

Roll No: .....

**Hi-Tech Institute of Engineering & Technology**  
**DEPARTMENT OF MCA**  
**Course- MCA**  
**(SEM-III)Odd Model Test Paper 2023-24**  
**SET-A**

**Subject Code: KCA024**

**Subject Name: Software Testing & Quality Assurance**

**Faculty Name: Prachi Vashist**

**Time: 3 hours**

**Total Marks: 100**

**Note: 1. Attempt all Sections. If require any missing data; then choose suitably.**

**1. Attempt all parts of the following**

**(2\*10=20)**

Q.No	1	Marks	CO
a.	What are error, fault and failure?	2	1
b.	Differentiate between verification and validation.	2	1
c.	Discuss the concept of debugging.	2	2
d.	What are the steps involved in test case design.	2	2
e.	Explain the difference between black box testing & white box testing.	2	2
f.	What is ISO? Explain ISO model.	2	4
g.	Explain the concept of BVA(boundary value analysis) and ECP(equivalence class partitioning).	2	2
h.	Explain points for good code writing practices.	2	4
i.	Explain the term SQA and components of SQA.	2	5
j.	Explain Taguchi Quality loss function.	2	3

**2. Attempt any four questions: -**

**10\*3=30**

Q.No	2	Marks	CO
a.	Illustrate all necessary steps of withdrawing cash from an ATM machine. Generate test cases using class testing.	10	1
b.	Explain defect injection and how you will insert defect in code.	10	3
c.	Explain PSP and TSP.	10	5
d.	Explain the various steps of the regression testing process. Which step is the most important and why?	10	2
e.	What are 7QC tools and modern tools?	10	4

**3. Attempt any ONE part of the following:**

**10\*1 = 10**

Q.No	3	Marks	CO
a.	Explain various “features and characteristics” of software that define its quality?	10	5
b.	Explain various means for quality of software and explain the concept of SQA in detail.	10	5

**4. Attempt any ONE part of the following:****10\*1 = 10**

Q.No	4	Marks	CO
a.	Describe each phase of SDLC & STLC in detail with diagram.	10	3
b.	Consider a program to multiply and divide two numbers. The inputs may be two valid integers (say a and b) in the range of [0, 100]. (i) Create equivalence class and generate test cases (ii) Develop a decision table and generate test cases (iii) Design a cause-effect graph and write test cases accordingly.	10	3

**5. Attempt any ONE part of the following:****10\*1 = 10**

Q.No	5	Marks	CO
a.	What is CMM? Explain in detail. Compare CMM with CMMI.	10	4
b.	Illustrate the SQA architecture with its components. Should QA's resolve production issues?	10	4

**6. Attempt any ONE part of the following:****10\*1 = 10**

Q.No	6	Marks	CO
a.	What are the differences between regression testing and development testing? Do we perform regression testing before the release of the software?	10	2
b.	Write a short note on : Peer review Walkthrough Inspection	10	2

**7. Attempt any ONE part of the following:****10\*1 = 10**

Q.No	7	Marks	CO
a.	Explain the various levels of testing? Which testing level is easy to test and why?	10	1
b.	Zero Defect Software is dependent on the definition of test adequacy criteria. Justify your answer.	10	1