

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Summer 2019

Course: B. Tech in Mechanical Engineering

Sem: III

Subject Name: Machine Drawing & CAD

Subject Code: BTMEC304

Max Marks: 60

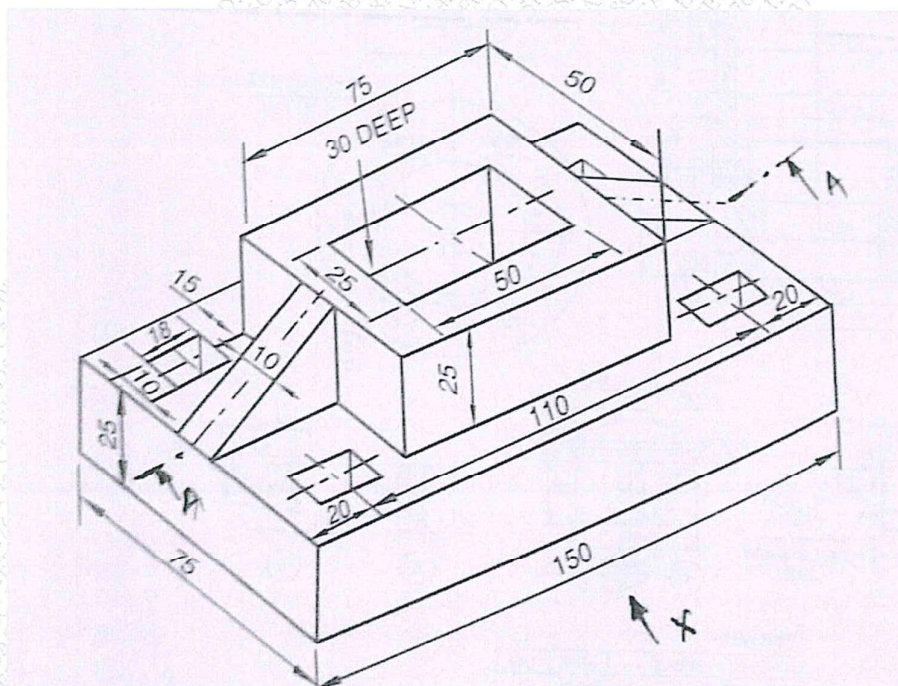
Date: 31-05-2019

Duration: 3 Hr.

Instructions to the Students:

1. Solve **ANY FIVE** questions out of the following.
2. The level question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in () in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

		(Level/ CO)	Marks
Q.1	Solve the following. (Any TWO)		12
A)	Draw the conventional representation of a) Leaf spring with eye b) Splined shaft c) Tension spring	01	06
B)	Draw one example of following sections a) Half section b) Removed section	03	06
C)	Fig shows a block, Draw i) Sectional Front view along A-A ii) Top view	03	06



Q.2 Draw the free hand sketch of the following. (Any THREE)	12
A) Single riveted (Double straps) butt joint.	02 04
B) Castle nut	02 04



undefined

- C) Eye Foundation bolt
D) Flanged Coupling

02 04
02 04

Q.3 Solve the following.

12

- A) A circular cylinder with base diameter 60mm, axis length 70mm stands vertically on its base on H.P. The square prism with side of base 25mm, axis length 90mm penetrates horizontally such that its axis is parallel to V.P. and 10mm away from axis of vertical cylinder and is 30 mm above the base of cylinder. The faces of square prism are equally inclined to H.P. Draw the projection showing curve of intersection.

