



C16-M-406

6451

BOARD DIPLOMA EXAMINATION, (C-16)

JUNE/JULY—2022

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. For each of the following hole and shaft assembly,

Shaft $150^{+0.068}_{-0.043}$ Hole $150^{+0.040}_{-0.000}$

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

2. Draw the tolerance character symbol for the following :

- (a) Flatness
- (b) Cylindricity
- (c) Round-out
- (d) Position
- (e) Parallelism

3. Write the surface roughness grade numbers for the following roughness values :

(a) 25 μm

(b) 1.6 μm

(c) 12.5 μm

(d) 3.6 μm

(e) 0.1 μm

4. Write the meanings of the following symbols/specifications :

(a) Fe 410 Cu K

(b) 45C10G

(c) Stud AM 10 \times 30, IS : 1862-P-4.6

(d) Hex.bolt M20 \times 1.2 \times 75 N, IS : 1364-S-4.6

(e) Splines 6 \times 32 \times 28, IS : 2327

PART—B

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

(2) Each question carries **forty** marks.

5. Study the given assembly drawing of the Eccentric shown in figure 1.

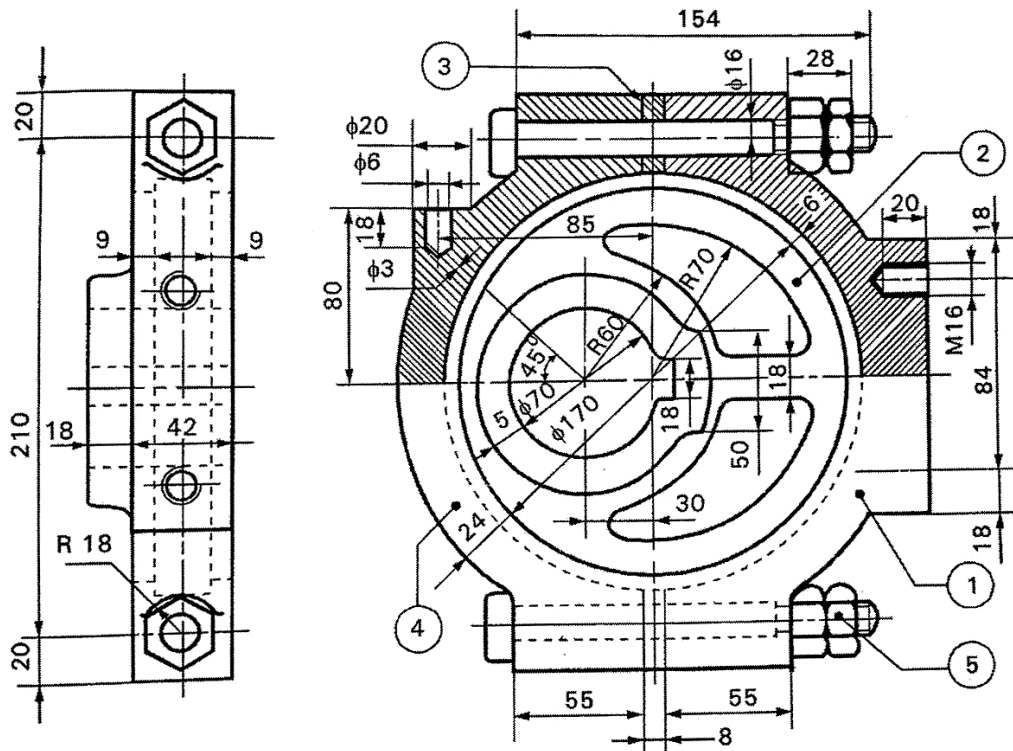
(a) Draw the part drawings for Strap and Sheave. 20

