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C09–M–407

3507

BOARD DIPLOMA EXAMINATION, (C–09)

OCT/NOV—2015

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.

1. A hole and a shaft have basic size of 25 mm, and are to have a clearance fit with maximum clearance of 0·02 mm and minimum clearance of 0·01 mm. The hole tolerance is to be 1·5 times the shaft tolerance. Determine limits for both hole and shaft using hole basis system.

2. Mention the average surface roughness values that can be obtained from the following processes :

(a) Milling

(b) Reaming

(c) Forging

(d) Casting

(e) Grinding

3. Sketch the symbols for tolerance of form and position for the following : 1×5=5

(a) Circularity

(b) Cylindricity

(c) Parallelism

(d) Symmetry

(e) Profile of any surface

4. Explain the following IS designations :

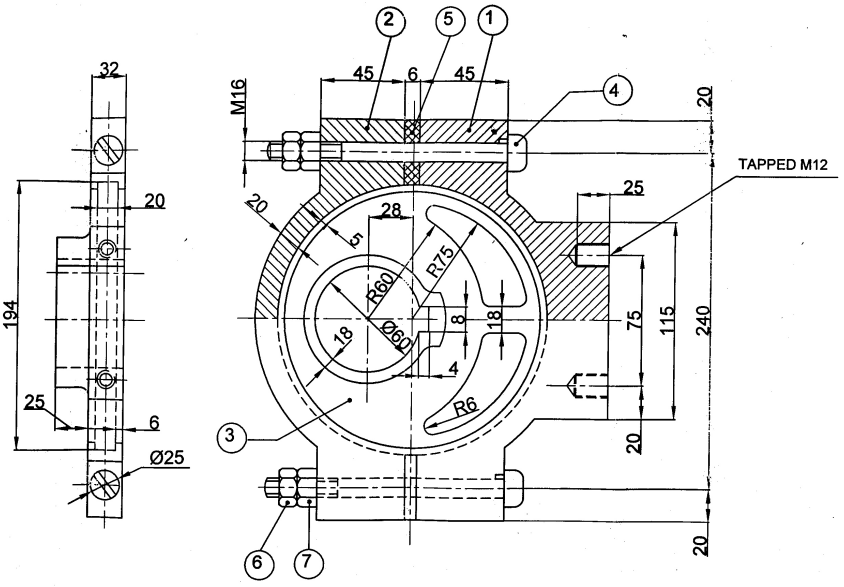
(a) Stud AM 20×60, IS : 1862 P-4·6

(b) Taper key 15×10×90, IS : 2292

PART—B 40

Instructions : (1) Answer *any* **one** question.
(2) Each question carries **forty** marks.
(3) Use limits, fits and tolerance tables.
(4) Use suitable scale.

5. Study the given assembly drawing, (Eccentric) shown in the figure below :



Eccentric	*Parts List*
7	Lock nut
6	Nut
5	Liner
4	Bolt
3	Sheave
2	Strap
1	Strip
Part No.	Part name

Eccentric

(a) Draw the component drawings. 20

(b) Apply suitable fits and tolerances. 5

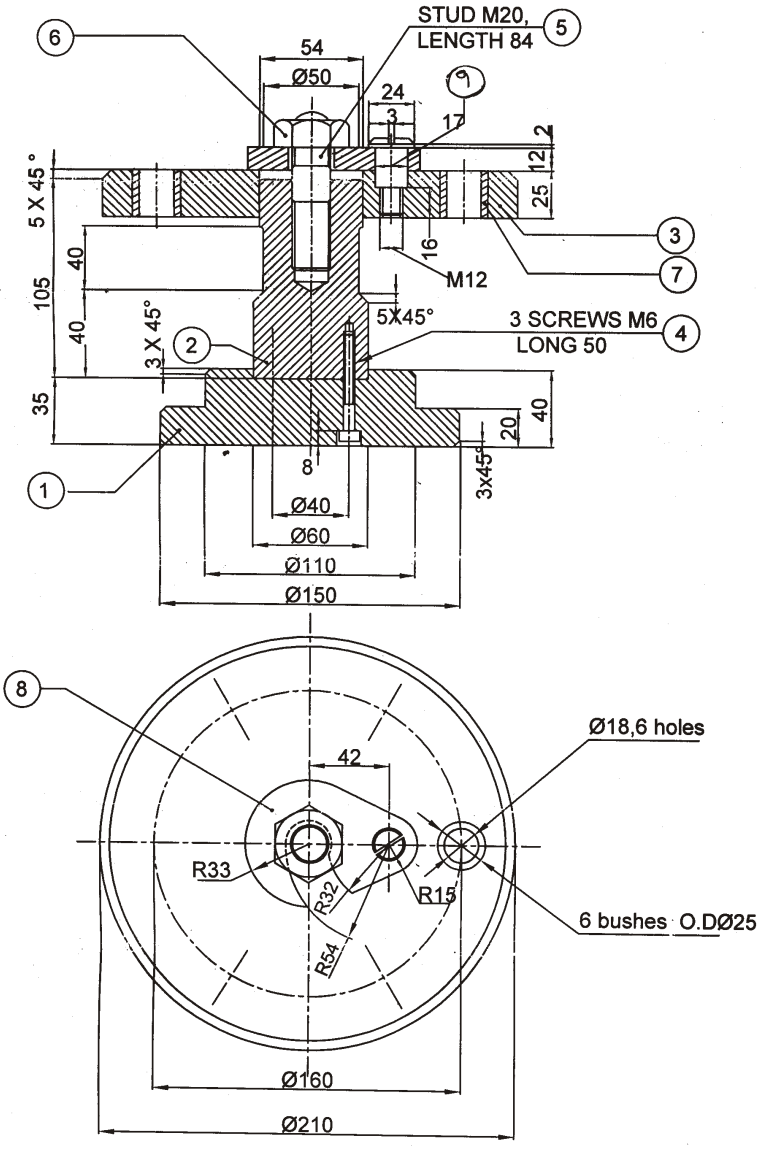
(c) Apply suitable geometrical tolerances to each component. 4

(d) Select normal surface roughness values to the components. 4

(e) Prepare bill of materials. 2

(f) Prepare process sheet for bolt. 5

6. Study the given assembly drawing (Drill jig) shown in the figure below :



Drill Jig

(a) Draw the component drawings. 20

(b) Apply suitable fits and tolerances. 5

(c) Apply suitable geometrical tolerances to each component. 4

(d) Select normal surface roughness values to the components. 4

(e) Prepare bill of materials. 2

(f) Prepare process sheet for jig plate. 5

Drill jig	*Parts List*
9	Washer Screw
8	Latch
7	Bush
6	Nut
5	Stud
4	Screw
3	Jig plate
2	Stem
1	Base plate
Part No.	Part name

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