

# PSN COLLEGE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS)

Melathediyoor, Tirunelveli – 627 152

(Approved by AICTE and Recognized by UGC Section 2f & 12B)  
(Accredited by NAAC with A+ grade, Affiliated to Anna University)  
An ISO 9001:2015 Certified Institution

Web site: [www.psnecet.ac.in](http://www.psnecet.ac.in) Email.ID: [principal@psnecet.ac.in](mailto:principal@psnecet.ac.in)

Phone. No: 04634-27777



## Department of Computer Science and Engineering

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

Branch: <b>B.E CSE</b>	Department of <b>Computer Science and Engineering</b>	Year / Semester : IV / VIII		
Course Code: 503217	Course Name: Software Testing			
Max. Marks: 100 Marks	Session: FN	Regulation: <b>2018</b>		
<b>Course Outcomes (COs):</b> At the end of the course, the student will be able to				
<b>CO1</b> :	Describe testing fundamentals, principles, TMM levels and classify the defects.			
<b>CO2</b> :	Apply suitable Black box and White Box testing techniques and design Test cases in practice.			
<b>CO3</b> :	Understand the concept of different levels of software testing and how those testing methods are used in software development.			
<b>CO4</b> :	Describe to develop test plans, testing goals & policies and perform reviews for practical applications.			
<b>CO5</b> :	Determine the right method of measurement program to support product and quality testing activity.			
<b>BL</b> – Bloom's Level (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating); <b>CO</b> – Course Outcome;				
<b>UNIT - 1</b>				
Q. No.	PART-A	Mark s	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
<b>Q. No.</b>	<b>PART – B</b>	<b>Marks</b>	<b>CO</b>	<b>BL</b>
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	Explain any Three defects types with example.	16	CO1	2
<b>UNIT - 2</b>				
<b>Q. No.</b>	<b>PART-A</b>	<b>Marks</b>	<b>CO</b>	<b>BL</b>
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
<b>Q. No.</b>	<b>PART – B</b>	<b>Mark s</b>	<b>CO</b>	<b>BL</b>
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	EEexplain all additional white box test design approaches?	16	CO2	3
8	How Black box testing is working .Explain in detail.	16	CO2	3
<b>UNIT - 3</b>				
<b>Q. No.</b>	<b>PART-A</b>	<b>Mark s</b>	<b>CO</b>	<b>BL</b>
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 importance 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
<b>Q. No.</b>	<b>PART – B</b>	<b>Mark s</b>	<b>CO</b>	<b>BL</b>
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
<b>UNIT - 4</b>				
<b>Q. No.</b>	<b>PART-A</b>	<b>Mark s</b>	<b>CO</b>	<b>BL</b>
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
<b>Q. No.</b>	<b>PART – B</b>	<b>Mark s</b>	<b>CO</b>	<b>BL</b>
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
<b>UNIT - 5</b>				
<b>Q. No.</b>	<b>PART-A</b>	<b>Mark s</b>	<b>CO</b>	<b>BL</b>
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
<b>Q. No.</b>	<b>PART – B</b>	<b>Mark s</b>	<b>CO</b>	<b>BL</b>
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