

Roll No.

Total No. of Pages : 04

Total No. of Questions : 07

B.Tech. (Marine Engg.) (Sem.-3)

**MACHINE DRAWING**

Subject Code : BTME-303

M.Code : 59113

Date of Examination : 17-05-23

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of NINE questions carrying TWO marks each.
2. SECTION-B contains FOUR questions carrying FOUR marks each and students have to attempt any THREE questions.
3. SECTION-C contains TWO questions carrying THIRTY marks each and students have to attempt any ONE question.
4. Note : First angle projection to be used. You may assume any missing dimension.

**SECTION-A**

1) Answer briefly :

- a) Show conventional representation of internal threads and external threads in case of nut and bolt.
- b) With suitable sketch, explain the methods of dimensioning of i) Circle ii) Angle.
- c) Explain unilateral and bilateral tolerance with an example.
- d) What is a castle nut? Where is it used?
- e) When would you prefer pin type flexible coupling over rigid coupling?
- f) Draw a free hand sketch to show riveted butt joint.
- g) What are advantages of knuckle joint over muff coupling?
- h) What is the function of blow off cock?
- i) What is the function of clearance in cotter joint?

### SECTION-B

2. Draw free hand sketch of a single plate friction clutch.
3. Draw profile of knuckle threads by taking pitch of 20 mm.
4. Draw free hand front view of a spigot and socket joint.
5. Draw plan and sectional elevation of a double riveted (zig-zag) butt joint. Take diameter of rivet 15 mm and thickness of plate 10 mm.

### SECTION-C

6. Assemble the parts of screw jack given in Fig.1 and draw the following views:
  - a) Elevation (Right Half in Section)
  - b) Top view.
7. Assemble the parts of universal coupling given in Fig.2 and draw the following views:
  - a) Elevation
  - b) Plan.

