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C16-M–406

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BOARD DIPLOMA EXAMINATION, (C-16)

OCTOBER/NOVEMBER—2024

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.

(3) Draw the following neatly with proportionate dimensions.

(4) Use of production drawing tables is allowed.

1. Calculate the values of maximum clearance, hole tolerance and shaft tolerance for the following dimensions of assembled part :

$$\text{Hole}^{44.515}_{44.500} \quad \text{Shaft}^{43.975}_{43.957}$$

2. Draw the tolerance character symbol for the following :

(a) Perpendicularity

(b) Cylindricity

(c) Profile of any line

(d) Position

(e) Concentricity

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

(a) Sand casting

(b) Hot rolling

(c) Shaping

(d) Honing

(e) Super finishing

4. Write the meanings of the following symbols/specifications :

(a) Fe 410 Cu K

(b) 45C10G

(c) Stud AM 10 × 30, IS : I862-P-4·6

(d) Hex.bolt M20 × 1·2 × 75 N, IS : 1364-S-4·6

(e) Splines 6 × 32 × 28, IS : 2327

PART—B

40×1=40

Instructions : (1) Answer *any* **one** question.

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

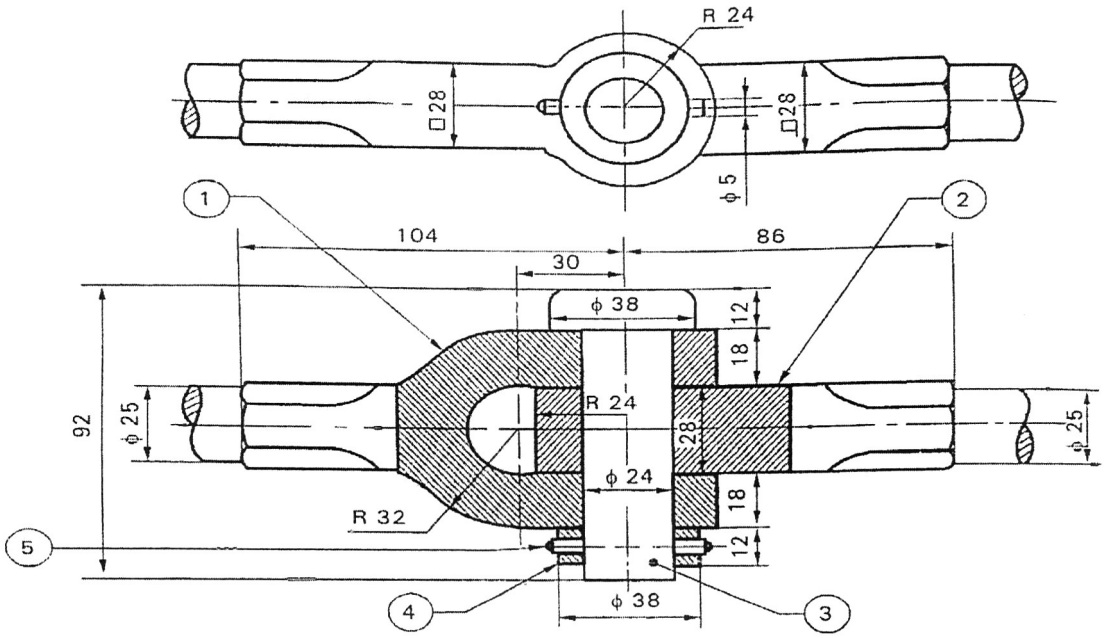
5. Study the given assembly drawing of the Knuckle joint shown in Fig. 1.

