

6451

BOARD DIPLOMA EXAMINATION, (C-16)

MAY/JUNE—2023

DME - FOURTH SEMESTER EXAMINATION

PRODUCTION DRAWING

Time : 3 Hours ]

[ Total Marks : 60

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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 limits, fits and tolerance tables are allowed.

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

$$\text{Hole : } 50^{+0.039}_{+0.000} \quad \text{Shaft : } 50^{+0.062}_{+0.041}$$

Find the following terms :

- (a) Hole Tolerance  
(b) Shaft Tolerance  
(c) Maximum Allowance  
(d) Minimum Allowance  
(e) Type of fit
2. Draw the conventional symbols for the following :
- (a) Perpendicularity  
(b) Runout  
(c) Parallelism  
(d) Angularity  
(e) Straightness

3. Give the range of roughness values in microns obtained in the following manufacturing processes :
- (a) Lapping
  - (b) Surface Grinding
  - (c) Turning
  - (d) Forging
  - (e) Die Casting
4. Write the meaning of the following specifications :
- (a) Hexagon Fit Bolt M20 × 70, IS : 3640-S-8.8
  - (b) Oil Seal A25 × 40 × 7, IS : 5129
  - (c) Castle Nut M20, IS : 2232-B-4
  - (d) Stud A M10 × 30, IS : 1862-P-4.6
  - (e) Countersunk Screw M5 × 15, IS : 1365-4.8

**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 Universal coupling shown in figure. 20+5+5+5+5
- (a) Draw the part drawings for fork and centre block.
  - (b) Select suitable fits and tolerances.
  - (c) Prepare the process sheet for centre block.
  - (d) Indicate the Surface roughness symbols and geometrical tolerance symbols.

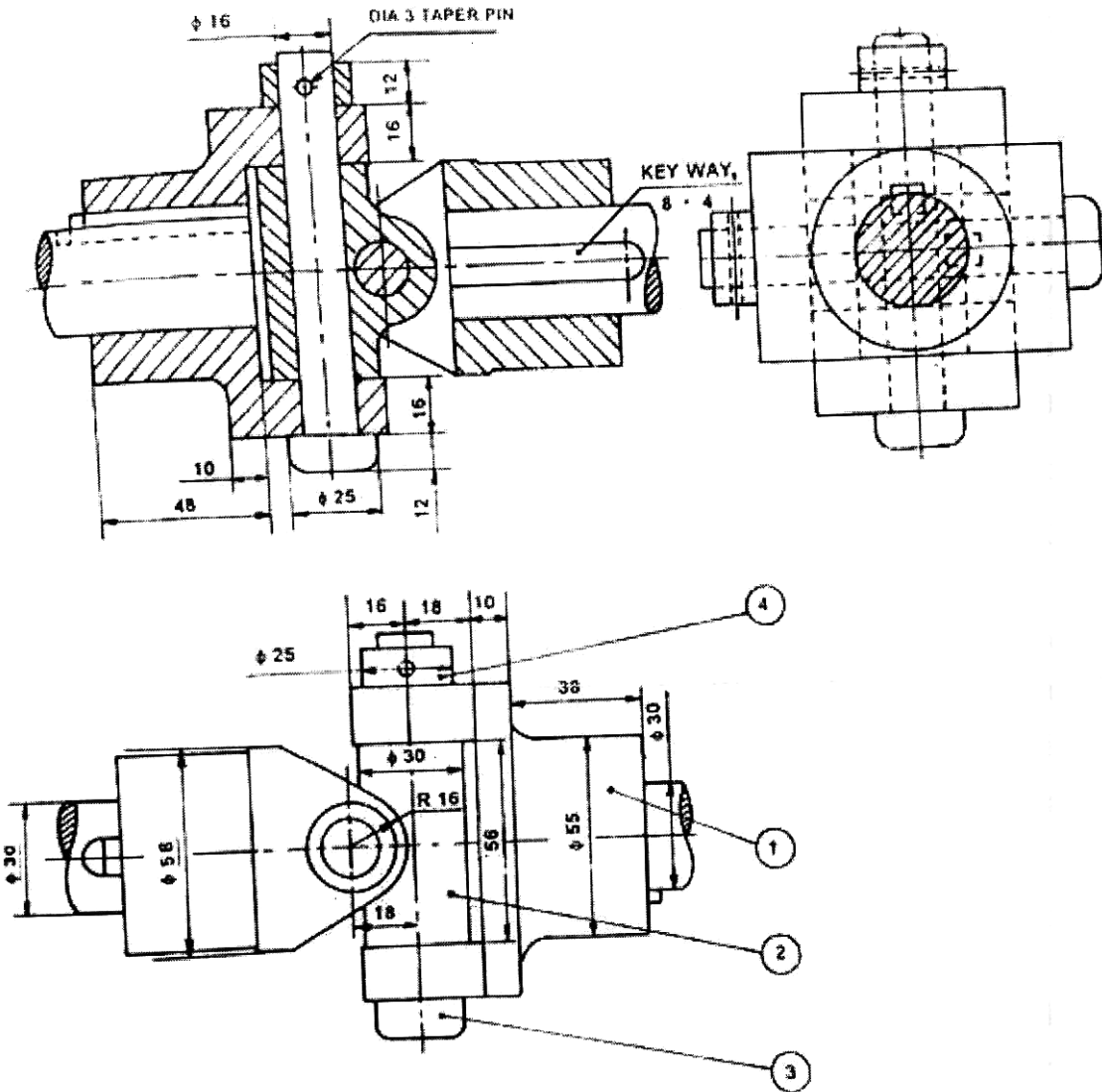
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(e) List out the materials and quantity of the components.



Bill of material

| Part No. | Name         |
|----------|--------------|
| 1        | Fork         |
| 2        | Centre block |
| 3        | Pin          |
| 4        | Collar       |

