INDIAN SCHOOL AL WADI AL KABIR
SAMPLE PAPER 2

CLASS: XII **MM:70 marks**
Time: 3 hrs.

ENGINEERING GRAPHICS (046)

General Instructions:

i. Attempt all the questions.
ii. Use both sides of the drawing sheet, if necessary.
iii. All dimensions 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.Number your answers according to questions.

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5 x 1 = 5

Q.I.i) Which scale is used for drawing isometric projection?

a) Full size scale b) Vernier scale

c) Enlarged scale d) Isometric scale

ii) Which of the following methods is widely used for drawing isometric circles?

a) Four center b) Five center

c) Two center d) Six center

iii) A continuous and projecting helical ridge of uniform section on a cylindrical surface is called --------

a) lead b) screw thread

c) pitch d) flank

iv) Lines which are parallel to the isometric axes are called …….

a) Isometric lines b) Parallel lines

c) Vertical lines d) Slant lines

v) A snug in a bush is provided in a bearing to:

a) prevent its rotation with the shaft b) strengthen the bush

c) fit the bush d) dissipate heat

Q.2. (a) Construct an isometric scale of length 80 mm. **4**

(b) A Pentagonal prism of base side of 25 mm and axis length of 55 mm is resting on its face with its axis parallel to both H.P and V.P. Draw its isometric projection. **8**

(c) Draw an Isometric Projection of a vertical regular hexagonal pyramid resting vertically and centrally having two of its base edges perpendicular to V.P. On the top rectangular face of a horizontal square prism with its square ends perpendicular to V.P. Side of the square = 50 mm, length of the prism =100 mm, side of the hexagon = 30 mm and height of the pyramid = 60 mm. **12**

Q.3. (a) Draw to scale, 1:1, the standard profile of a Knuckle thread, taking enlarged pitch as 40mm **8**

OR

Draw to scale 1:1, the Front elevation and Plan of a square nut of diameter 25mm, keeping its axis vertical and two of the opposite edges of the square face parallel to V.P.

(b) Sketch freehand the Front view and Top view of a 60° counter sunk flat head rivet of diameter 20mm, keeping its axis vertical. Give standard dimensions **5**

OR

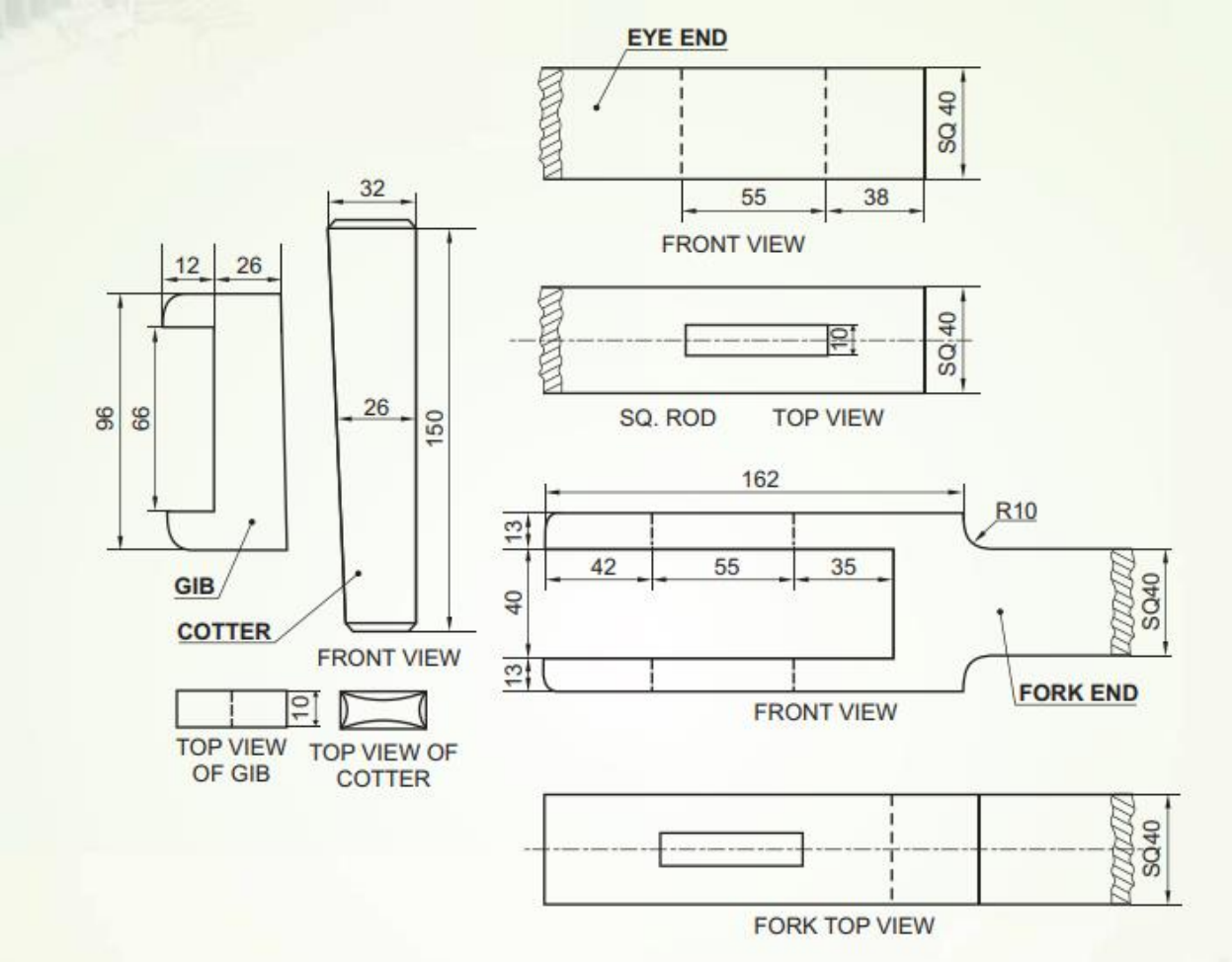
Sketch freehand the single start conventional LH external square threads. (Take P = 5mm)

