Reg. No. : | | | | | | | | | | |

Question Paper Code: 44706

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2022

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) Sketch the actual and conventional representation for the following elements: external thread, splined shaft, helical tension spring, chain wheel and bearing. (20)

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) Sketch and illustrate the terminologies of surface finish / profile. (10)

(ii) With a neat sketch explain the symbols for surface finish obtained by different machining process. (10)

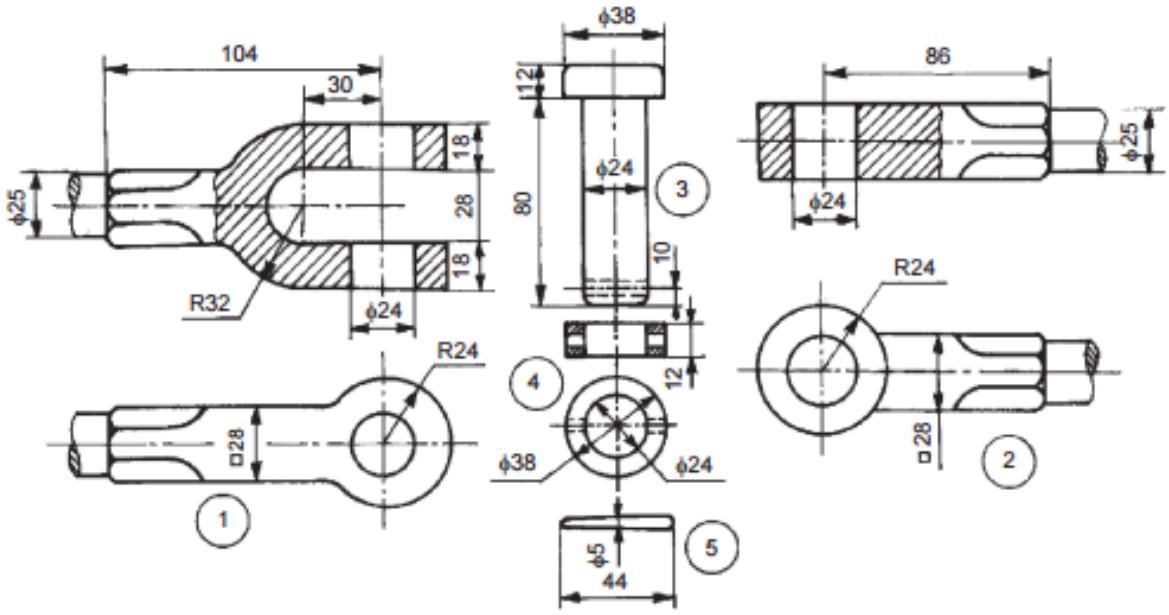
Or

(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)

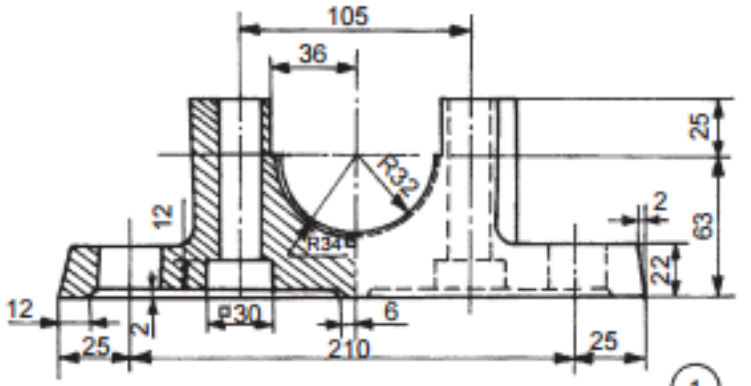
(a) Assemble the parts of a knuckle joint, shown in figure and draw, (i) sectional view from the front and (ii) view from above. (60)

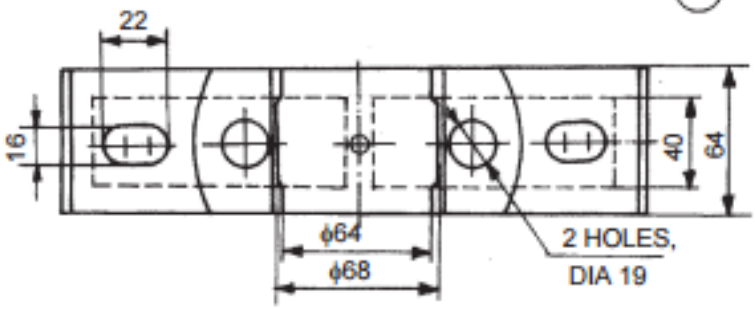


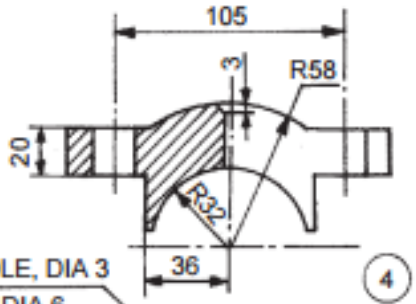
Parts list

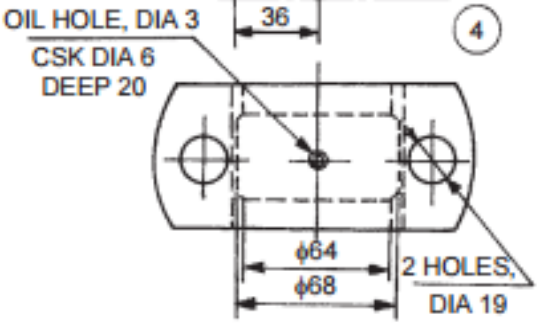
Sl. No.	Name	Matl.	Qty.
1	Fork end	Forged steel	1
2	Eye end	Forged steel	1
3	Pin	Mild steel	1
4	Collar	Mild steel	1
5	Taper pin	Mild steel	1

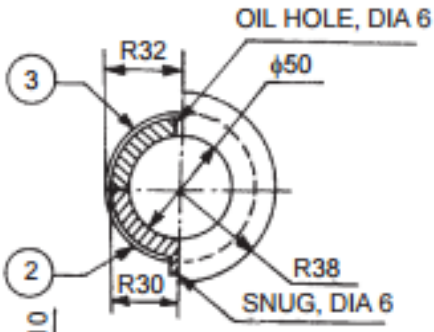
3. (a) Assemble the parts of universal coupling as shown in Figure 1 and draw,
(i) Half sectional front view and
(ii) Top view (60)





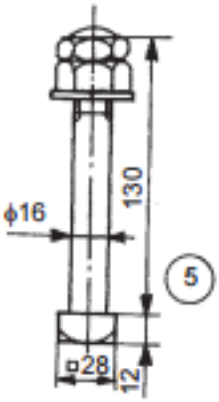


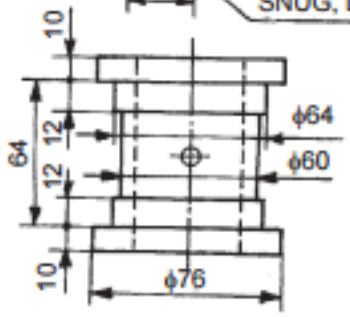




Parts list

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





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