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**Question Paper Code : 90400**

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2019  
Third Semester  
Mechanical Engineering (Sandwich)  
MS8301 – MACHINE DRAWING  
(Regulations 2017)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. Name the assembly views which will give inner details of parts. (2)
2. State the two methods of dimensioning in engineering drawing. (2)
3. What are the details to be given in Bill of material in machine drawing ? (2)
4. Name the view which will give assembly sequence with a suitable sketch. (2)
5. How Geometric Tolerancing is different from Dimensional tolerancing ? (2)
6. Brief two types of material conditions used in Geometric Tolerancing. (2)
7. State any four types of assembly drawings based on their uses. (2)
8. What are the data required to draw an assembly drawing ? (2)
9. Mention any two advantages of computer graphics over manual drawing. (2)
10. Name any two most popular 3d CAD softwares. (2)

PART – B

(5×13=65 Marks)

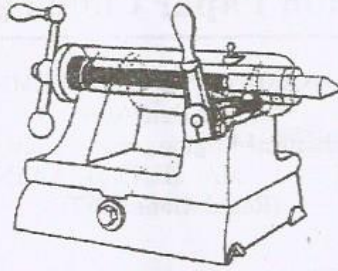
11. a) Brief screw thread terminology with neat sketches. (13)  
(OR)
- b) Sketch the following :
  - i) Square Threads (3)
  - ii) Acme Threads (3)
  - iii) Hexagonal Nut (4)
  - iv) Plain Washer (3)
12. a) Draw the two important views of hexagonal bolt of 100 mm long, 25 mm diameter and a thread length of 50 mm, with a washer and a hexagonal nut. Dimension the views. (13)  
(OR)

90400

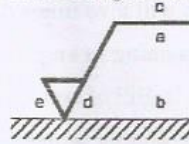
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b) In detail, explain the assembly and dismantling exercise with emphasis on assembly sequence with appropriate fits for a tail stock. (13)



13. a) Explain in detail with interpretation of at least five machining symbols the various terms (a to e) used in the surface finish symbol below. Also explain the methods of indicating the surface roughness. (13)



(OR)

b) Explain in detail the form, orientation, runout and location tolerances related to Geometric tolerancing. (13)

14. a) Make a free hand sketch showing the following views of a journal bearing. (13)

- i) Front view                              ii) Right side view

(OR)

b) Draw two views of the flange coupling shown in Fig. 14 (b) to join two shafts of diameter  $D = 40$  mm and dimension them. (13)

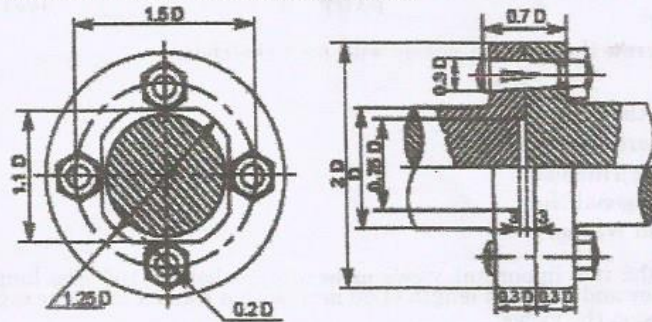


Fig. 14 (b)



15. a) Assemble the parts in Fig. 15 (a) and draw the following views of a Plummer block below : (13)
- Front View
  - Top View

