



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

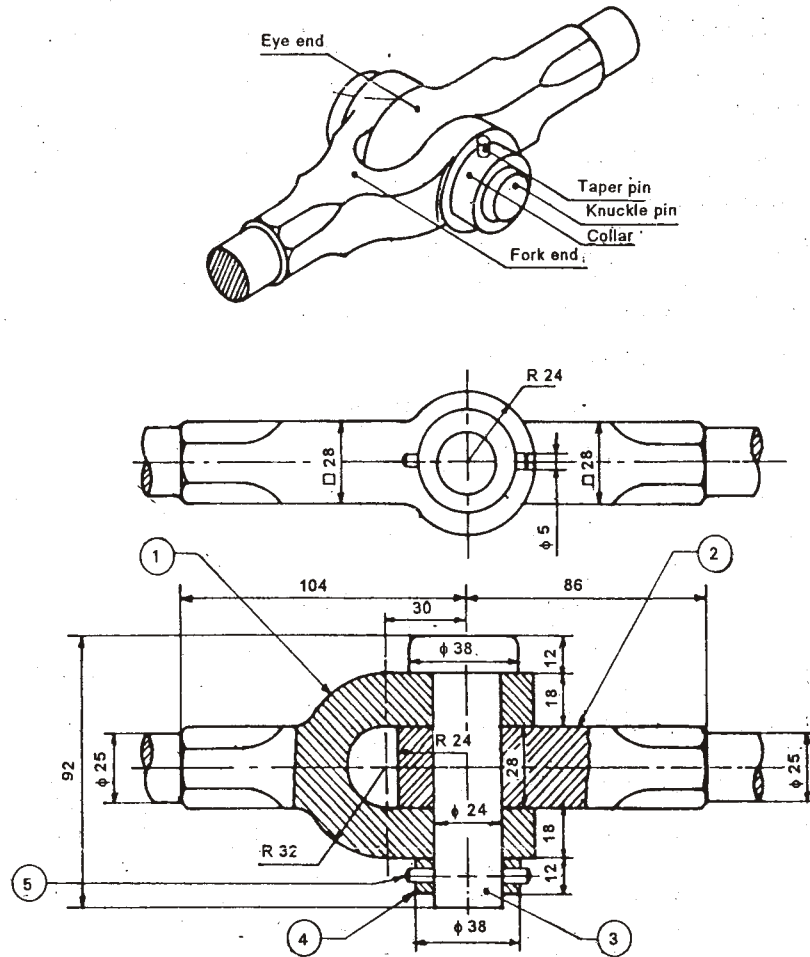
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Instructions : (1) Answer *any one* question.

(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.

(e) Prepare ^{*} process sheet for pin.



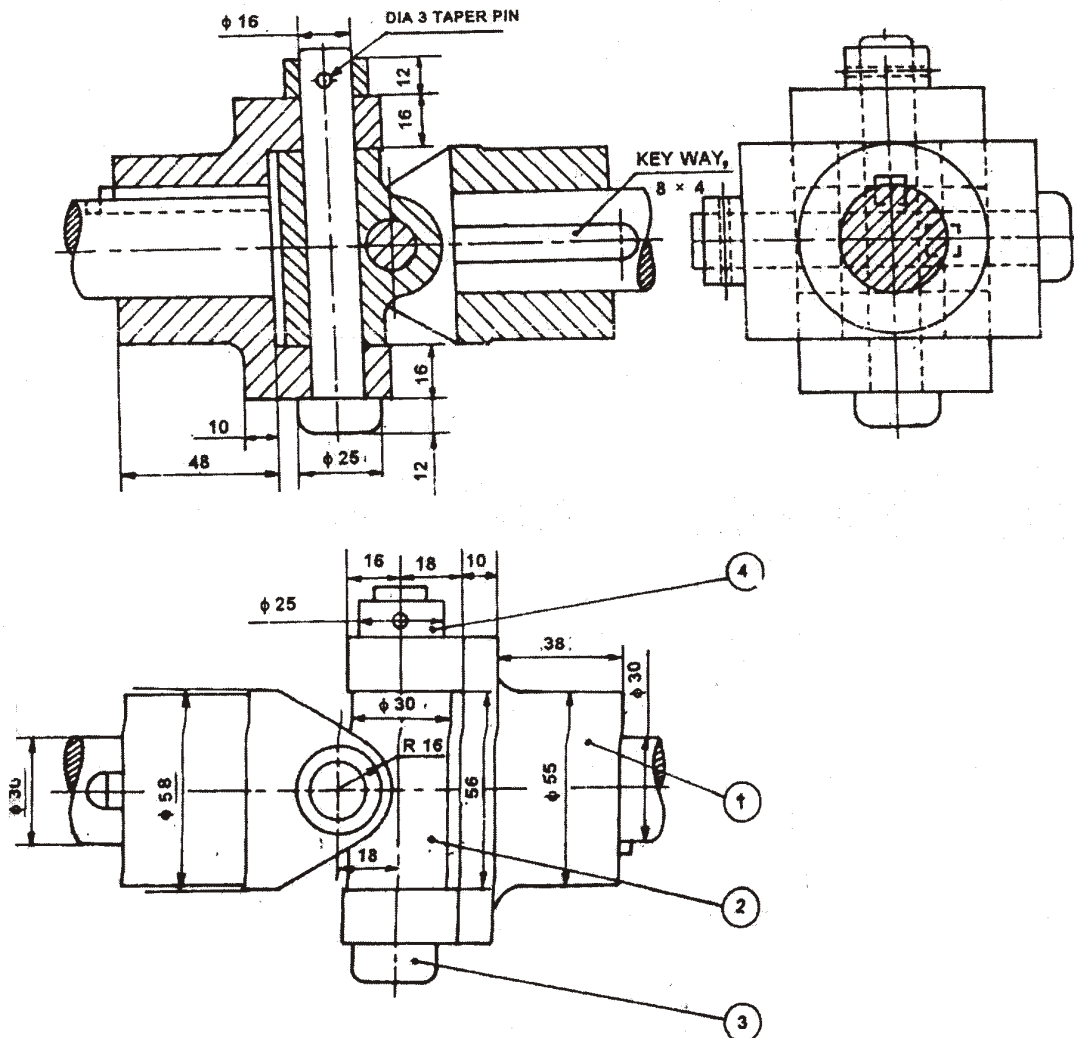
Bill of material

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

- (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).
