BBA in TM, 7th Sem.   Date: October 11, 2023 (Afternoon)

ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)
ORGANISATION OF ISLAMIC COOPERATION (OIC)

DEPARTMENT OF BUSINESS AND TECHNOLOGY MANAGEMENT

Mid-Semester Examination   Winter Semester, A. Y. 2022-2023
Course No.   : BTM 4763   Time   : 1.5 hours
Course Title : System Analysis   Full Marks   : 75

Answer all 3 (three) questions. All questions carry equal marks. Marks of each question and corresponding
CO and PO are written in the right margin with brackets.

1. a)	You recently joined a retail sales company which has recently bought and assimilated a commercial supply house. Now you have been asked to develop a consolidated inventory tracking system. Suggest which system development process you might use and why.	10 (CO3) (PO3)
b)	What are the technology and business drivers? How they influence information system development and use?	15 (CO1) (PO1)

2. a) ABC Software Solutions is a mid-sized software development company that
specializes in creating custom software applications for clients in various industries.
Over the past few years, the company has faced challenges with inconsistent software
quality, project delays, and client dissatisfaction. To address these issues, the
company's management has decided to adopt the Capability Maturity Model (CMM)
framework. The company's management has initiated the process of implementing
CMM within the organization. They have formed a CMM team composed of senior
software engineers, project managers, and quality assurance experts. The team has
started by assessing the current software development processes and identifying areas
that need improvement. They have also defined specific goals and objectives for each
maturity level. The CMM team has made progress in implementing CMM practices,
including defining standard processes, establishing metrics for process improvement,
and providing training to employees. However, they have encountered some
resistance from certain team members who are resistant to change. Additionally, there
have been budget constraints and a need to balance short-term project demands with
long-term process improvement goals.

Based on the above case answer the following questions:

i)	Discuss the key steps involved in implementing Capability Maturity Model (CMM) framework.	4 (CO2) (PO1)
ii)	What are the challenges that organizations might face during this process?	3 (CO2) (PO2)

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iii) Provide recommendations on how ABC Software Solutions can overcome the challenges to achieve higher maturity levels in their software development processes.   6 (CO2) (PO3)

b) HealthCare Innovators (HCI) is a large healthcare organization that manages several hospitals and clinics across the country. HCI is committed to providing high-quality healthcare services to its patients while optimizing its operational efficiency. To achieve this goal, HCI has decided to implement the FAST (Framework for Application of System Techniques) methodology to analyze and improve its healthcare systems. HCI has formed a dedicated team of system analysts, healthcare professionals, and IT experts to implement the FAST methodology. They have chosen a specific healthcare process, the patient admission and discharge process, for analysis and improvement. The team has begun by defining the scope of the project, identifying stakeholders, and documenting the existing processes.   12 (CO2) (PO2)

As the team progresses with the implementation of FAST, they have faced several challenges. The healthcare environment is highly regulated, and compliance with healthcare standards and regulations is crucial. Additionally, there are concerns about data security and patient privacy. The team needs to balance the need for process improvement with the need to maintain high levels of patient care and safety.

Using the case of HealthCare Innovators (HCI), discuss the key steps involved in implementing the FAST methodology in a healthcare system. Highlight the challenges that organizations like HCI might encounter when applying FAST in a highly regulated and data-sensitive environment.

3. a) What are the underlying principles of system development process? How they impact the success of system development projects?   8 (CO2) (PO2)

b) Mr. John is working as a system analyst who will be conducting a requirement analysis for an individually owned brick-and-mortar retail store with POINT-OF-SALE system. Identify who the typical internal and external users might include. Analyze what roles an user might play in the system.   7 (CO2) (PO2)

c) Assume that you have been assigned to conduct system requirement analysis of a warehouse management system of a retail store. To successfully accomplish this assignment, what skills do you need and why?   10 (CO3) (PO3)