INDIAN SCHOOL AL WADI AL KABIR
SAMPLE PAPER - III

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.

1. Which of the projection is having, two angles between principal axes are equal and over 90 degree?

a) Isometric   b) Diametric

c) Trimetric   d) Orthographic

2. True length in an isometric scale is measured at an angle of?

a) 15 degree   b) 30 degree

c) 45 degree   d) 90 degree

3. What is the angle between the flanks of a BSW thread?

a) 60 degree   b) 90 degree

c) 45 degree   d) 55 degree

4.Give the dimension for calculating the minor diameter "d" in Metric thread Internal?

a) d = 0.61P   b) d = 0.64P

c) d = 0.54P   d) d = 0.86P

5. A------------- is a cylindrical piece of metal having threads at both ends.

   a) Key   b) Stud

   b) Nut   d) Rivet

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

b Draw the isometric projection of an equilateral triangular prism of 50   mm base side and 75 mm axis resting on its base in HP with one of its base edge parallel to VP in front. **(8)**

c. Draw an Isometric Projection of 32 mm cube resting centrally on the top face of an equilateral triangular prism having 50 mm base side and height = 30 mm. One rectangular face of the prism is away from the observer and kept parallel to the V.P.   **(12)**

3.a Draw to scale 1:1, the standard profile of B.S.W thread, taking pitch as 40 mm. Give standard dimensions**.**   **(8)**

OR

Draw to scale 1:1 the front view and side view of a hexagonal headed bolt of diameter 30mm, keeping the axis parallel to HP and VP. The length of the bolt is 120 mm**.**

3.b Sketch freehand the front view and top view of a stud with square neck of diameter equal to 20mm, keeping its axis vertical.   **(5)**

OR

Sketch free hand the front view and top view of a Pan head rivet of diameter 20 mm, keeping its axis vertical. Give standard dimensions. **(5)**

4.a. The figure shows the details of a bushed bearing. Assemble these parts correctly and draw its following views to scale 1:1.

a) Front view.
b) Left hand side view.

Write heading and scale used. Draw projection symbol. Give 6 important dimensions. **(28)**
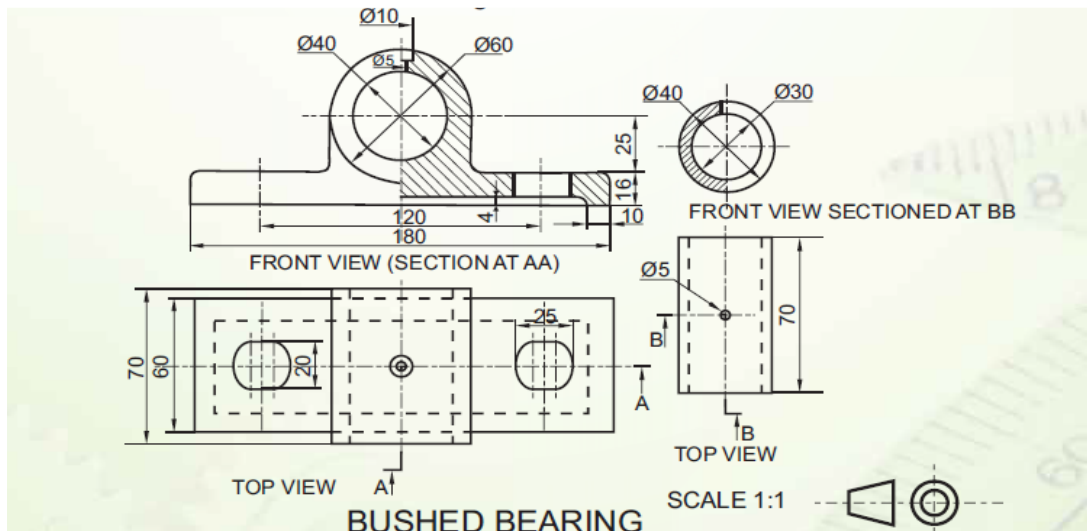
OR

4.bThe figure given below shows the assembly of an Open bearing, Disassemble the following parts and draw the following views to a full-size scale.

a) Front view right half in section.
b) Top view.

Write heading and scale used. Draw projection symbol. Give 6 important dimensions. **(28)**

OPEN BEARING
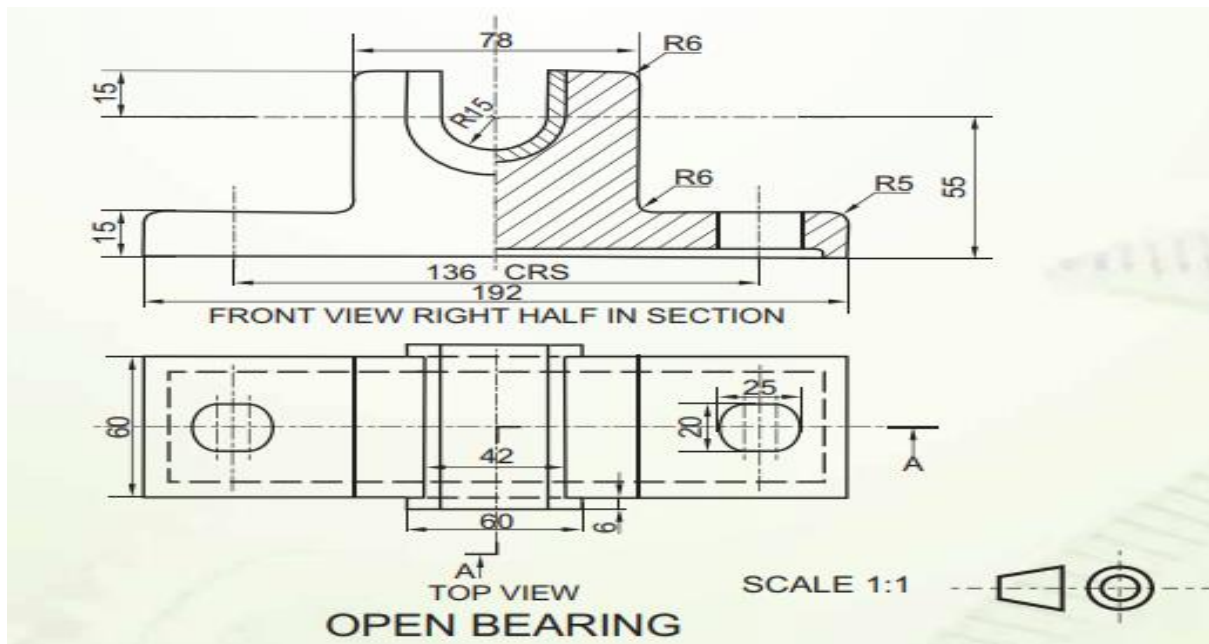
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