(b) Select suitable fits and tolerances. 4

(c) Prepare the process sheet for Strap. 7

(d) Indicate the surface roughness symbols and geometrical tolerance symbols. 6

(e) List out the materials and quantity of the components. 3

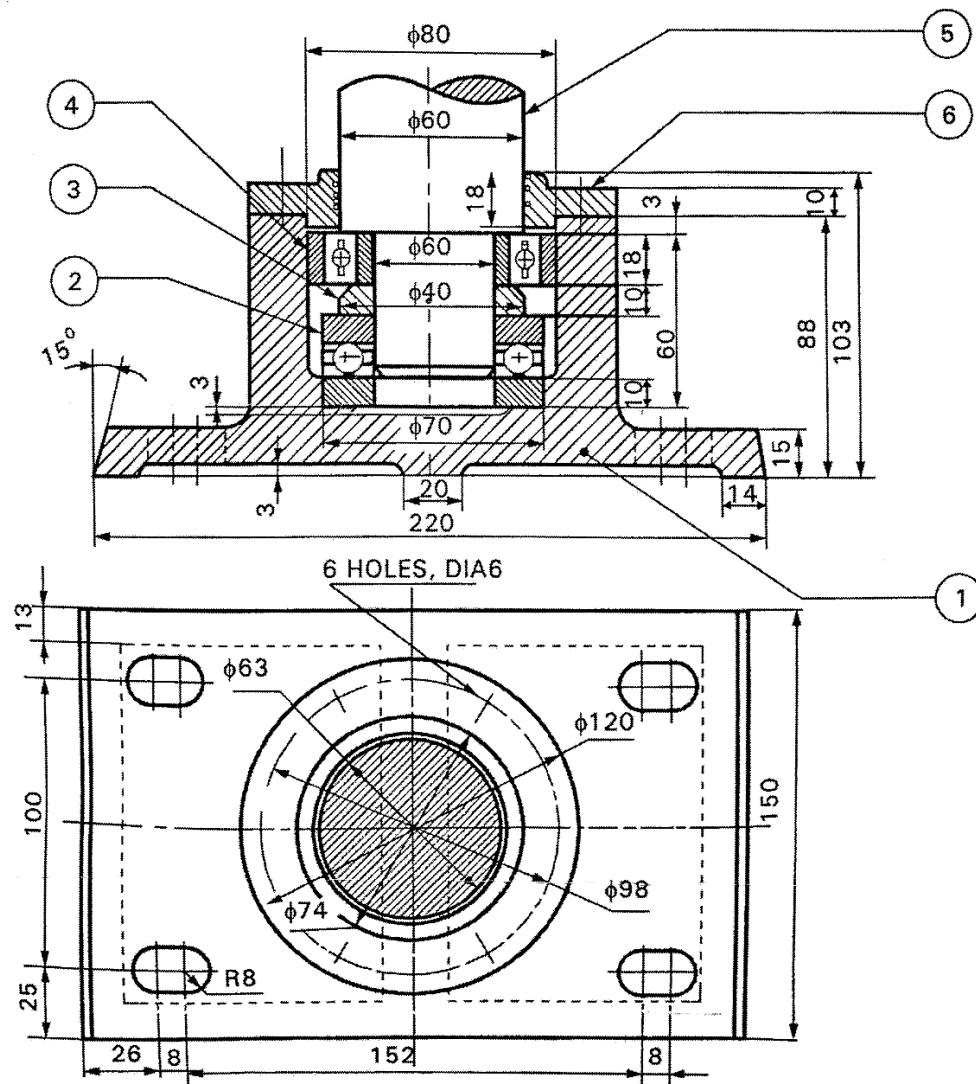


Bill of material :

Part No.	Name	Raw material	Quantity
1	Strap	C.I – Casting	1
2	Sheave	C.I – Casting	1
3	Shim	Brass – Strips	2
4	Strap	C.I – Casting	1
5	Bolt with nut	M.S – Std. Components	2

6. Study the given assembly drawing of Foot Step Bearing shown in figure 2.

- (a) Draw the part drawings. 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	Quantity
1	Base	C.I – Casting	1
2	Thrust ball bearing	Std. Component	1
3	Spacer	C.I – Casting	1
4	(Radial) ball bearing	Std. Component	1
5	Shaft	MS ϕ 63	1
6	Cover	C.I – Casting	1

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