Reg. No. :										
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Maximum: 100 Marks

Question Paper Code: 41732

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

Third Semester

Mechanical Engineering

14UME302 - MANUFACTURING TECHNOLOGY - I

(Regulation 2014)

Duration: Three hours

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Core print is the part of the (a) Core (b) Pattern (c) Gate (d) Moulding tool 2. Chills are used in moulds to (a) Achieve directional solidification (b) Increase freezing zone (c) Reduce freezing zone (d) Smoothen metal flow for reducing spatter The welding process used for weld the non metal is 3. (a) Gas welding (b) Arc welding (c) Ultrasonic welding (d) Resistance welding The ratio of acetylene to oxygen is approximately _____ for neutral flames used in gas 4. welding. (a) 1:1 (b) 2:3 (c) 3:2 (d) 2:5 Recrystallisation temperature is 5. (a) Melting temperature (b) Above melting temperature (c) Below melting temperature (d) Solidification temperature

6.	In deep drawing of sheets, the value of limiti	ng draw ratio depends on						
	(a) % elongation of sheet metal(c) Type of press used	(b) Yield strength of the sheet metal(d) Thickness of the sheet						
7.	Annealing leads to							
	(a) Relieve internal stress(c) Improve hardness	(b) Improve surface finish(d) Improve strength						
8.	Metal extrusion process is generally used for	producing						
	(a) Uniform solid sections(c) Uniform solid and hollow sections	(b) Uniform hollow sections(d) Varying solid and hollow sections						
9.	Palsticizer used for							
	(a) To improve the viscosity of polymer(c) To enhance the polymerization	(b) To enhance the colour(d) To improve strength						
10.	Fillers added to plastics to							
	(a) Improve flow(c) Facilitate processability	(b) Reduce brittleness(d) Improve strength						
PART - B (5 x 2 = 10 Marks)								
11.	What is core venting?							
12.	What is the principle of Thermit welding?							
13.	What is impact extrusion?							
14.	What is the spring back effect in sheet metal	component?						
15.	What is film blowing?							
	PART - C (5 x	16 = 80 Marks)						
16.	16. (a) Explain the steps required to carry out green sand moulding.							

Or

(b) Illustrate about the lost wax method of moulding to cast quality product. Also state their advantages and disadvantages. (16)

17. (a) Compare and contrast TIG and MIG welding by explaining their principles of operation with necessary sketches. (16)

Or

- (b) What are the special features of resistance welding methods? Explain all the methods in detail with neat sketches. (16)
- 18. (a) List out various extruding operations to make hollow tubes with necessary sketches. (16)

Or

- (b) Enumerate the various hammers used for forging operations. (16)
- 19. (a) Discuss super plastic forming with necessary sketches. (16)

Or

- (b) (i) What is meant by stretch forming? Explain. (8)
 - (ii) Explain with a neat sketch the principle and operation of magnetic pulse forming. (8)
- 20. (a) Explain briefly with neat sketches, commercially used method of blow moulding for blowing of plastics bottles and mention their specific advantages. (16)

Or

(b) Illustrate about the various methods of injection moulding in the processing of plastics. (16)