No. of Printed Pages : **4 + Drawing Sheet**

BAS-005

01200

B.TECH. (AEROSPACE ENGINEERING) (BTAE / BTCLEVI / BTMEVI / BTCSVI / BTELVI / BTECV)

Term-End Examination

June, 2013

BAS-005 : ENGINEERING DRAWING

Time : 3 hours *Maximum Marks : 70*

Note : *Question **1** is **compulsory**. Answer **any four** questions from Q. 2 to Q. 8.*

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1. Figure. 1 shows a ball bearing in cut section. Draw elevation (sectioned) and side view (full in view). OD–outside diameter, ID–inside diameter, r–radius of ball, B–width. Thickness of inner and outer race = 2.0 mm. Number of balls = 9 **22**

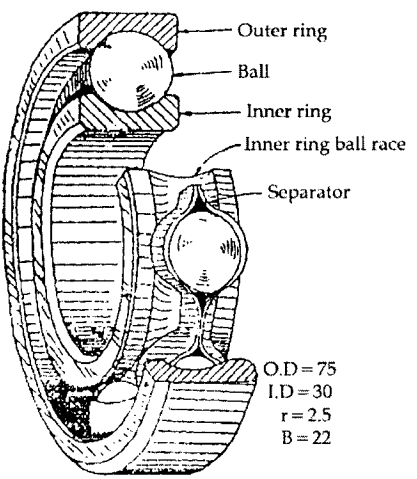

Fig. 1

OR

Figure 2 shows a machine part. Draw : **22**

(a) Elevation (b) Top view

(c) Side view

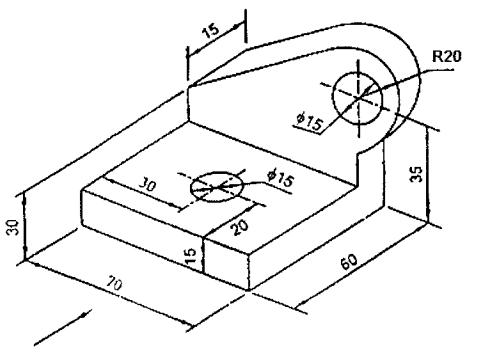

Fig. 2

2. Figure 3 shows two views of a square head bolt. **12**
Draw its isometric view.

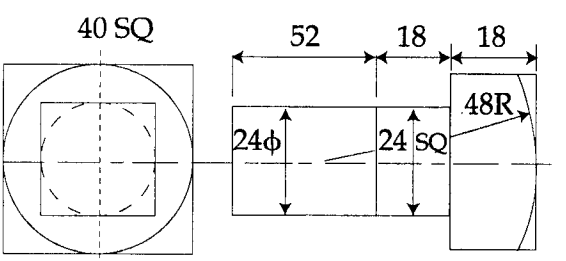

Fig. 3

3. Cone shown in Figure 4 is cut by an inclined plane. Draw the development of lateral surface of upper part of cone. If another horizontal plane 12

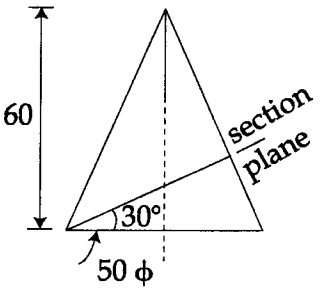

Fig. 4

cuts the cone 20 below the apex, how the surface development will change.

4. Figure 5 shows the isometric view of an object. Draw front view and top view in free hand sketching. 12

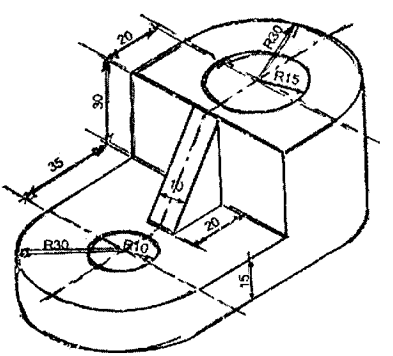

Fig. 5

5. A hollow cylinder 60 mm outside diameter, 30 mm inside diameter and 80 mm long has its axis parallel to VP and inclined 30° to vertical. It is cut by a horizontal plane passing through middle of the axis. Draw the sectional top view. **12**

6. Inscribe a regular pentagon in circle of diameter 50 mm. What length is the side of pentagon ? **12**

7. Using concentric circles method, draw an ellipse with minor axis of 30 cm and major axis of 45 cm. Draw a tangent and a normal at any point to ellipse. **12**

8. A vertical cylinder of 70 mm diameter is penetrated by another cylinder of 50 mm diameter. The axes of two cylinders are at right angle but 8 mm apart. Show the curves of intersection in projection. **12**