Avinashilingam Institute for Home Science and Higher Education for Women
Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD (now MoE)
Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641043, Tamil Nadu, India

Bachelor's Degree Examination-November 2025
V Semester

Class : III UG 2019 & 2022 Batch (Repeater) **Time : 3 Hours**
Major : Computer Science / Computer Application **Max. Marks : 100**

21BCSC23 / 18BCAC20 / 21BCAC20 Software Engineering

Course Outcomes:

1. Acquire strong fundamental knowledge in software engineering.
2. Ability to apply software engineering principles, techniques, tools and practices.
3. Effectively demonstrate competence in communication, planning, analysis, design, construction, testing and deployment.
4. Adapt to new emerging technologies and methodologies.
5. Cope up with software quality standards.

Part A **10 x 1 = 10**
Choose the Correct Answer

1. The _____ model is a sequential approach to software development, an oldest one. CO1 K1

   a. Waterfall b. RAD c. incremental d. spiral

2. The _____ is an incremental software process model that emphasizes a short development cycle CO1 K1

   a. RAD b. waterfall c. spiral d. evolutionary process

3. A technique that translates the need of the customer into technical requirements for software is _____. CO2 K2

   a. Quantity Functional Deployment b. Quality Functional Deployment
   c. Quantity Functional Department d. Quality Functional Development

4. It defines the properties of data objects and takes on one of three different characteristics is _____. CO2 K2

   a. cardinality b. data attribute c. modality d. data objects

5. A _____ is a named collection of data that describes a data object. CO3 K2

   a. architecture b. attribute c. data abstraction d. pattern

6. The concept of _____ is a direct outgrowth of modularity and the concepts of abstraction and information hiding. CO3 K2

   a. patterns b. modularity c. refinement d. functional independence

7. A _____ consists of a set auditing and reporting function that assesses the effectiveness and completeness of quality control activity. CO4 K1

   a. Quality b. Quality control c. Cost of auditing d. Cost of assurance

8. The _____ is a software quality assurance activity that focuses on the identification CO4 K1

   a. software design b. cost c. manpower d. software safety

9. Cocomo stands for _____. CO5 K1

   a. Constructive Cost of Model b. Constructive Comprehensive model
   c. Common Cost of Model d. Comprehensive Cost of model

10. The _____ testing involves testing the internal workings of the software, such as its code and architecture. CO5 K2

    a. Grey box b. Smoke c. Black-box d. White-box

Part B **5 x 6 = 30**

Answer ALL questions

Each answer should not exceed 400 words or two pages

11.a. Write a note on Layered technology.	CO1 K1
(or)	
11.b. Describe the software process framework.	CO1 K1
12.a. Discuss Agile modelling.	CO2 K1
(or)	
12.b. How to use the Spiral model in software framework?	CO2 K1
13.a.Discuss communication practices.	CO3 K2
(or)	
13.b. How do you identify stakeholders?	CO3 K2
14.a. What are the Elements of the analysis model?	CO2 K2
(or)	
14.b. Write a note on Class-Responsibility-Collaborator (CRC) Modelling.	CO1 K1
15.a. Write an example for Unit Testing and brief.	CO1 K1
(or)	
15.b. Write a note on Black Box testing.	CO1 K1

Part C **5 x 12 = 60**

Answer ALL questions

Each answer should not exceed 800 words or four pages

16.a. Explain the Software process framework in detail.	CO1 K1
(or)	
16.b. Describe the role of CMMI in software engineering.	CO1 K1
17.a. What are the Software engineering models – Explain.	CO2 K1
(or)	
17.b. Discuss about the Principles of Extreme programming.	CO2 K2
18.a. Explain the various software engineering practices.	CO3 K2
(or)	
18.b. What are the seven tasks of Requirements engineering. Brief them.	CO3 K1
19.a. Describe the use of Requirement Analysis in detail.	CO4 K2
(or)	
19.b. Data modelling concepts. Explain.	CO4 K1
20.a. Discuss about the Software Testing strategies	CO5 K1
(or)	
20.b. Illustrate the White Box Testing method with example.	CO3 K2