Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐ **Total No. of Pages : 4**

Total No. of Questions : 09

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B.Tech. (AE) (Sem.–3)
MACHINE DRAWING
Subject Code : BTAE-306 (2011 Batch)
Paper ID : [A1156]

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Time : 3 Hrs.   **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.**

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SECTION-A

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l. Write briefly :

    a.   What is difference between allowance and tolerance?

    b.   Why sectional views are used in drawing?

    c.   The root angles in BIS metric thread and BSW threads are respectively _____ and _____?

    d.   Why are split muff coupling used in preference with solid muff?

    e.   Why brasses are used in connecting rod ends and why are these made of soft metals?

    f.   What is blow-off cock and where it is used?

    g.   What are the functions of steam stop valve?

    h.   What is the advantage of providing bush in a bearing and what is the material of bush?

    i.   Draw the free hand sketch of hexagonal bolt.

    j.   What is the use of tailstock in a lathe and how is it operated?

SECTION-B

2. What are the different types of machine drawing? Explain Production drawing in detail.

3. Draw plan and sectional elevation of a double riveted butt joint (Single cover and chain riveting). Take diameter of rivet: 25 mm.

4. Draw free hand upper half sectional-front elevation of a protected type flange coupling on proportionate scale.

5. What is the strength of transverse fillet welded joint?

6. Discuss the various commands available in Auto-CAD to draw a pentagon.

SECTION-C

7. Draw the full sectional front view and side view of the flange coupling as shown in figure 1.

Figure. 1

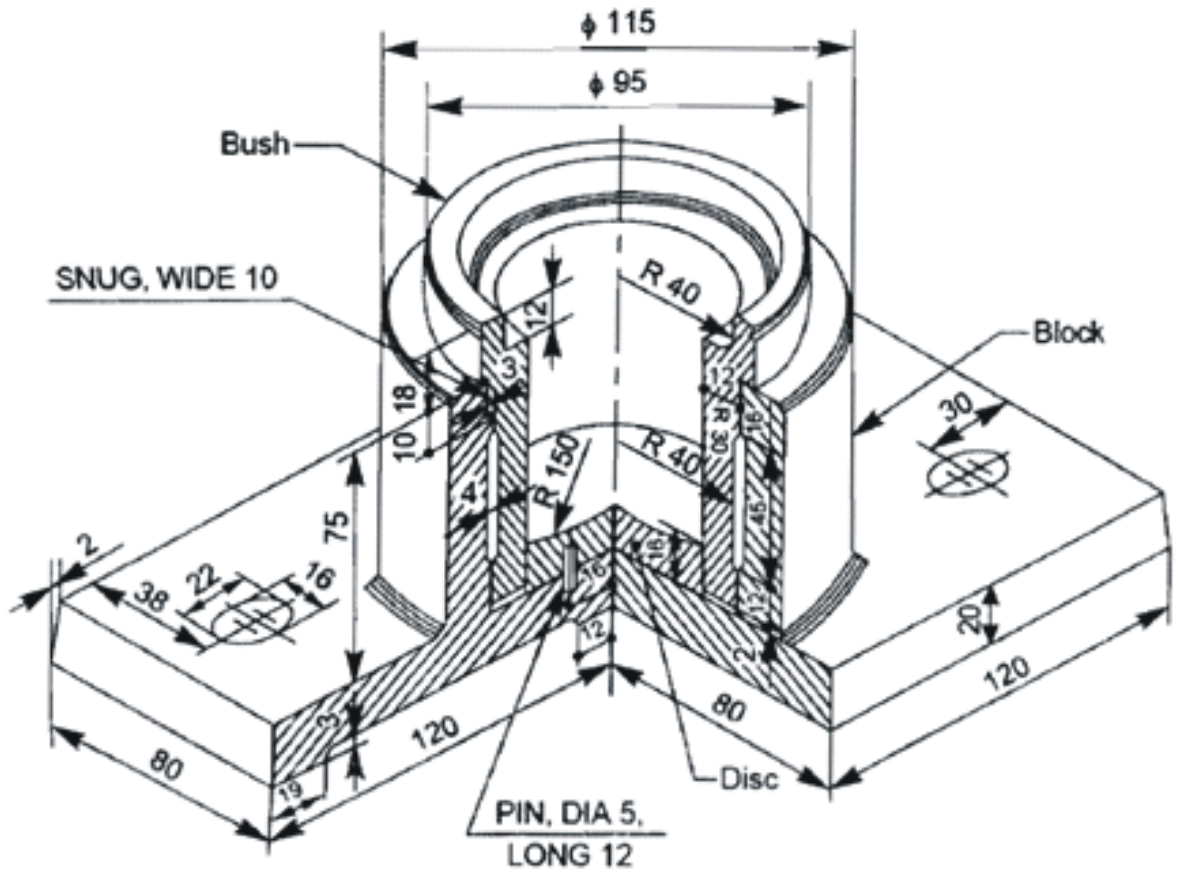8. Draw the front view and top view of foot step bearing as shown in figure 2.

