

Total No. of Questions: 6

Total No. of Printed Pages:3

Enrollment No.....



Faculty of Science
End Sem (Even) Examination May-2019
CA3CO13 Software Engineering
Programme: BCA Branch/Specialisation: Computer
Application

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. How many phases are there in Scrum? 1
(a) Two
(b) Three
(c) Four
(d) Scrum is an agile method which means it does not have phases
- ii. RAD stands for 1
(a) Relative Application Development
(b) Rapid Application Development
(c) Rapid Application Document
(d) None of these
- iii. Choose the incorrect statement with respect to Non-Functional Requirement (NFR). 1
(a) Product-oriented Approach – Focus on system (or software) quality
(b) Process-oriented Approach – Focus on how NFRs can be used in the design process
(c) Quantitative Approach – Find measurable scales for the functionality attributes
(d) Qualitative Approach – Study various relationships between quality goals

P.T.O.

[2]

iv.	Which of the following is not a diagram studied in Requirement Analysis? (a) Use Cases (b) Entity Relationship Diagram (c) State Transition Diagram (d) Activity Diagram	1
v.	Which of the following is/are main parameters that you should use when computing the costs of a software development project? (a) Travel and training costs (b) Hardware and software costs (c) Effort costs (costs of paying software engineers and managers) (d) All of these	1
vi.	COCOMO stands for (a) Constructive cost model (b) Comprehensive cost model (c) Constructive cost estimation model (d) Complete cost estimation model	1
vii.	_____ is a measure of the degree of interdependence between modules. (a) Cohesion (b) Coupling (c) None of these (d) All of these	1
viii.	A software engineer must design the modules with the goal of high cohesion and low coupling. (a) True (b) False	1
ix.	A set of inputs, execution preconditions and expected outcomes is known as a (a) Test plan (b) Test case (c) Test document (d) Test Suite	1
x.	Which test refers to the retesting of a unit, integration and system after modification, in order to ascertain that the change has not introduced new faults? (a) Regression Test (b) Smoke Test (c) Alpha Test (d) Beta Test	1
Q.2	i. What are the Drawbacks of RAD Model?	2
	ii. What is the difference between program and software?	3

[3]

	iii.	Discuss the prototype model. What is the effect of designing a prototype on the overall cost of the software project?	5
OR	iv.	Describe various steps of Scrum and also Define different roles in Scrum?	5
Q.3	i.	What are the objectives of Requirement Analysis?	2
	ii.	List five desirable characteristics of a good SRS document. Discuss the relative advantages of formal requirement specifications. List the important issues, which an SRS must address.	8
OR	iii.	what are the purposes of Data Flow diagrams, Entity-Relationship diagrams? Give an example diagram of each.	8
Q.4	i.	Describe in detail the 4 P's of project management?	3
	ii.	Discuss the various types of COCOMO model. Explain the phase wise distribution of effort.	7
OR	iii.	What is cost estimation model? Define various cost estimation models.	7
Q.5	i.	What problem are likely to arise if a module has low cohesion?	4
	ii.	What are the design principles? Explain in details the flow of information from analysis model to the design model.	6
OR	iii.	Discuss various type of coupling and cohesion with illustrative example.	6
Q.6		Attempt any two:	
	i.	Discuss the limitations of testing.	5
	ii.	What are the differences between Alpha and Beta testing?	5
	iii.	Explain in detail about functional testing and structural testing.	5

Marking Scheme
CA3CO13 Software Engineering

Q.1	i.	How many phases are there in Scrum? (b) Three	1
	ii.	RAD stands for (b) Rapid Application Development	1
	iii.	Choose the incorrect statement with respect to Non-Functional Requirement (NFR). (c) Quantitative Approach – Find measurable scales for the functionality attributes	1
	iv.	Which of the following is not a diagram studied in Requirement Analysis? (d) Activity Diagram	1
	v.	Which of the following is/are main parameters that you should use when computing the costs of a software development project? (d) All of these	1
	vi.	COCOMO stands for (a) Constructive cost model	1
	vii.	_____ is a measure of the degree of interdependence between modules. (b) Coupling	1
	viii.	A software engineer must design the modules with the goal of high cohesion and low coupling. (a) True	1
	ix.	A set of inputs, execution preconditions and expected outcomes is known as a (b) Test case	1
	x.	Which test refers to the retesting of a unit, integration and system after modification, in order to ascertain that the change has not introduced new faults? (a) Regression Test	1
Q.2	i.	Two Drawbacks of RAD Model 1 mark for each (1 mark * 2)	2
	ii.	Definition of program 1.5 marks	3
		Definition of software 1.5 marks	

OR	iii.	Prototype model Overall cost of the software project	3 marks 2 marks	5
	iv.	Steps of Scrum Any two roles in Scrum 1 mark for each (1 mark * 2)	3 marks 2 marks	5
	Q.3	i. Two objectives of Requirement Analysis		2
		ii. Five desirable characteristics Advantages Important issues	2.5 marks 2.5 marks 3 marks	8
OR	iii.	Purposes of Data Flow diagrams Entity-Relationship diagrams	4 marks 4 marks	8
	Q.4	i. 4 P's of project management Names Describe	1.5 marks 1.5 marks	3
OR		ii. Two types of COCOMO model 2.5 marks for each (2.5 marks * 2) Phase wise distribution of effort	5 marks 2 marks	7
	iii.	Definition of cost estimation model Cost estimation models.	2 marks 5 marks	7
Q.5	i.	Any two problem are likely to arise if a module has low cohesion 2 marks for each (2 marks * 2)		4
	ii.	Design principles Analysis model to the design model.	4 marks 2 marks	6
	OR	iii. Type of coupling Cohesion	3 marks 3 marks	6
Q.6		Attempt any two:		
	i.	Any three limitations of testing.		5
	ii.	Alpha testing Beta testing	2.5 marks 2.5 marks	5
	iii.	Functional testing Structural testing.	2.5 marks 2.5 marks	5
