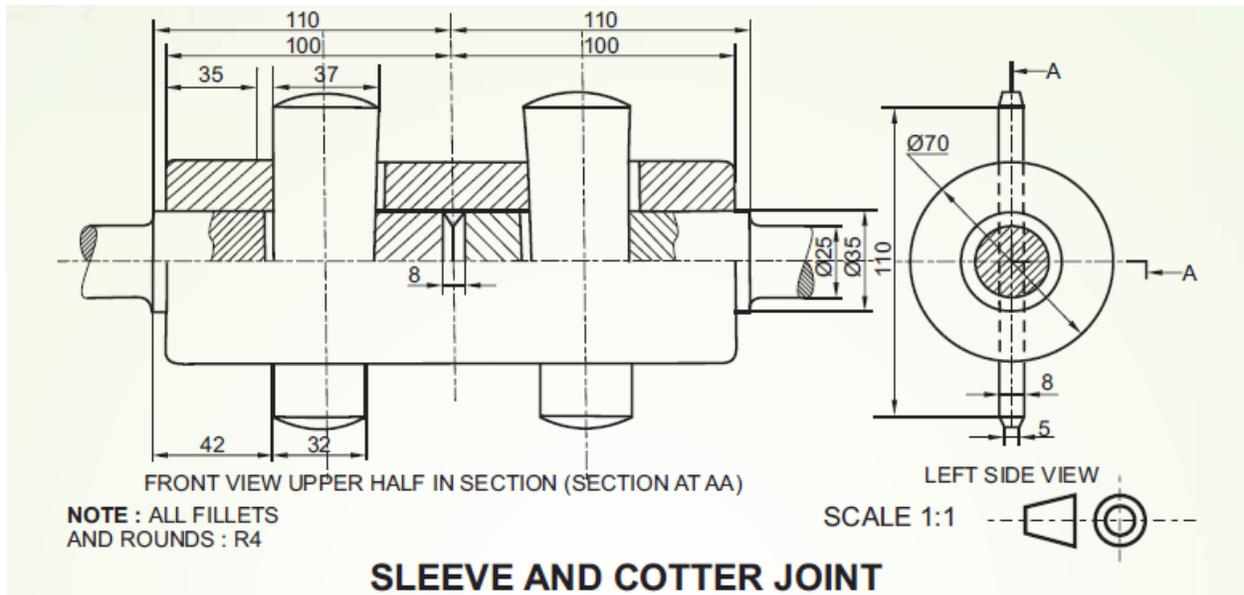| Q.NO	ANSWERS
1	(b) Parallel to the isometric axes
2	(b) Axonometric projection
3	(c) A vertical hexagonal pyramid with two of its base edges perpendicular to VP is placed centrally on a horizontal square prism with its square ends parallel to VP.
4	(c) L = 3P
5	(d) d
6	(c) Power transmission
7	(d) 1-ii, 2-iii, 3-iv, 4-i

8	(d) The solid is inverted with its axis perpendicular to HP and parallel to VP.
9	(b) 1-ii, 2-i, 3-iv, 4-iii
10	(b) The size of the common axis is less than true 90mm.
11	(c) Gasket
12	(b) Tensile forces
13	(c) Radial loads at right angles to the shaft axis
14	(b) 20 mm

SECTION B

Q.NO	ANSWERS
15	(b) Ellipse
16	(a) Four center method
17	(a) Less than 180 mm
18	(c) Isometric scale
19	(b) Rivet heads
20	(a) Bolts & Nuts
21	(c) Taper pin
22	(b) 16 mm

23.(A) Assembly of Sleeve & Cotter joint (27)

FRONT VIEW UPPER HALF IN SECTION (SECTION AT AA)

