



MARRI LAXMAN REDDY INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(AN AUTONOMOUS INSTITUTION)

(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)

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III B.Tech I Sem Regular End Examination, February 2022

Principles of Programming Languages (CSE & IT)

Time: 3 Hours.

Max. Marks: 70

Note: 1. Question paper consists: Part-A and Part-B.

2. In Part - A, answer all questions which carries 20 marks.

3. In Part - B, answer any one question from each unit.

Each question carries 10 marks and may have a, b as sub questions.

PART- A

(10*2 Marks = 20 Marks)

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|-------|---|----|-----|-----|
| 1. a) | Define syntax and semantics. | 2M | C01 | BL1 |
| b) | What are the fundamental features of imperative languages? | 2M | C01 | BL1 |
| c) | Explain about the enumerated data type. | 2M | C02 | BL2 |
| d) | What is an associative array? | 2M | C02 | BL1 |
| e) | Write an example of call and return statements. | 2M | C03 | BL3 |
| f) | Give the two kind of abstractions in programming languages. | 2M | C03 | BL1 |
| g) | What is semaphore? | 2M | C04 | BL1 |
| h) | What advantages do monitors have over semaphores? | 2M | C04 | BL1 |
| i) | Write the advantages of scripting languages. | 2M | C05 | BL3 |
| j) | What is procedural abstraction? | 2M | C05 | BL1 |

PART- B

(10*5 Marks = 50 Marks)

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|------|--|----|-----|-----|
| 2 a) | Explain the attribute grammar and also write the attribute grammar for simple assignment statements. | 5M | C01 | BL5 |
| b) | Distinguish between ambiguous grammar and attribute grammar with an example. | 5M | C01 | BL2 |

OR

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|------|--|-----|-----|-----|
| 3 | Describe the general methods of programming language syntax. | 10M | C01 | BL6 |
| 4 a) | Explain in detail various design issues of character string types. | 5M | C02 | BL5 |
| b) | Discuss about guarded commands with an example. | 5M | C02 | BL2 |

OR

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| 5 | Explain Union type with an example. | 10M | C02 | BL6 |
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| 6 | a) | Explain how subprogram names are passed as parameters with example. | 5M | C03 | BL6 |
| | b) | Explain the overloaded subprogram with an example. | 5M | C03 | BL6 |
| OR | | | | | |
| 7 | | Explain about generic sub-programs with example. | 10M | C03 | BL6 |
| OR | | | | | |
| 8 | a) | How message passing is implemented in ADA. Give examples. | 5M | C04 | BL2 |
| | b) | Briefly Explain the Sub-program level concurrency. | 5M | C04 | BL2 |
| OR | | | | | |
| 9 | | Explain the design issues of an exception handling system. | 10M | C04 | BL6 |
| OR | | | | | |
| 10 | a) | Explain the different types of data types used in Python. | 5M | C05 | BL2 |
| | b) | Write a short note on data and procedural abstraction. | 5M | C05 | BL3 |
| OR | | | | | |
| 11 | | Explain about the fundamentals of functional programming languages. | 10M | C05 | BL6 |

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