

Total No. of Questions: 6

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Enrollment No.....



Faculty of Engineering
End Sem (Odd) Examination Dec-2018
CA5CO11 Software Engineering

Programme: MCA 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. The primary focus of software industries is to produce **1**
(a) Quality Software
(b) Software within Budget
(c) Software in small cycle time
(d) All of these
- ii. The work associated with software engineering can be categorized **1**
into three generic phases, regardless of application area, project
size, or complexity namely the _____ phase which focuses
on *what*, the _____ phase which focuses on *how* and
the _____ phase which focuses on *change*.
I. Support II. Development III. Definition
(a) I, II, III (b) II, I, III (c) III, II, I (d) III, I, II
- iii. Which is the right job of a project manager? **1**
(a) Project planning and sequencing
(b) Requirement analysis
(c) Testing
(d) Architecting
- iv. According to the COCOMO model, for estimating a project, the **1**
manager needs to consider
(a) Characteristics of the product
(b) Experience of the development team
(c) Characteristics of the development environment
(d) All of these

P.T.O.

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- v. Requirements elicitation phase is used to **1**
(a) Organize requirements (b) Validate requirements
(c) Gather requirements (d) Manage requirements
- vi. Which tool/s is/are used for structured analysis? **1**
(a) UML (b) DFD
(c) Data Dictionary (d) Both (b) and (c)
- vii. Coupling is a qualitative indication of the degree to which a **1**
module
(a) Is connected to other modules and the outside world
(b) Focuses on just one thing
(c) Is able to complete its function in a timely manner
(d) Can be written more compactly
- viii. UML stands for **1**
(a) Universal Modeling Language
(b) Unified Modeling Language
(c) Unified Meta Language
(d) None of these
- ix. What is the intention of software testing process? **1**
(a) Produce a maintainable system
(b) Produce a usable system
(c) Produce a defect free system
(d) None of these
- x. Which testing is performed on the basis of functions or features **1**
of the software?
(a) White-box testing (b) Black-box testing
(c) Regression testing (d) Performance testing

Q.2

- Attempt any two:
- i. Explain the difference between generic and customized **5**
software. What are their relative advantages and disadvantages?
- ii. Explain the features of spiral model with the help of its process **5**
diagram? How are the risks handled in this model?
- iii. What is extreme programming? What are its different practices **5**
of development?

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- Q.3 i. Explain risk management process. **4**
ii. What are the responsibilities of a project manager in an **6**
organization? What skills are necessary for a project manager?
- OR iii. Compute the FP value for vehicle registration at your nearest **6**
RTO office. Assume that it is an average complexity size
project. The information domain values are as follows:
Number of inputs: 6
Number of outputs: 7
Number of inquiries: 5
Number of external files: 9
Number of interfaces: 4.
Assume that all complexity adjustment values are average and 9
algorithms have been counted.
- Q.4 i. What is the purpose of fact finding? Explain the various **4**
methods of fact finding in brief.
- ii. Explain the desirable characteristics of a good SRS document. **6**
- OR iii. Differentiate between structured analysis and object-oriented **6**
analysis with suitable examples.
- Q.5 i. Enumerate the characteristics of a good software design. **3**
ii. What is cohesion? Why is cohesion important in software **7**
designing? Explain the different types of cohesion with their
example.
- OR iii. What is the purpose of use case diagrams? Draw a use case **7**
diagram for a library management system.

Q.6

- Attempt any two:
- i. What is software testing? Why is it most important and serious **5**
phase in software development life cycle?
- ii. Differentiate between white-box and block-box testing methods. **5**
- iii. Explain the various software quality factors with example. **5**

Marking Scheme
CA5CO11 Software Engineering

Q.1	i.	The primary focus of software industries is to produce (d) All of these	1				
	ii.	The work associated with software engineering can be categorized into three generic phases, regardless of application area, project size, or complexity namely the_____ phase which focuses on <i>what</i> , the_____ phase which focuses on <i>how</i> and the_____ phase which focuses on <i>change</i> . I. Support II. Development III. Definition (c) 3, 2, 1	1				
	iii.	Which is the right job of a project manager? (a) Project planning and sequencing	1				
	iv.	According to the COCOMO model, for estimating a project, the manager needs to consider (d) All of these	1				
	v.	Requirements elicitation phase is used to (c) Gather requirements	1				
	vi.	Which tool/s is/are used for structured analysis? (d) Both (b) and (c)	1				
	vii.	Coupling is a qualitative indication of the degree to which a module (a) Is connected to other modules and the outside world	1				
	viii.	UML stands for (b) Unified Modeling Language	1				
	ix.	What is the intention of software testing process? (c) Produce a defect free system	1				
	x.	Which testing is performed on the basis of functions or features of the software? (b) Black-box testing	1				
Q.2		Attempt any two:					
	i.	Difference b/w generic and customized software. Relative advantages and disadvantages.	2.5 marks				5
	ii.	Features of spiral model with process diagram How are the risks handled in this model?	3 marks 2 marks				5
	iii.	Extreme programming. Different practices of development.	2 marks 3 marks				5
Q.3	i.	Risk management process 1 mark for each activities (1 mark * 4)					4
	ii.	Responsibilities of a project manager in an organization. Necessary skills of project manager	2 marks 4 marks				6
OR	iii.	Calculating Unadjusted Function Points (UFP) Calculating complexity adjust. attributes (CAA) Calculating Function Points (FP)	2.5 marks 2.5 marks 1 marks				6
Q.4	i.	Purpose of fact finding Various methods	1 mark 3 marks				4
	ii.	Characteristics of a good SRS document. 1 mark for explanation of each	(1 mark * 6)				6
OR	iii.	Difference b/w structured analysis and object-oriented analysis Each pair of differentiation and example	(2 marks * 3)				6
Q.5	i.	1/2 mark for each characteristics	(1/2 mark * 6)				3
	ii.	Definition of cohesion. Importance of cohesion Explanation of different types of cohesion	1 mark 2 marks 4 marks				7
OR	iii.	Purpose of use case diagrams Diagram of library management system	3 marks 4 marks				7
Q.6		Attempt any two:					
	i.	Defining software testing Highlighting its importance	2 marks 3 marks				5
	ii.	Difference between white-box and block-box testing methods. 1 mark for each difference	(1 mark * 5)				5
	iii.	Various software quality factors with example. 1 mark for each factor with example	(1 mark * 5)				5