LEFT SIDE VIEW

NOTE : ALL FILLETS
AND ROUNDS : R4

SCALE 1:1

SLEEVE AND COTTER JOINT

OR

23.(B) Disassembly of Turnbuckle

FRONT VIEW UPPER HALF IN SECTION

TOP VIEW

BODY

RH SIDE VIEW

FRONT VIEW

ROD - A

SCALE 1:1

DISASSEMBLY OF TURNBUCKLE
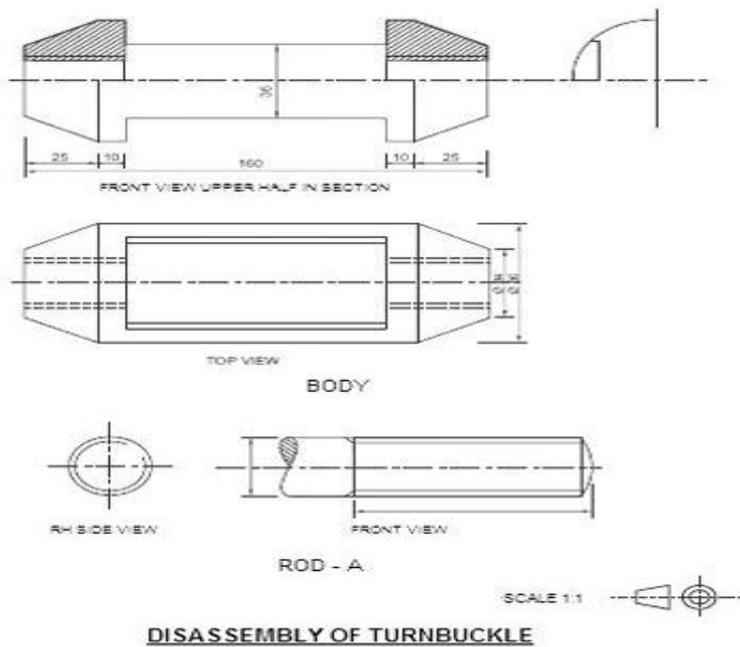
$$1 \times 4 = 4$$
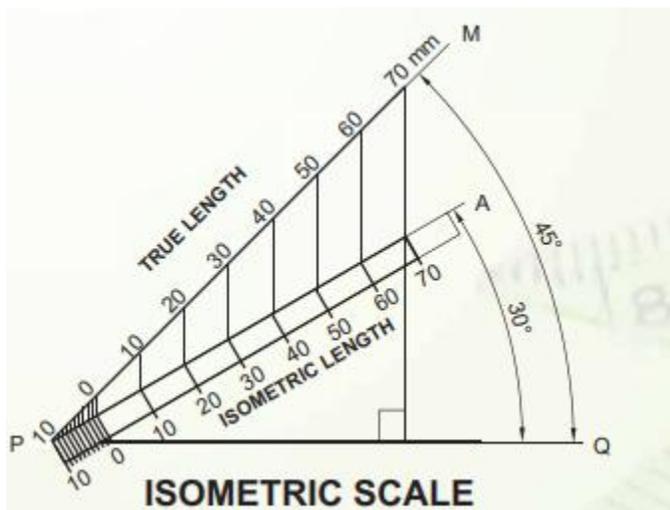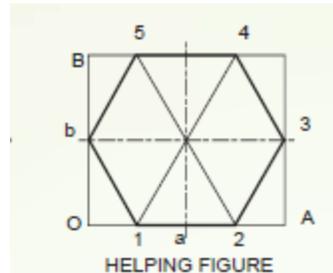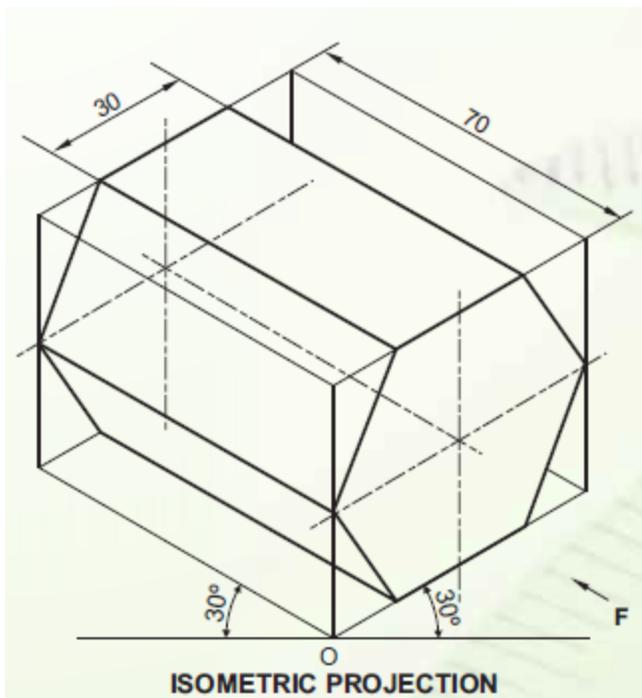
24.(a) ISOMETRIC SCALE

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

b. Projections on 30 degree inclined line showing isometric length with 1mm subdivisions in one part (2)
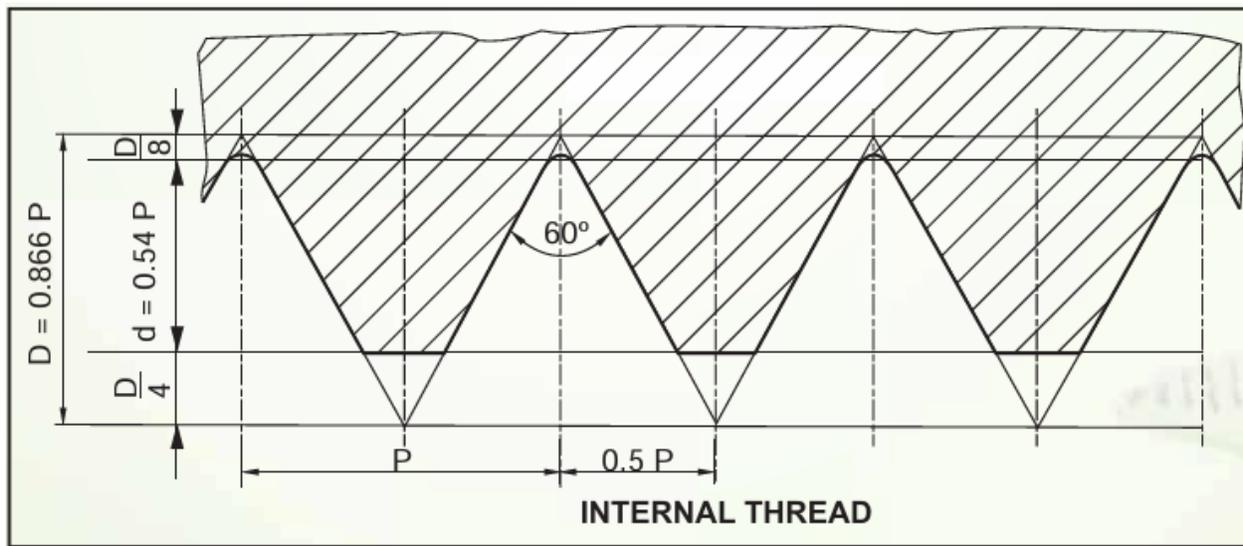
 c. Writing title, sub titles and angles (1)

24.(b) (9)

ISOMETRIC PROJECTION

HELPING FIGURE

25.(a) Metric thread Internal   (8)

INTERNAL THREAD

P	D = 0.86P	d = 0.54P	D/8	D/4
50	43	27	5.3	10.7

OR

25.(b)

d	0.8d	1.5d+3	2d+6	2d
24	19.2	39	54	48

SQUARE BOLT