



C14-M-407

4483

BOARD DIPLOMA EXAMINATION, (C-14)
OCT/NOV—2017
DME—FOURTH SEMESTER EXAMINATION
PRODUCTION DRAWING PRACTICE

Time : 3 hours]

[Total Marks : 60

PART—A

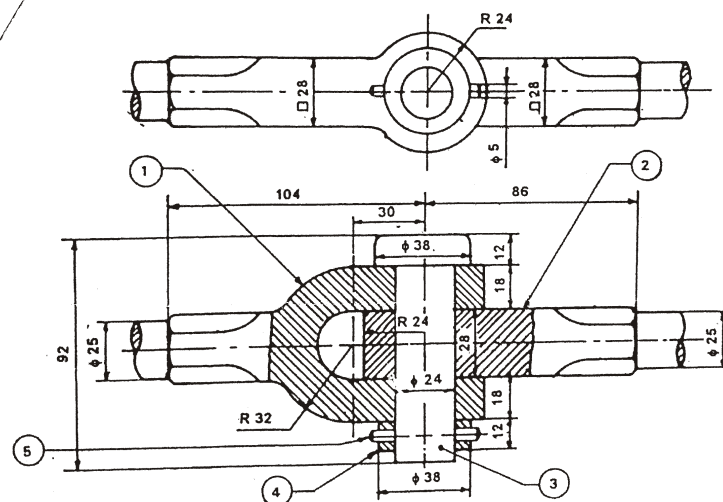
5×4=20

- 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.
- Determine the limit dimensions for a clearance fit between the mating parts having nominal diameter of 50 mm, providing a minimum clearance of 0.1 mm, with the tolerance of the hole as 0.02 mm and that of the shaft 0.03 mm. Follow shaft basis system.
 - What are the surface roughness grade number and roughness grade symbol for surfaces with roughness value 50 μ m, 12.5 μ m, 1.6 μ m, 0.2 μ m, 0.025 μ m.
 - Write the meaning of the following designations :
 - FeE 460
 - 25Cr4Mo2G
 - Square bolt M 12 × 50 N, IS : 2585
 - Castle nut M 20, IS : 2232-B-4
 - Stud AM 10×40, IS 1862-P-4.6
 - How are ammonia prints prepared?

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

5. Study the given assembly drawing of knuckle joint given in the fig. 1. 20+8+3+4+5

- (a) Draw the component drawings for all parts
- (b) Prepare the process sheet for the pin
- (c) Prepare bill of material
- (d) Indicate the recommended surface roughness values on all the parts.
- (e) Indicate suitable tolerances wherever needed. Mention the type of fit between the mating parts (i) Pin and fork end (ii) Fork end and eye end.



Knuckle Joint Parts List

| Part No | Name |
|---------|-----------|
| 1 | Fork End |
| 2 | Eye End |
| 3 | Pin |
| 4 | Collar |
| 5 | Taper Pin |

Fig. 1 (Knuckle Joint)

6. Study the given assembly drawing of revolving centre given in the Fig. 2 : 20+8+3+4+5

(a) Draw the component drawings for parts 1, 2, 6, 7 and 8.

(b) Prepare the process sheet for Barrel.

(c) Prepare bill of material.

(d) Indicate the recommended surface roughness values on parts 1, 2, 6 and 7.

(e) Indicate suitable tolerances wherever needed. Mention the type of fit between the mating parts (i) barrel and the sleeve (ii) sleeve and the center.

| Revolving Centre Parts List | |
|-----------------------------|---------------------|
| Part No. | Name |
| 1. | Centre |
| 2. | Front Cover |
| 3. | Screen |
| 4. | Radial ball bearing |
| 5. | Thrust ball bearing |
| 6. | Barrel |
| 7. | Sleeve |
| 8. | Back Cover |

