

Priyadarshini College of Engineering, Nagpur
Sessional Examination (2022-23) Odd Semester
B.Tech. Fifth Semester (Computer Technology) (C.B.C.S.)
Software Engineering and Project Management

P. Pages: 2

PCE/KW/22/BTCT503T

Time: Three Hours

Max. Marks: 70

Notes:

1. All questions carry marks as indicated.
2. Solve Question 1 or Question 2.
3. Solve Question 3 or Question 4.
4. Solve Question 5 or Question 6.
5. Solve Question 7 or Question 8.
6. Solve Question 9 or Question 10.
7. Due credit will be given to neatness and adequate dimensions.
8. Assume suitable data wherever necessary.
9. Illustrate your answers whenever necessary with the help of neat sketches.

Q. No.	Question	CO	B	Ma
			T	rks
1.	a) Define software engineering and explain software Engineering-a layered technology.	CO1	II	7
	b) Illustrate unified process model for software development with neat diagram.	CO1	II	7
	OR			
2.	a) Compare Waterfall model with RAD model	CO1	II	7
	b) List and explain common process framework for software engineering in detail.	CO1	II	7 (2)
3.	a) What is an Agile Process? State its principles and different methods of Agile.	CO2	II	7 (3)
	b) List and explain various system elements of computer - based system.	CO2	II	7
	OR			
4.	a) Describe all the stages of Requirement Engineering in detail.	CO2	II	7
	b) What is SRS? State significance of SRS.	CO2	I	3
	c) What is QFD? What are various types of requirements defined in QFD?	CO2	I	4
5.	a) Discuss Object Oriented Modeling in detail.	CO3	II	6
	b) Define following software design concepts : 1) Abstraction 2) Pattern 3) Modularity 4) Information Hiding	CO3	I	8
	OR			
6.	a) What are the components of Analysis Modelling? Discuss Scenario based modeling.	CO3	I	7
	b) Discuss E-R model with an example.	CO3	II	7 (5)
7.	a) What do you mean by cyclomatic complexity? Calculate the cyclomatic	CO4	II	8

Q. No.

Question

CO

B

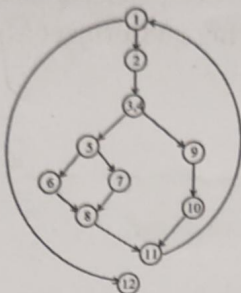
Ma

T

rks

I

complexity for the following graph.



- b) What are the different quality factors used to measure software quality? Explain CO4 II 6

OR

8. a) Discuss following testing strategies. CO4 II 10

- i) Unit Testing
- ii) Integration Testing
- iii) Regression Testing
- iv) Smoke Testing
- v) System Testing

- b) Illustrate size oriented metric? CO4 II 4

9. a) Discuss RMMM. CO5 II 4

- b) What is Change Management ? Discuss Software Configuration Management CO5 II 5

- c) What is Project Scheduling? Explain the quality factors of project scheduling. CO5 II 5

OR

10. a) What are Risks in Software development? Explain Risk Projection. CO5 II 6

- b) What are the Functions of an SCM Repository. CO5 II 4

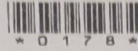
- c) Explain with example, how FP based estimation is performed. CO5 II 4

*****8*****All the Best*****

B.Tech. (Computer Technology) Fifth Semester (C.B.C.S.) Winter 2022
Software Engineering and Project Management

P. Pages : 2

Time : Three Hours



SPM/KW/22/2674

Max. Marks : 70

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Due credit will be given to neatness and adequate dimensions.
 9. Assume suitable data whenever necessary.
 10. Diagrams and chemical equations should be given whenever necessary.
 11. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What are the different characteristics of software. Explain it's role in software development. 8
- b) Explain the unified process model. What are the work products that may get generated in this model? 6

OR

2. a) Describe evolutionary process models. 9
 - b) Comment on "Software engineering in a layered technology". 5
3. Write short note on:
- i) Requirement engineering process. 5
 - ii) Adaptive software development. 5
 - iii) Extreme programming. 4

OR

4. a) What is system engineering? Explain with the help of diagram. 7
 - b) Define business process engineering with the help of suitable diagram. 7
5. a) Write about behavioral modeling in detail. 7
 - b) Explain scenario based modeling in detail. 7

OR

6. a) Explain about flow oriented modeling in detail.

