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Question Paper Code: 54706

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

Fourth Semester

Mechanical Engineering

15UME406 - MACHINE DRAWING

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (2 x 20 = 40 Marks)

- 1 (a) What is the need for sectioning? Explain broken section and revolved section with neat sketch. CO1-U (20)

Or

- (b) Why hole basis system is preferred over shaft basis system? Explain with suitable example and sketch. CO1-U (20)

- 2 (a) (i) How are the following threads designated as per BIS : CO2-U (10)
- (a) Metric thread with coarse pitch.
 - (b) Metric thread with fine pitch.
 - (c) Square thread.
 - (d) ACME thread.

- (ii) Explain the eye bolt with neat sketches and what purpose is it used. CO2-U (10)

Or

- (b) (i) State the conventions followed in representing threads in drawing. Draw the representation for internal and external threads. CO2-U (10)

- (ii) Illustrate the types of keys. Draw a gib headed key with its proportions. CO2-U (10)

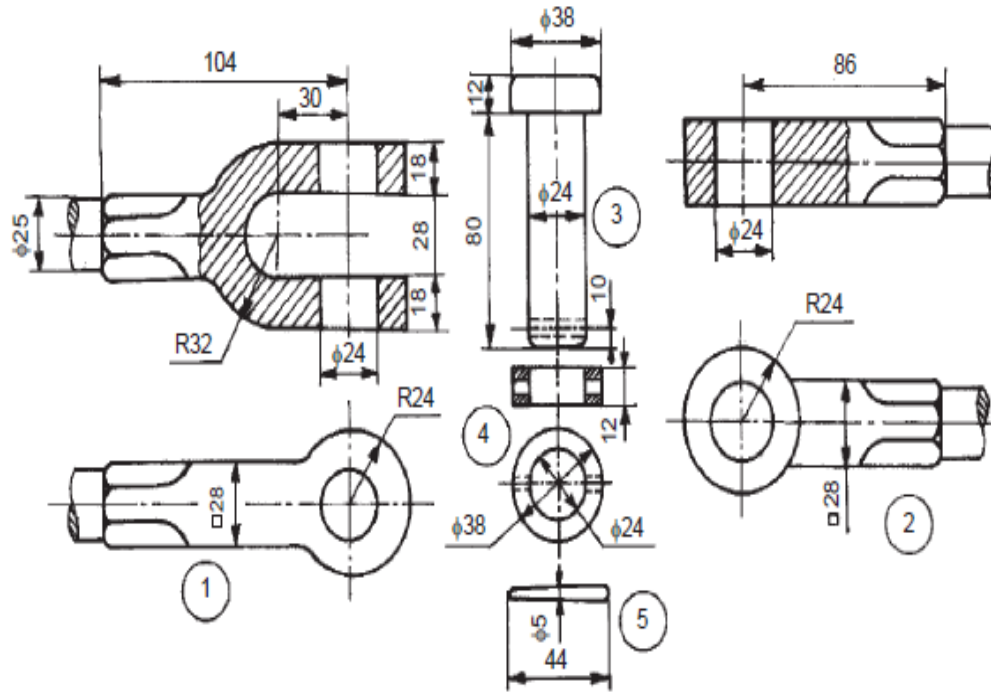
PART B - (1 x 60 = 60 Marks)

3 (a) The Part details of Knuckle joint are shown in figure. Construct the assembled views. CO4-U (60)

(i) Draw full sectional front view for assembled part.

(ii) Draw plan for assembled part.

