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3rd Sem / Mechanical Engg., Mechanical
(Tool & Die Design)
Subject : Mechanical Engineering Drawing - II

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 What is the purpose of a limit in engineering? (CO1)
- a) To set an upper size bound for a part
- b) To specify the exact size of a part
- c) To allow for variation in part dimensions
- d) To ensure a perfect fit in all cases

Q.2 In a shaft-hole system, what is the fit called when the shaft size is greater than the hole size? (CO1)
- a) Clearance fit b) Transition fit
- c) Interference fit d) Running fit

Q.3 Which type of coupling allows for misalignment between two shafts? (CO2)
- a) Rigid coupling b) Gear coupling
- c) Flexible coupling d) Disc coupling

Q.4 Which type of gear has teeth that are cut at an angle to the axis of rotation? (CO6)
- a) Spur gear b) Bevel gear
- c) Worm gear d) Helical gear

Q.5 What is the typical shape of a roller bearing? (CO2)
- a) Spherical b) Cylindrical
- c) Conical d) Rectangular

Q.6 A tolerance of ±0.02 mm means that: (CO1)

- a) The dimension can vary between + 0.02 mm and -0.02 mm.
- b) The dimension can vary between + 0.01 mm and -0.01 mm.
- c) The dimension must be exactly 0.02 mm.
- d) The dimension can vary by up to 0.02 mm in either direction.

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define pressure angle. (CO6)

Q.8 What is the purpose of coupling. (CO2)

Q.9 _____ gears are used to transmit power between parallel shafts. (CO6)

Q.10 Lathe tool holder is used for_____ (CO4)

Q.11 What is the function of steam stop valve? (CO5)

Q.12 Spur gear is having cycloidal profile.(T/F) (CO6)

SECTION-C

Note: Long answer type questions. Attempt any four questions out of five questions. (4x12=48)

Q.13 Explain terms relating to limit system with neat sketch. (CO1)

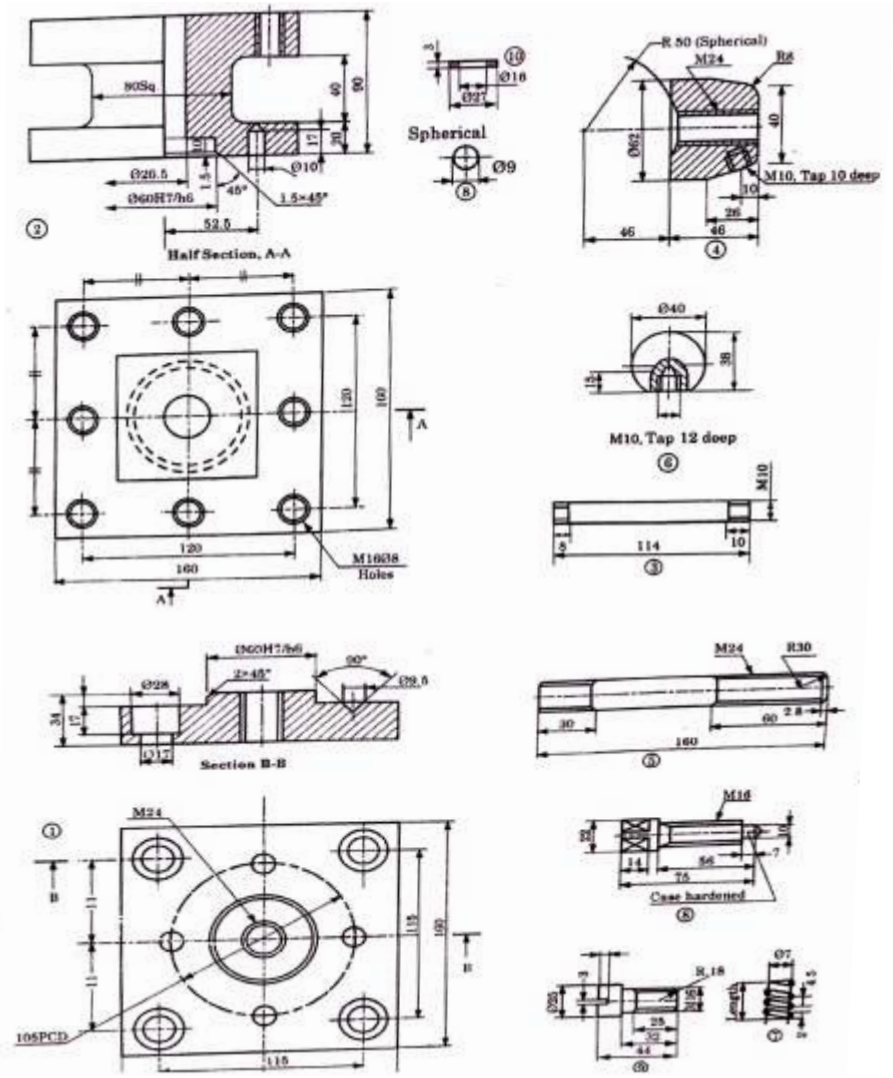
Q.14 Make a proportionate free hand sketch of screw jack. (CO4)

