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Question Paper Code: 44706

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

Fourth Semester

Mechanical Engineering

14UME406 – MACHINE DRAWING

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (2 x 20 = 40 Marks)

1. (a) (i) Calculate the fundamental deviations for the hole size 40 D9. (5)
(ii) A journal bearing consists of a bronze bush of diameter 100 *mm* fitted into a housing and a steel shaft of 50 *mm* diameter, running in the bush, with oil as lubricant. Determine the working dimensions of (a) bore of the housing, (b) bush and (c) shaft. Calculate the maximum and minimum interference or clearance. (15)

Or

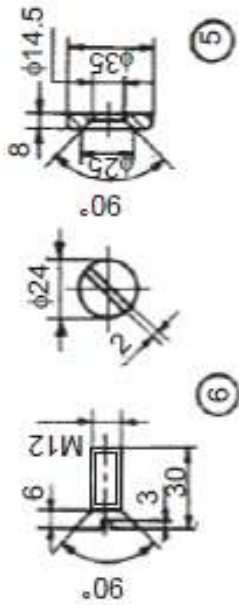
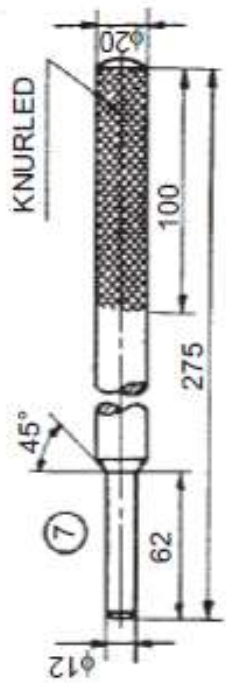
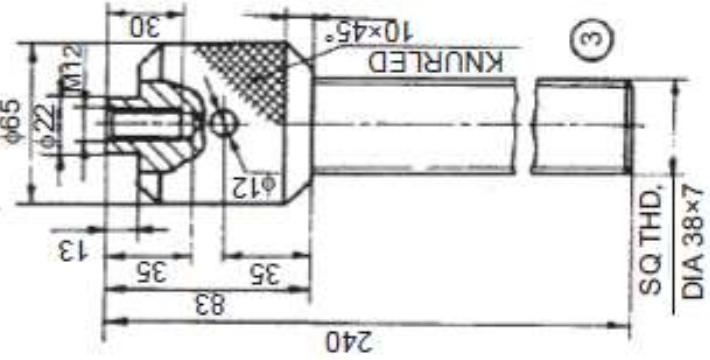
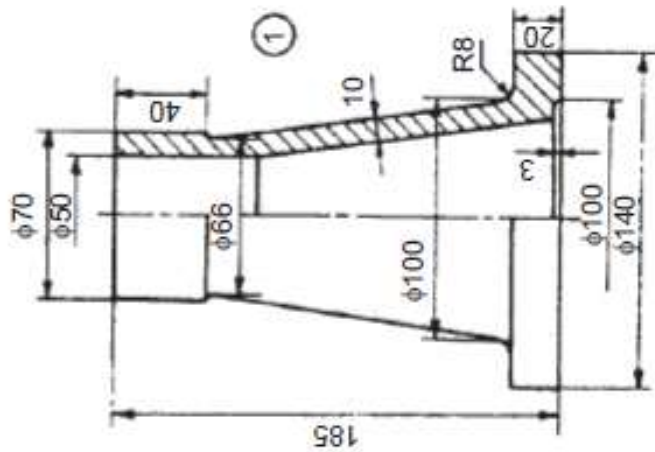
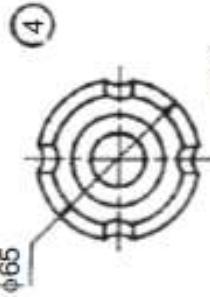
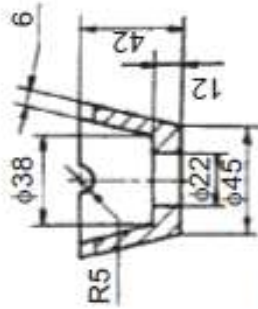
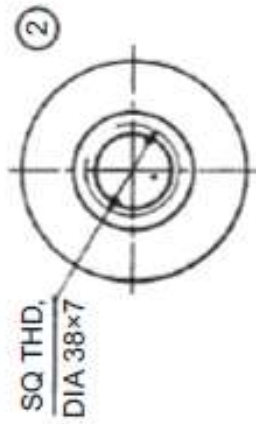
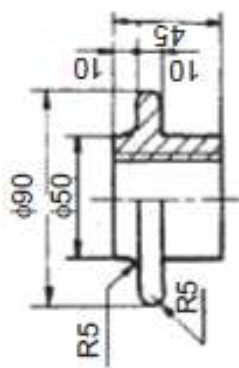
- (b) (i) Briefly discuss about the importance of tolerance allocation and differentiate unilateral and bilateral tolerances. (10)
(ii) Explain in detail about the selection of fits with examples. (10)
2. (a) (i) State the importance of surface roughness measurement. (10)
(ii) Explain in details about the indications of surface waviness symbols on drawings. (10)

