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## INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(AN AUTONOMOUS INSTITUTION)

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

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### II B.Tech I Sem Supply End Examination, October 2021

## OBJECT ORIENTED PROGRAMMING USING C++

### (CSE & IT)

Time: 3 Hours.

Max. Marks: 70

Note: 1. Answer any FIVE questions.

2. Each question carries 14 marks and may have a, b as sub questions.

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|---|----|--|----|-----|-----|
| 1 | a) | Explain all the basic features of Object Oriented Programming Language   | 7M | CO1 | BL4 |
|   |    | What is difference between while and do-while loop? Develop a C++ program to print numbers from 10 to 1 using while and do-while loop structures                           | 7M | CO1 | BL5 |
| 2 | a) | What is an array? How it is declared and used in C++? Mention the limitations of an array.   | 7M | CO1 | BL1 |
|   | b) | When do we use default arguments in functions? What are the rules need to be followed while using default arguments? Write code snippet which illustrate the above concept | 7M | CO1 | BL1 |
| 3 | a) | Differentiate between Constructor and Destructor with the help of suitable example.  | 7M | CO2 | BL2 |
|   | b) | Define constant member function. Why do we require constant member functions? Explain with a relevant program  | 7M | CO2 | BL4 |
| 4 | a) | Explain different forms of inheritance with suitable example for each.   | 7M | CO3 | BL4 |
|   | b) | Define dynamic binding. How do we achieve dynamic binding C++ ? Explain the same with support of relevant program  | 7M | CO3 | BL1 |

Define a class named 'Bank Account' to represent following members:

Data members :-

- Account Number
  - Name of Depositor
  - Account Type
  - Balance Amount
- Member functions:
- Initialize members
  - Deposit Amount
  - Withdraw Amount
  - Display Balance

- |   |    |  |    |     |     |
|---|----|--|----|-----|-----|
| 5 | a) | Write a C++ program to test the Bank Account class for 10 customers.   | 7M | CO2 | BL3 |
|   | b) | What is the role of private, public and protected keywords in inheritance? In what way they are differ explain with code snippet | 7M | CO3 | BL1 |

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|---|----|--|----|-----|-----|
| 6 | a) | List out the error handling functions during file accessing available in C++. Explain them with the support of syntax and code snippet   | 7M | C04 | BL4 |
|   | b) | Develop a C++ program to overload an operator '+' to add two time objects which consists of hr, min and sec as data members  | 7M | C04 | BL5 |
| 7 | a) | Develop a C++ program to count the number of occurrences of a given word in a given text file  | 7M | C04 | BL5 |
|   | b) | Define exception. What are the benefits of exception handling? How do we handle exceptions in C++? Mention the limitations   | 7M | C05 | BL1 |
| 8 | a) | What is the syntax of block which can catch all exceptions? Where do we place this block? What are the benefits and restrictions for using this block? Support your answer with code snippet | 7M | C05 | BL1 |
|   | b) | Develop a C++ program to raise an exception if the user given string is not "CSE"  | 7M | C05 | BL5 |

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