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BTECH
(SEM VI) THEORY EXAMINATION 2024-25
OBJECT ORIENTED PROGRAMMING

TIME: 3 HRS**M.MARKS: 100****Note:** Attempt all Sections. In case of any missing data; choose suitably.**SECTION A****1. Attempt all questions in brief.****2 x 10 = 20**

Q no.	Question
a.	What is the importance of modelling in software development?
b.	Name the different views in UML architecture.
c.	What are asynchronous messages in sequence diagrams?
d.	What is Object-Oriented Analysis?
e.	What is physical packaging in object-oriented systems?
f.	Define identifier in C++.
g.	What is an Enum in C++?
h.	What are private and public members in a class?
i.	What is a constructor? Name its types.
j.	What is the use of the 'this' pointer in C++?

SECTION B**2. Attempt any three of the following:****10 x 3 = 30**

Q no.	Question
a.	Explain the basic structural modeling elements in UML with examples.
b.	Discuss the implementation of control and inheritance adjustment in OOD.
c.	Explain the different types of operators in C++ with suitable examples.
d.	Discuss function overloading in C++ with multiple examples.
e.	What is the difference between early binding and late binding?

SECTION C**3. Attempt any one part of the following:****10 x 1 = 10**

Q no.	Question
a.	Discuss time diagrams and interaction diagrams with suitable examples.
b.	What is a pure virtual function? Explain how abstract classes are used in polymorphism.

4. Attempt any one part of the following:**10 x 1 = 10**

Q no.	Question
a.	Why is modeling important in system design? Explain with suitable cases.
b.	Explain the concept of type conversion between objects using constructors and casting operators.



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5. Attempt any one part of the following:

10 x 1 = 10

Q no.	Question
a.	What is a state machine diagram? Discuss its components and usage.
b.	What is the difference between call by value and call by reference? Give examples.

6. Attempt any one part of the following:

10 x 1 = 10

Q no.	Question
a.	Describe the process of translating classes into data structures and implementing encapsulation.
b.	Write a program demonstrating single and multiple inheritance.

7. Attempt any one part of the following:

10 x 1 = 10

Q no.	Question
a.	Discuss the significance of object identity, encapsulation, and information hiding in OOP.
b.	What are friend functions? Explain their use and limitations with examples.

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