Sir Syed University of Engineering & Technology
Faculty of Basic & Applied Sciences
Department of Computer Science

End Semester Examinations (Spring 2020)

Course Title with Code	**CS-469: Software Project Management**	**Program**	BSCS
Instructor	**Ayesha Khaliq**	**Semester**	7th
Start date & Time	June 29, 2020 at 11:30 AM	**Submission Deadline**	June 29, 2020 at 5:30PM
Maximum Marks	50		

IMPORTANT INSTRUCTIONS:

Read the following Instructions carefully:

- Attempt All Questions on MS-Word. Font theme and size must be Times New Roman and 12 points respectively. Use line spacing 1.5. Convert file to PDF format before submitting.
- You may provide answers HANDWRITTEN. The scanned solution must be submitted in PDF file format (Use any suitable Mobile Application for Scanning)
- For Diagrams, you can use paper and share a clear visible snapshot in the same Answer Sheet.
- Arrange questions and their subsequent parts in sequence.
- Make sure that your answers are not plagiarized or copied from any other sources. In case of plagiarism, **ZERO** marks will be awarded.
- Provide relevant, original and conceptual answers, as this exam aims to test your ability to examine, explain, modify or develop concepts discussed during the course.
- Recheck your answer before the submission on **VLE** to correct any content or language related errors.
- You must upload your answers via the VLE platform ONLY.

You must follow general guideline for students before online examination and during online examination which had already been shared by email and WhatsApp.

This paper has a total of 04 pages including this title page

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Q.1. **(10)**

A unique customer order planning application has been designed by the tech company. This company providing Self-Service Applications & Interface Tools, Input Systems and Industry and also this software firm is Pioneers & Queue Management Manufacturers. Now consider yourself as a java developer who is supposed to organize a workshop for users of the application. At this time, there is not a single training manual has been issued for a client. A strategy for the delivery of training programs is today required for the task. When the first session of workshop begins, the project can be anticipated to be accomplished. The necessary things that should be kept in mind are wise schedule, arrangement of program, attendance of program and installed equipment for program during the preparation of workshop material.

i. Develop the project charter of this project with appropriate headings.
ii. What project management principle should be applied for the completion of this project?

Q.2. **(10)**

Read carefully the given case study of Smart Sports Ecommerce System. You have to cover the following.

i. Discuss the analysis of risk for the Smart Sports Ecommerce System.
ii. Design Work Breakdown Structure for Smart Sports Ecommerce System.
iii. What team structure would you choose for Smart Sports Ecommerce System and why? Justify your selection.
iv. Discuss the key roles and responsibility of project manager for the completion of the given project?
v. What difficulty project manager will face in Smart Sports Ecommerce System?

Smart Sport Ecommerce System

A software house will going to start a project named Smart Sports Ecommerce Website. This project will consist of creating the tool for automated Order, Purchase, Sale, Payment, and Receipt. The Smart Sport project will fulfill the specifications of inventory and ledger system. It will produce the reports of sports inventory and ledger to control inventory flow and party ledger. It will allow end-users to setup order, and look after the approval or rejection of request, and keep various lists of shop category as well. The main goal of Smart Sports Ecommerce System is to guarantee 24 hrs. Availability of articles for customers. Thus, Smart Sports is focused toward vendors of small to large stores who are capable of keeping sufficient goods on hand in a wholesale or manufacturing business.

The arrangement of the system can be distributed into three main components. The first component must offer some form of Record management, allowing the Sports Store to monitor what can be ordered by customers. The second component is the purchasing system which provide the features for client to place their order and provide all mandatory details. The third and final logical component is the receipt of order retrieval system which is used by the Sport Store to maintain or monitor all the orders which have been placed, this component takes care of retrieving and displaying order information, as well as updating orders which have already been processed.

Q.3. **(10)**

A startup software house, which provide solution of customer in multiplatform mobile applications or web based solution. They are currently working on School Management System. It is expected that the development of the Existing system may require two weeks to complete. There are three major components of the software which need to be deployed such as; Management, Student and Faculty. The design and implementation of the mentioned components would require five, eight and ten days respectively. Unit Management (M) and Unit Student(S) components could only be verified and validate through parallel with their strong associate features. This joined verification and validation may require two weeks to finish. Faculty Component takes eight test days per sub unit. After completion of all component testing, detailed system testing is expected for a further three weeks. The test will require ten days to finish on the sole basis of the features clearly outlined in the design specifications.

From the above given scenario, create precedence network diagram (PDM) and critical path with suitable parameters.

Q.4. **(10)**

A Development Company, which is a specialist in market intelligence research, integration of complex enterprise-level applications, automation, creation and integrated web and mobile applications. However, they have formed numerous software such as an account related software which tend to make user ease to manage the employees' payroll. Further, they accomplished many projects for various business domains which already operational efficiently in many multinational national enterprises (MNEs). Now suppose this software house going to develop a software package to computerize the various financial reporting issues related with the institute's educational tasks, such as the enrollment of courses and graduates. The size of code for academic packages is anticipated to be 12,000 SLOC in Java.

For the above organization, the following list summarizes the weightings to be used for computation of function point measure of a software development project. The company has performed the software development with the following features:

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- Number of user inputs: the first digit of your roll number (simple)
  (For example: 2017-CS-341 so the first digit will be 3)
- Number of user outputs: add five in the first digit of your roll number (simple)
- Number of user inquiries: total count of your first name (average)
- Number of files: total count of your last name(average)
- Number of external interfaces: 1(complex)

What would be the unadjusted function point (UFP) measure of the size of the software system and effort estimated using COCOMO model?

Q.5. (10)

Suppose a developer of the company working on the software. During the initial stage of development the developer requires clarity as to what is implied by a specific word used in the system from the documentation. Another problem that is encountered while development phase is programmer could only finish its software program when another programmer completes his portion first, but if he did not do so then the first programmer will face a massive pressure from the client to finish the job.

Which seems to be the smartest way of communication in Software Project Management? and What quality measures should be implement using six sigma technique? Explain your response with the support of an obvious reason.