



C09-M-407

3507

BOARD DIPLOMA EXAMINATION, (C-09)  
MARCH/APRIL—2017  
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) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

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

$$\begin{array}{ll} + 0.010 & - 0.020 \\ - 0.003 & - 0.001 \end{array}$$

Hole : 70                      Shaft : 70

Find (a) shaft tolerance, (b) hole tolerance, (c) maximum allowance, (d) minimum allowance and (e) type of fit.

2. Sketch the symbols for the following characteristics to be toleranced :
- (a) Profile of any line
  - (b) Flatness
  - (c) Position
  - (d) Symmetry
  - (e) Roundness

3. Give the range of roughness values in microns obtained in the following manufacturing process :
- (a) Permanent mould casting
  - (b) Shaping
  - (c) Boring
  - (d) Lapping
  - (e) Reaming
4. Write the meaning of following designations of mechanical components :
- (a) Hex bolt  $M20 \times 1.5 \times 75NN$
  - (b) Ball bearing 410
  - (c) Spline shaft  $32 \times 28 \times 6$
  - (d) Solid taper pin  $15 \times 60$
  - (e) O-ring 15/3, Teflon

**PART—B**

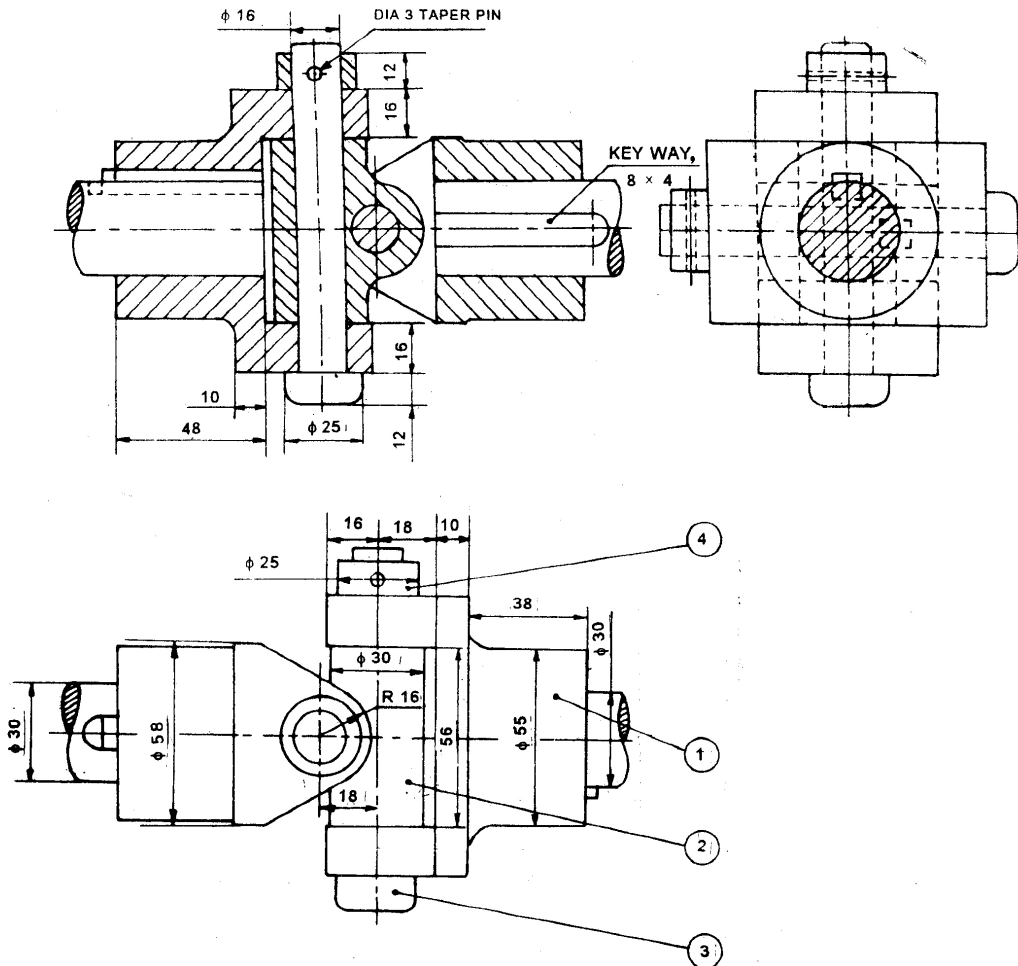
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- Instructions :** (1) Answer *any one* question.  
(2) Priority should be given to the accuracy, neatness and dimensioning.  
(3) Standard components need not be drawn as part drawings.

5. Study the given assembly drawing of eccentric : 20+5+5+5+5
- (a) Draw the component drawings.
  - (b) Indicate dimensional tolerances and fits on important mating parts.
  - (c) Indicate the geometrical tolerances wherever needed.



(e) Prepare the process sheet for Centre block.



Bill of material

Part No.	Name	Raw material	Qty.
1.	Fork	MCS - Forging	2
2.	Centre block	C.I - Casting	1
3.	Pin	CRS - $\phi$ 25 Bar stock	2
4.	Coller	MS - $\phi$ 25 Bar stock	2

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