Subject: SQE(SE-309) Roll# & Section TESE-19032 (A)

Test(d) Module 1 [Marks:5]

Instructions: You can pick questions in any order but all parts of a question must attempt altogether

1.a It is said that "Quality assurance is all about software testing". Do you agree with this claim ? Briefly justify your opinion with suitable example. [2]

1.b Describe the role of QA in each phase of Software Development?[2]

1.c It is said that "Quality control is proactive process" do you agree with this claim? Briefly justify your opinion. [1]

Test(d) Module 2 [Marks:5]

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2.a How many testing levels are involve in a project's testing phase? Suggest suitable testing technique for each level. Also justify your suggestions. [2]

2.b Apply BVA and ECP methods and design test cases for an application which accept age in between 18 to 60 years and 65 to 66 years., 76 to 86 years. And99 to onwards.[2]

2.c Explain the activates involve in testing process in detail [1]

to standards. Quality assurance in design phase ensures design doc is consistent with SRS. A company XYZ builds a software on wrong specifications and thus wrong design and architecture. So ever if all functionalities will be covered, the product will still not be a high quality product.

1b. Role of QA in each phase of SW Development

1 Requirement Gathering ~~(Also Inel~~

I/P : SRS

O/P : sign off SRS, list of question/answers from relevant stakeholders.

QA in feasibility study (Phase 0) and Requirements phase ensures viability of project and consistency and unambiguity of specifications. SRS should be according to organizational standards and based on SRS a contractual agreement is signed with client. If any ambiguity, it is clarified from relevant stakeholder

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SQA - Quiz 1

Module 1

1a. "Quality Assurance is all about software testing" I do not agree with this claim. Quality in the software product is not just assured because testing is optimal, rather the whole SDLC model should be systematic and optimal to assure quality.

Quality assurance is management's responsibility to ensure all standards and procedures are being followed and project planning and management is efficient. It ensures that all development and maintenance activities are performed according to plan. So quality assurance is equally important in requirement, plan, design, construction and maintenance phase as it is in testing process.

Eg: Quality Assurance in requirement phase ensures that specifications are complete, unambiguous and according to standards. Quality assurance in design phase ensures design doc is consistent with SRS. A company XYZ builds a software on wrong specifications and thus wrong design and architecture. So ever if all functionalities will be covered, the product will still not be a high quality product.

1b. Role of QA in each phase of SW Development

1 Requirement Gathering ~~(Also Intel~~

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2 Planning I/P : SRS O/P : Project Plan
Based on SRS, milestones and their distribution deadlines are documented in project plan. SQA plan all activities throughout the project such as train... assessment criteria, etc.

3 Design I/P : SRS, DD O/P : test plan, sign off DD, test... effort e...
Design document is verified to be in compliance with SRS so errors do not flow down to other activities. Test plan covering tasks to perform to test functionalities, scope, approach is prepared.

4 Construction I/P : all documents O/P : detailed test cases, test environment readiness.
Once coding complete, detailed test case including steps are designed and environment is studied and prepared to ensure if product is ready test

5 Testing I/P : test plan, test environment, test data developed application O/P : quality application test summary report
Detailed test cases are executed and then test summary report prepared. If bugs present, product is sent to development phase else to deployment phase

6 Deployment I/P Quality product, user manual release notes, installat... O/P : bug free app release notes.
Quality application deployed to customer with user manual and release notes.

7. Maintenance I/P : Change Requirements O/P : support to customer updated implementation
Based on changed requirements, product is updated.
Error

1c. NO. Quality control is rather a reactive process as it aims to identify defects by executing a developed application. Testers throughout testing lifecycle try to find defects of non compliance with standards or other bugs. So it is a reactive process as it is performed based on the execution of code aiming to identify defects. Quality control is related to validation (if the product is what the product was demanded to be).

Module 2

2a There are 3 testing level: (unit, integration and system level)

1) Unit / component: Smallest unit of code test independently of other units / components. Suitable Technique is white box testing by developer.

Eg Person A builds a login module. He himself will test that module whether it is working as intended or not and will try to cover each statement or path so to ensure unit is build correctly.

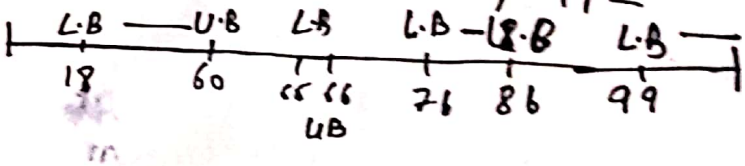
2. Integration: Two or more modules integrated and then tested for interfacing. Both white and black box can be used but black box preffered.
Approaches: Top down, Bottom UP.

Eg: A and B module build and integrated. Person 1 will just check if both combinedly and individually work fine so black box.

3. System Level: whole comple system tested.
Generally black box preffered.
Eg: Person 1 checking whole application working so cannot go in structural details only functionalities

2b ranges: 18 – 60 . 65 – 66 . 76, 86, 99 –

Boundary value



Test cases		expected O/P
TC1 :	~~to~~ 17	reject
TC2 :	18	accept
optional TC3 :	19	accept
optional TC4 :	59	accept
TC5 :	60	accept
TC6 :	61	reject
TC7 :	64	reject
TC8 :	65	accept
9 :	66	accept
10 :	67	reject
11 :	75	reject

	12	76 accept
opt	13	77 accept
opt	14	85 accept
	15	86 accept
	16	87 reject
	17	98 reject
	18	99 accept
	19	100 accept

02

2nd

* ECP ranges 18-60 65-66 76-86 99-

Classes :	invalid < 18	valid 18-60	invalid 61-64	valid 65-66	invalid 67-75	valid 76-86
TC:	10	20	63	65	69	79
Exp O/P	reject	accept	reject	accept	reject	accept

	invalid 82-98	valid 99-
TC:	90	100
Exp O/P	reject	accept

2c Activities in Testing Process

(1) Test planning and preparation:

Based on the requirements and software, test cases are planned and designed. Who will execute them and when is documented in test plan. Detailed test cases designed.

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(2) Test Execution

The test cases designed are executed to identify bugs and defects in the product. Test summary report is prepared.

(3) Analysis and Follow Up

Analysis: Analyses involves understanding the impact of failed on test cases on systems quality

Follow Up: Identified defects are corrected, then again testing is performed on those parts. Also called regression testing