Code: DE03

Time: 3 Hours

JUNE 2008

Subject: **ENGINEERING DRAWING**

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.

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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.

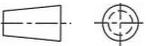**Q.1 Write the correct or best alternative in the following :** **(10 × 2=20)**

 a. The visible edge of an object is shown by:

 (A) Thick dotted line **(B)** Thick continuous line
 (C) Thin dotted line **(D)** Thin continuous line

 b. Cotter joint is used for joining two rods to transmit _____

 (A) axial force **(B)** tangential force
 (C) normal force **(D)** friction force

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c. For showing _____ angle projection ⊏⊐ ⊕ symbol is used

(A) Ist   (B) IInd
(C) IIIrd   (D) IVth

d. When a line is parallel to both H.P. & V.P. it has _____ trace

(A) vertical   (B) horizontal
(C) profile   (D) no

e. If 'd' is the diameter of rivet in mm and 't' the thickness of the plate also in mm, then the equation for calculating the diameter of rivet is _____

(A) $d = t/6$ (B) $d = 6\sqrt{t}$
(C) $d = 6t$ (D) $d = 12\ t$

f. If a circular lamina is inclined to V.P. and perpendicular to H.P., its top view will be

(A) circle   (B) ellipse
(C) line   (D) triangle

g. _____ is used as a foundation bolt.

(A) Hexagonal headed bolt
(B) Square bolt
(C) Simmond's bolt
(D) Lewis bolt

h. If the development of a square prism is a square of 100 mm side, then the length of the base side will be

(A) 25 mm   (B) 50 mm
(C) 75 mm   (D) 100 mm

i. The double ordinate through the focus of a conic is called

(A) Vertex   (B) Directrix
(C) Latus Rectum   (D) Tangent

j. If 10 mm represents 1m on a map, the representative fraction is

(A) 1:100
(B) 1:1000
(C) 100:1
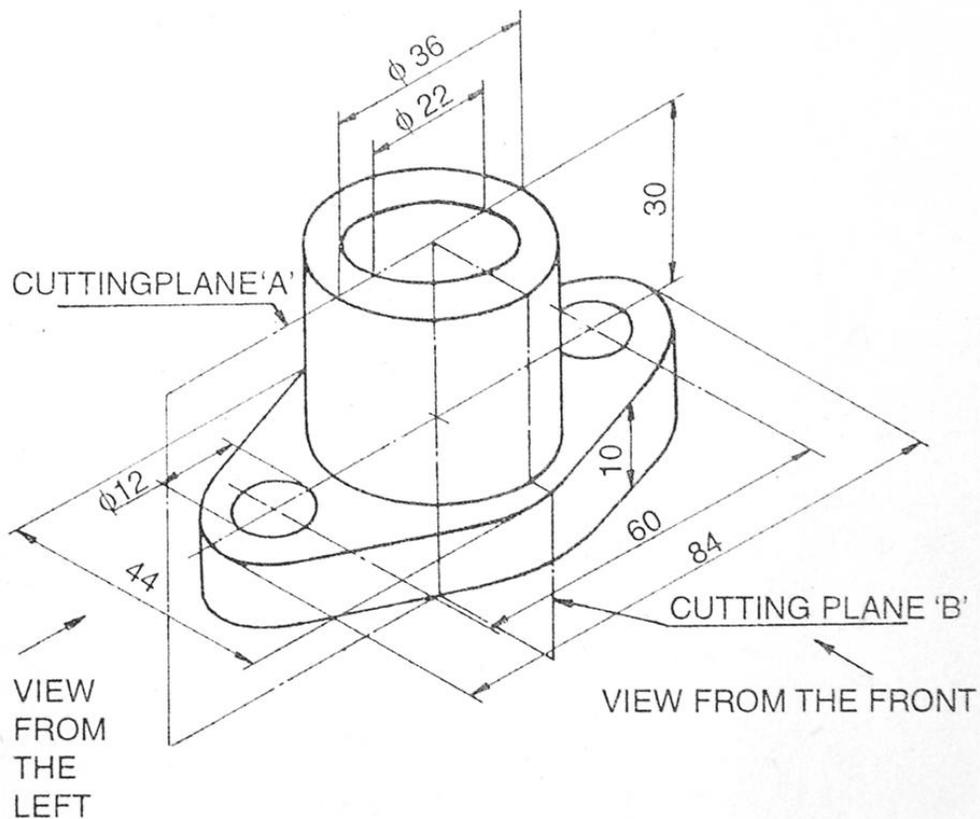**(D)** 1000:1

SECTION B (Compulsory)

Q.2   The object shown in Fig.1 is cut by two cutting planes 'A' and 'B' as shown. Draw the following views of this object
(a) Half sectional front view with left half in section
(b) Half sectional side view with right half in section
(c) Top view   **(12+10+10=32)**

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

Q.3   A straight line CD is inclined at 30° to HP and 45° to VP. The end C is   10 mm above HP and 20 mm infront of VP. The line is 90 mm long. Draw the projections of the line and show its top view and front view.   **(16)**

Q.4   Draw the involute of a circle of 30 mm diameter and draw a normal and tangent at a point on the involute curve 60mm from the centre of the circle.   **(16)**

Q.5   A cone having a base diameter 60 mm and height 65 mm is resting with its base on HP. A section plane perpendicular to VP and inclined at an angle of 40° to HP cuts the cone such that the section plane is passing through a point on the axis at a height of 30 mm above the base. Draw the projections of the cut solid showing the sectional top view.   **(16)**

Q.6   Draw the isometric projection of the object shown in Fig.2.   **(16)**
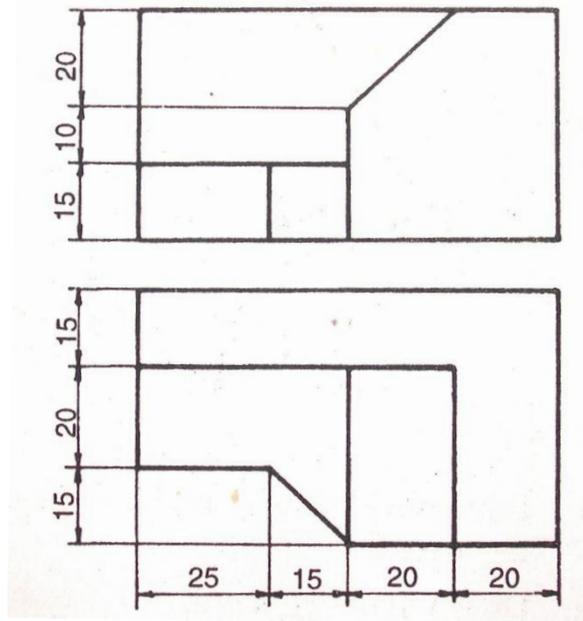

Fig.2

Q.7   Draw sectional front view of a Socket and Spigot Joint for 25 mm diameter rods keeping the axes of the rods horizontal. Show the dimensions.   **(16)**