Hi-Tech Institute of Engineering & Technology
DEPARTMENT OF COMPUTER APPLICATION
Course- MCA.
(SEM-3) ODD SEMESTER Model paper- 1

Subject Code: KCA-302   **Subject Name:Software Engineering**

Time: 3: 00 Hours   **Total Marks: 100**

SECTION-A

1. Attempt all question in brief.   **2x 10 = 20**

Q.No	Question	Marks	CO
a.	List 2 reasons for software crisis.	2	1
b.	"Software is developed or engineered; it is not manufactured in classical sense". Explain	2	1
c.	Describe 2 characteristics of SRS.	2	2
d.	Describe ER Diagram	2	2
e.	Describe structure chart	2	3
f.	List two disadvantages of Lines of Code.	2	3
g.	What are the two main activities of regression testing?	2	4
h.	Differentiate between test drivers and test stubs	2	4
i.	Define need of maintenance.	2	5
j.	Discuss the ways to avoid risk.	2	5

SECTION-B

2. Attempt any three of the following: **10x3 =30**

Q.No	Question	Marks	CO
a.	Discuss the prototype model. What is the effect of designing a prototype on the overall cost of the software project?	10	1
b.	What is feasibility study?What are the contents we should contain in the feasibility report? (Draw a DFD for result preparation automation system of MCA Courses of AKTU university. Clearly describe the working of that system, also mention all assumptions made by you.	10	2
c.	What is integration testing? Explain different types of integration testing	10	3
d.	Discuss risk management? Explain how to select the best risk reduction technique when there are many ways of reducing	10	4
e.	Discuss the prototype model. What is the effect of designing a prototype on the overall cost of the software project?	10	5

SECTION-C

3. Attempt any ONE part of the following: **10x1 = 10**

Q.No	Question	Marks	CO
a.	What is Software development life cycle? Discuss the process for Spiral model.	10	1
b.	Current trends in Software Engineering are moving away from the waterfall model for large projects and moving toward iterative methods? What are we gaining and losing as a result? Explain with suitable examples.	10	1

4. Attempt any ONE part of the following: **10x1 = 10**

Q.No	Question	Marks	CO
a.	Discuss the significance of requirement engineering. Also write the various steps with requirement engineering with proper explanation.	10	2
b.	What do you understand with the term "requirement elicitation"? Discuss any two techniques.	10	2

5. Attempt any ONE part of the following: **10x1 = 10**

Q.No	Question	Marks	CO
a.	Define Cohesion. What is Functional Cohesion? Does Functional Cohesion within a module bring about good software design? Give an example. What type of coupling and cohesion between/among modules is preferred for good quality software?	10	3
b.	What is a formal technical review? What ate the objectives of formal technical review? Give a comparative study of code inspection, reviews and walk-through.	10	3

6. Attempt any ONE part of the following: **10x1 = 10**

Q.No	Question	Marks	CO

a.	Consider the following source code: void sort (int *a, int n) {
	 inti, j, t;
	if (n < 2) return;
	for (i=0; i< n-1; i++)
	 {
	for (j=i+1; j < n; j++)
	{
	if (a[i] > a[j])
	{
	 t = a[i]; a[i] = a[j]; a[j] = t;
	}
	}
	}
	}
	
	Calculate the formula of Halstead Analysis for Volume and Difficulty-level of the code?
		10	4

b.	Write the difference between black-box testing and white-box testing. Consider a program which computes the square root of an input integer between 0 and 5000. Determine the equivalence class test cases. Determine the test cases using boundary value analysis also.	10	4

7. Attempt any ONE part of the following: **10x1 = 10**

Q.No	Question	Marks	CO
a.	Categorize the use of case tools in software engineering with their advantages and disadvantages.	10	5
b.	What are the benefits of Software Configuration Management (SCM)? Elaborate the activities for SCM performed during SDLC?	10	5