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TED (10) – 4028 Reg. No. .....

(REVISION—2010) Signature .....

SIXTH SEMESTER DIPLOMA EXAMINATION IN MECHANICAL ENGINEERING — MARCH, 2015

ADVANCED PRODUCTION PROCESS

[*Time* : 3 hours

(Maximum marks : 100)

PART—A

(Maximum marks : 10)

Marks

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. List any four tool holding devices used on turret and capstan lathes.
2. What do you mean by tool layout ?
3. How do you classify Broaching process according to the method of operation ?
4. List any three methods of gear manufacturing.
5. What do you mean by Honing ? (5×2=10)

PART—B

(Maximum marks : 30)

II Answer *any five* of the following. Each question carries 6 marks.

1. List the limitations of Broaching process.
2. Explain the advantages and disadvantages of grinding.
3. List the advantages of CNC machines.
4. Describe computer aided process planning.
5. With the help of a neat sketch explain the tool layout.
6. Describe the characteristics and capabilities of machining centres.
7. List any six application of Robots. (5×6=30)

PART—C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT—I

III (a) Describe and draw gear terminology. 5

(b) Explain the parts of a Turret Lathe with a neat sketch. 10

OR

			Marks
IV	(a)	List the areas of uses of automatic machines.	5
	(b)	Explain the working of single spindle automatic lathe.	10

UNIT—II

V	(a)	Write short notes on thermo setting plastics.	5
	(b)	Explain Jig Boring Machine with a neat sketch.	10

OR

VI	(a)	State the advantages of Jigs and Fixtures.	5
	(b)	Briefly explain the any two gear generating process.	10

UNIT—III

VII	(a)	What do you mean by precision grinding.	5
	(b)	Briefly describe the working of ECM.	10

OR

VIII	(a)	List the different types of bonds used for grinding machines.	5
	(b)	Briefly explain the working of centre less grinder.	10

UNIT—IV

IX	(a)	What do you mean by Flexible manufacturing.	5
	(b)	Explain briefly the components of FMS.	10

OR

X	(a)	State the advantages of CAD and CAM.	5
	(b)	Briefly describe any two configurations of robot with diagram.	10