University of Mumbai

Examination 2021 under cluster __(Lead College: _____)

Examinations Commencing from 1st June 2021 to 14th June 2021

Program: **Computer Engineering_**

Curriculum Scheme: Rev 2016

Examination: TE Semester VI

Course Code: **CSC601**_and Course Name:**Software Engineering_**

Time: 2 hours Max. Marks: 80

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Q1.	**Choose the correct option for following questions. All the Questions are compulsory and carry equal marks**
1.	COCOMO-II model is an example of :
Option A:	Risk Management
Option B:	Estimation Models
Option C:	Requirement Analysis
Option D:	software testing
2.	Empirical Estimations model are constructed on:
Option A:	Expert judgment based on past projects
Option B:	Regression models derived from historical project data
Option C:	Expected value estimation
Option D:	Trial and error parameter values
3.	Which of the following does not fall under project scheduling?
Option A:	Effort validation
Option B:	Market assessment
Option C:	Compartmentalization
Option D:	Time allocation
4.	Which of the following software process models couples the iterative nature of prototyping with the controlled and systematic factors of the linear sequential model?
Option A:	The Spiral Model.
Option B:	The Waterfall Model.
Option C:	The Incremental Model.
Option D:	The Revolutionary Model
5.	A Person is anyone within the company that has business interest in the product to be built and might be rewarded for the outcome or criticized if the attempt fails.
Option A:	Developer
Option B:	Stakeholder
Option C:	Coder

Option D:	Proprietor
6.	A technique for handling the introduction of products with an emphasis on chronic transparency and not overburdening the development team is ----------
Option A:	Kanban
Option B:	Scrum
Option C:	Agile
Option D:	Development
7.	Which of the following is a useful measure for measuring the quality of a system?
Option A:	integrity, sales, usability, maintainability
Option B:	Stakeholders ,integrity, usability, sales
Option C:	correctness, usability, maintainability, integrity
Option D:	Correctness ,size ,usability ,maintainability
8.	The 3 P's in Project management are:
Option A:	Process, Performance and Product
Option B:	Process, Product and People
Option C:	Product, Performance and People
Option D:	People, Process and Performance
9.	In LOC Estimation techniques Problem decompositions are based on:
Option A:	project schedule
Option B:	process activities
Option C:	product specification
Option D:	software function
10.	SRS is said to be consistent if and only if
Option A:	its structure and style are such that any changes to the requirements can be made easily while retaining the style and structure
Option B:	every requirement stated therein is verifiable
Option C:	every requirement stated therein is one that the software shall meet
Option D:	no subset of individual requirements described in it conflict with each other
11.	What questions do black-box tests answer?
Option A:	Are all independent paths within a module exercised?
Option B:	Is the system particularly sensitive to certain input values?
Option C:	Does the internal structure to ensure their validity are exercised?
Option D:	Do all loops at their boundaries and within their operational bounds are exercised?
12.	In the Change control process, the change report is evaluated finally by whom?
Option A:	Software Developer
Option B:	Project Manager
Option C:	Software Configuration Manager

Option D:	Change Control authority
13.	Which design concept defines a direct outgrowth of modularity and the concepts of abstraction and information hiding?
Option A:	Refinement
Option B:	Architectural Patterns
Option C:	Functional Independence
Option D:	Refactoring
14.	The reverse engineering is concerned with
Option A:	Any adaptation of the system
Option B:	Any reconstruction of the system
Option C:	Any maintenance of the system
Option D:	Documentation change of the software
15.	Estimate the risk exposure, if the risk probability is given as 70%, 15 components need to be developed from scratch and the average component is 100 LOC with software engineering cost for each LOC is Rs.12.
Option A:	Rs.10,500
Option B:	Rs.18,000
Option C:	Rs.8,400
Option D:	Rs.12, 600
16.	Which one among the following provides the upper bound on the number of test cases that will be required to guarantee that every statement in the program has been executed at least once
Option A:	Cyclomatic Complexity
Option B:	Flowchart and flow graph
Option C:	Boundary value analysis
Option D:	Independent Program Paths
17.	Which of the following errors should not be tested when error handling is evaluated?
Option A:	Error description is impossible to understand
Option B:	Error noted does not correspond to error encountered
Option C:	Error condition causes system intervention
Option D:	Error description provide enough information to assist in the location of the cause of the error
18.	Which of the following is not a SQA plan for a project?
Option A:	evaluations to be performed
Option B:	duration of technical work
Option C:	audits and reviews to be performed
Option D:	procedures for error reporting and tracking

19.	Which of the following is not the golden rule for user interface design?
Option A:	Place the user in control
Option B:	Reduce the user's memory load
Option C:	Make the interface consistent
Option D:	Risk identification
20.	Independence of a module is measured using the following 2 qualitative criteria :
Option A:	Module and modularity
Option B:	Cyclomatic complexity and modularity
Option C:	Cohesion and coupling
Option D:	Abstraction and function point

Q2.	**Solve any Two Questions out of Three 10 marks each**
A	Differentiate between Spiral and Agile process models. Explain which process model is appropriate for developing any Mobile application.
B	Explain the SCM Process. Differentiate between Quality Assurance and Quality control
C	Describe the various testing strategies for a conventional system. Also discuss the different testing methods applicable for Web application.

Q3.	**Solve any Two Questions out of Three 10 marks each**
A	Is Risk can be quantified? Justify your answer. How to practice risk management? Explain in detail.
B	Explain COCOMO II Model with a suitable example. A project size of 200 KLOC is to be developed. Software development team has average experience on similar types of projects. The project schedule is not very tight. Calculate the Effort, development time, average staff size, and productivity for the project.
C	Describe verification and validation with example. What comes first? Justify