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

a. A point is 'x' distance infront of V.P. and 'y' distance below H.P., then the point is in _____ quadrant

(A) I **(B)** II

(C) III **(D)** IV

b. A plain scale is representing 1 cm = 0.5 Km, the R.F. is _____

(A) 5000:1 **(B)** 1:50000
(C) 10:5000 **(D)** 5000:10

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c. If a vertical pyramid is cut by a horizontal section plane the resulting cut solid is _____

(A) prism
(B) pyramid
(C) frustum
(D) cuboid

d. The curve generated by the locus of a point on the circumference of a circle which rolls, without slipping along a fixed straight line is known as

(A) cycloid **(B)** ellipse
(C) trochoid **(D)** involute

e. The permissible variation of a size of a part is called _____

(A) allowance
(B) tolerance
(C) fundamental deviation
(D) None of these

f. The least distance from a rivet hole centre to the nearest edge of the plate is known as

(A) margin **(B)** pitch
(C) back pitch **(D)** diagonal pitch

g. A jib and cotter joint is mostly used for _____ rod ends.

(A) triangle
(B) rectangle
(C) circular
(D) square

h. _____ holds a bearing, which supports on overhung shaft, which is parallel to and near a wall

(A) wall hanger
(B) wall bearing
(C) wall bracket
(D) none of these

Q1. B. State True or False

i.

The difference of the focal distances from any point on an ellipse is constant.

(A) True

(B) False

j. By increasing the number of rows of rivets, the riveted joints become stronger.

(A) True

(B) False

SECTION B (Compulsory)

Q.2 A machine block is shown in Fig.1 on page 4. Using 1:1 scale draw the following views giving nine important dimensions:

(i) Front view looking from the direction 'X'.
(ii) Left side view.
(iii) Top view. **(11+10+11 = 32)**

SECTION C
Answer any THREE Questions. Each question carries 16 marks.

Q.3 A distance of 2 mm on a part of an object is represented by a line of 6 mm on the drawing. Find the R.F. and construct a diagonal scale using that R.F. showing $(1/10)^{th}$ of mm, mm, cm and long enough to measure 5 cm. Mark on it the distance 37.8 mm and 40.4 mm. **(16)**

Q.4 The top view of a 75 mm long line AB measures 65 mm, while the length of its front view is 50 mm. Its one end 'A' is in the H.P. and 12 mm in front of V.P. Draw the projections of AB and determine its inclination with H.P. and V.P. **(16)**

Q.5 A hexagonal prism, base 40 mm side and height 40 mm. Draw its projections when it is resting on one of its corners on the H.P. with its axis inclined at 60° to the H.P. and two of its faces parallel to V.P. **(16)**

Q.6 Draw the development of the surface of the object made out of cone shown in Fig.2. **(16)**

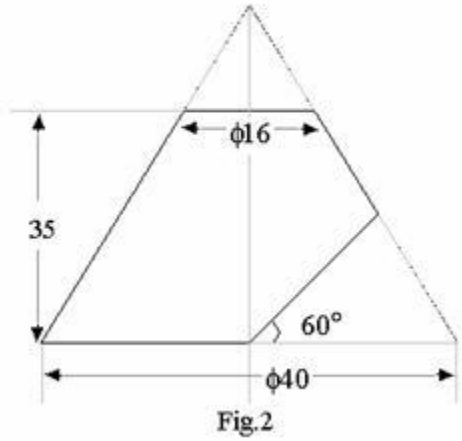

Fig.2

Q.7 a. Draw two views of hexagonal headed bolt and square nut taking bolt diameter 24 mm. Assume the shank length of bolt=100 mm. **(16)**

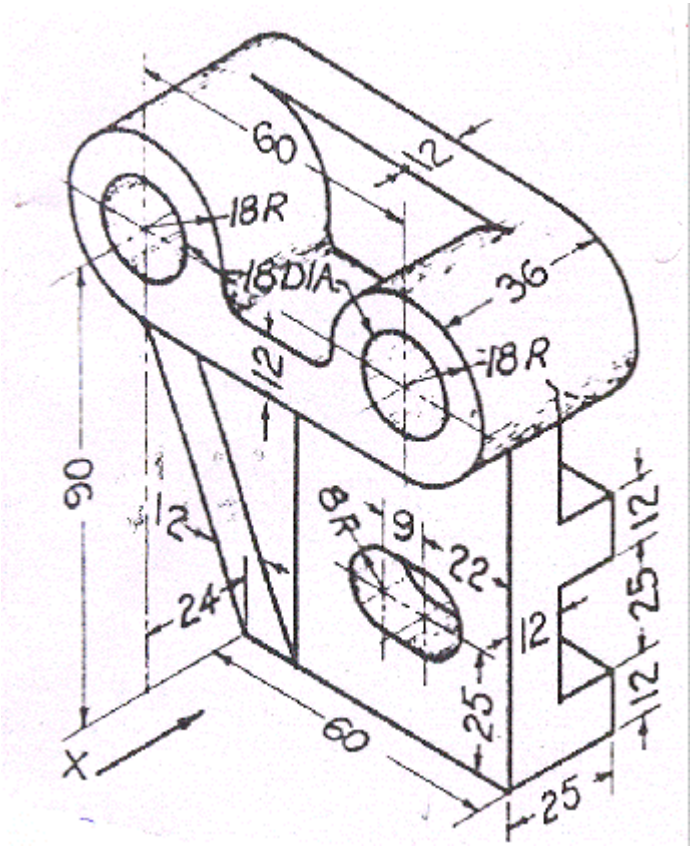

Fig.1