Details of Knuckle joint



Parts list

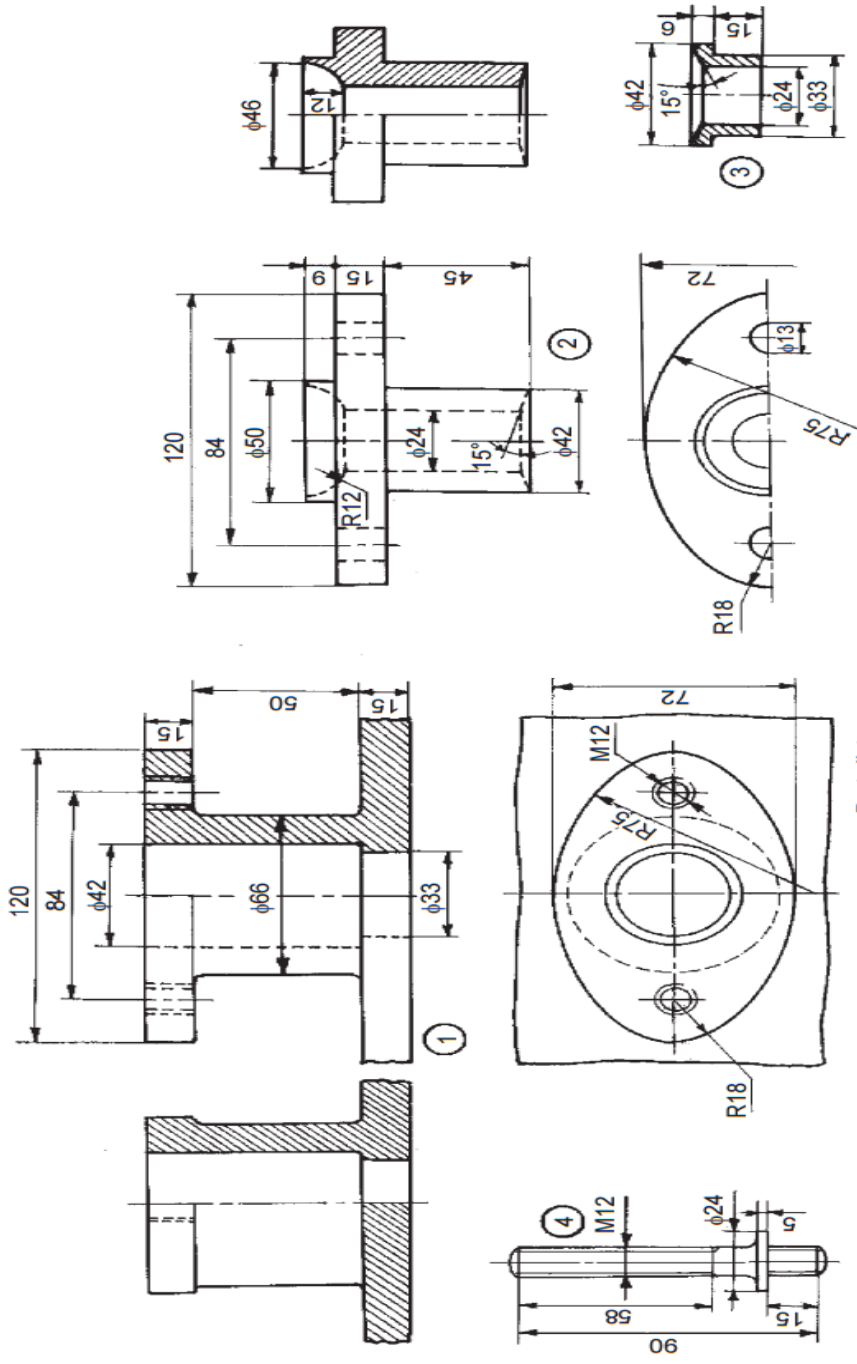
Sl. No.	Name	Matl.	Qty.
1	Fork end	Forged steel	1
2	Eye end	Forged steel	1
3	Pin	Mild steel	1
4	Collar	Mild steel	1
5	Taper pin	Mild steel	1

Or

(b) Assemble the parts of the Stuffing box and draw the following views: CO5-U (60)

(i) Full sectional Elevation

(ii) Plan View



Parts list

Part No.	Name	Matl	Qty
1	Body	CI	1
2	Gland	Brass	1
3	Bush	Brass	1
4	Stud	MS	2
5	Nut, M12	MS	2

