



C14-M-407

4483

**BOARD DIPLOMA EXAMINATION, (C-14)**  
**MARCH/APRIL—2017**  
**DME—FOURTH SEMESTER EXAMINATION**  
**PRODUCTION DRAWING PRACTICE**

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

0 039                      0 062  
0 000                      0 041

Hole : 40                      Shaft : 40

Find out the following :

- (a) Tolerance of shaft  
(b) Tolerance of hole  
(c) Maximum allowance  
(d) Minimum allowance  
(e) Type of fit

- \* 2. Indicate the roughness values for the following surface roughness grade numbers :
- (a) N 10
  - (b) N 8
  - (c) N 6
  - (d) N 4
  - (e) N 1
3. Indicate the meaning of the following symbols/specifications :
- (a) Hex bolt  $M20 \times 1.5 \times 75$  NN, IS : 1364-S-4.5
  - (b) Countersunk screw  $M5 \times 15$ , IS : 1365-Aluminium
  - (c) Taper key  $12 \times 8 \times 50$ , IS : 2292
  - (d) Circlip B20
  - (e) Bearing 205
4. Write about blue printing process in reprographic methods.

**PART—B**

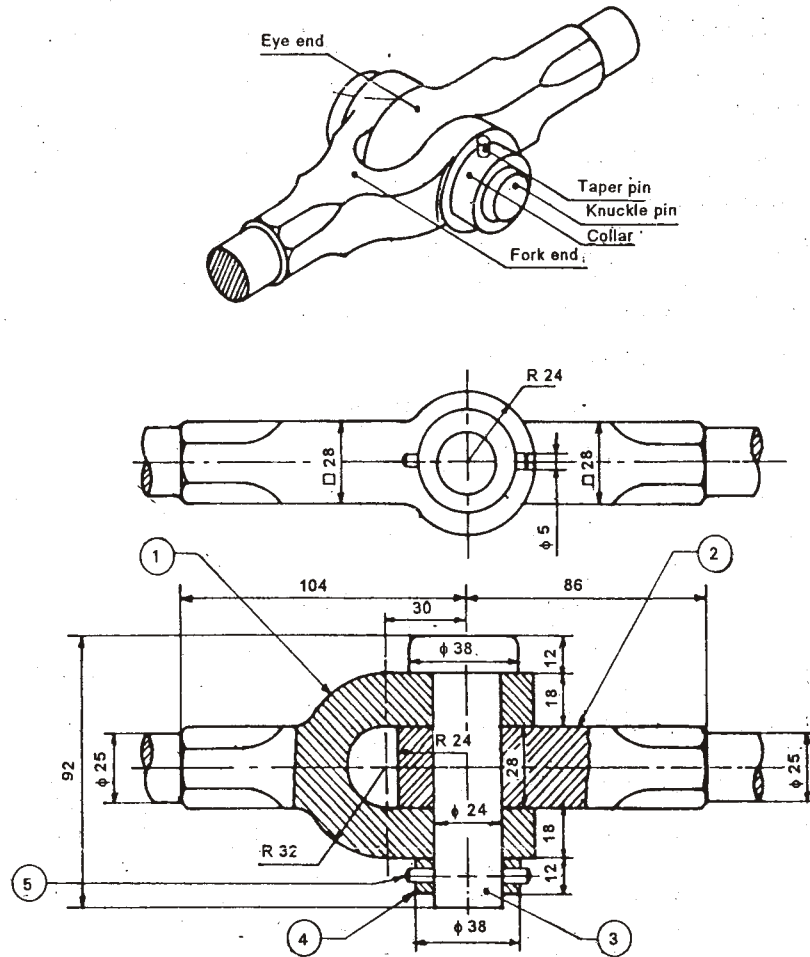
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- Instructions :** (1) Answer *any one* question.  
(2) Each question carries **forty** marks.

- \* 5. (a) Study the given assembly of knuckle joint and draw part drawing of each component.
- (b) List out the materials of the components.
  - (c) Select suitable fit for assembly of pin and fork end, fork end and eye.
  - (d) Indicate the surface roughness values.

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(e) Prepare process sheet for pin.



