VIT

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

Continuous Assessment Test – I   FALL 2019-20

Programme Name & Branch: B.Tech. (BME)

Course Code & Name: MEE1007 Manufacturing Processes

Class Number: VL2019201001648; VL2019201001878; VL2019201001882; VL2019201002234;

VL2019201006797

Slot: G1   Exam Duration: 90 minutes   Maximum Marks: 50

Answer ALL the questions

S.No.	Question	Mark
1.	Describe the stages involved in the shrinkage of metals during casting using cooling curves.	[5]
2.	A rectangular steel product (length = 16 cm; width = 3.5 cm; height = 8.5 cm) is to be produced by the sand-casting process. Calculate the solidification time, if the mold constant of Chvorinov's rule is 4.0 min/cm^2. Assume n = 2.	[5]
3.	Explain the casting defects that are cause by improper fluid flow and heat transfer in casting operations.	[5]
4.	Select an ideal furnace to produce molten metal in huge quantity of cast iron.	[15]
5.	With neat sketches, explain the step by step procedure of the investment casting process. Provide some applications, advantages and limitations of this process.	[20]