

Code	•	9ME-33
Couc	٠	714110-33

Register				
Number				

III Semester Diploma Examination, Nov./Dec., 2014

MANUFACTURING TECHNOLOGY – I

Note: (i) Section – I is compulsory. (ii) Answer any two full questions each from Sections – II, III & IV. SECTION – I 1. (a) Fill in the blanks: (i) are inorganic, non-metallic, covalent network solids & can be used for high temperature related chores. (ii) is used for drainage fittings and pipe work. (iii) In TIG welding electrode is used to produce the weld. (iv) is the operation of removal of the desired shaper from the edge of a plate. (v) is the operation of enlarging the end of a hole cylindrically. (b) State the general properties of composite materials. SECTION – II 2. (a) Explain Thermoplastic and Thermosetting plastics. (b) Write a note on advanced materials used in manufacturing. (c) Explain the basic steps involved in casting process. 5. 3. (a) Explain with neat sketches shrinkage allowance and taper allowance. (b) Explain sweep pattern with a neat sketch. 4. (c) Explain hydraulic press used in forging with a neat sketch. 5. 4. (a) List the types of casting defects. (b) Explain closed die forging process.	Time	: 3	Hours [Max. Marks : 10)()
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(c) Explain bending and fullering operations in forging with simple sketches. 6 [Turn over]			Explain bending and fullering operations in forging with simple sketches.	6 er

SECTION - III

5.	(a)	List the different forging defects and its remedies.	5
	(b)	Differentiate between cold working and hot working of metals.	5
	(c)	Explain three-high rolling mill with a neat sketch.	5
6.	(a)	Sketch and explain the working principle of rolling.	5
	(b)	Define welding, write the classification of welding process.	5
	(c)	Explain shielded metal arc welding with a neat sketch.	5
7.	(a)	Explain MIG welding with a neat sketch.	5
	(b)	Explain seam welding with a neat sketch.	5
	(c)	Sketch the power press and label its parts.	5
		SECTION – IV	
8.	(a)	How do you specify the size of a lathe?	4
	(b)	Explain the working of pilot and knockout in press work with sketches.	6
	(c)	What are the differences between a capstan and a turret lathe?	5
9.	(a)	Explain principle of thread cutting in a lathe with a neat sketch.	6
	(b)	Define the following w.r.t. a lathe:	4
		(i) Cutting speed	
		(ii) Feed	
		(iii) Depth of cut	
,		(iv) Machining time	
	(c)	Explain progressive die with a neat sketch.	5
10.	(a)	Explain reaming and tapping operations with sketches.	8
	(b)	Explain twist drill nomenclature using sketches.	7