

BAHRIA UNIVERSITY (KARACHI CAMPUS)

MIDTERM EXAMINATION –SPRING SEMESTER – 2021

**(SOFTWARE QUALITY ASSURANCE (SEN-460)**

Class: **BS(CS) - 8 (A, B & C)**

Course Instructor: **M. Shahid Khan /Adnan Ahmed**

Date: **21-May-2021; Session: III**

**(Morning)**

Time Allowed: **90 Minutes**

Max Marks: **10**

**Student Name:**

**Enrolment #**

Instructions:

# In order to avoid any run time electricity and internet unavailability situation, it is suggested that keep your laptop fully charged.

* Examination paper can be downloaded and solution must be uploaded back to LMS.
* Activate 3G/4G connection as an alternative of Wi-Fi/internet option to upload your paper solution on LMS.
* In addition to upload your paper to LMS, it is mandatory to email the solution to course instructor ([muhammadshahid.bukc@bahria.edu.pk](mailto:muhammadshahid.bukc@bahria.edu.pk)) within examination paper time.
* Plagiarized/copied solution will be marked ZERO.
* Overall the online mid-term examination will be comprised of written and viva based evaluation having weightage of 50% each. An online viva session will be conducted for the assessment after submission of written part solution by the students.
* For monitoring purposes, all students have to remain online throughout the examination period on MS teams. It is mandatory to keep your web cam open for the whole period of examination.

## QUESTION NO. 1 [02]

Ali is an excellent programmer. Testing its software modules revealed very few errors, far less than the team's average. He keeps his schedule on time and is rarely late to finish his chores. He always finds the original way to solve programming problems and uses the original, separate coding style version. He does not like to prepare the necessary documents and rarely works according to the team's submission.

On the second day after completing the challenging task, he was called to the office of the department’s chief software engineer. The company's chief software developer warned that if he fails to fully adhere to the team's coding and documentation, or that he will be fired, he will not be commended for his accomplishments (as expected).

1. Do you agree with the position taken by the department’s chief software engineer?
2. If yes, could you suggest why his/her position was so decisive?

Solution:

a) Yes

b) Ali approaches are non-standard coding and documentation are also not up to the mark which causes.

* challenges for an inspection and monitoring team, which can result in lower-than-normal error detection rates.
* Because of the non-standard coding team faced difficulties in debugging or changes are hard to implement.
* faced challenges developing software modules that would interact with Ali's module, which could lead to errors.

## QUESTION NO. 2 [04]

Mr. Kamran, an experienced project leader at ABC’s Software Ltd., a medium-size software house, has been appointed project leader for development of an advanced help desk software system for a leading home appliance maintenance service. This is the 12th help desk system developed by his department in the last three years.

The current project is somewhat special with respect to its timetable. The contract with the customer was signed 6 days after submission of the proposal, and the development team is scheduled to begin working at full capacity, with 8 team members, 10 days later. The contract offers a significant early completion bonus for each week below 26 weeks but determines high late completion penalties for each week after 30 weeks.

In a meeting with his superior, Mr. Kamran claims that the comprehensive proposal documentation “as is”, which has been thoroughly checked by the contract review team, should serve as the project's development and quality plans. His superior does not agree. with him and demands that he immediately prepare comprehensive project and quality plans, according to company procedures.

1. Do you agree with Mr. Kamran? If yes – list the arguments that support his claim.
2. Do you agree with his superior? If yes – list the arguments that support the superior’s

claim.

1. Considering the circumstances of the project, what, in your opinion, should be done in this case.
2. Comparing the circumstances described here to those of the opening anecdote, are there any justifications for different recommendations?

Solutions:

a) Yes, because I believe that the project's scenario supports Kamran's claim, and the proposal content should be included in production and quality assurance plans.

On the other hand, the project manager must prepare some clarifications and additional details.

plans and details for the building to be completed.

B) I comply with the superiors on certain points, such as the limited completion period and the incentives and fines that come with it. As a result, extra caution is expected when assessing the availability of any kind of resource, including external partners, and in addressing implementation risks. These reviews should be more thorough than those conducted for the initiative.

c) Already written in part a and part b

* the project manager must prepare some clarifications and additional details.
* plans and details for the building to be completed.
* The one who perform the proposal should be at least one level above of these examinations.

d) This critical distinction justifies the preparation of new proposals based on a complete update of the project content. Partially upgrading proposal content should suffice in our situation.

## QUESTION NO. 3 [02]

Create a proposal draft contract for a software product on the basis of customer-supplier relationship for both external and internal projects, according to the following.

1. Customer requirements
2. Timetable adequately
3. Formal aspects
4. Protection of proprietary rights

Solution:

* Customer requirements:

additional information from the customer is required. Clarifications and changes to ambiguous specifications can be recorded in a separate contract that is signed by both the client and the tech company.

* Timetable adequately

Estimation of project resource and timelines that is accurate. The term "resource assessment" applies to both technical personnel and the project's budget, which includes subcontractor payments. Estimates for scheduling should take into account the time constraints of all project participants.

* Formal aspects:

The formal details of the customer's relationship with the software company have been established. The plan should contain formalities such as:

* Channels for customer contact and interaction
* Acceptance standards and project deliverables
* Method of formal step approval
* Protection of proprietary rights:

For both internal and external it has the company right for commercial use or any other use because company own the project not the developer its like developer develop the project then sold it to the company whether it is external or internal.

## QUESTION NO. 4 [02]

Several experts assert that increasing the usability of software will inevitably reduce efficiency. Others professional assume that both software efficiency and usability are independent.

* 1. Which group has stronger and more correct view in your opinion?
  2. Justify your answer with explanation.

Solution:

1. Due to Actual situation both claims might be correct because of different scenarios.
2. Two different scenarios are mentioned below.

* A better usability in most cases include better design of the flow and better interface implemented in a beautifully design GUI. In this scenario no extra hardware are required to run the interface smoothly so in this case increased usability does not affect the efficiency.
* In several other ways, achieving greater usability necessitates the substitution of low-capability equipment with higher-capability equipment and the installation of new hardware components. In these cases, greater usability necessitates a reduction in performance.

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