

DiplETE – ET (OLD SCHEME)

Code: DE03
Time: 3 Hours

Subject: ENGINEERING DRAWING
Max. Marks: 100

DECEMBER 2009

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.

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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. The ratio of isometric scale to full scale is

(A) $\sqrt{2} : \sqrt{3}$

(B) 2 : 3

(C) 3 : 2

(D) $\sqrt{3} : \sqrt{2}$

b. When the drawing of small objects like screw of a wrist watch is to be drawn, we use

(A) Reduced scale

(B) Enlarged scale

(C) Normal scale

(D) Comparative scale

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- c. In isometric projection all the axes are inclined to each other at an angle
 (A) 90° (B) 30°
 (C) 120° (D) 60°
- d. In 3rd angle projection, the view obtained on V.P. is called
 (A) Front view (B) Top view
 (C) Rear view (D) Profile view
- e. A sphere is obtained by revolving a _____ about its axis.
 (A) Square (B) Semicircle
 (C) Rectangle (D) Cylinder
- f. Curve generated by a point moving around the surface of a right cylinder and, at the same time moving axially along it, such that the ratio of its circumference to its axial movement is constant, the curve is
 (A) Cycloid (B) Involute
 (C) Helix (D) Epicycloid
- g. Slot or a cavity in the bottom part of a plummer block bearing is used for
 (A) storing the lubricating oil
 (B) preventing the rotation of brasses
 (C) save the casting material
 (D) none of the above
- h. A ball is thrown in the air. It will cover max horizontal distance, if it is thrown at an angle of _____ from the ground.
 (A) 30° (B) 45°
 (C) 60° (D) 90°
- i. Line of symmetry is drawn by
 (A) _____
 (B) _____
 (C) - - - - -
 (D) - - - - -

j. The point at which the conic cuts the axis is known as

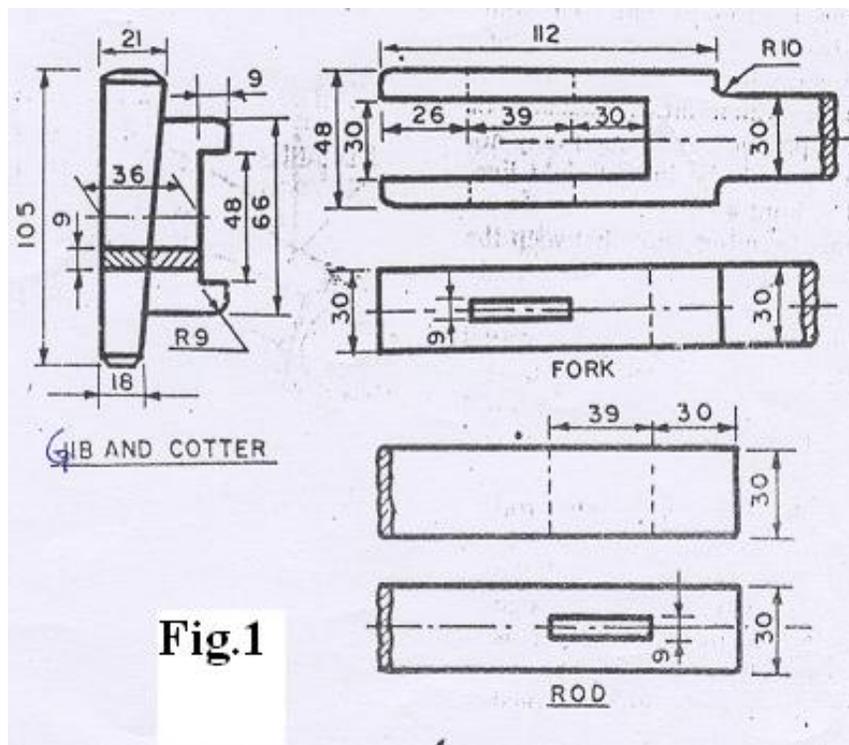
- (A) Locus
- (B) Vertex
- (C) Directrix
- (D) Focus

SECTION B (Compulsory)

Q.2 The Fig.1 shows the details of a gib and cotter joint. Assemble the parts and draw to scale 1:1 the following views.

- (a) Front view (full section)
- (b) Side view looking from left
- (c) Top view

(12+10+10 = 32)



SECTION C

Answer any THREE Questions. Each question carries 16 marks.

Q.3 Draw a cycloid, given the diameter of a generating circle as 50 mm. Draw also a tangent and normal at any point on the curve. **(16)**

Q.4 Two fixed points are 100mm apart. A point moves in such a way that the sum of its distances from the two fixed points is always 150mm. Trace the path of the point and name the curve. **(16)**

Q.5 A straight line AB is 60mm long has its end A in both H.P. and V.P. The straight line is inclined at an angle of 30° to V.P. and 45° to H.P. Draw the projections of the line. **(16)**

Q.6 Draw the front view and side view of the assembly of a hexagonal headed bolt of nominal dia 20mm and shank length 100 mm with a hexagonal nut, keeping the axis of the bolt parallel to H.P. and V.P. **(16)**

Q.7 Draw the following views to scale 1:1 of the object shown the Fig.2.

- (i) Front view in the direction of arrow
- (ii) Top view
- (iii) Right side view

(16)

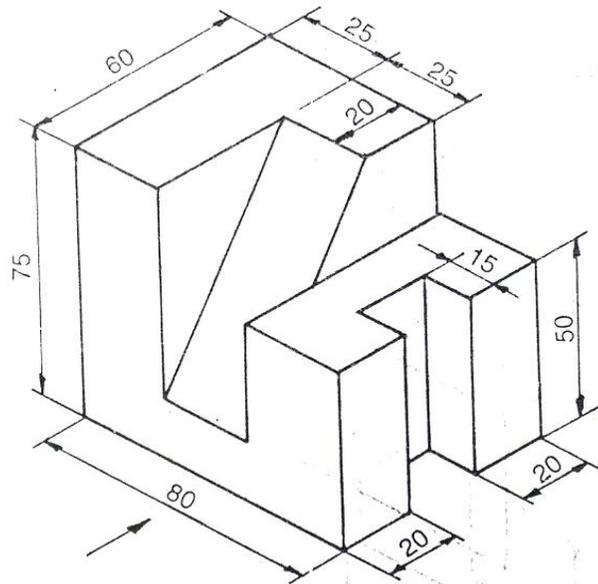


Fig.2