Q.4. The figure shows the detail drawings of different parts of a Gib and Cotter Joint for joining two square rods. Assemble all the parts correctly and draw the following views to scale 1:1

(a) Front view, upper half in section.

(b) Side view, viewing from the left-hand side.

(c) Print title, scale used and draw the projection symbol. Give '6' important dimensions. **28**



OR

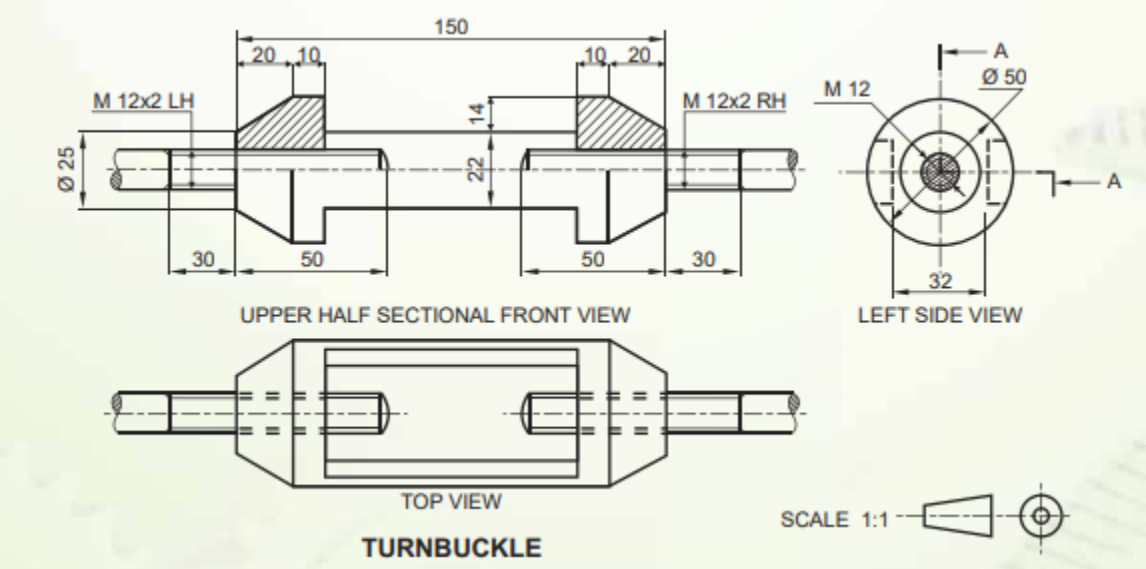
The figure shows the Assembly of a Turnbuckle. Disassemble the parts correctly and then draw the following views, to a scale 1:1. Keep the parts in the same position with respect to HP and VP.

(a) Sectional Front view

(b) Rod A and Rod B Front view, Sectional side view.

(c) Print titles of both and scale used. Draw the projection symbol. Give 8 important dimensions.

28



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