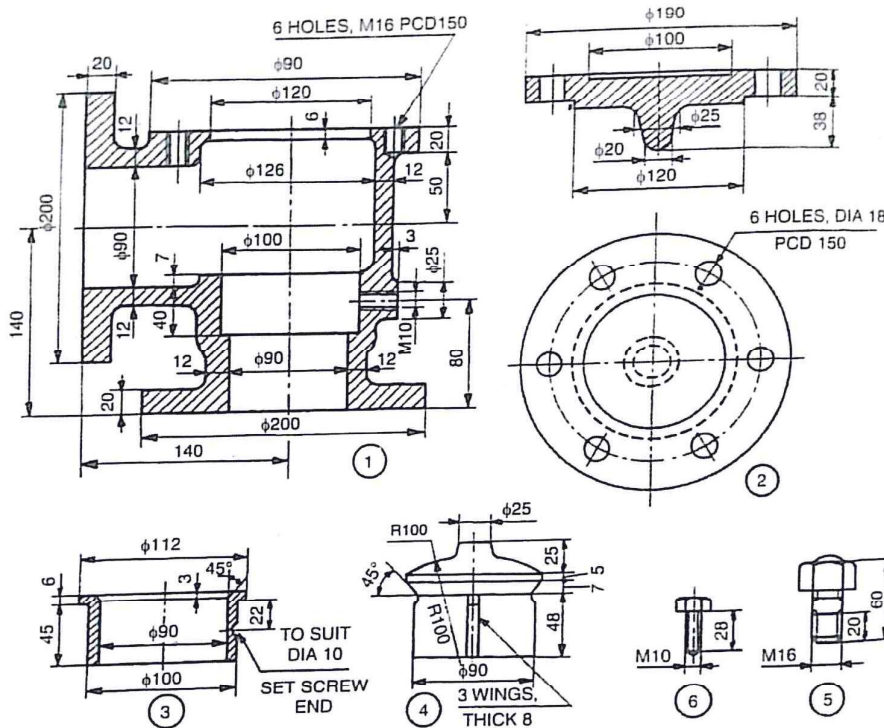
02

Q.4 Attempt the following. (Any ONE)

12

- A) The fig. shows details of "Non-return valve". Draw the Assembly drawing for it consisting, i) Sectional Front View ii) Top view iii) Prepare part list

03



Parts list

No.	Name	Matl	Qty
1	Body	Brass	1
2	Cover	Brass	1
3	Valve seat	Bronze	1
4	Valve	Brass	1
5	Stud with nut	MS	6
6	Set screw	MS	1