Or

- (b) (i) Compare and contrast the permanent and temporary fastening system with suitable examples. (10)
- (ii) List the nomenclatures of external thread and explain with a neat sketch. (10)

PART - B (1 x 60 = 60 Marks)

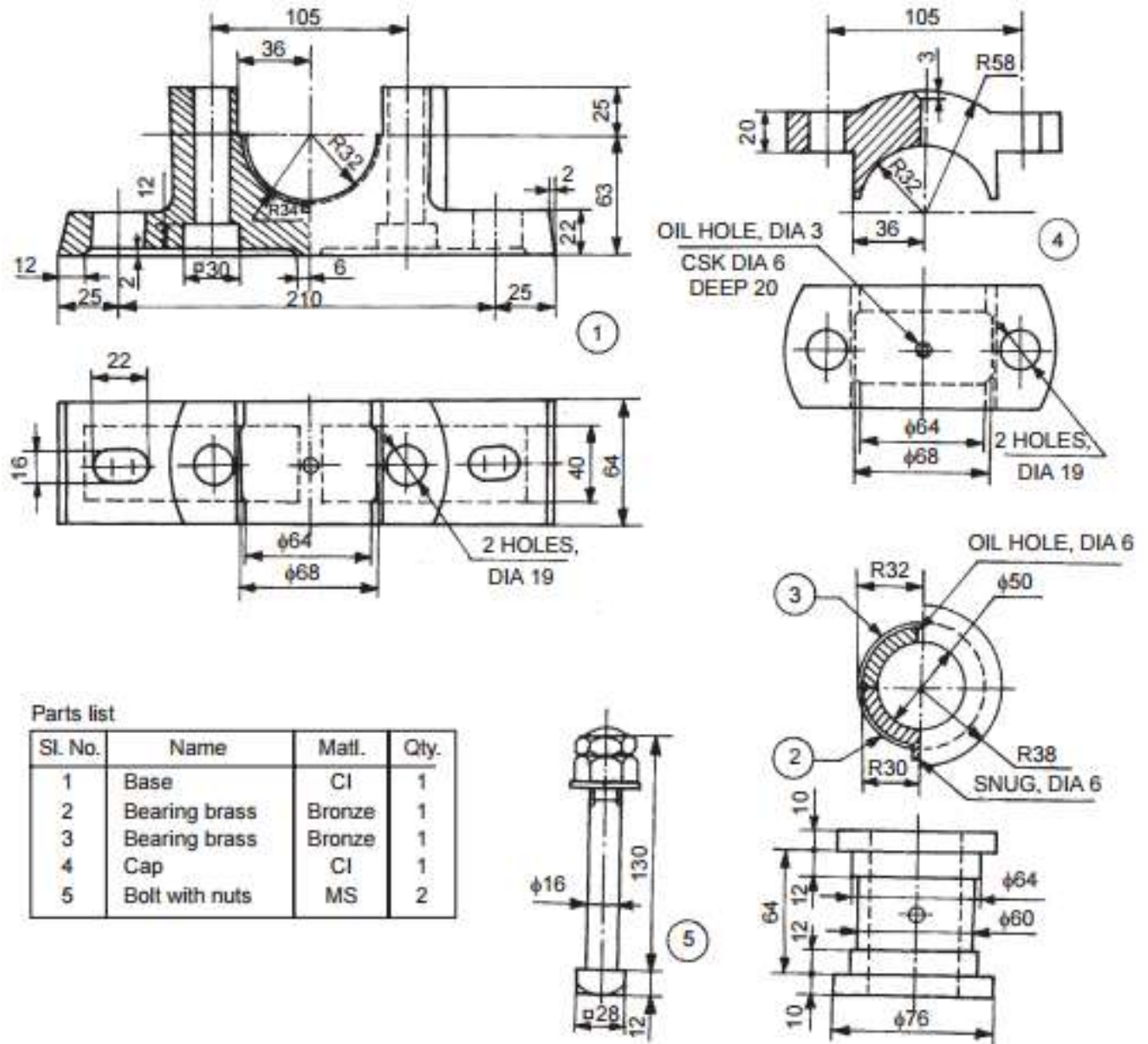
3. (a) Draw the following assembled views of a screw jack, details of which are given in Figure - 2.
- (i) Half sectional front view
- (ii) Top view (60)



Parts list

Part No.	Name	Matl	Qty
1	Body	CI	1
2	Nut	GM	1
3	Screw	MS	1
4	Cup	CS	1
5	Washer	MS	1
6	Screw	MS	1
7	Tommy bar	MS	1

3. (a) Assemble the parts of universal coupling as shown in Figure 1 and draw,
 (i) Half sectional front view and
 (ii) Top view (60)



Parts list

Sl. No.	Name	Matl.	Qty.
1	Base	CI	1
2	Bearing brass	Bronze	1
3	Bearing brass	Bronze	1
4	Cap	CI	1
5	Bolt with nuts	MS	2