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BACHELOR OF COMPUTER APPLICATIONS (B.C.A.)
BACHELOR OF COMPUTER APPLICATIONS (CYBER SECURITY)
EXAMINATION : DECEMBER -2024
SEMESTER – V
Sub : Unified Modeling Language (UML) / Object Oriented Modeling & Design
(BCA-546-20/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.
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Q.1. Case Study

(20)

A Library lends books and magazines to member, who is registered in the system. It also maintains the purchase of new books and magazines for the Library. A member can reserve a book or magazine that is not currently available in the library, so that when it is returned or purchased by the library, that person is notified. The library can easily create, replace and delete information about the books, members, and reservation in the system. The books transactions are stored in the database. The fine list while the member returns the book after the due date must be generated. Analyze the users and actors of this system, and the interactions between them must be depicted.

Draw Usecase diagram, Activity diagram and Class diagram for above statement

Q.2. Solve (Any two)

(30)

1. Draw Class diagram, Sequence diagram and Use case diagram for ordering online pizza from pizza hut
2. Draw Class Diagram, State chart Diagram, and Sequence Diagram for online purchasing Shoes.
3. Draw a Sequence diagram, Activity diagram and Use case diagram playing a song using music player.

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

(10)

1. What is the difference between a flow chart and an activity diagram?
 2. What is Dynamic Model? State its purpose with suitable example.
 3. What are principles of model?
 4. Draw Use Case Diagram for transaction from ATM
 5. What is purpose of state chart diagram?
 6. Explain Swim lane/ partition from activity diagram
 7. Draw state chart diagram for sending an Email.
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