



C16-M-406

6451

BOARD DIPLOMA EXAMINATION, (C-16)  
OCTOBER—2020  
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 :

Hole	$\frac{44.500}{44.515}$	Shaf	$\frac{43.975}{43.957}$
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2. Draw the tolerance character symbol for the following :

- (a) Angularity  
(b) Run out  
(c) Profile of any surface  
(d) Flatness  
(e) Straightness

\* **3.** Mention the roughness grade symbol for the following roughness values :

(a) 50  $\mu\text{m}$

(b) 25  $\mu\text{m}$

(c) 1.6  $\mu\text{m}$

(d) 0.4  $\mu\text{m}$

(e) 0.05  $\mu\text{m}$

**4.** Write the meaning of following symbols/specifications :

(a) Fe 410 Cu-k

(b) 30 CS B

(c) Hex bolt M 30  $\times$  1.0  $\times$  100 1S136454.6

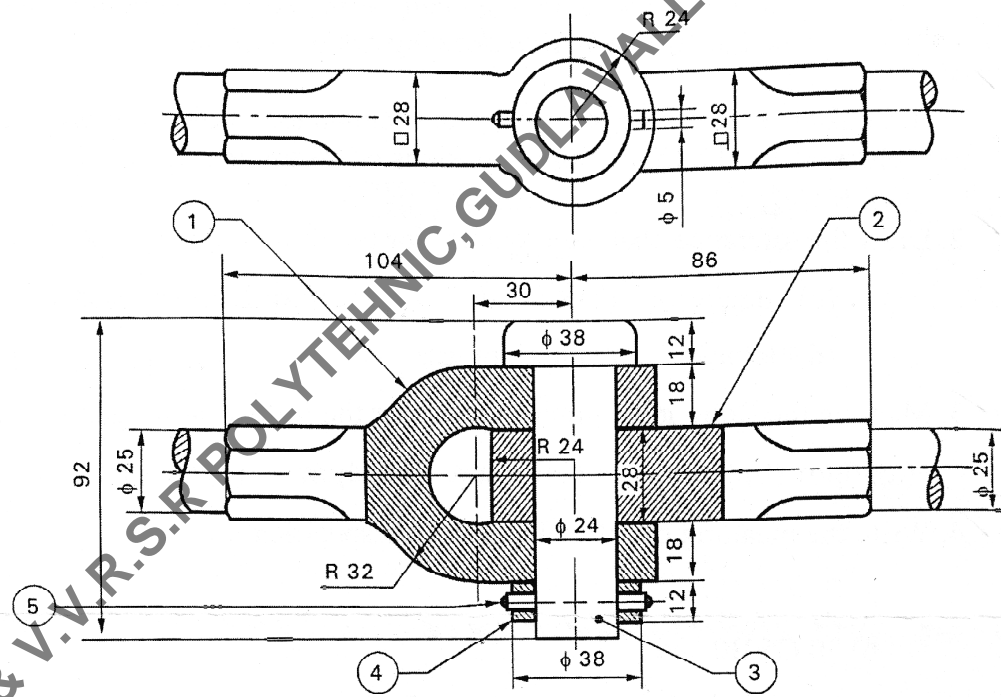
(d) O-ring 10/2.5, viton

(e) Bearing No. 305

\* A.A.N.M & V.V.R.S.R POLYTEHNIC, GUDLAVALLERU, KRISHNA DIST., A.P

- 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 for Fork End and Eye End 20
  - (b) Select suitable fits and tolerances 4
  - (c) Prepare the process sheet 7
  - (d) Indicate the surface roughness symbols and geometrical tolerance symbols 6
  - (e) List out the materials and quantity of the components. 3



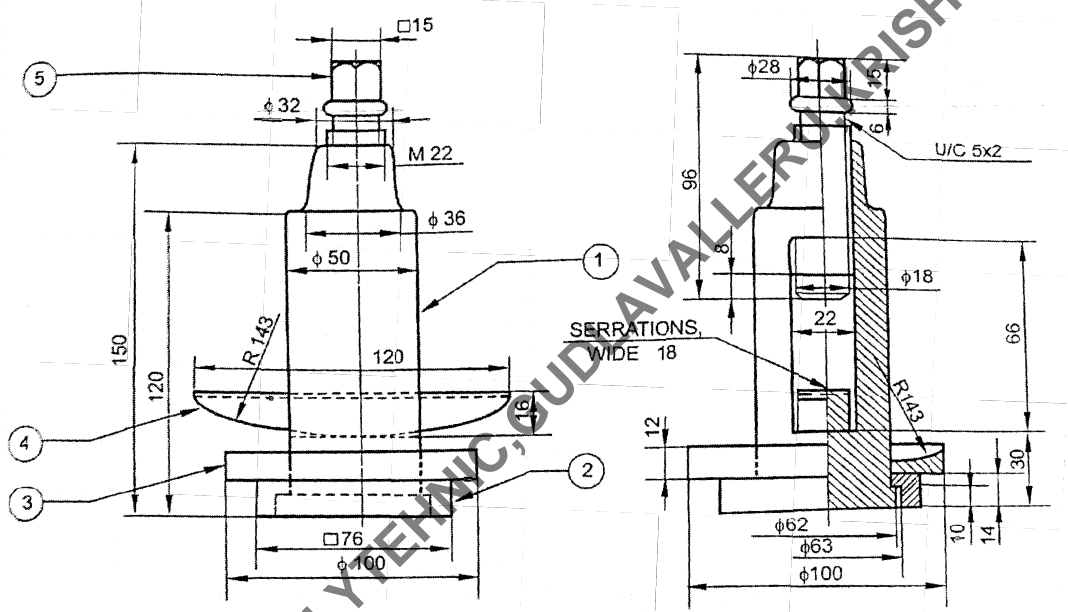
Bill of material

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

Fig. 1

6. Study the given assembly drawing of the tool post shown in Fig. 2.

- (a) Draw the part drawings for pillar, block and screw 20
- (b) Select suitable fits and tolerances 4
- (c) Prepare the process sheet 7
- (d) Indicate the surface roughness symbols and geometrical tolerance symbols 6
- (e) List out the materials and quantity of the components. 3



Bill of material

Part No.	Name	Raw material	Qty.
1.	Pillar	MCS - Forging	1
2.	Block	MCS - Forging	1
3.	Ring	MS - Forging	1
4.	Wedge	MCS - Forging	1
5.	Screw	MCS - $\phi$ 32 Bar stock	1

Fig. 2

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