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Enrollment No.....



Faculty of Engineering / Science

End Sem Examination May-2024

CS3EL20 / BC3EC09 Software Testing

Programme: B.Tech. / B.Sc.

Branch/Specialisation: All /
Computer Science

Maximum Marks: 60

Duration: 3 Hrs.

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. Assume suitable data if necessary. Notations and symbols have their usual meaning.

- Q.1 i. Which testing activity involves executing the software with test cases? 1
(a) Test planning (b) Test design
(c) Test execution (d) Test analysis
- ii. Which one is the primary goal of software testing? 1
(a) Validation (b) Verification (c) Quality (d) Assurance
- iii. Which technique involves the use of predetermined input values to verify the correctness of software under test? 1
(a) Boundary value analysis (b) Decision table testing
(c) Use case testing (d) Static testing
- iv. Which testing type involves executing the software's functions to determine whether it meets specified requirements? 1
(a) Functional testing (b) Usability testing
(c) Regression testing (d) Acceptance testing
- v. At which level of testing are individual units or components integrated to form larger modules- 1
(a) Unit (b) Integration (c) System (d) Acceptance
- vi. Which phase of testing involves assessing the stability and functionality of a software product before its release to a limited audience? 1
(a) Alpha (b) Beta (c) Gamma (d) Delta
- vii. What is the primary purpose of using automation in software testing? 1
(a) Reduce Costs (b) Increase Accuracy
(c) Accelerate Testing (d) All of these
- viii. Which aspect of testing ensures that a software product is easy to use for its intended audience 1
(a) Accessibility (b) Usability (c) Configuration (d) Beta

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- ix. Which of the following metrics is commonly used to measure project progress in software development? 1
(a) Lines of code written (b) Number of meetings held
(c) Burn-down chart (d) Employee satisfaction rating
- x. Which type of testing relies on tools to execute pre-scripted tests on software applications? 1
(a) Manual (b) Automated (c) Exploratory (d) Ad-hoc
- Q.2 i. What is the significance of testing as a process in software development? 2
ii. Explain the role of a software tester in software development. 3
iii. Describe the various testing principles. 5
- OR iv. How the defects are different from errors? Explain the various defect prevention strategies. 5
- Q.3 i. Explain equivalence class partitioning using suitable example. 2
ii. What are test cases? How test cases are designed to perform testing on a particular software? 8
- OR iii. Explain various types of testing with example. 8
- Q.4 i. Differentiate alpha testing and beta testing. 3
ii. Explain acceptance testing and performance testing in detail. 7
- OR iii. Describe in detail about configuration testing, compatibility testing and website testing using suitable example. 7
- Q.5 i. Explore the various people and organizational issues that can impact the effectiveness of testing within a software development project. 4
ii. How can test results be effectively reported to stakeholders to ensure clear communication and decision-making within a software development project? 6
- OR iii. Define the skills needed to be a good software test specialist. 6
- Q.6 Attempt any two:
i. Explain the design and architecture for test automation. 5
ii. Define the project metrics, progress metrics and productivity metrics. 5
iii. What is test planning and define the components of a test plan? 5

Marking Scheme

Software Testing-BC3EC09(T)

Q.1	i)	c) Test execution		1
	ii)	c) Quality		1
	iii)	b) Decision Table Testing		1
	iv)	a) Functional Testing		1
	v)	b) Integration		1
	vi)	a) Alpha		1
	vii)	c) Configuration		1
	viii)	d) All of the above		1
	ix)	c) Burn-down chart		1
	x)	b) Automated		1
Q.2	i.	significance of testing as a process (4 points)	Each 0.5 Marks	2
	ii.	Explain the role of a software tester in software development.		3
	iii.	Describe the various testing principles.	Each 1 Marks	5
OR	iv.	How the defects are different from errors.	2.5 Marks	5
		Also explain the various defect prevention strategies.	2.5 Marks	
Q.3	i.	Definition –	1 Mark	2
		Example-	1 Mark	
	ii.	Test cases definition –	1 Mark	8
		Example –	1 Mark	
		How test cases are designed to perform testing on a particular software.-	6 Marks	
OR	iii.	Explain various types of testing with example.		8
		Each type 2 Marks with example		
Q.4	i.	Differentiate Alpha Testing and Beta Testing.(atleast 4 points)		3
	ii.	Acceptance testing	3.5 Marks	7
		performance testing –	3.5 Marks	
OR	iii.	Configuration testing	2 Marks	7
		Compatibility testing	2 Marks	
		website testing	2 Marks	
		example of each	1 Marks	
Q.5	i.	Explore the various people and organizational issues that can		4

impact the effectiveness of testing within a software development project.

Each Issue 1 Marks

Each Issue 1 Marks

ii. How can test results be effectively reported to stakeholders to ensure clear communication and decision-making within a software development project **6**

compete Ansar 6 Marks

OR iii. Define the skills needed to be a good software test specialist. **6**

Each Skill with equation 2 Marks

Q.6	Attempt any two:		
i.	Explain the design and architecture for test automation.	5 Marks	5
ii.	Define the project metrics,	2 Marks	5
	progress metrics	2 Marks	
	and productivity metrics.	1 Marks	
iii.	What is test planning and define the components of a test plan		5
	Definition -	1 Marks	
	Each Component with expiations –	1 Marks	
