

Hall Ticket Number:

160220737160

Code No. : 14648 AS

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD

Accredited by NAAC with A++ Grade

B.E. (I.T.) IV-Semester Advanced Supplementary Examinations, September-2022.

Software Engineering

Time: 3 hours

Max. Marks: 60

Note: Answer all questions from Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	Differentiate between Linear and evolutionary process flows	2	2	1	1
2.	What is a process pattern? Why is it required	2	2	1	1
3.	What is Quality Function Deployment? Why is it used?	2	1	2	1
4.	List the problems that occur when the requirements are elicited from 2 or 3 different customers.	2	3	2	1
5.	Give two reasons for the need of Software Architecture	2	3	3	1
6.	State the Open-Closed Design Principle	2	1	3	1
7.	Differentiate between Verification and Validation	2	2	4	1
8.	What is Smoke Testing	2	1	4	1
9.	What is Goal oriented software measurement	2	1	5	1
10.	Differentiate between Reactive Versus Proactive risk	2	2	5	1
Part-B (5 × 8 = 40 Marks)					
11. a)	Describe Rational Unified Process. Specify the deliverables of each phase	4	1	1	1
b)	What are the differences between Spiral model and other software process models	4	1	1	1
12. a)	The department of public works for a large city has decided to develop a Web-based pothole tracking and repair system (PHTRS). "Citizens can log onto a website and report the location and severity of potholes. As potholes are reported they are logged within a "public works department repair system" and are assigned an identifying number, stored by street address, size (on a scale of 1 to 10), location (middle, curb, etc.), district (determined from street address), and repair priority (determined from the size of the pothole). Work order data are associated with each pothole and include pothole location and size, repair crew identifying number, number of people on crew, equipment assigned, hours applied to repair, hole status (work in progress, repaired, temporary repair, not repaired), amount of filler material used, and cost of repair (computed from hours applied, number of people, material and equipment used). Finally, a damage file is created to hold information about reported damage due to the pothole and includes citizen's name, address, phone number, type of damage, and dollar amount of damage. PHTRS is an online system; all queries are to be made interactively. a. Draw a UML use case diagram for the PHTRS system. You'll have to make a number of assumptions about the manner in which a user interacts with this system. b. Develop a class model for the PHTRS system.	5	4	2	2

Contd... 2

	b)	List and explain the Design Concepts	3	2	2	1
13.	a)	Discuss Component Qualification, Adaptation and composition w.r.t Component based Software Engineering	4	2	3	2
	b)	Describe the User-Interface Design Process. Why is it important to provide accessibility in Software applications	4	3	3	1
14.	a)	What is Software Quality Assurance? Explain software quality goals, attributes and associated metrics	4	2	4	1
	b)	Differentiate between Black box testing and White box testing	4	3	4	1
15.	a)	What are the function based metrics and explain how Function point is computed.	4	3	5	1
	b)	Illustrate the process of assessing risk impact	4	3	5	1
16.	a)	Explain the incremental model of software development. How are the requirement changes handled in incremental model	4	3	1	2
	b)	What is a behavioral model? List and explain the steps required to create a behavioral model	4	2	2	1
17.		Answer any <i>two</i> of the following:				
	a)	Briefly discuss the various architectural styles .	4	2	3	1
	b)	Analyze the Integration process of Top-down and Bottom-up Integration	4	3	4	1
	c)	Explain the metrics for object oriented testing	4	2	5	1

M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	20%
ii)	Blooms Taxonomy Level – 2	40%
iii)	Blooms Taxonomy Level – 3 & 4	40%
