Reg. No …… Name ……. **26U4215**

BCA DEGREE END SEMESTER EXAMINATION - MARCH 2026

UGP(HONS.) SEMESTER - IV: CORE COURSE

COURSE: – 24UBCADCC205 – SOFTWARE ENGINEERING

(For Regular 2024 Admission)

Time: 2 Hours Max. Marks: 70

PART A

Answer any 5 questions. Each question carries 2 marks

1. Write any two characteristics of a good software. (U, CO1)
2. Define System Testing. (U CO4)
3. Explain Software requirement. (U, CO2)
4. Define Class diagrams. (U, CO3)
5. List any two software process models (U, CO1)
6. Define Alpha Testing (U, CO4)
7. Define Software Prototyping (U, CO2)

(2 x 5 = 10)

PART B

Answer any 6 questions. Each question carries 5 marks

8. Write short notes on(a) Spiral model (b) Waterfall model (An, CO1)
9. Explain the phases of SDLC. (U, CO1)
10. Explain the role of project manager in software development. (U, CO1)
11. Write note on Requirement elicitation and analysis. (A, CO2)
12. Explain various Software Design patterns. (U, CO3)
13. Develop the software requirement document for the following requirement. A coffee vending machine serves coffee to customers. A customer can choose a type of coffee among a list often options, supply the amount required and get served. Each coffee is prepared by adding units of hot water, coffee powder, milk and sugar. The recipe for each coffee is stored. Develop a use case diagram, Activity diagram and Sequence diagram. (A, CO2)
14. Describe the principles of good Software Design. (A, CO3)
15. Differentiate between Unit testing and integration testing. (An CO4)

(5 x 6 = 30)

PART C

Answer 3 questions. Each question carries 10 marks

16. Explain Black BoxTesting and White Box Testing with comparison and examples. (A, CO4)

17. Explain the Requirement Engineering Process in detail. Discuss its phases with a neat diagram. (U, CO2)

18. Assume that you are the technical manager of a software development organization. A client approached you for a software solution. The problems stated by the client have uncertainties which lead to loss if it not planned and solved. Which software development model you will suggest for this project – justify. Explain that model with its pros and cons with neat sketch. (A, CO1)

19. Describe architecture in software design. Outline the different types of architectural styles used in developing a software product. (U, CO3)

(10 x 3 = 30)

OBE: Questions to Course Outcome Mapping

CO'S	Expected Course Outcome	CL	Questions	Total Marks
1	Illustrate the characteristics of software engineering and life cycle model	U	1,4,8,9,10,18	29
2	Apply the concept of software requirement analysis and planning to develop software systems for real world problems	A	3,7,11,17	19
3	Design aa software design by considering the aspects of heuristics, modularity and uml	A	4,12,14,19	22
4	Differentiate between the types of software testing methodologies	An	2,6,15,16	19