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BACHELOR OF COMPUTER APPLICATIONS (B.C.A.)/
SPECIALIZATION IN CYBER SECURITY (CS)

EXAMINATION : DECEMBER - 2024

SEMESTER – V

Sub : Unified Modeling Language (BCA-546-18/ BCA-546-20)/

Object Oriented Modeling & Design (BCA-CS-546-20)

Date : 28/12/2024

Total Marks : 60

Time: 10.00am To 12.30pm

Instructions:

1. All questions are compulsory unless and otherwise stated.
2. Bold figures to the right of every question are the maximum marks for that question.
3. Candidates are advised to attempt questions in order.
4. Answers written illegibly are likely to be marked zero.
5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
6. Draw neat and labelled diagrams wherever necessary.

Q.1. Case Study

(20)

A system is designed for processing results of students. Students fill the examination form by giving details about subject, centre etc. which is an input to the system. Student pays examination fees. Fee receipt and admit card of examination should get generated. Examination is conducted at various centers. Centers provide absentee report. The evaluation department provides marks of students in each subject. Mark sheet and merit list are the output of the system.

Draw the following Class Diagrams, Use case Diagram and Activity Diagram

Q.2. Solve (Any two)

(30)

1. What is Model? Explain the principles of modeling. What are features of UML?
2. Draw Class diagram, Use case diagram and Activity diagram for restaurant management system.
3. Draw Class diagram, Use Case and Sequence diagram for booking cab from uber/ola app

Q.3. Answer the following in 2-3 lines (Solve any 5)

(10)

1. Which diagram gives static and dynamic behavior of the system?
2. Write the purpose of Fork and joining in UML
3. Draw Sequence diagram for online exam system
4. What is include and extend in use case?
5. What is object, inheritance, classes, abstraction in UML
6. What is synchronous message and asynchronous message?
7. Draw Sequence diagram for sending an Email.