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

EXAMINATION : DECEMBER-2025

SEMESTER – V

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

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

Date : 27/12/2025

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 candidate applies in a placement call for placement in a company. He can be placed in one of the companies registered with the placement call. The candidate's applications are sorted on aggregate percentage basics. Top students are selected for placement in the registered companies on merit basic. The joining process involves candidate being shown available companies. Candidate select membership of health club, food club and entertainment club. On successful placement he is given a selection letter and a copy of company schedule. A candidate not placed can select to register himself for waitlist. Draw an activity diagram, sequence diagram, class diagram for the above described system.

Q.2. Solve (Any two)

(30)

1. Draw state chart diagram, class diagram, use case diagram for hotel management systems
2. Draw class diagram, use case diagram and sequence diagram for exam registration system
3. Draw activity diagram, sequence diagram and state chart diagram for online shopping.

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

(10)

1. Give difference between generalization and extend relationship.
2. List static model and dynamic model.
3. What are OOP's concepts of uml.
4. What is fork and swimlanes in activity diagram?
5. What is the difference between a flow chart and an activity diagram?
6. What is state machine?
7. What is node?