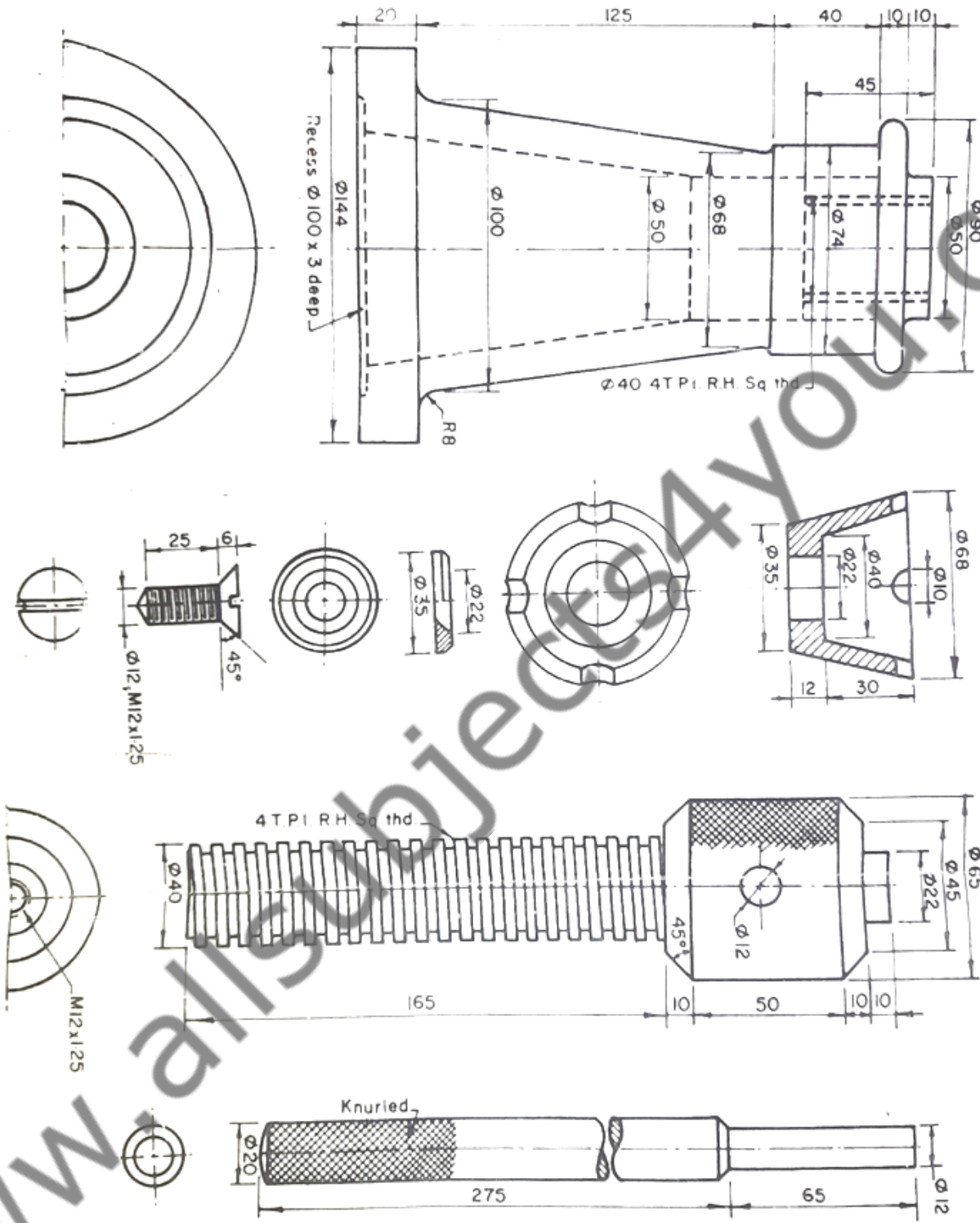


Fig.1

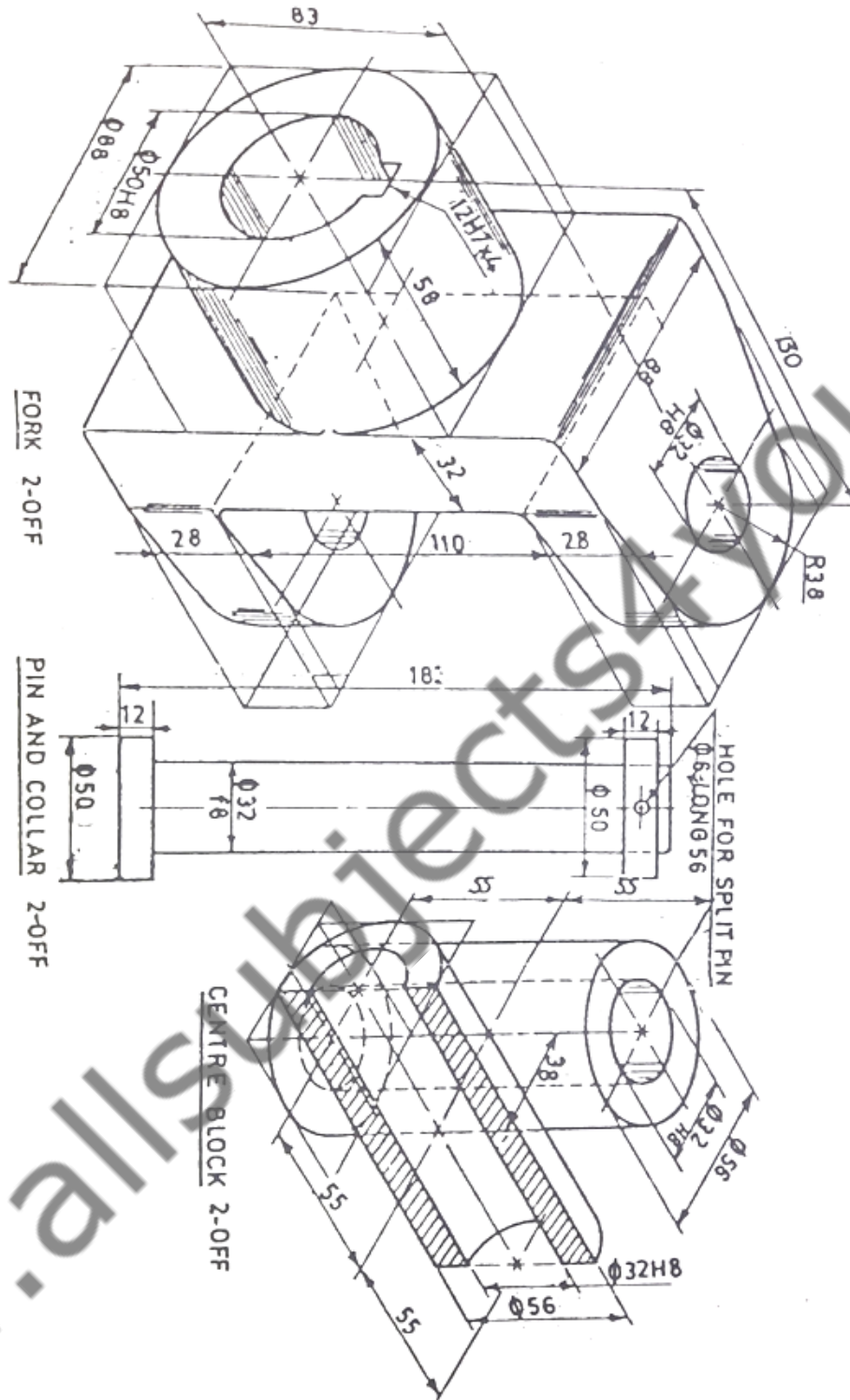


Fig.2

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**