

B.Tech II Year I Semester (R13) Supplementary Examinations June 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 conventional representation of the following:
 - (a) Cast iron.
 - (b) Lead.
 - (c) Glass.
 - (d) Slate.
- 2 Sketch the following thread profiles, pitch =25 mm.
 - (a) Square thread.
 - (b) Buttress thread.
- 3 Draw the conventional representation of bevel gear and worm and worm wheel.

Section – II

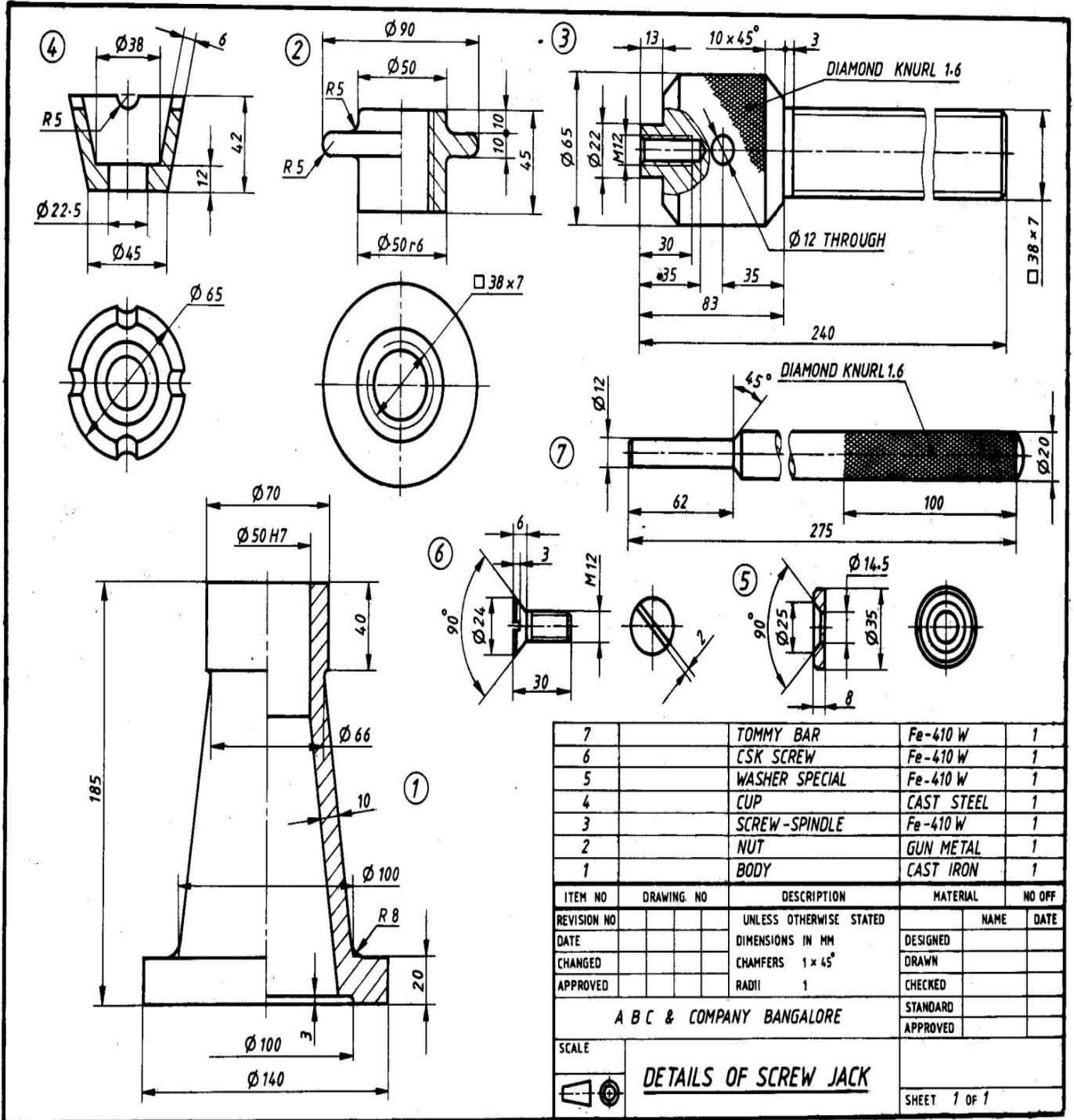
Answer any two of the following (2 × 10 = 20 Marks)

- 4 Draw the top and front views of a single riveted lap joint. The thickness of the plates is 9 mm. Show at least three rivets in each row. Indicate all the dimensions. Use snap head rivets.
- 5 Draw the Sectional front view and side view of the Knuckle Joint assuming the diameter of the rods is 25 mm.
- 6 Draw the sectional front view and side view of a Flanged Coupling-Protected type, assuming diameters of the shafts is 30 mm.

Section – III

Answer the following (1 × 42 = 42 Marks)

- 7 Details of a Screw Jack are shown in figure below. Assemble the parts and draw the following views:
 - (a) Front view in half section.
 - (b) Top view.



| | | | | |
|---|--|----------------|------------|---|
| 7 | | TOMMY BAR | Fe-410 W | 1 |
| 6 | | CSK SCREW | Fe-410 W | 1 |
| 5 | | WASHER SPECIAL | Fe-410 W | 1 |
| 4 | | CUP | CAST STEEL | 1 |
| 3 | | SCREW-SPINDLE | Fe-410 W | 1 |
| 2 | | NUT | GUN METAL | 1 |
| 1 | | BODY | CAST IRON | 1 |

| ITEM NO | DRAWING NO | DESCRIPTION | MATERIAL | NO OFF |
|---------------------------|------------|-------------------------|----------|--------|
| REVISION NO | | UNLESS OTHERWISE STATED | NAME | DATE |
| DATE | | DIMENSIONS IN MM | DESIGNED | |
| CHANGED | | CHAMFERS 1 x 45° | DRAWN | |
| APPROVED | | RADI 1 | CHECKED | |
| A B C & COMPANY BANGALORE | | | STANDARD | |
| SCALE | | | APPROVED | |


DETAILS OF SCREW JACK
 SHEET 1 OF 1
