

Reg. No.

Name



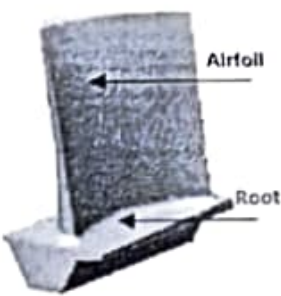
VIT

Vellore Institute of Technology

Continuous Assessment Test I – May 2023

Programme	B.Tech. Mechanical Engineering	Semester	Fall Inter Sem 2022-23
Course Title	Metal Casting and Welding	Code	BMEE302L
Faculty	Dr. R. Radha	Slot	A1 + TA1
	Dr. R. Narayanan	Class Nbr	CH2022232500212
Time	1 ½ hours	Class Nbr	CH2022232500214
		Max. Marks	50

Answer all the questions; (5 x 10 = 50 Marks)

Q.No.	Sub. Sec.	Question Description	Marks
1		Describe the method of producing sand core for use in a moulding operation.	10
2		<p>Suggest a suitable expendable casting method for the batch production of superalloy turbine blade given below and explain its operational steps in detail.</p> 	10
3		Describe a suitable casting method for producing magnesium Metal Matrix Composite (MMC). Mention the advantages and disadvantages.	10
4		Describe the progressive and directional solidification in casting and also explain the microstructure of cast obtained through each solidification process.	10
5		Two cubical castings of the same metal and sizes of 4 cm side and 10 cm side are moulded in green sand. If the smaller casting solidifies in 8 mins, what will be the expected time of solidification for larger casting?	10