

Thursday, August 6, 2009

PTU ME102 Engineering Drawing May 2007 Question Paper

BE (First/Second) Semester Exam

(Common to all Branches)

Time: 3 hrs

Maximum Marks: 60

Instruction to Candidates:

1. Section A is compulsory.
2. Attempt any five questions from Section B and C.
3. Select atleast Two questions from Section B and Two from Section C.

SECTION A (Marks: 2 each)

1. (a) Sketch the hidden line, short break line and long break line.

Ans: Dashed narrow line, cotinuous narrow free hand drawing and continuous line with zigzags shown in Table 2.3 of ED - Basant Agrawal, TMH. B.I.S. codes may also be referred.

(b) Which BIS standards are followed for engineering drawings.

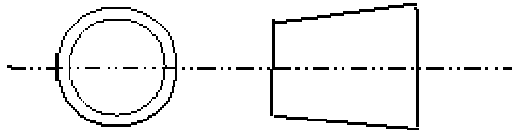
Ans: SP46:2003 Engineering Drawing Practices for Schools and Colleges.

Refer article 1.2 page 1.1 of ED - Basant Agrawal, TMH.

(c) What is the true length of a line.

Ans: Line showing true shape and size of a line is called true length.

(d) Following symbol represents first or third angle projection.



Ans: Third

(e) What is the difference between prism and pyramid?

Ans: Refer article 11.2 page 11.2 of ED - Basant Agrawal, TMH.

(f) Why sectional views are used in engineering drawing?

Ans: To show internal details.

(g) What is an isometric view?

Ans: Refer article 15.7 page 15.4 of ED - Basant Agrawal, TMH.

(h) To represent a solid in an orthographic projection, at least _____ views are necessary.

Ans: two

(i) What is the trace of a line?

Ans: Refer article 9.3 page 9.1 of ED - Basant Agrawal, TMH.

(j) Unfolding of all of the _____ of the object on a plane is called development.

Ans: surfaces

SECTION B (Marks: 8 each)

2. A line 6 cm long makes an angle of 45° with VP and lies in a plane perpendicular to both the HP and VP. Its one end is in HP and the other end is in VP. Draw its projections.

Ans: Refer problem 9.33 page 9.35 of ED - Basant Agrawal, TMH.

3. Write freehand the following sentence using inclined capital letters of 8 mm size in single stroke using 7:5 ratio. 'Nature is beautiful'

Ans: Take height:width ratio for lettering as 7:5 and characters as shown in Fig 2.3(a) of ED - Basant Agrawal, TMH.

4. List out the various principles which are to be followed while dimensioning a drawing.

Ans: Refer article 2.13 page 2.9 of ED - Basant Agrawal, TMH.

5. A cylinder of 65 mm diameter and 90 mm long has its axis parallel to the HP and inclined at 30° to the VP. It is cut by a vertical section plane in such a way that the true shape of the section is an ellipse having the major axis 75 mm long. Draw its sectional view and true shape of the section.

Ans: Refer problem 12.49 page 12.2 of ED - Basant Agrawal, TMH.

SECTION C (Marks: 8 each)

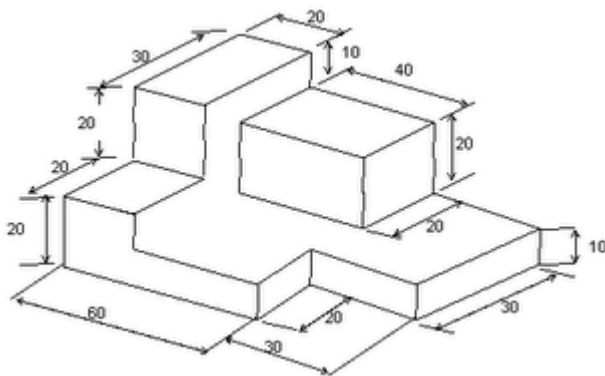
6. A cube of 40 mm side rests centrally on square block of 60 mm edges and 20 mm thick. Draw the isometric projections of the two objects with the edges of the two blocks mutually parallel to each other.

Ans: Refer problem 15.19 and 15.20 page 15.16 of ED - Basant Agrawal, TMH.

7. A vertical cylinder of 45 mm diameter and height 70 mm resting on its base on HP is completely penetrated by another cylinder of same dimensions and length. Their axis bisect each other at right angles and are parallel to VP. Draw the projection showing lines of penetration on the two cylinders.

Ans: Ans: Refer problem 11 page 14.27 of ED - Basant Agrawal, TMH.

8. Draw the view from the front (arrow side) and the view from the right of the following object. (All dimensions are in mm)



Agrawal, TMH.

Ans: Refer chapter 7 of ED - Basant

9. Draw the development of the lateral surfaces of the pyramid of height 4 cm. The pyramid is having hexagonal base of 2 cm each side length. The base is parallel to HP and two sides of the base are parallel to the VP

Ans: [Similar to problem 13.9 page 13.9 of ED - Basant Agrawal, TMH.](#)