PSN COLLEGE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS)
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(Approved by AICTE and Recognized by UGC Section 2f &12B)
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Department of Computer Science and Engineering

END SEMESTER QUESTION BANK / AY (2023-2024) / Odd

Branch: B.E CSE	Department of Computer Science and Engineering	Year / Semester : IV / VIII
Course Code: 503217	Course Name:Software Testing	
Max. Marks: 100 Marks	Session: FN	Regulation: **2018**

Course Outcomes (COs): At the end of the course, the student will be able to

CO1 :	Describe testing fundamentals, principles, TMM levels and classify the defects.
CO2 :	Apply suitable Black box and White Box testing techniques and design Test cases in practice.
CO3 :	Understand the concept of different levels of software testing and how those testing methods are used in software development.
CO4 :	Describe to develop test plans, testing goals & policies and perform reviews for practical applications.
CO5 :	Determine the right method of measurement program to support product and quality testing activity.

BL – *Bloom's Level (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)*; **CO** – *Course Outcome*;

UNIT - 1

Q. No.	PART-A	Marks	CO	BL
1	Define software Testing.	**2**	**CO1**	**2**
2	Define Verification?	**2**	**CO1**	**2**
3	What is Error?	**2**	**CO1**	**1**
4	What is Fault?	**2**	**CO1**	**1**
5	What is Failure?	**2**	**CO1**	**1**
6	What is SQA?	**2**	**CO1**	**1**
7	What are the different type of defects?	**2**	**CO1**	**2**

8	What is Coding Defect?	**2**	**CO1**	**2**
9	What are the Quality Attributes in Software Testing?	**2**	**CO1**	**2**
10	What are the contents of a test case?	**2**	**CO1**	**3**
11	Define Test, Test Oracle and Test Bed.	**2**	**CO1**	**3**
12	What are Defect sources?	**2**	**CO1**	**4**
13	Mention the role of test Engineer in software development organization.	**2**	**CO1**	**3**
14	Define testing and debugging.	**2**	**CO1**	**2**
15	Define Quality Metric?	**2**	**CO1**	**2**
Q. No.	**PART – B**	**Marks**	**CO**	**BL**
1	Discuss the following (i)Testing as a process (ii) Role of process in software quality	**16**	**CO1**	**2**
2	Briefly discuss about Software testing principles	**16**	**CO1**	**2**
3	Explain the tester's role in a software development organization (ii) Origin of Defects	**16**	**CO1**	**3**
4	Briefly describe about Designing Defects and Coding Defects	**16**	**CO1**	**2**
5	Explain (i) Developer/Tester Support for Developing a Defect Repository (ii) Testing Defects	**16**	**CO1**	**4**
6	Explain 5 level structure of testing maturity model in detail.	**16**	**CO1**	**3**
7	Explain all the defects related to requirement specification, design, coding and testing phases	**16**	**CO1**	**2**
8	Explaine any Three defects types with example.	**16**	**CO1**	**2**
UNIT - 2				
Q. No.	**PART-A**	**Marks**	**CO**	**BL**
1	What is Test Case Design Strategies?	**2**	**CO2**	**2**
2	What is Random Testing?	**2**	**CO2**	**2**
3	what is Boundary Value Analysis?	**2**	**CO2**	**4**
4	Define Cause - and - Effect Graphing?	**2**	**CO2**	**2**

5	Define State transition testing?	**2**	**CO2**	**2**
6	What is Test adequacy criteria?	**2**	**CO2**	**2**
7	Coverage concepts provide two major tester?	**2**	**CO2**	**3**
8	What is path?	**2**	**CO2**	**3**
9	Classified loops into four categories?	**2**	**CO2**	**3**
10	Give some advantage of White-Box Testing?	**2**	**CO2**	**2**
11	What are White box Knowledge sources?	**2**	**CO2**	**1**
12	What are the steps involved in Equivalence Class Partitioning?	**2**	**CO2**	**1**
13	What is cyclomatic complexity?	**2**	**CO2**	**2**
14	How to compute cyclomatic complexity?	**2**	**CO2**	**3**
15	What is a control flow graph?	**2**	**CO2**	**2**
Q. No.	**PART – B**	**Marks**	**CO**	**BL**
1	Discuss about test case design approach Using black box	**16**	**CO2**	**2**
2	Explain briefly about Equivalence Class Partitioning and also explain its list of conditions	**16**	**CO2**	**2**
3	Discuss about test case design approach Using White box	**16**	**CO2**	**3**
4	Briefly discuss about Boundary Value Analysis.	**16**	**CO2**	**2**
5	Explain (i) Cause - and - Effect Graphing (ii) State transition testing	**16**	**CO2**	**3**
6	Explain State transition testing	**16**	**CO2**	**3**
7	EExplain all additional white box test design approaches?	**16**	**CO2**	**3**
8	How Black box testing is working .Explain in detail.	**16**	**CO2**	**3**
UNIT - 3				
Q. No.	**PART-A**	**Marks**	**CO**	**BL**
1	What are major phases of testing?	**2**	**CO3**	**2**
2	Integration test for procedural code has two major goals?	**2**	**CO3**	**2**
3	what are the integration test planning?	**2**	**CO3**	**2**
4	Define System Testing?	**2**	**CO3**	**3**
5	Give some is importantance of System testing?	**2**	**CO3**	**2**