Figure. 2.

9. Figure-3 shows the details of a Lathe tail stock. Assemble all the parts and draw the Front View.
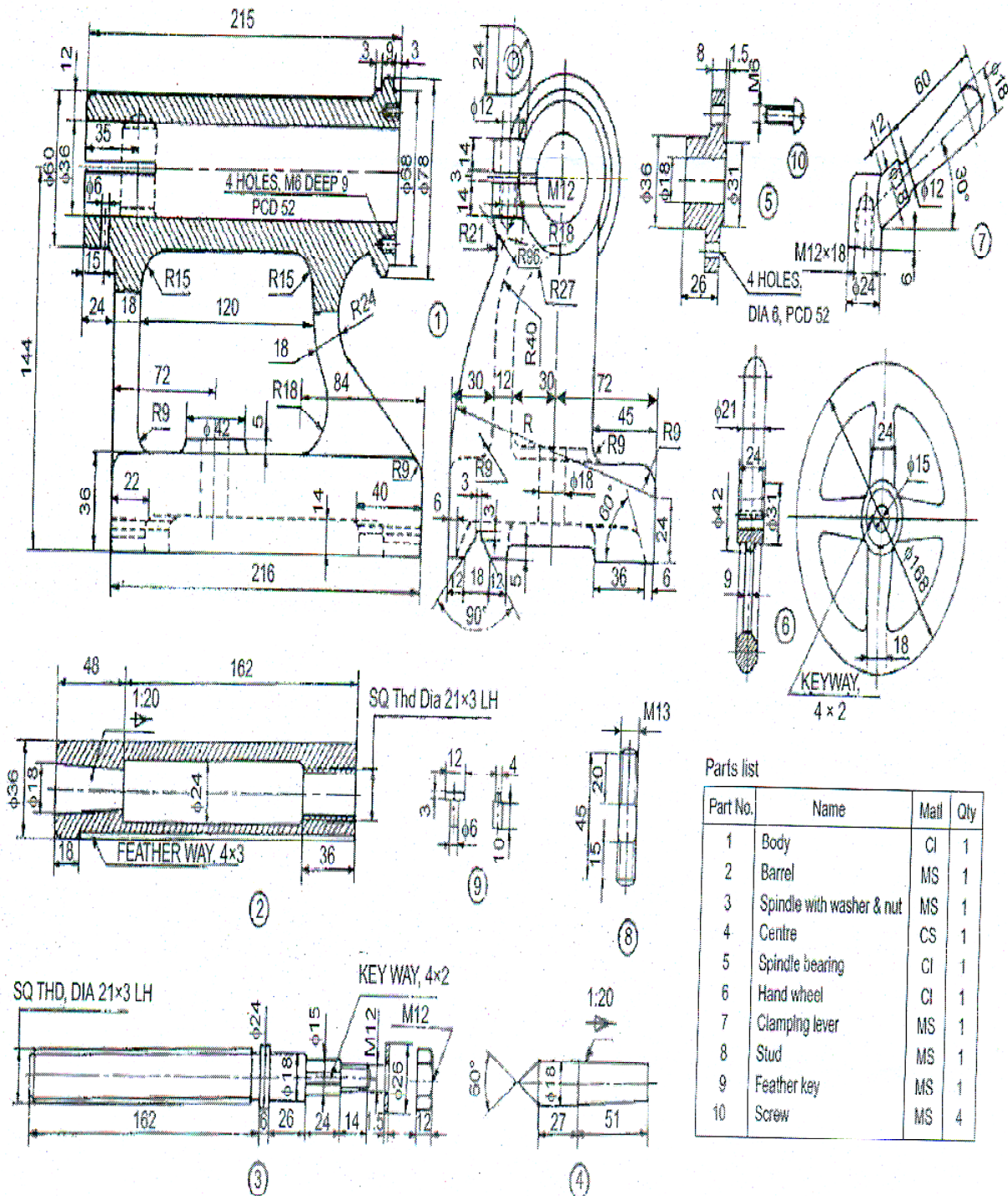

Part No.	Name	Matl	Qty
1	Body	CI	1
2	Barrel	MS	1
3	Spindle with washer & nut	MS	1
4	Centre	CS	1
5	Spindle bearing	CI	1
6	Hand wheel	CI	1
7	Clamping lever	MS	1
8	Stud	MS	1
9	Feather key	MS	1
10	Screw	MS	4

Figure. 3.