Hall Ticket Number:

Code No. : 16242 N/O

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD
Accredited by NAAC with A++ Grade
B.E. VI-Semester Main & Backlog Examinations, May/June-2023
Software Engineering
(Common to CSE & AIML)

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.	Give some software development myths.	2	1	1	1,2
2.	What is the purpose of process assessment? How does the process is assessed?	2	1	1	1,2
3.	Illustrate the concept of Agile Process.	2	2	2	1,2
4.	"Software requirements specification formally captures the requirements of the software to be developed. Hence it is important that requirements are free from defects like incorrect or conflicting requirements". Justify the above statement.	2	3	2	1,2
5.	What are the types of relationships in UML?	2	1	3	1,2
6.	Draw the use case diagram for an airline reservation system. Summarize the purpose of each use case, actor and its importance.	2	3	3	1,2
7.	Differentiate Alpha testing and Beta testing.	2	2	4	1,2
8.	Explain how validation is different from verification with an example.	2	2	4	1,2
9.	State the purpose of SCM.	2	1	5	1,2
10.	How do you analyze security requirements?	2	1	5	1,2

Part-B (5 × 8 = 40 Marks)

Q. No.	Stem of the question	M	L	CO	PO
11. a)	Distinguish between personal process model and team process model.	4	2	1	1,2
b)	"Waterfall model is not suitable for real time system development". Justify.	4	2	1	1,2
12. a)	What is requirements elicitation? Briefly describe the activities performed in is requirements elicitation phase.	4	2	2	1,2
b)	Develop the Extreme programming (XP) concept for the case study. E-vote website details are given in the case study. The categories of users are: Registered users: The users who have registered and can cast vote. Authorized user: Each user can cast vote exactly once. The major activities in the website are, ○ Login/Sign up. ○ Casting a vote.	4	2	2	1,2

		M	L	CO	PO
13. a)	Create a state diagram for the Windows-NT login system. Assume that the user is given three attempts to properly enter her/his password.	4	4	3	1,2
b)	Design a Class Diagram for a web-based library system. The library system needs to be able to conduct simple bookkeeping tasks, such as keeping track of the books and journals that users have borrowed. Staff members are allowed to borrow both books and journals, but students can only borrow books. The system should also allow users to browse books, reserve books (if there is a copy available) and enable librarians to keep the catalogue up to date. You will need to identify the actors in the system, the functional requirements of the system (i.e. the use cases), and the relationships between actors and functional requirements.	4	3	3	1,2
14. a)	What are the most common challenges that the mobile application testers face during testing phase and list out the various strategies that they should follow to test a new mobile app?	4	3	4	1,2
b)	Design flow graph to find out paths, Regions and calculate Cyclomatic complexity for the given code- IF P = 786 THEN IF Q > R THEN P = Q ELSE P = R END IF END IF PRINT P	4	3	4	1,2
15. a)	Explain Software Configuration Management process.	4	1	5	1,2
b)	What is the overall strategy for software testing? While developing an application for ola cab services, identify various metrics for testing this application and What are the possible things to consider while testing a mobile application through a black box technique?	4	3	5	1,2
16. a)	Distinguish the features of Incremental and iterative process model	4	1	1	1,2
b)	You were a Software Engineer and the user wants you to develop an application for delivering the Medicines online. Show the functional decomposition for this application and list out the required modules.	4	2	2	1,2
17.	Answer any *two* of the following:				
a)	What is state chart diagram? Design the state chart diagram for ticket object in train reservation system.	4	3	3	1,2
b)	Differentiate between white box and black box testing with an example.	4	1	4	1,2
c)	What are the future trends in software metrics and how they can be used to support software development practices such as Agile and DevOps?	4	3	5	1,2

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

i)	Blooms Taxonomy Level – 1	27.5%
ii)	Blooms Taxonomy Level – 2	32.5%
iii)	Blooms Taxonomy Level – 3 & 4	40%

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