6	What is Regression Testing?	**2**	**CO3**	**2**
7	What is Security Testing?	**2**	**CO3**	**3**
8	What is Portability Testing?and that strategies?	**2**	**CO3**	**2**
9	What is Test Case?	**2**	**CO3**	**3**
10	What are the type of test cases?	**2**	**CO3**	**3**
11	Define Functional Testing.	**2**	**CO3**	**2**
12	Define Configuration testing.	**2**	**CO3**	**2**
13	What is security testing?	**2**	**CO4**	**2**
14	What are the areas to be focused on during security testing?	**2**	**CO5**	**3**
15	Define alpha and beta testing.	**2**	**CO6**	**3**
Q. No.	**PART – B**	**Marks**	**CO**	**BL**
1	Explain briefly about Unit test planning	**16**	**CO3**	**2**
2	Briefly discuss about (i)Unit testing (ii) The need for levels of testing	**16**	**CO3**	**4**
3	Describe Integration Testing also explain Designing integration tests	**16**	**CO3**	**1**
4	Explain the following (i)Designing the unit tests (ii) The test harness	**16**	**CO3**	**2**
5	Explain in detail about Regression testing.	**16**	**CO3**	**1**
6	What is Regression testing? Outline the issues to be addressed for developing test cases to perform regression testing?	**16**	**CO3**	**2**
7	Explain in detail about System Testing and its types	**16**	**CO3**	**3**
8	Discuss about Some of the important and commonly used non-functional testing.	**16**	**CO3**	**3**
UNIT - 4				
Q. No.	**PART-A**	**Marks**	**CO**	**BL**
1	Define Goal and Policy	**2**	**CO4**	**2**
2	List any 5 Test plan components.	**2**	**CO4**	**2**
3	Define a Work Breakdown Structure.(WBS)	**2**	**CO4**	**2**
4	What is Debugging?	**2**	**CO4**	**1**

5	What is Testing?	**2**	**CO4**	**2**
6	Write the test term hierarchy?	**2**	**CO4**	**2**
7	What are the Three critical groups in testing planning and test plan policy?	**2**	**CO4**	**2**
8	Define Test Log.	**2**	**CO4**	**2**
9	Define Test incident Report	**2**	**CO4**	**2**
10	Write any 5 WBS elements for testing.	**2**	**CO4**	**4**
11	Define Walkthrough.	**2**	**CO4**	**2**
12	What are the three types of goals in testing?	**2**	**CO4**	**4**
13	What are the classes of Review?	**2**	**CO4**	**1**
14	What is Test Review?	**2**	**CO4**	**2**
15	What are the various components of the test plan?	**2**	**CO4**	**2**
Q. No.	**PART – B**	**Marks**	**CO**	**BL**
1	Explain in detail about Testing and Debugging goals and Policy.	**16**	**CO4**	**3**
2	Briefly discuss about Test Plan Component?	**16**	**CO4**	**2**
3	Explain Component & Configuration Testing	**16**	**CO4**	**3**
4	Explain in detail about Configuration Testing	**16**	**CO4**	**2**
5	Explain the User Interface Testing	**16**	**CO4**	**3**
6	Explain in detail about Review Checklist	**16**	**CO4**	**2**
7	Discuss the Concept and Types of Review	**16**	**CO4**	**4**
8	Explain in detail about three critical groups helping for software testing..	**16**	**CO4**	**2**
UNIT - 5				
Q. No.	**PART-A**	**Marks**	**CO**	**BL**
1	Write few Steps for initiating the software measurement program assessing organizational sponsorship, commitment, and involvement;	**2**	**CO5**	**2**
2	Give the Need for a Formal Test Measurement Program	**2**	**CO5**	**2**

3	Definition of Measurement.	**2**	**CO5**	**1**
4	What is software quality costs?	**2**	**CO5**	**2**
5	Define Quality control.	**2**	**CO5**	**1**
6	What are the three critical views in software testing?	**2**	**CO5**	**1**
7	What are the Software Measurement Principles?	**2**	**CO5**	**1**
8	Write the Characteristics of quality control?	**2**	**CO5**	**4**
9	Give the categories of Quality Cost?	**2**	**CO5**	**4**
10	Describe any two Advantages of TMM?	**2**	**CO5**	**2**
11	Give the need of TMM.	**2**	**CO5**	**1**
12	Define Testing Maturity	**2**	**CO5**	**4**
13	What is TMM?	**3**	**CO5**	**2**
14	What is Process Centric approach?	**4**	**CO5**	**2**
15	What is software quality evaluation?	**5**	**CO5**	**2**
Q. No.	**PART – B**	**Marks**	**CO**	**BL**
1	Explain briefly about Initiation of Measurement Program?	**16**	**CO5**	**1**
2	Briefly discuss about TMM Concept?	**16**	**CO5**	**2**
3	Explain about The Role of Operational Profiles and Usage Models in Quality Control.	**16**	**CO5**	**2**
4	Explain the following? Quality Cost Quality Control	**16**	**CO5**	**3**
5	Explain about different levels of TMM?	**16**	**CO5**	**3**
6	Explain in detail about Three critical views of Software Testing.	**16**	**CO5**	**2**
7	Explain about Usage Models in Quality Control.	**16**	**CO5**	**3**
8	How the TMM levels are supporting to the softwre testing.	**16**	**CO5**	**3**