IT495: Selected Topics in Information Technology-1
IT Service Analysis, Design, and Operation
Spring 2024
Sheet 3

Information and Outcomes
Topics: Introduction to IT Service Management
Lecture: Part 3 of Lecture Notes
Learning Outcomes: By completing this sheet, you should be able to:
- Understand the basic concepts of a service design and its related concepts.

Question 1
For each of the statements, indicate whether the statement is **True** or **False**. Please provide the correct answer for the False statements.
1. The SDP stands for Service Design Protocol.
2. SDP contains only the functional and nonfunctional requirements of the service.
3. SLA stands for Service Limit Agreement.
4. OLA stands for Optimum Level Agreement.
5. As an IT service provider, it is only sufficient to sign an SLA with the customer.
6. A service provider must sign both SLRs and SLAs with its customers.
7. VBF stands for Variable Business Faults.
8. ITIL is the best source of best practice when it comes to IT service and information security practices.

Question 2
Give an example of how bad service designs can increase the TCO.

Question 3
Give an example of one scenario of an IT service provider that requires the signing of both an SLA and an OLA.

Question 4
A 8×5 service has been running for a period of 5,020 hours with only two breaks, one of 10 hours and one of 18 hours, compute the availability, reliability and maintainability of this service.

Question 5
Consider the ATM that provides various banking services including money withdrawal, disposal, transfer, balance check, Fawry payment functions.
1. Which in your opinion from the above function(s) are considered VBFs for the ATM? Explain your answer.
2. Which of the following design approaches you think more suitable to design the availability of the ATM service. Explain your answer.
    a. High availability
    b. Fault tolerance
    c. Continuous operation
    d. Continuous availability

Question 6
A hospital that is fully digitized, uses the idea of RFID tags to tag each patient that is being admitted to the hospital. Once the patient is being admitted, his full information is being recorded in a tag, the tag is then attached to the hands of the patient. All medical and financial transactions that are being performed to the patient are recorded accurately on his RFID tag. Once the treatment is completed, the patient tag is read and all medical and financial transactions are settled (e.g., prescriptions, bills, etc.).
   a) The IT department of the hospital has contracted a specific vendor to supply RFID readers and RFID tags with specific requirements. In your opinion, is this vendor considered a commodity or strategic supplier to the hospital?
   b) The hospital plans to advance its digital services and wants to use a customized new RFID tags that allows other services to the patients. Some of these services include home-care after release from the hospital. Another service is related to a remote medicine-reminder and supply-shortage alarm for elderly people. A world-wide RFID company called RFYOU specialized in personalized RFID-based services. They even can design a customized RFID tags suitable for different types of patients. The IT manager of the hospital suggested to the top management that the hospital should partner with RFYOU company to provide the new services. Discuss the pros and cons of the idea of partnership from the ITIL supplier management perspective.
   c) The IT manager at the hospital is developing the ITSCM plan for the hospital. He started with identifying and analyzing the main business risks and performed BIA. Since the RFID is a key component to all the hospital operations, he believes that the first and most important step is develop a plan to see how to quickly fix and supply RFID tags in case there is a disaster. Do you think that this is a correct approach to think about the hospital ITSCM plan? Explain your answer.

Question 7
1. Explain what could happen if the customer business process demands are **much faster** that the supplier provided by the service process of the service provider. Discuss how can the demand management help the service provider in this case.
2. Explain what could happen if the customer business process demands are **much lower** that the supplier provided by the service process of the service provider. Discuss how can the demand management help the service provider in this case.