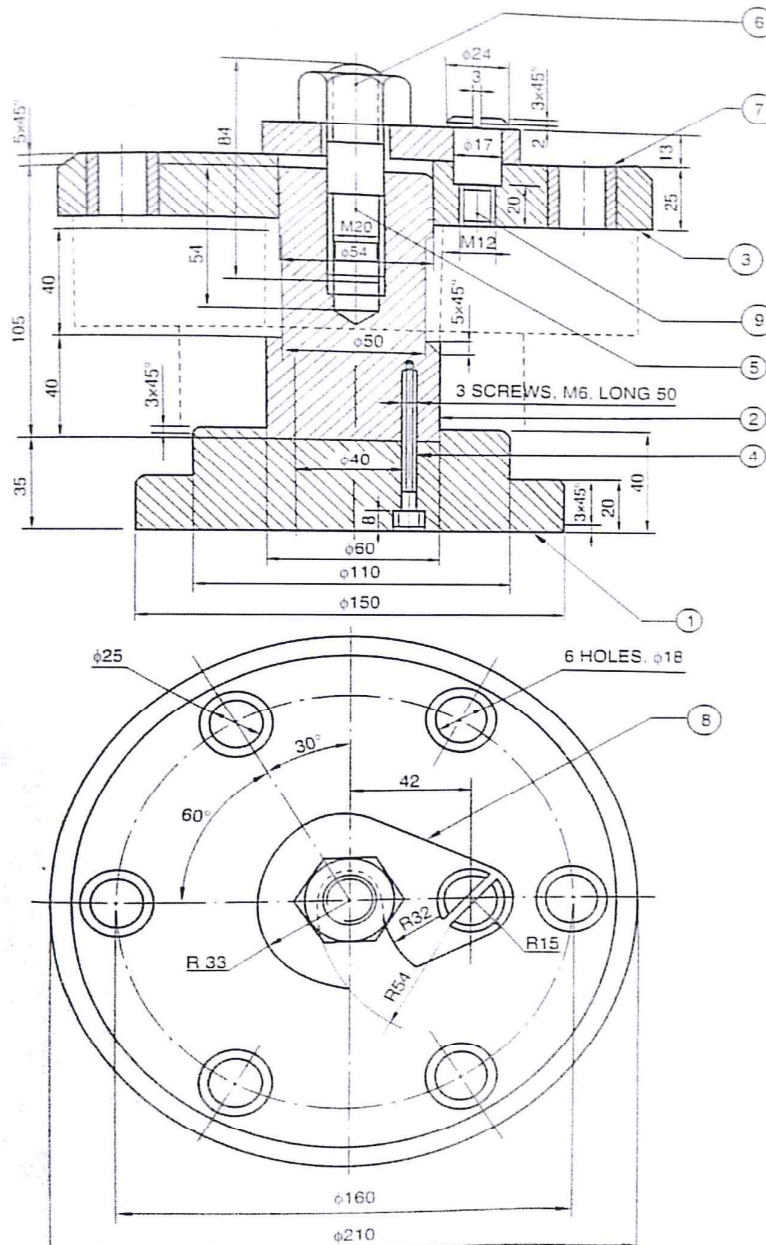
15F8A8CAEE76137CDEFD5C570E8A44E6

undefined

B) The fig. shows Assembly of "Drilling Jig". Draw the Details of part number 01, 02, 03, 04, 05.

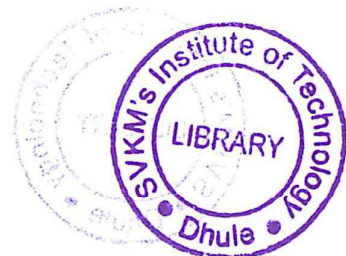
Draw the Front view of part number 01, 02, 04, 05.

Draw the Front view and Top View of part number 03.



Part list

15F8A8CAEE76137CDEFD5C570E8A44E6



undefined

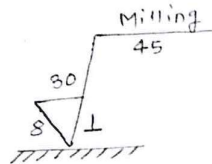
PART NO.	NAME	MATERIALS	NO. OFF
1	BASE PLATE	C.I.	1
2	STEM	M.S.	1
3	JIG PLATE	C.I.	1
4	SCREW	M.S.	3
5	STUD	M.S.	1
6	NUT	M.S.	1
7	BUSH	A.S.	6
8	LATCH WASHER	M.S.	1
9	SCREW	M.S.	1

Q. 5 Solve the following.

A) The hole size is $\varnothing 20^{+0.018}_{-0.000}$ and shaft size is $\varnothing 20^{+0.023}_{+0.012}$ determine the type of fit.

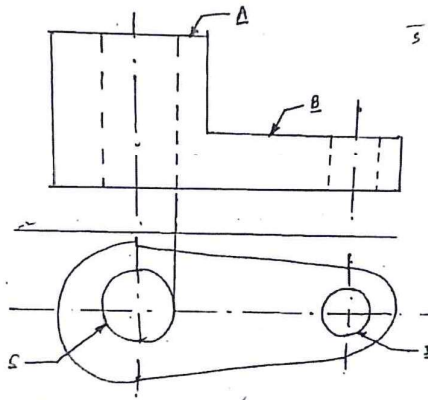
Dimensions are in mm.

B) State the meaning of every term shown in following symbol.



Redraw the following fig. and show the following items on it.

- C) a) Show the Parallelism between hole C and D with 0.1 mm.
b) Flatness of surface B is within 0.08 mm.



Q. 6 Solve the following

- A) Write advantages of CADD
B) Write short note on Auto LISP programming
C) List Commands in Draw and modify in Auto CAD.



END

15F8A8CAEE76137CDEFD5C570E8A44E6