Reg. No.															

B.Tech. DEGREE EXAMINATION, DECEMBER 2023

Fourth Semester

18CSC206J – SOFTWARE ENGINEERING AND PRODUCT MANAGEMENT

(For the candidates admitted from the academic year 2020-2021 & 2021-2022)

Note:

(i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.

(ii) **Part - B & Part - C** should be answered in answer booklet.

Time: 3 hours Max. Marks: 100

PART – A (20 × 1 = 20 Marks)

Answer **ALL** Questions

	Marks	BL	CO	PO
1. _____ is a controlled process of initiating, planning, executing and closing a project. (A) System design (B) System analysis (C) Project scheduling (D) Project management	1	1	1	11
2. _____ is also known as reuse engineering. (A) Reverse engineering (B) Reengineering (C) Forward engineering (D) Surface engineering	1	1	5	1
3. _____ type of testing is generally used in software maintenance. (A) Unit (B) Integration (C) System (D) Regression	1	1	4	5
4. Identity the cost estimation technique, independent of programming language and can be measured before software design and code is done. (A) Lines of code (B) Function points (C) Process-based (D) Tool-based	1	2	1	2
5. In which model there is no planning involved in the whole process and is mostly an ad-hoc approach? (A) Quick fix model (B) Boehm's model (C) Osborne's model (D) Iterative enhancement model	1	1	5	11
6. The term project velocity is a suitable measure of _____. (A) Team productivity (B) Team achievement (C) Team cooperation (D) Team performance	1	1	1	1
7. Cocomo stands for _____. (A) Consumed cost model (B) Constructive cost model (C) Common control model (D) Composition cost model	1	1	1	1
8. Technical risks pose a danger to the software's _____. (A) System development (B) Quality and timelines (C) System integration (D) Unit modules	1	1	2	1

9. _____ elements indicates how software functionality and subsystems will be allocated within the physical computing environment that will support the software. 1 1 2 3

(A) Component level design (B) Deployment level design
(C) Architectural design elements (D) Interface design elements

10. Which focuses on the profile of the users, who will interact with the system? 1 1 2 3

(A) Interface analysis (B) Interface design
(C) Interface construction (D) Interface validation

11. Fixing defects at the stage of testing leads to _____. 1 2 4 2

(A) High cost (B) High maintenance
(C) Time consuming (D) Less efficiency

12. CASE stands for _____. 1 1 3 5

(A) Cost Aided Software Engineering
(B) Computer Aided Software Engineering
(C) Control Aided Software Engineering
(D) Costumer Aided Software Engineering

13. Standard naming conventions can be used so that the code has _____. 1 1 3 3

(A) Modularity (B) Simplicity
(C) Clarity (D) Reliability

14. Software maintenance can be categorized into _____. 1 1 5 11

(A) Two (B) Three
(C) Four (D) Five

15. _____ focuses on the ability of the interface, the degree to which the interface is easy to use and easy to learn, and the user's acceptance of the interface as a useful tool in their work. 1 1 2 3

(A) Interface analysis (B) Interface design
(C) Interface construction (D) Interface validation

16. Which is the most labor-intensive phase in software development? 1 1 3 3

(A) Software testing (B) Software developing
(C) Software debugging (D) Software constructing

17. _____ is the final review of the software code. 1 1 3 3

(A) Desk check (B) Walk through
(C) Inspection (D) Code review

18. _____ increases software code reuse and enhances productivity of developers. 1 1 4 1

(A) Modularity (B) Simplicity
(C) Clarity (D) Reliability

19. Which of the following is not a part of the test document? 1 1 5 1

(A) Test case (B) Requirements traceability matrix
(C) Test strategy (D) Project initiation note

20.	Validation testing is also known as _____. (A) Dynamic testing (B) Verification testing (C) System testing (D) Static testing	1	1	4	3

PART – B (5 × 4 = 20 Marks)
Answer **ANY FIVE** Questions

		Marks	BL	CO	PO
21.	Write short notes on how quality function deployment is applied in requirement elicitation. And list the types of requirements identified by QFD.	4	2	1	1
22.	Recall and list the questions, the team members of the scrum process model will respond to in the daily meeting.	4	1	2	9
23.	Describe CASE tools.	4	2	3	5
24.	Describe the objectives of web app's design.	4	2	2	3
25.	Enumerate the coding methods.	4	1	3	3
26.	Compare verification and validation.	4	2	4	2
27.	Illustrate the flow of maintenance life cycle.	4	3	5	5

PART – C (5 × 12 = 60 Marks)
Answer **ALL** Questions

		Marks	BL	CO	PO
28. a.	A project size of 200 KLOC is to be developed. The software development team has average experience on similar types of projects. The project schedule is medium. Identity and state which mode will be suitable to calculate the effort, development time, effort staff size, and productivity of the project, also calculate the same. (Organic: $a_b = 2.4, b_b = 1.05, c_b = 2.5, d_b = 0.38$ Semi-detached: $a_b = 3.0, b_b = 1.12, c_b = 2.5, d_b = 0.35$ Embedded: $a_b = 3.6, b_b = 1.20, c_b = 2.5, d_b = 0.32$)	12	4	1	11
	(OR)				
b.	The gaming industry strongly relies on the initial versions of games created to have a kick start and then adapt to the feedback from various perspectives. Also, if the industry requires a proper risk evaluation, choose and explain a model that suits this scenario. List the advantages and disadvantages.	12	5	1	3
29. a.	For Google doc's web application design, discuss the content analysis and interaction analysis with diagrams for each.	12	3	2	3
	(OR)				
b.	For object-oriented systems, star UMl tools allow developers to produce system UML models that are syntactically correct and consistent with each other. They can be refined and developed to produce executable code. Sketch the activity diagram for a ticket vending machine.	12	3	2	5

30. a.	Classify the different kinds of reviews done at different stages in software code writing.	12	4	3	3
	(OR)				
b.	Categorize the various coding standards and explain its characteristics with examples.	12	4	3	3
31. a.	Illustrate and explain the test life cycle phases.	12	4	4	5
	(OR)				
b.	Create a test case report and explain with an example.	12	6	4	5
32. a.	Categorize the type of product release. Enumerate the product implementation tasks with detailed description.	12	4	5	1
	(OR)				
b.	Elaborate about maintenance cost and elucidate the financial causes that portrays the significance of maintenance.	12	2	5	11

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