

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2018****Subject Code:2152506****Date:27/11/2018****Subject Name:Foundry Technology****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
<b>Q.1</b>	(a) Explain the requirement of foundry process in manufacturing industry.	<b>03</b>
	(b) Compare foundry process with other forming processes.	<b>04</b>
	(c) Explain the general procedure of Casting process.	<b>07</b>
<b>Q.2</b>	(a) Enlist different types of material used for making pattern.	<b>03</b>
	(b) Enlist different types of allowances provided in the cast pattern. Which one of them is Negative allowance?	<b>04</b>
	(c) Enlist different types of pattern. Explain any three of them with neat sketch.	<b>07</b>
<b>OR</b>		
	(c) Explain the functions of each part of Gating system. Enlist the name of colors used in the cast pattern.	<b>07</b>
<b>Q.3</b>	(a) In general, metallic Pipeline is manufacture with the help of which casting process?	<b>03</b>
	(b) Explain function of Core in foundry process	<b>04</b>
	(c) Enlist types of Moulding Machines. Explain any one of them with neat sketch.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) Write the difference between Sand and Clay.	<b>03</b>
	(b) Explain the functions of Riser.	<b>04</b>
	(c) Slush Casting: explain in brief with neat sketch.	<b>07</b>
<b>Q.4</b>	(a) Enlist different Non-destructive Testing are carried out for cast product.	<b>03</b>
	(b) Explain Liquid penetrant test with neat sketch.	<b>04</b>
	(c) Explain Investment Casting Process with neat sketch, advantages, limitations and applications.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) What is difference between porosity and blow hole.	<b>03</b>
	(b) Enlist different types of furnaces used in foundry industries.	<b>04</b>
	(c) Explain centrifugal casting with neat sketch, advantages, limitations and applications.	<b>07</b>
<b>Q.5</b>	(a) In general, which area of centrifugal cast product is having highest possibilities of defects?	<b>03</b>
	(b) Explain directional solidification with neat sketch.	<b>04</b>
	(c) Enlist types of defects in the casting product. Explain any three of them with neat sketch.	<b>07</b>
<b>OR</b>		
<b>Q.5</b>	(a) Enlist type of various cast-product finishing process.	<b>03</b>
	(b) Explain the difference between Shot blasting and Sand Blasting.	<b>04</b>
	(c) Explain the role of automation in advance Foundry industries.	<b>07</b>