DECEMBER 2007

Subject: ENGINEERING DRAWING
Time: 3 Hours **Max. Marks: 100**

NOTE:

1. (a) There are SEVEN questions in all and these are arranged in three Sections A, B and C.

(b) Sections A and B are compulsory and carry 20 marks and 32 marks respectively.

(c) Out of remaining 5 questions (of 16 marks each) in Section C students are required to answer any 3 questions.

2. Detach this sheet from the question paper and write answers on this sheet only on Pages 1 & 2. Attach it to the main drawing sheet. Remaining questions are to be answered on the main drawing sheet.

3. All dimensions given are in mm. Use suitable values of any missing and mismatching dimensions.

4. Use BIS Code: SP: 46-1988 for all drawings and do not rub off construction lines.

ROLL NO…….

SECTION A (Compulsory)

Note :1. Attach this sheet to the main drawing sheet.
2. Write Answers To Question No. 1 In This Sheet Only.

Q.1 Write the correct or best alternative in the following : (10 × 2=20)

a. A turn buckle has threaded pitch "P". The axial distance moved in one revolution is

(A) 0.5 P **(B)** P
(C) 2 P **(D)** 0.25 P

b. The angle between the flanks of B.S.W. Threads is

(A) 47.5º **(B)** 55º
(C) 60º **(D)** 45°

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Signature of Suptd / invigilator

(A)

along the axis
(B) perpendicular to the axis of shaft
(C) at angle to the axis of the shaft
(D) none

d. If a vertical cone is sectioned by a cutting plane parallel to its base and the lower part of the solid is removed the remaining part of it will be
(A) cone

(B) frustum of a cone
(C) circular plane

(D) cylinder

e. A point is lying 35mm in front of V.P. and 30mm below H.P., the point lies in

(A) First quadrant
(B) Fourth quadrant
(C) Third quadrant
(D) Second quadrant

f. Locus of a point equidistant from two co-planner points is
(A) circle

(B) straight line
(C) cycloid
(D) none

g. When measurements are required in three successive units, the scale used is

(A)

plain scale
(B) diagonal scale
(C) comparative scale
(D) scale of chords

h. A curve generated by a point on the circumference of a circle rolling (without slip) along another circle outside it, is

(A) Epicycloid
(B) Hypocycloid
(C) Spiral
(D) Trochoid

i. The line indicating the features of an object is

(A)

