



K20P 1251

Reg. No. :

Name :

**V Semester Master of Computer Application (M.C.A.)/M.C.A.
(Lateral Entry) Degree (C.B.S.S. – Reg./Suppl. (Including Mercy Chance)/Imp.)
Examination, November 2020
(2014 Admission Onwards)**

MCA 5C24 : OBJECT ORIENTED MODELING AND DESIGN

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **any ten** questions. **Each** question carries **three** marks :

1. What is the relationship between abstraction, information hiding and encapsulation ?
2. Explain polymorphism with example.
3. Explain inheritance with example.
4. Explain how to depict concurrent execution of objects in a sequence diagram.
5. Write a note on use case diagrams.
6. Explain how do you depict multiple inheritance in class diagrams.
7. Write a note on packages in UML.
8. What are the uses of architecture diagrams ? Explain.
9. Explain the principle of closed behavior.
10. Write a note on state-space of a subclass.
11. Write a note on abuses of inheritance.
12. Explain advantages and disadvantages of using components. **(10×3=30)**

P.T.O.



SECTION – B

Answer **all** questions. **Each** question carries **ten** marks :

13. a) Explain message structure, message arguments and types of messages with example. 10
- OR
- b) i) Where did object orientation come from ? Explain.
ii) Write a note on object orientation as an engineering discipline. (4+6)
14. a) Explain aggregation and composition. Give their respective UML notations with an example. 10
- OR
- b) i) Explain basic expression of classes, its attributes and operations with example.
ii) Write a note on whole/Part associations in class diagrams. (5+5)
15. a) Explain with a neat diagram depicting the human interface using the window layout diagram. 10
- OR
- b) Explain deployment diagram for hardware artifacts in detail. 10
16. a) i) Explain in detail class cohesion.
ii) Explain encapsulation structure. (5+5)
- OR
- b) Write a note on : (5+5)
i) Encumbrance
ii) Principles of type conformance.
17. a) Explain various design techniques for organizing the attributes and operations of a class interface. 10
- OR
- b) Explain in detail state and behavior support in a class interface. 10
- (5×10=50)