

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FOURTH SEMESTER B.TECH DEGREE EXAMINATION, APRIL 2018

Course Code: MP206

Course Name: FOUNDRY TECHNOLOGY (MP, PE)

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any three full questions, each carries 10 marks.

Marks

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| 1 | a) List the applications of casting process. | (5) |
| | b) Explain the metallurgical advantages of castings. | (5) |
| 2 | a) Outline the steps involved in casting. | (5) |
| | b) Write the limitations of casting process. | (5) |
| 3 | a) Distinguish pattern from casting. | (5) |
| | b) Describe factors affecting choice of pattern materials. | (5) |
| 4 | a) Categorize types of patterns. | (5) |
| | b) Discuss allowances given in patterns. | (5) |

PART B

Answer any three full questions, each carries 10 marks.

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| 5 | a) Identify properties of moulding sand. | (5) |
| | b) Summarize mechanised moulding methods. | (5) |
| 6 | a) Discuss AFS grain analysis. | (5) |
| | b) Classify types of cores. | (5) |
| 7 | a) Describe solidification of castings. | (5) |
| | b) Explain economical and metallurgical considerations in casting design. | (5) |
| 8 | a) Discuss principles of riser design. | (5) |
| | b) Compare types of gating systems in casting. | (5) |

PART C

Answer any four full questions, each carries 10 marks.

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| 9 | a) Compare hot and cold pressure die casting. | (5) |
| | b) Describe continuous casting. | (5) |
| 10 | a) Explain centrifugal casting. | (5) |
| | b) List out the defects in casting. | (5) |
| 11 | a) Discuss radiography tests of castings. | (5) |
| | b) Write the principle of CO ₂ moulding. | (5) |
| 12 | a) Justify the need for mechanisation of foundry. | (5) |
| | b) Suggest a material handling system for a general foundry. | (5) |
| 13 | a) List the pollutants and its source from a foundry. | (5) |
| | b) Discuss about pollution control in foundry. | (5) |
| 14 | a) Describe the role of CAD/CAM in foundry. | (5) |
| | b) Explain casting of automobile components. | (5) |
