| BAS-005 |

B.Tech. AEROSPACE ENGINEERING (BTAE)

00264 **Term-End Examination**

June, 2017

BAS-005 : ENGINEERING DRAWING

Time : 3 hours   *Maximum Marks : 70*

Note : *Attempt any **five** questions. All questions carry equal marks.*

1. A square prism edge of base 25 mm and axis 45 mm long has its axis inclined at 45° to the H.P. and an edge of its base on which the prism rests is inclined at 30° to the V.P.
   Draw its projections.   *14*

2. The top view of a 75 mm long line PQ measures 65 mm while the length of its front view is 50 mm. Its one end P is 15 mm above H.P. and 15 mm in front of V.P.
   Draw the projections of the line PQ and determine its inclinations with H.P. and V.P.   *14*

3. Draw an isometric projection of the frustum of a hexagonal pyramid having base side 40 mm, top side 25 mm long and height 60 mm long. *14*

4. (a) Draw two views of a knuckle joint to connect rods of 36 mm diameter. The diameter of fork end and eye end, each are 62 mm. The pin diameter is 36 mm.

(b) Sketch a square key of size 12×12 mm^2 to be fitted in a shaft of diameter 48 mm. Show two views. *9+5*

5. (a) Draw the external thread profile of M52 V thread. d = 52 mm; d_c = 46·587 mm; d_p = 48·75 mm; p = 5·0 mm.

(b) Draw the external thread profile for acme thread with

major diameter = 65 mm;

core diameter = 55 mm;

pitch = 10 mm;

Depth of thread = $\dfrac{P}{2}$ + 0·25;

Angle of inclination of the thread profile = 15°.

Show the pitch diameter. *7+7*

6. (a) Sketch a simple Bush Bearing.

(b) Sketch split muff coupling (Two views). *7+7*

7. Sketch single rivetted butt joint (chain type) front view full in section and top view. *14*

8. (a) Explain the various commands used for transformation of an object in AutoCAD.

   (b) Describe any two methods of drawing a circle in AutoCAD. *7+7*

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