

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2020****Subject Code:3152007****Date:01/02/2021****Subject Name:Manufacturing Technology****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any **FOUR** questions out of **EIGHT** questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Why the following allowances are provided on the patterns in sand molding. (i) Draft (ii) Contraction (iii) Shaking.	03
	(b) What is the role of electrode coating in shielded metal arc?	04
	(c) What are the common defects of casting? State their causes and remedies.	07
Q.2	(a) What is difference between nozzles of oxy-acetylene gas welding process and oxy-acetylene gas cutting process? Why? Explain with help of neat sketches.	03
	(b) Why the properties like permeability, compressive strength, hardness and flow ability required in molding sand? Explain with appropriate reasons for each of them.	04
	(c) Write a short note on Gas Welding with necessary sketches.	07
Q.3	(a) Define following terms:- (i) Ingot (ii) Bloom (iii) Billet (iv) Slab.	03
	(b) Write a short note on AJM.	04
	(c) What are the different forging operations? Explain any two with neat sketch.	07
Q.4	(a) Differentiate between Punching and blanking.	03
	(b) Discuss with neat sketch following core:- (i) Horizontal core (ii) Balanced Core.	04
	(c) Explain difference between TIG and MIG welding process.	07
Q.5	(a) Describe the different functions performed by cutting fluids during machining operations.	03
	(b) Give complete detail to carry out following alignment tests: 1. Line joining two centers parallel with lathe bed	04
	(c) Write down the types of milling machines. Explain column and knee type with neat sketch.	07
Q.6	(a) Explain vertical Boring Machine Operations.	03
	(b) Differentiate between the quick return mechanisms of shaper machine and planar machine.	04
	(c) Write down classification of Drilling Machine. Explain upright Drilling machine with figure.	07

- Q.7 (a) What is deep hole drilling operation? What are the difficulties commonly observed in deep hole drilling operation? **03**
- (b) Define operations:- (i) Lapping (ii) Honing (iii) polishing (iv) Buffing. **04**
- (c) Explain single point cutting tool Geometry. **07**
- Q.8 (a) What is called as plunge cut grinding? Explain with neat sketch. **03**
- (b) List out different specifications of lathe machine and describe them in brief. **04**
- (c) Explain classification of manufacturing process. **07**

www.FirstRanker.com