

Part-A

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Ans. to the que. No: 2

(a)

Seeing the given questions we can say that, Diamond structure is followed. By the question "what kind of documents do I require to open a bank account?", it is meant that it is a specific question and this question has a specific answer. In diamond structure interview is started with specific type of question and the question has specific answer. Then more general question comes. The diamond structure concludes with specific questions. By the question, "How can I apply for a loan?", it is meant that it is a general question. The bank staff may explain the answer in a general way i.e., the answer is not specific. Finally, by the question, "Can I send money overseas through your bank?", it is meant that it is a specific question and this question has a specific answer like "Yes" or "No". So we can say that the interview structure followed in the question is diamond structure. Diamond structure combines the

strength of both the pyramid and funnel structures. It takes longer time to finish the interview than other structures.

Now we will rearrange the questions to follow pyramid structure. Pyramid structure begins with very ~~not~~ specific question. It expands by allowing open-ended questions and more generalized responses. Finally ends with more general questions. Following are the questions chosen for our pyramid structure interview:

- i) what kind of documents do I require to open a bank account?
- ii) Can I send money overseas through my bank?
- iii) How can I add a nominee to my account?
- iv) How long will it take to get my cheque book?
- v) How can I operate my account?
- vi) How can I apply for a loan?
- vii) Could you please explain your online banking system?

In this interview pattern we have started with specific question like "what kind of documents do I require to open a bank account?". This question has specific answer like the names of the documents. Then we expanded our questions into general forms like "How can I operate my account?". This question have no specific answer. The bank stuff should explain the operating procedure of their bank to answer this question. Finally we ended with more general question like "could you please explain your online banking system?". Here the question is asked to get explanation, not to get specific answer. The bank stuff must explain the online banking system to answer the question. So, we can say that, our rearranged interview pattern follows pyramid structure. Pyramid structure is useful if interviewees need to be warmed up to the topic or seem reluctant to address the topic.

(b)

Regression and smoke testing both are software testing strategy. Software must be tested in many ways to be sure that there is minimum bugs before launching the software to public. We know that softwares are not totally free of bugs. But the software testing strategies allows us to reduce the amount of bugs in to a newly developed software.

Regression testing is the re-execution of some subset of tests that have already been conducted to ensure that changes have

not propagated unintended side effects. Whenever software is corrected, some aspect of the software configuration is changed like the program, its documentation, or the data that support it. Regression testing helps to ensure that changes due to testing for other reason do not introduce unintended behaviour or new bugs in our software.

Regression testing may be conducted manually, by re-executing a subset of all test cases or using automated capture or playback tools.

For example, we have developed a system on software to help blind people named "Blind care". We are ready to launch our software. We have tested in many ways and find a bug that this software have issues to read data from sensors. We have to make some changes in our software now to fix these bugs. After fixing these bugs we have to re-execute all the test cases to ensure that there is no new bugs on the software runs properly and serves its purposes properly. This re-execution is called Regression testing.

Smoke testing is another software testing strategy. Smoke testing is an integration testing approach that is commonly used when product software is developed. It is a common approach for creating "daily builds" for product software. Software components that have been translated into code are integrated into a "build". A build includes all data files, libraries, reusable modules and engineered components that are required to implement one or more product functions.

A series of tests is designed to expose errors that will keep the build from properly performing its function. The intent should be to uncover "show stopper" errors that have the highest likelihood of throwing the software project behind schedule. The build is integrated with other builds and the entire product is smoke tested daily.

For example, we are building a e-commerce software named "E-order". We have finished developing the interface. Now we will add products in our online store. After adding new products we have to test if it works fine or not. That means we have to test our software by adding new features on daily basis. This testing is called smoke testing. Smoke testing helps us to find the bugs in initial states and allows us to fix those bugs earlier.

Both regression and smoke testing are important in software development.

Answer to the que. No: 3

(a)

(a) Tangible costs are accurately projected by the systems analyst and accounting personnel. That means tangible costs are known early and can be calculated accurately before. On the other hand, Intangible costs are difficult to estimate and may not be known. That means intangible costs are sometimes hidden and we can't feel the loss exactly. Now we will explain under the given scenario:

i) Tangible cost. As the product price is already known to the merchandiser, they can easily estimate the cost. By returning the value of the broken product, the company is upholding their image and prompt the customer to order new products from them. They are getting customers by their good will.

ii) The company is losing

good will.

ii) Intangible cost. The company is losing their reputation and they will also loss their customers. No new customer will be interested to buy medicine from them as the company has sold damaged or bad product.

to their customers.

iii) Intangible cost. The stuffs will waste their working hours to connect their work station to the new server. The server cost may be fixed initially but it will need continuous maintenance that may be variable. That's why the company won't be able to measure the costs perfectly.

iv) Tangible cost. The company pays their employee paychecks and purchases office components. These are fixed before and the company can measure the cost very accurately because these costs are not variable. The company can draw more profits by these cost as new components can increase productivity.

(b)

Verification refers to the set of tasks that ensure that software correctly implements a specific function. In development phases we have to verify our progress whether it works perfectly or not. We can fix errors if we find any after verification.

Validation refers to a different set of tasks that ensure that the software that has been built is traceable to customer requirements. That means that, it emphasize on whether we are building the right product or not. We must develop softwares that has public demand or develop in a way that public has easy access to our software.

According to Boehm, verification is "Are we building the product right?" and validation is "Are we building the right product?".

(c)

Extreme programming is the most widely used agile process. It uses an object-oriented approach. XP design occurs both before and after coding as refactoring is encouraged. On the other hand, Adaptive software development focuses on human collaboration and team self-organization as a technique to build complex software and system. There are three phases of ASD such as Speculation, collaboration and Learning. We will now

distinguish between Extreme programming (XP) and Adaptive software development (ASD).

ASD	XP
i) Central undisputed agent aspect is human role.	i) Human beings are also central undisputed agent.
ii) Developers steer product, adapt it to changing requirements.	ii) Developers steer process, use predefined testings to do so.
iii) Customer provides input to steer products.	iii) customer provides input to steer process.
iv) Communication, co-operation and corporation is the key to emerge.	iv) communication, co-operation and corporation are key for working towards result.
v) Human utilize technology at their will.	v) Human control technology within predefined framework
vi) Purpose of development is to survival and thriving of organization.	vi) Purpose of development is to product delivery while satisfying by work.