18. (a) Write short notes on Unit testing.

Or

(b) Explain about User interface actions.

19. (a) Write short notes on Iterators.

Or

(b) Discuss about the Layout Managers.

20. (a) Discuss about the Singleton Pattern.

Or

(b) Write short notes on Visitor Pattern.

PART C — (3 × 10 = 30)

Answer any THREE questions.

21. Describe in detail about Software Development life cycle.

22. Explain in detail about Relationship between Classes.

23. Explain in detail about Interface Types.

24. Explain in detail about the Hierarchy of Swing Components.

25. Discuss in detail about the Factory Method Pattern.

(For candidates admitted from 2022–2023 onwards)

M.C.A. DEGREE EXAMINATION, NOVEMBER 2023.

Computer Applications – Elective

OOAD AND DESIGN PATTERNS

Time : Three hours   Maximum : 75 marks

PART A — (20 Marks)

Answer ALL questions.

I. (A) Multiple choice questions.   (5 × 1 = 5)

1. A ———— is a description of a set of objects that share the same attribute operations, relationships and semantics.

    (a) Class   (b) Objects

    (c) Abstraction   (d) Polymorphism

2. To hide the internal implementation of an object we use ————

    (a) inheritance   (b) encapsulation

    (c) polymorphism   (d) none of these

3. Use case descriptions consist of interaction ——————

(a) use case   (b) product

(c) actor   (d) product and actor

4. Abstraction provide an operation named as ——————

(a) Encapsulation   (b) Call back

(c) Turndown   (d) Inheritance

5. The idea of the interface was introduced to solve the problem of ——————

(a) Generalization

(b) Association

(c) Multiple inheritances

(d) Dependency

(B) Fill in the blanks: (5 × 1 = 5)

6. The —————— is a standard language for writing software blueprints.

7. A —————— is a general-purpose mechanism for organizing elements into groups.

8. A —————— diagram is an interaction diagram that emphasizes the time ordering of messages

9. An —————— is a software-intensive collection of hardware that interfaces with the physical world.

10. A —————— is made up of nodes and edges that have certain shapes.

II. Answer ALL questions.   (5 × 2 = 10)

11. What is Polymorphism?

12. Define Use cases.

13. Define Timers.

14. What is meant by containers?

15. Define Animations.

PART B — (5 × 5 = 25)

Answer ALL questions.

16. (a) Describe the Important of modelling.

Or

(b) Explain the Principles of modelling.

17. (a) Write Short notes on Sequence Diagrams.

Or

(b) Discuss about CRC cards.