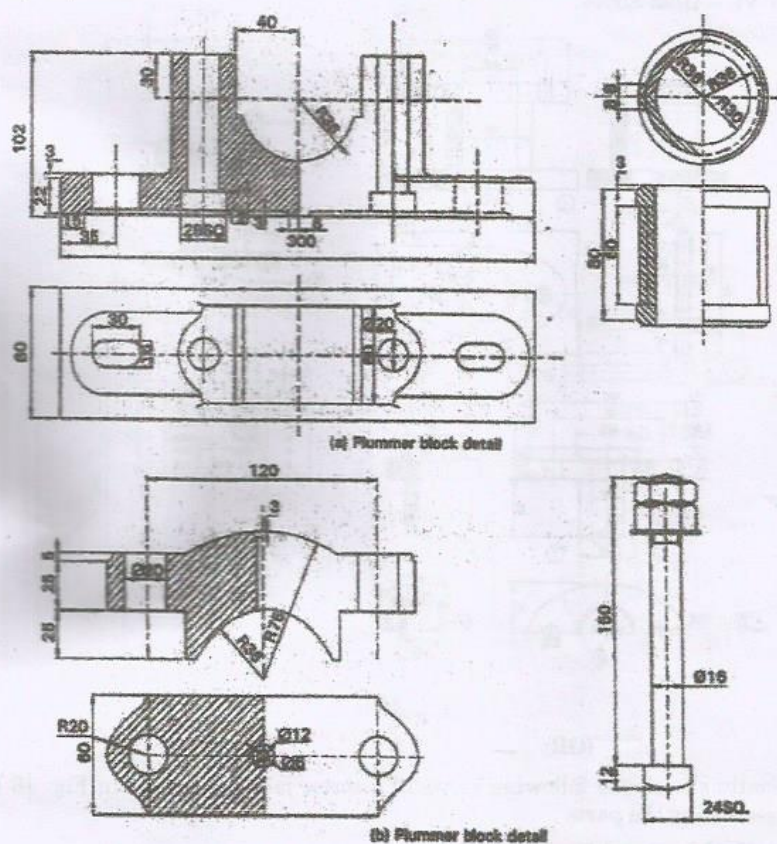


Fig. 15 (a)

(OR)

- b) Write short notes on the following : (13)
- Creation of bill of materials
  - Interference check between solids.

90400

-4-



PART - C

(1×15=15 Marks)

16. a) The details of stuffing box are shown in Fig. 16 (a). Neatly sketch the following assembled views : (15)
- a) Full sectional front view
  - b) View from above.

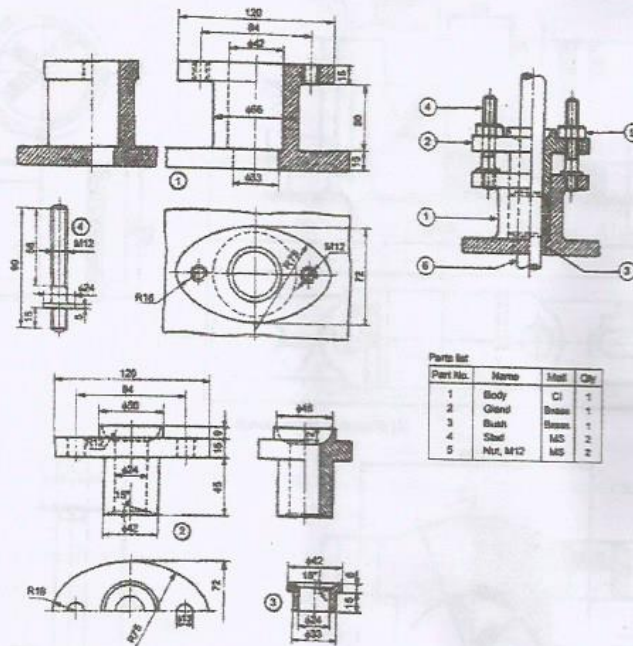


Fig. 16 (a)

(OR)

- b) Neatly sketch the following views of a screw jack mentioned in Fig. 16 (b), assembling the parts (15)
- i) Half Sectional Front View
  - ii) Right Side View



DETAILS OF SCREW JACK

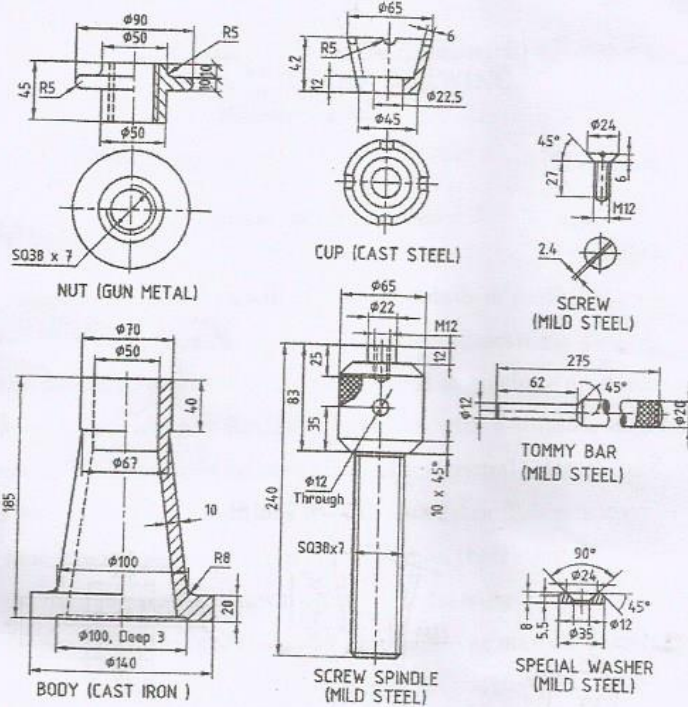


Fig. 16 (b)