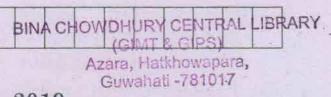
ME 131305

Roll No. of candidate



2019

B.Tech. (ME) 3rd Semester End-Term Examination

PRIMARY MANUFACTURING

(New Regulation)

(w.e.f. 2017 - 2018)

Full Marks - 70

Time - Three hours

The figures in the margin indicate full marks for the questions.

Answer Question No. 1 and any FOUR from the rest.

1. Fill in the blanks:	the blanks:	(10
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- (i) The lower moulding flask used in sandcasting is called ———
- (ii) Risers are added to the mould cavity to take care of —
- (iii) The _____ acts as a reservoir of molten metal in casting.
- (iv) Flattened or elongated cavities formed on the surface of the casting due to presence of moisture are called ————

 $\times 1 = 10$

	(v)	the cross-section of the part.
	(vi)	Gun shells are manufactured by —
	(vii)	is the process where a punch removes a portion of material from a metal strip and the portion removed is the scrap.
	(viii)	Processes where working on metal is done above the recrystallization temperature are called — processes.
	(ix)	is the depth up to which the weld metal combines with the base metal.
	(x)	welding is used to join thick plates in a single pass.
2.	(a)	Name and explain the desirable properties of moulding sand. (5)
	(b)	Name and explain the different casting defects. (10)
3.	(a)	Explain the process of Hot-chamber and cold- chamber die casting. (10)
	(b)	What is true-centrifugal casting? (5)
4.	(a)	What are forehand and backhand welding techniques in gas welding? (4)
	(b)	How is acetylene made available for gas welding? Explain. (6)
	(c)	Explain the working of the welding torch used in gas welding. (5)

5.	(a)	What are the functions of consumable electrodes? (5)
	(b)	What are the polarities used in electric arc welding? (4)
	(c)	Name and explain the various metal transfer methods in MIG. (6)
6.	(a)	Name and explain the different types of rolling stand arrangements. (5)
17.	(b)	Explain the different types of extrusion processes. (10)
7.	(a)	Explain the process of deep drawing (4)
	(b)	What is Resistance welding? How is heat balance achieved in resistance welding. (6)
	(c)	Explain the process of sintering in powder metallurgy. (5)