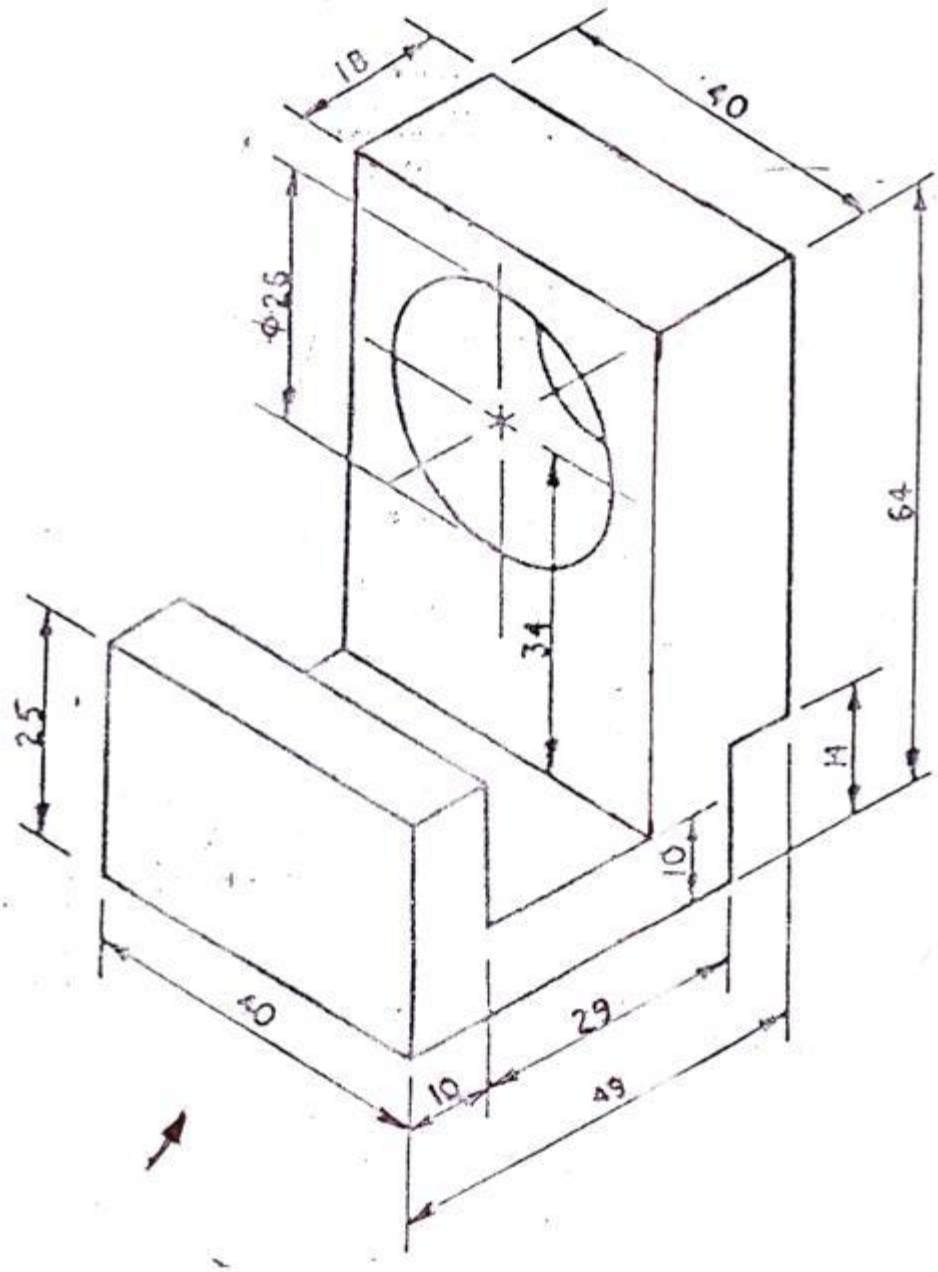
Cutting plane line **(B)** Leader line
(C) Centre line **(D)** Axis line

j. Foot-step bearing is used to give support to

(A) Vertical shaft **(B)** Horizontal shaft
(C) Both **(A)** and **(B)** **(D)** Inclined shaft

SECTION B (Compulsory)

Q.2 The Fig.1 shows a machine block. Draw to scale 1:1 the following:
(i) Front view in the direction of arrow
(ii) Top view
(iii) Right side view **(11+10+11 = 32)**


18
40
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64
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29
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49

SECTION C

Answer any THREE Questions. Each question carries 16 marks.

Q.3 The distance between two railway stations is 600 Km. It is represented on a railway map by a line 15 cm long. Construct a diagonal scale to measure upto a Km. Find its R.F. and indicate a distance of 346 Km on it. **(16)**

Q.4 A right regular hexagonal pyramid edge of the base 20mm and height 50mm rests on one of its base edges in H.P. with its axis parallel to V.P. Draw the projections of the solid when its base makes an angle of 45º to H.P. and leaning towards left. **(16)**

Q.5 A cricket ball is thrown in the air. It reaches to a maximum height of 10 meters and falls on the ground at a distance of 20m from the point of projection. Draw the path followed by the ball (using appropriate scale) and name the curve. Assume the point of projection to be at the ground level. **(16)**

Q.6 Draw the sectional front view and top view of a double riveted lap joint (Zig Zag) taking the thickness of plate to be 25 mm. **(16)**

Q.7 A square pyramid of 25 mm side of base and 60 mm height is resting with its base on H.P. such that one of the base edge is parallel to V.P. A section plane is making an angle 60º with H.P. and cutting its axis at a height of 40mm from the base. Develop the truncated pyramid. **(16)**