

B.Tech II Year I Semester (R13) Supplementary Examinations November/December 2017

MACHINE DRAWING
(Mechanical Engineering)

Time: 4 hours

Max. Marks: 70

All answer should be on the drawing sheet only
Answers on the drawing sheet only will be valued
First angle projections to be adopted

Section – I

Answer any two of the following (2 × 4 = 08 Marks)

- 1 Sketch the following thread profiles for a nominal diameter of 25 mm and pitch 3 mm and give their applications:
 - (a) Buttress thread.
 - (b) ACME thread.
- 2 Give the proportions of key with a Gib head, in terms of shaft diameter 20 mm.
- 3 Draw the three views of a hexagonal headed bolt of a nominal diameter 25 mm and length 100 mm, with a hexagonal nut and washer.

Section – II

Answer any two of the following (2 × 10 = 20 Marks)

- 4 Draw the sectional view from the front, and view from the top of a knuckle joint used to connect eye and fork end of diameter 50 mm.
- 5 Sketch a socket and spigot pipe joint to connect two pipes of 50 mm diameter each. The pipes are laid underground. Indicate proportionate dimensions of various parts of the joint.
- 6 Draw:
 - (a) Sectional view from the front.
 - (b) View from the above, of the double riveted, double strap, zig-zag butt joint, to join plates of thickness 12 mm.

Section – III

Answer the following (1 × 42 = 42 Marks)

- 7 The details of crosshead of a steam engine are shown in figure. Assemble the parts and draw:
 - (i) Half sectional view from the front, showing top half in section and
 - (ii) View from the above.

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