



C16-M-406

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BOARD DIPLOMA EXAMINATION, (C-16)  
SEPTEMBER/OCTOBER - 2020  
DME—FOURTH SEMESTER EXAMINATION

PRODUCTION DRAWING

Time : 3 hours ]

[ Total Marks : 60

PART—A

5×4=20

**Instructions** : (1) Answer **all** questions.

(2) Each question carries **five** marks.

1. The dimensions of a shaft and a hole are given below :

Shaft 50  $\begin{matrix} 0\ 002 \\ 0\ 001 \end{matrix}$  Hole 50  $\begin{matrix} 0\ 0012 \\ 0\ 0010 \end{matrix}$

Find out the maximum allowance and hole tolerance.  $2\frac{1}{2}+2\frac{1}{2}=5$

2. Draw the symbolic representation for the following geometrical characteristics to be toleranced :

5

(a) Straightness

(b) Squareness

(c) Symmetry

(d) Angularity

(e) Cylindricity

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[ Contd...

3. Indicate the surface roughness limiting values for the following manufacturing processes : 5

(a) Die casting

(b) Forging

(c) Turning and milling

(d) Boring

(e) Reaming

4. Write the meaning for the code designation of the following components :  $2\frac{1}{2}+2\frac{1}{2}=5$

(a) Taper key 15 10 70

(b) Hex bolt M10 40NL

### PART—B

40

- Instructions** :
- (1) Answer *any one* question.
  - (2) Each question carries **forty** marks.
  - (3) All dimensions are in mm.
  - (4) Choose suitable scale.

5. Study the given assembly drawing of the knuckle joint and—

(a) draw the component drawings;

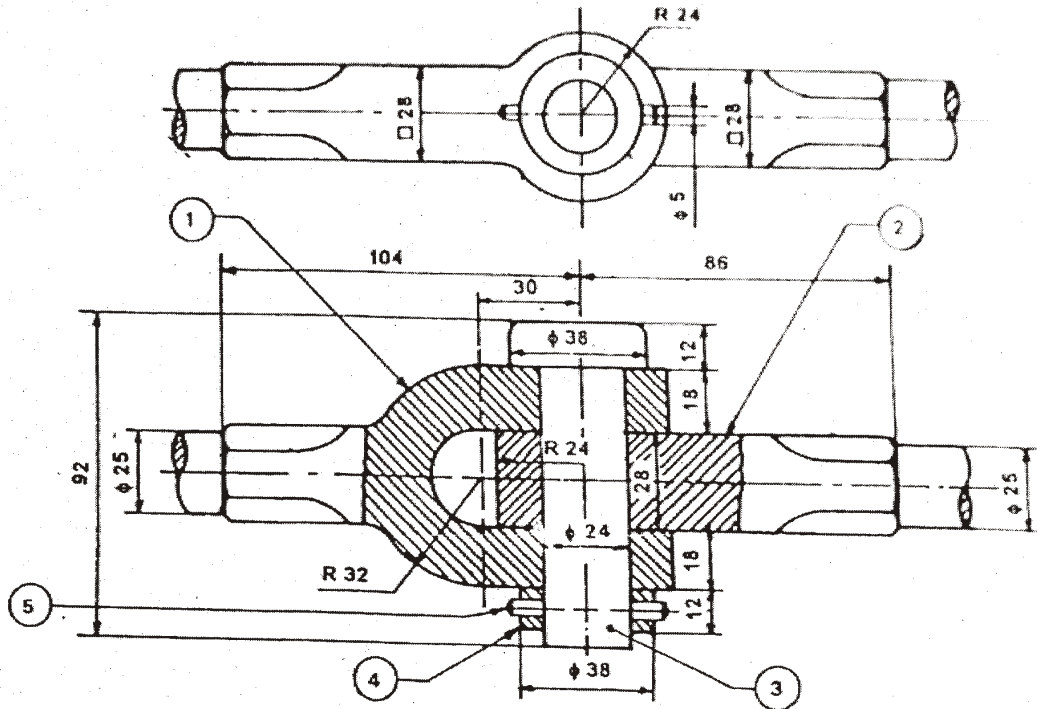
(b) apply suitable tolerances and fits;

(c) apply suitable geometrical tolerances to components;

(d) show the surface roughness symbols;

(e) list out the materials for the components;

(f) prepare the process sheet for pin. 20+5+3+3+4+5=40

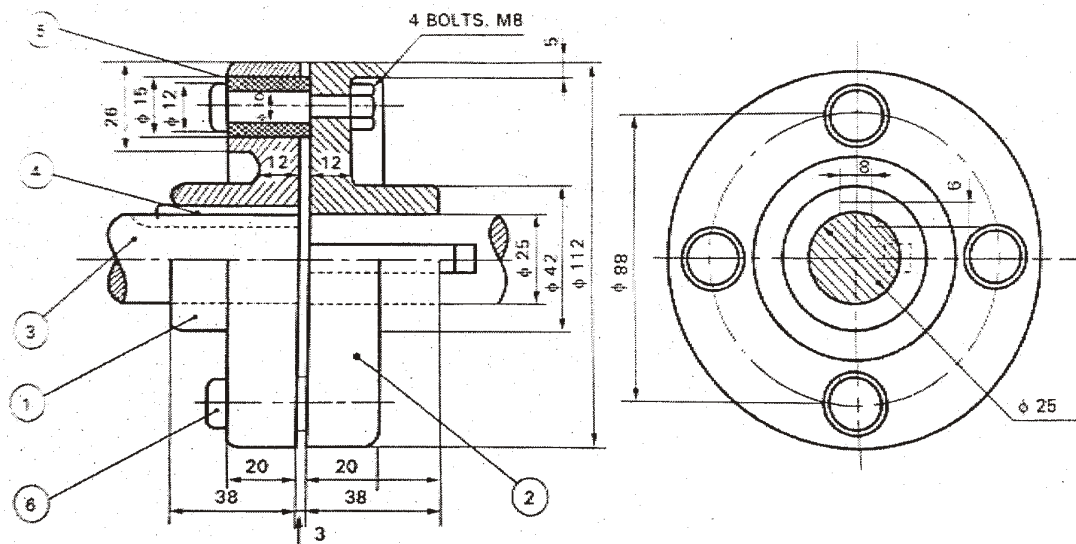


Bill of material

Part No.	Name	Qty.
1.	Fork end	1
2.	Eye end	1
3.	Pin	1
4.	Collar	1
5.	Taper pin	1

6. Study the given assembly drawing of the bushed pin-type flanged coupling and—

- (a) draw the component drawings;
- (b) apply suitable tolerances and fits;
- (c) apply suitable geometrical tolerances to components;
- (d) show the surface roughness symbols;
- (e) list out the materials for the components;
- (f) prepare the process sheet for flange 2.  $20+5+3+3+4+5=40$



Bill of material

Part No.	Name	Qty.
1.	Flange	1
2.	Flange	1
3.	Shaft	2
4.	Key	2
5.	Rubber bushes	—
6.	Bolt	4

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