(a) Draw the part drawings of Fork End and Eye End. 20

(b) Select suitable fits and tolerances. 5

(c) Prepare the process sheet for Pin. 8

(d) Indicate the surface roughness symbols and geometrical tolerance symbols. 7



Bill of material

Part No.	Name	Raw material	Qty.
1.	Fork end	FS – Forging	1
2.	Eye end	FS – Forging	1
3.	Pin	MS – ϕ40 × 95	1
4.	Coller	MS – ϕ40 Bar stock	1
5.	Taper pin	MS – Std. component	1

Fig.1

6. Study the given assembly drawing of the universal coupling shown in Fig. 2.

(a) Draw the part drawings of fork and centre block. 20

(b) Select suitable fits and tolerances. 4

(c) Prepare the process sheet for center block. 7

(d) Indicate the surface roughness symbols and geometrical tolerance symbols. 6

(e) List out the materials and quantity of the components. 3

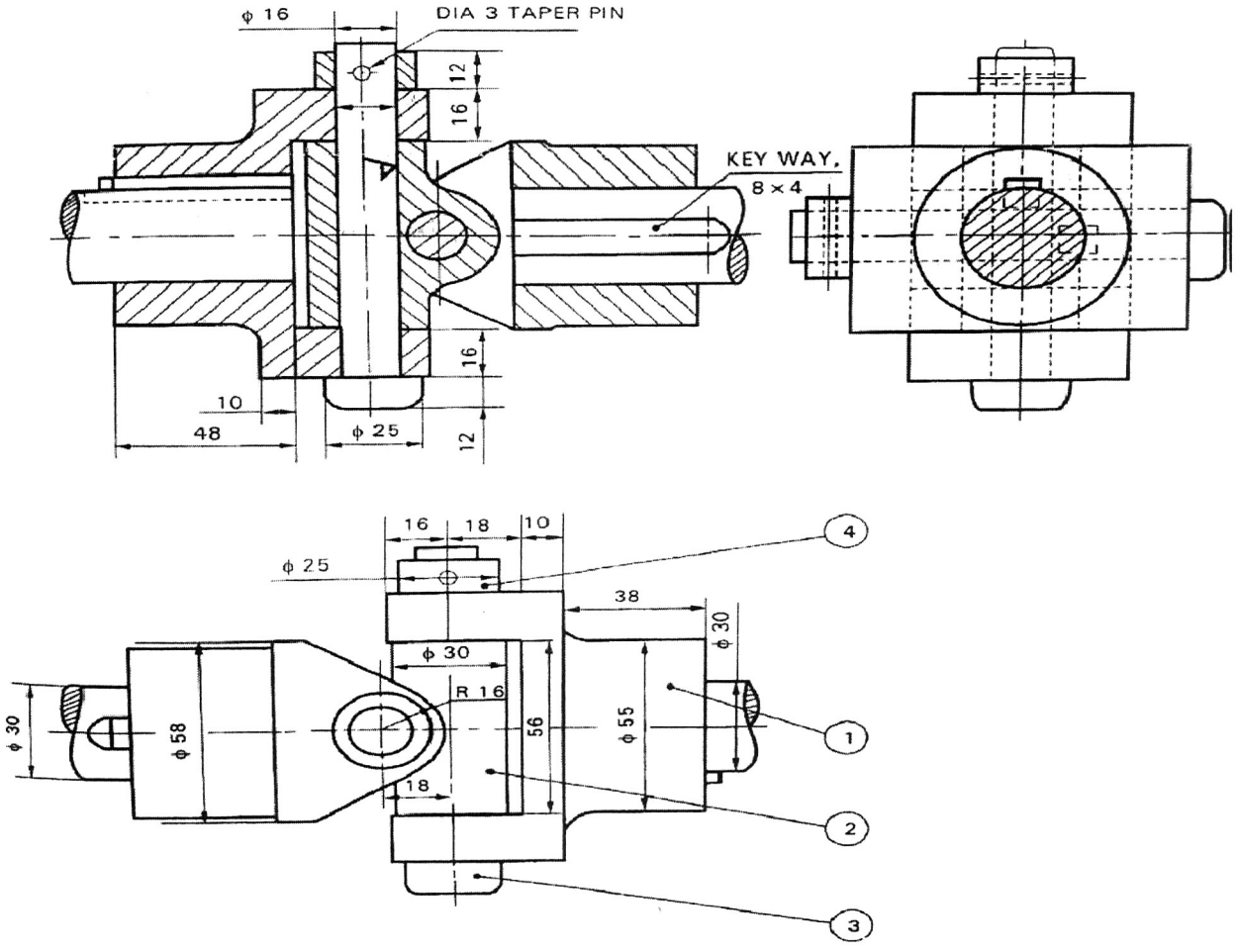


Fig. 2

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