

ROLL No:

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Total number of pages: [2]
Total number of questions: 06

B.Tech. (ALL BRANCHES) 2nd Sem

(^{1st} Sem (RG/RP))

Engineering Drawing

Subject Code: BTME-102-A/102

Paper ID: M/18

(2011 batch onwards)

Max Marks: 60

Time allowed: 3 Hrs

Important Instructions:

- All questions are compulsory
- Assume any missing data
- Attempt all parts of qu. No. 1 at one place and sequentially only.
- Try to attempt all questions in sequence. Leave space if you want to do it later.
- Write P.T.O. (bold and large) at right hand side (bottom) of the drawing sheet if you want to use backside of the sheet also.

PART A (2×10)

Q. 1. Short-Answer Questions:

All COs

- Draw symbol for Third angle projections.
- Mention standard drawing sheet dimensions of A-2 sheet as per B.I.S.
- What do you mean by "truncated cone"?
- Differentiate between orthographic and oblique projections.
- Draw front and top views for a triangular pyramid, resting on its base of 40 mm side on the HP, when its axis (50 mm long) is perpendicular to the H.P. and one of the base sides is parallel and 30 mm in front of the V.P.
- Explain R.F. (Representative Fraction) of a scale.
- Sketch the front view of intersection of two cylinders of same diameter (80 mm dia). and same length (75 mm.), when their axes bisect each other and are parallel to the V.P.
- Sketch twice a same regular square of 30 mm side and dimension it using two different systems of dimensioning.
- Mention the method to find true length of an oblique line.
- Draw true shape of a regular heptagon of 30 mm side.

PART B (8×5)

- Q. 2. Print "HONESTY IS THE BEST POLICY" in single stroke vertical capital letters, taking height of letters as 14 mm. CO1

OR

Explain with neat figures different ways of dimensioning, e.g. parallel dimensioning, chain dimensioning etc. CO1

- Q. 3. A Right circular cylinder, diameter of base 40 mm and height 60 mm, lies in the HP on one of its generators (elements) such that its axis is parallel to the HP and inclined to the VP at 30 degrees. Draw its projections. CO2

OR

A pentagonal prism of base 30 mm and height 65 mm is resting on one of its sides of the base in the HP such that this side is perpendicular to the VP. The axis of the solid is making an angle of 45 degrees with the H.P. and is parallel to the VP. Draw its projections. CO2

- Q. 4. A straight line AB, 60 mm long has its end A, 50 mm above the HP and 20 mm in front of the VP and end B is 20 mm above the H.P. and 45 mm in front of the VP. Draw its projections, locate its traces and determine its true angles. CO3

OR

A right circular cone of 40 mm diameter and 60 mm height is resting centrally on a square prism of 40 mm base side and height as 50 mm. Draw isometric projections of the two solids. CO3

- Q. 5. A Right regular square prism, side of base 30 mm and height 65 mm rests on the HP on one of its base corners. Its base is inclined to the HP at 45° and is perpendicular to the VP. A section plane parallel to the VP cuts the prism and is at a distance of 8 mm from the vertical plane containing the axis and is towards the observer. Draw its top view and sectional front view. CO4

OR

A cylinder, base diameter 70 mm and axis length 80 mm is kept on the H.P. on its base. Its axis is bisected by a section plane perpendicular to V.P. and inclined to H.P. at 45 degrees. Draw Front view, Top view, side view and true shape of the section AND also develop the lateral surfaces of the truncated cylinder. CO4

- Q. 6. On a map a line 1 cm long represents 20 meters. Construct a diagonal scale to read single meter and long enough to read up to 400 meters. Write its Representative fraction and show distance of 283 meters on it. CO5

OR

Two cities are about 400 km apart. The distance is represented on a map by a line 10 cm long. Construct a diagonal Scale to measure up to a kilometer. Find R.F. of the scale and indicate a distance of 374 km on it. CO5