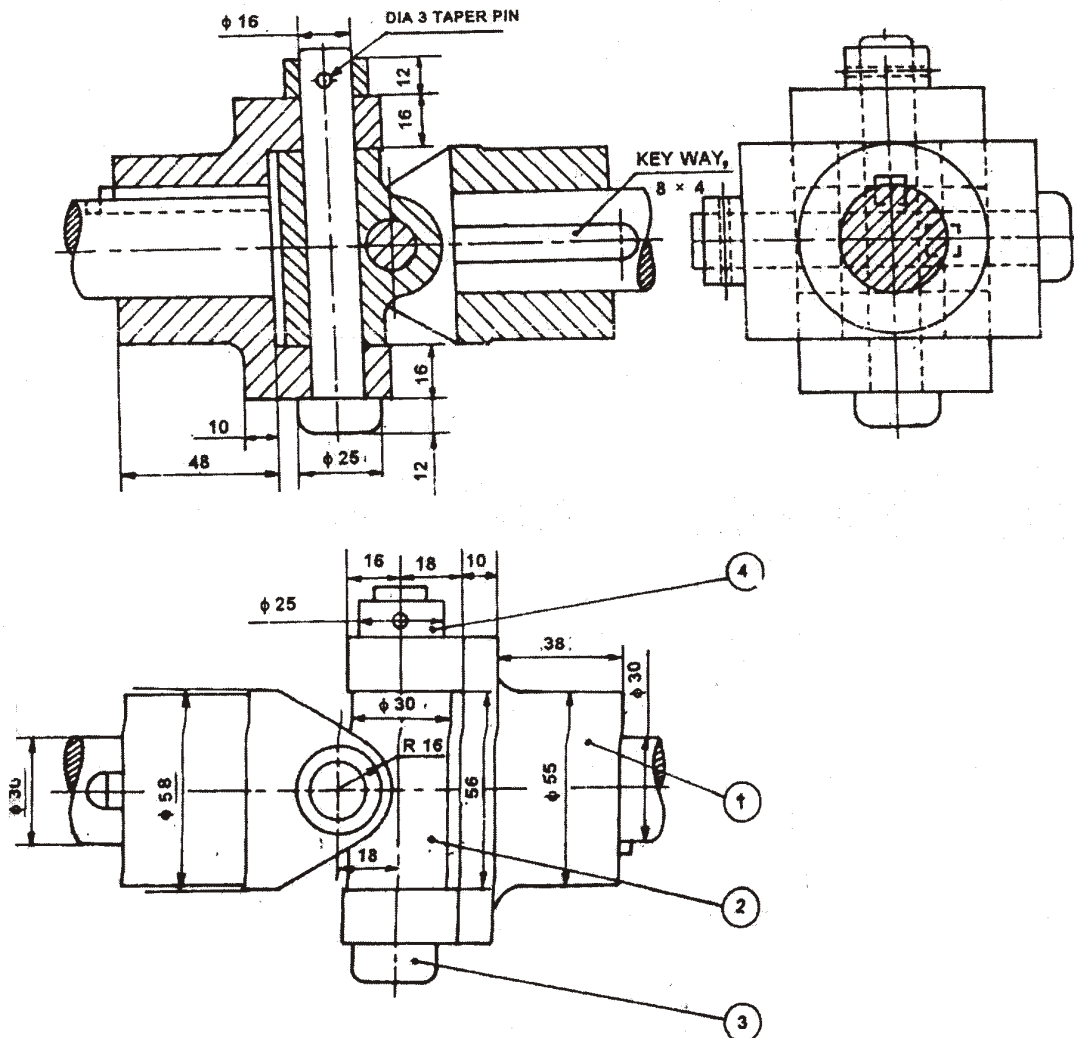
Bill of material

Part No.	Name	Raw material	Qty.
1.	Fork end	FS - Forging	1
2.	Eye end	FS - Forging	1
3.	Pin	MS - $\phi 40 \times 95$	1
4.	Collar	MS - $\phi 40$ Bar stock	1
5.	Taper pin	MS - Std. component	1

Knuckle Joint

Fig. 1

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



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.	Collar	MS - $\phi 25$ Bar stock	2

Universal Coupling

Fig. 2

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- (a) Draw the component drawings selecting suitable tolerances and fits.
- (b) Prepare the process sheet for centre block (2) made with cast iron.
- (c) Show the surface roughness symbols for fork (1).

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