

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

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