FACULTY OF SCIENCE

ACADEMY OF COMPUTER SCIENCE AND SOFTWARE ENGINEERING
MODULE   IT00077/IT08X77   INTRODUCTION TO IT PROJECT MANAGEMENT
CAMPUS   APK
EXAM   JULY 2019 SSA EXAMINATION

DATE: July 2019

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EXTERNAL MODERATOR   Prof AJ van der Merwe (UP)

DURATION: 2 HOURS   **MARKS:**   100

THIS PAPER CONSISTS OF 4 PAGES INCLUDING THE COVER PAGE

INSTRUCTIONS:
1. Answer **ALL** the questions
2. Read the questions thoroughly
3. Write neatly and legibly
4. Calculator required

Question 1

Stakeholders are the people involved in or affected by project activities. List the different stakeholders involved in a typical project.   [8]

Question 2

List five advantages of using formal project management.   [5]

Question 3

A systems approach emerged in the 1950s to describe a more analytical approach to management and problem solving. Briefly describe what systems are and the three parts it comprises.   [4]

Question 4

A Virtual team is a group of people who work together despite time and space boundaries using communication technologies. Name and briefly discuss three advantages and three disadvantages of working in Virtual teams.   [6]

Question 5

Project management can be viewed as a number of interlinked processes.
Name and describe five project management process groups.   [10]

Question 6

A **project charter** is a document that formally recognizes the existence of a project and provides direction on the project's objectives and management. Key project stakeholders should sign a project charter to acknowledge agreement on the need and intent of the project; a signed charter is a key output of project integration management. Name five minimum requirements (contents) of a project charter.   [5]

Question 7

Scope refers to all the work involved in creating the products of the project and the processes used to create them. Name four best practices for avoiding scope problems.   [4]

Question 8

Complete the following table (a-d):   [4]

Activity	Week 1
Earned value (EV)	5,000
Planned Value (PV)	10,000
Actual Cost (AC)	15,000
Cost Variance (CV)	a)
Schedule Variance (SV)	b)
Cost Performance Index (CPI)	c)
Schedule Performance Index (SPI)	d)

Question 9

The International Organization for Standardization (ISO) defines quality as "the degree to which a set of inherent characteristics fulfils requirements. Name the seven basic tools of quality that help in performing quality control.   [7]

Question 10

Six Sigma is "a comprehensive and flexible system for achieving, sustaining, and maximizing business success. Six Sigma is uniquely driven by close understanding of customer needs, disciplined use of facts, data, and statistical analysis, and diligent attention to managing, improving, and reinventing business processes." Briefly discuss Six Sigma with reference to **targets for perfection, DMAIC, defects and Yields.**   [7]

Question 11

Frederick Herzberg wrote several famous books and articles about worker motivation. He distinguished between Motivational Factors and Hygiene Factors. Define these terms and give three examples each of Hygiene Factors and Motivators.   [8]

Question 12

You have been appointed as project manager to the desktop technology renewal project in ABC Company. Several previous projects have run into problems due to ineffective communications. Your project sponsor has asked you to come up with some suggestions to improve project communications, especially around conflict handling, communication skills and meetings. List the suggestions would you make to him.

[10]

Question 13

Discuss the concept of risk utility and explain what value it has to the project manager. Use diagrams to support your view.   [7]

Question 14

You have been asked to assist in a make-buy decision of System XYZ. You have been given the following information.

- Build: There is a 30% probability that the system will fail and cost R100 000. If the system is successful, it would result in a profit of R200 000.
- Reuse: It might be possible to make use of existing components with some changes. A probability of 20% exists that a profit of R500 000 could be realised with minor changes. If major changes have to be made, the probability is 30% that a profit of R300 000 could be realised. The probability of a R150 000 loss is 70% for major changes.

14.1 Draw a decision tree to show how you would go about the decision   [7]
14.2 Show your calculations for both options   [7]
14.3 What is your recommendation and why?   [1]

Total: 100 marks