7

7

b) Write short notes on following

i) Information hiding

ii) Refactoring

7

7. a) Explain software debugging. Write debugging strategies.

7

b) Explain Black Box testing technique.

OR

8. a) What are measures, metrics and Indicators? Explain function point metric.

7

b) Explain white box testing in detail.

7

9. Write short note on following:

i) SCM

7

ii) RMMM plan.

7

OR

10. a) List and explain various types of s/w risks. Also define software Risk.

7

b) Write short note on project scheduling.

7

PRIYADARSHINI COLLEGE OF ENGINEERING, NAGPUR

Department: Computer Technology

Semester: V Section: A and B

Subject:SEPM

Duration: 1.5 Hrs

CAT-I (2022-23)

Subject Code:BTCT503T

Max.Marks:35

Note:

- 1) All questions are compulsory.
- 2) All questions carry marks as indicated.
- 3) Due credits will be given on neatness.
- 4) Draw diagram wherever it is necessary.

Questions		Marks	CO	BL
Q.1	A] In the Analysis phase, the development of the _____ occurs, which is a clear statement of the goals and objectives of the project. a) documentation b) flowchart c) program specification d) design	1	CO3	II
	B] Which design identifies the software as a system with many components interacting with each other? a) Architectural design b) High-level design c) Detailed design d) Both B & C	1	CO3	II
	C. What do you mean by data modeling? Explain.	5	CO3	II
OR				
Q.2	A]. Which tool is use for structured designing ? a) Program flowchart b) Structure chart c) Data-flow diagram d) Module	1	CO3	II
	B] Component level design is concerned with a) Flow oriented analysis b) Class based analysis c) Both of the above d) None of the above	1	CO3	II
	C. What is modularity? How to find moderate number of modules required with moderate cost of software?	5	CO3	II
Q.3	A. Defects are less costly if detected in which of the following phases a. Coding b) Design c) Requirements Gathering d) Implementation	1	CO4	II
	B. Which of the following is/are White box technique? a) Statement Testing b) Decision Testing c) Condition Coverage d) All of the mentioned	1	CO4	I
	C. Explain in detail White Box Testing and Black Box Testing.	5	CO4	II
	D. Explain Function points with an example.	7	CO4	II
OR				
Q.4	A. Degree to which design specifications are followed in manufacturing the product is called a) Quality Control b) Quality of conformance c) Quality Assurance d) None of the mentioned	1	CO4	II
	B. Quality Management is known as _____ a) SQI b) SQA c) SQM d) SQA and SQM	1	CO4	II
	C. Differentiate different testing strategies in detail.	5	CO4	II
	D. Explain the metrics for Design Modelling.	7	CO4	II
Q.5	A. What kind of quality cost is incurred when an error is detected in a product prior to shipment? a) Prevention b) Internal Failure c) External Failure d) Appraisal	1	CO5	II
	B. Which one of the following is not a software process quality? a) Visibility b) Timeliness c) Productivity d) Portability	1	CO5	II
	C. Explain Project scheduling and project metrics.	5	CO5	II

	D.Explain what is SCM? Why it is Important? What are different steps involved for same.	7	CO5	II
OR				
Q.6	A. The incorrect activity among the following for the configuration management of a software system is _____ a) Version management b) System management c) Change management d) Internship management	1	CO5	II
	B. _____ is a Strategy to achieve Software diversity. a) Explicit specification of different algorithms b) Different programming languages c) Different design methods and tools d) All of the mentioned	1	CO5	II
	C.Discuss RMMM.	5	CO5	II
	D.What is Software Risk? Explain various types of Software Risks.	7	CO5	II