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Shri Vaishnav Institute of Information Technology
Department of Computer Science and
Engineering

MST II

Subject Code: BTCS504

Subject Name: SEPM

Semester: V

Time: 1 Hour

Total Marks: 20

Note: All questions are compulsory. Assume suitable missing data. Answer should be precise.

Question No

Marks Related CO

- 1
- ✓ a) Discuss Alpha and Beta software Testing in brief. 3 CO4
- ✓ b) Explain different types of views in UML? 3 CO3
- ✗ c) Write short note on: (Any **two**)
- I) Project Metrics, II) Modularity, III) Messages in Sequence Diagram
- 4 CO3
- OR
- ✓ d) Explain life cycle of System Testing Process with diagrammatically. 4 CO4
- 2
- ✓ a) Explain various types of Black Box Testing. 3 CO4
- ✓ b) Explain (4+1) View Model. 3 CO3
- ✗ c) Define Software Design Process. State any three differences between CLI and GUI Interface.
- 4 CO3
- OR
- ✓ d) Write short note on: (Any **two**)
- ✓ I) Error Vs Bug, II) Debugging, III) Relationship in Class Diagram
- 4 CO4

CO3	Comprehend System modelling using UML.
CO4	Identify software testing strategies by using testing tools.

SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE

Shri Vaishnav Institute of Information Technology

Department of Computer Science and Engineering

MST I/II

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Question

Marks Related CO

No. 1

- ✓ a) Write the difference between Functional and non-functional requirement. 3 CO2
- ✓ b) Explain Software Process along with its characteristics. 3 CO1
- c) Define Generic Process Model. What Activities should include in Generic Framework? 4 CO1

OR

- ✓ d) What is Process Assessment? Explain Process Assessment Cycle. 4 CO1

2

- ✓ a) Explain Agile Development Model with schematic diagram. 3 CO1
- ✓ b) Explain Requirements validation with different types of checks. 3 CO2
- c) What is Unified Process? What are the main objectives of Elaboration Phase? 4 CO1

OR

- ✓ d) Write short not on: (Any two) 4 CO2
- ✓ I) Traceability, II) Facilitated Application Specification Techniques, III) Use Case Modelling

CO1	Compare various software process models and identify where these models are applicable.
CO2	Define and analyse software project management, the framework, and the dimensions of software project management.

BTCS504

V Semester Examination, December - 2022

B.Tech./B.Tech.+M.B.A./B.Tech.+M.Tech.(CSE,CCE,CSE-CC,CSE-CF,CSE-BDA,BDCE-IMPETUS,CSE-AII,CSE-BDAI,CSE-CMCI,CSE-DSI,CSE-ES,CSE-FSDI,CSE-ICS)

Software Engineering and Project Management

Choice Based Credit System (CBCS)

Time: 3 Hrs.

Maximum Marks: 60
Minimum Pass Marks: 24

Note: All questions carry equal marks, out of which part 'A' and 'B' carry 3 marks and part 'C' carries 6 marks.
From each question, part 'A' and 'B' are compulsory and part 'C' has internal choice.
Draw neat diagram, wherever necessary.
Assume suitable data wherever necessary.

- Q.1(A) What are the different steps involved in software process model? 03
(B) How do you choose the right project management methodology? Explain with example. 03
(C) Analyze the working of waterfall model. 06

OR

Examine the working of unified process model.

- Q.2(A) List down the approaches used to validate software requirements? 03
(B) Differentiate function-oriented design and object-oriented design? 03
(C) List down different software elicitation techniques used in software engineering. 06

OR

Define following terms in brief:

- I) Structure Charts, II) Process Specification, III) QFD

- Q.3(A) Write various design principles of software design process. 03
(B) Explain Data Flow Diagram with its various primitive symbols. 03
(C) Describe SA/SD component with its goals and analysis phases. 06

OR

Construct a class diagram for movie ticket booking system.

- Q.4(A) Define alpha-beta testing. 03
(B) Enlist different issues in software testing. 03

Contd...

- (C) Discuss Cyclometric Complexity. Find Cyclometric complexity for the given code segment.

```

while (first <= last)
{
    if (array [middle] < search)
        first = middle + 1;
    else if (array [middle] == search)
        found = True;
    else last = middle - 1;
    middle = (first + last)/2;
}
if (first < last) not Present = True;

```

06

OR

Write short Note: (Any two)

- I) Steps of Debugging, II) Validation Vs. Verification, III) Types of System Testing

- Q.5(A) Explain Distributed and Centralized Version Control System.

03

- (B) Discuss the processes involved in SCM.

03

- (C) A simple stand-alone software utility is to be developed in 'C' programming by a team of software experts for a computer running Linux and the overall size of this software is estimated to be 20,000 line of code. Considering 2.4 and 1.05 as a multiplicative and exponential factor for the basic COCOMO effort estimation equation, 2.5 and 0.38 as multiplicative and exponential factor for the basic COCOMO development time estimation, approximately how long does the software project take to complete?

06

OR

Discuss following terms:

- I) Modes of COCOMO, II) Project Estimation Techniques