Q.15 Draw the profile of involute teeth for a gear having 22 teeth and module 10 mm. Assume pressure angle 20□. (CO6)

Q.16 Figure A shows the detail drawing of a tool holder. Assemble all the parts together and draw the following views. (CO4)

i) Sectional front elevation
ii) Plan

Assume all the necessary dimensions. Select a suitable scale. Also prepare Bill of Materials.



Q.17 Figure B shows the detail drawing of a foot step bearing. Assemble all the parts together and draw the following views.

i) Front elevation-full in section
ii) Sectional top view

Assume all the necessary dimensions. Select a suitable scale. Also prepare Bill of Materials.

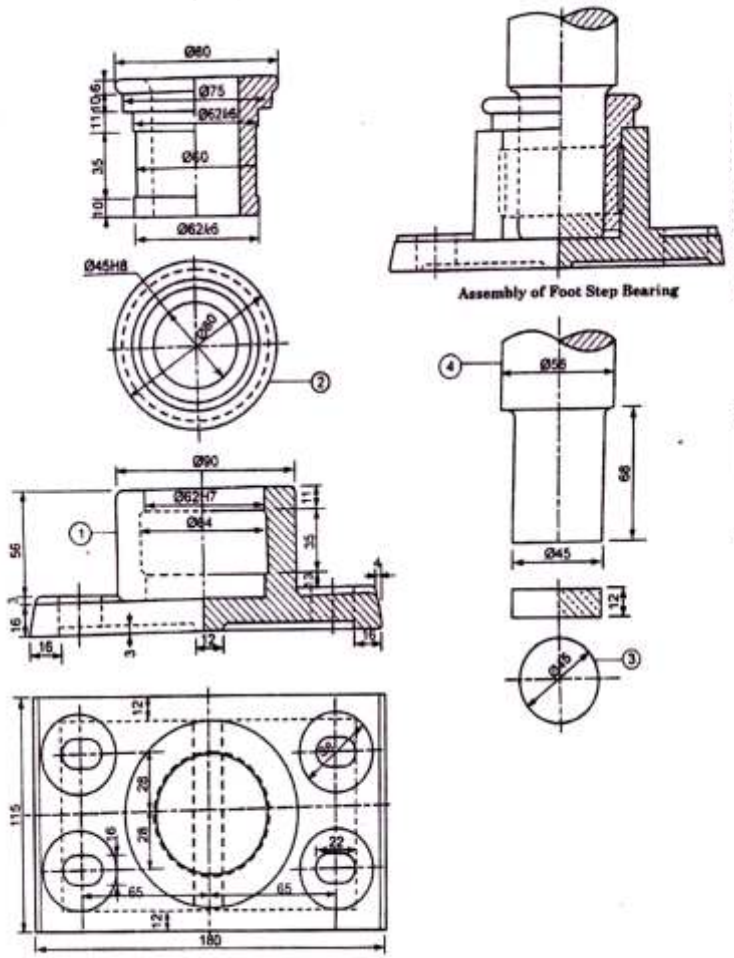


Figure (B): Details of Foot step bearing