## **GUJARAT TECHNOLOGICAL UNIVERSITY** BE - SEMESTER-V • EXAMINATION – SUMMER • 2015

Subject Code: 152501Date: 02/05/201Subject Name: Casting TechnologyTime: 02.30pm-05.00pmTime: 02.30pm-05.00pmTotal Marks: 7Instructions:1. Attempt all questions.			
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Q.1	(a)	Describe the activities in Metal Casting. Compare the merits and demerits of Metal Casting process with Forging process.	07
	<b>(b)</b>	Explain types and properties of Moulding Sand.	07
Q.2	(a) (b)	Write the merits, demerits and applications of different pattern materials. What are the steps in "Pattern Design"? Giving neat sketches, explain the different types of pattern allowances. <b>OR</b>	07 07
	<b>(b)</b>	Write the name of different types of pattern and explain any four with neat sketch.	07
Q.3	(a)	Explain the investment casting process with its advantages, disadvantages and applications	07
	<b>(b)</b>	Explain the Centrifugal Casting with advantages, disadvantages and applications.	07
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Q.3	(a) (b)	Classify and explain foundry tools with sketch. Give the names of moulds and explain any five.	07 07
Q.4	(a) (b)	Write the names of foundry furnaces. Explain the cupola furnace with sketch. Write the functions of cores. Explain with sketches the different types of core boxes.	07 07
Q.4	<b>(a)</b>	<b>OR</b> Give the classification of casting defects. Explain the causes and remedies of	07
	(b)	surface defects and dimensional defects. Draw neat sketch of components of the gating system. State the functions and importance of each component.	07
Q.5	<b>(a)</b>	Explain Ultrasonic testing for detecting a casting defects. What are the advantages and disadvantages of this method?	07
	(b)	Show the layout for small, medium and large foundry. How does a good layout help in higher productivity and quality in foundry? OR	07
Q.5	(a) (b)	Explain Cost estimation and use of Computers in Foundry shop. Explain the need for mechanization and modernization of foundry.	07 07

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