

4483

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL-2019

DME - FOURTH SEMESTER EXAMINATION

PRODUCTION DRAWING PRACTICE

Time: 3 Hours ]

[Max. Marks : 60

PART-A

5X4=20M

**Instructions:** 1) Answer **all** questions.

2) Each question carries **five** marks.

- 1) Determine the limit dimensions for a clearance fit between the mating diameter of 30 mm, providing a minimum clearance of 0.10 mm, with the tolerance on the hole equal to 0.02 mm, and on the shaft, 0.06 mm. Follow shaft basis system.
- 2) What are the surface Roughness Grade Number and Roughness Grade Symbol for surfaces with Roughness Values 50 $\mu$ m, 25 $\mu$ m, 3.2 $\mu$ m, 0.4 $\mu$ m, 0.1 $\mu$ m
- 3) Give the meaning of the following designations
  - a) X15Cr25Ni12
  - b) Fe470W
  - c) 30C5B0
  - d) Hex Bolt M20 X 1.5 X 75 NN, IS: 1364-S-4.6
  - e) Oil Seal A 25 X 40 X 7, IS: 5129
- 4) Explain microfilming process.

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## PART-B

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

2) Each question carries **forty** marks, Choose Suitable scale.

5) Study the given assembly drawing of Eccentric given in the fig. 1  
(20+8+3+4+5M)

- (a) Draw the component drawing for all parts.
- (b) Prepare the process sheet for strap (part No.1)
- (c) Prepare bill of material
- (d) Indicate the recommended surface roughness values for the straps and sheave.
- (e) Indicate suitable tolerances wherever needed. Mention the type of fit between the mating parts
  - (i) Straps and sheave and
  - (ii) Sheave and Shaft.

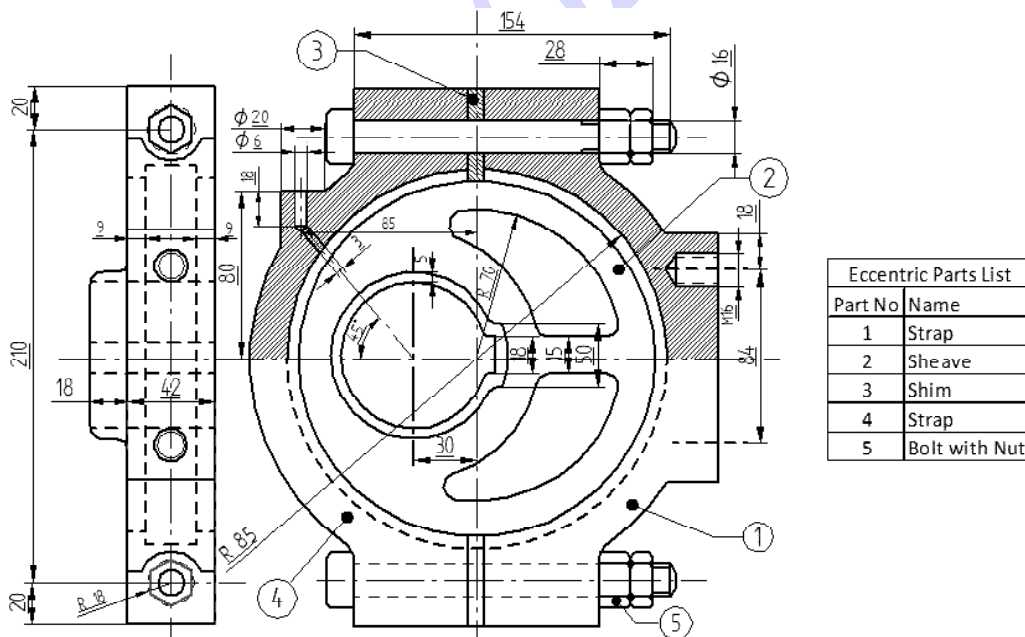


Fig.1(Eccentric)

- 6) Study the given assembly drawing of foot Step Bearing given in the (fig. 2) (20+8+3+4+5M)
- Draw the component drawing for parts 1, 3, 5 and 6.
  - Prepare the process sheet for Cover
  - Prepare bill material
  - Indicate the recommended surface roughness values where necessary.
  - Indicate suitable tolerances wherever needed. Mention the type of fit between the mating parts
    - Shaft and Radial Ball Bearing
    - Shaft and Thrust Ball Bearing.

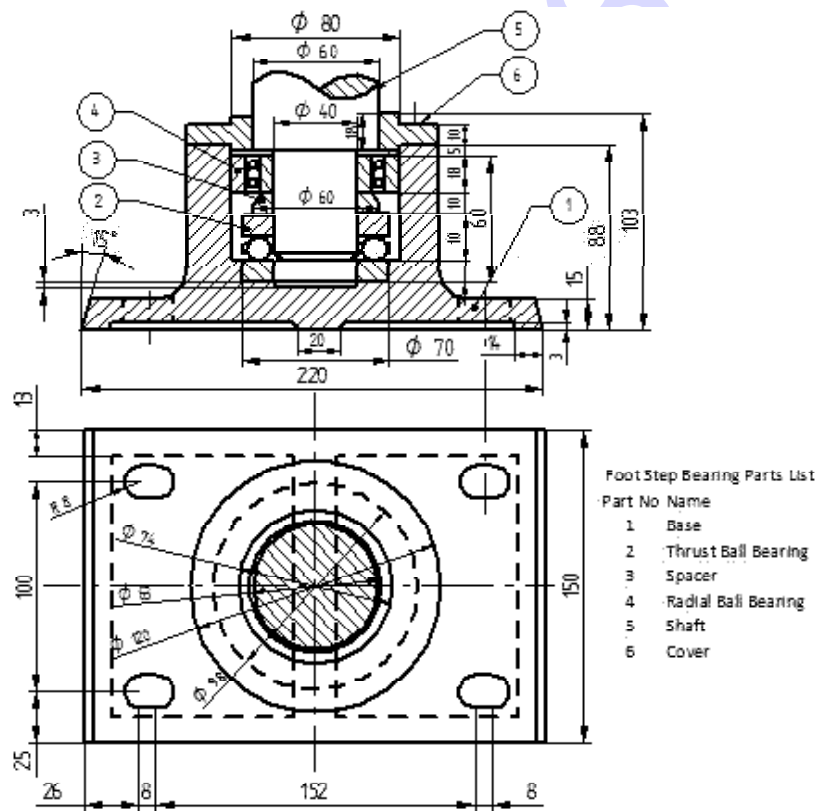


Fig.2 (Foot step Bearing)

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