Science and Technology University
Semester, (Level-2, Semester-II) Session :2020-21
Course Title: Information System Analysis and Design
-2022) Credit Hour: 3.00 , Full Marks: 70 Duration: 3.00 Hours

Patuakhali Science and Technology University
B.Sc.Engg. (CSE) 4th Semester (Level-2, Semester-II.) July-December-2021, Session:- 2019-20
Course Code: CIT-222 Course Title: Information System Analysis and Design Sessional
Final Exam. Credit Hour: 1.50 Full Marks: 70 Duration: 1.00 Hours

a) Assume you are a systems analyst who will be conducting a requirement analysis for an individually owned brick-and-mortar retail store with a point-of-sale System. Identify who the typical internal and external users might include. 5
b) You are the project manager of a medium-size project that is scheduled to take 10 months from project Initiation on September 1st through delivery on June 30th. It is now April 1st, seven months since the project began, and the project is slightly behind schedule, by perhaps a week. Draw a Gantt chart. Assume you are using the fast methodology, and the project phase can overlap. 10
c) Give the learning outcomes from this course. 5
d) Project work and presentation of report. 25+10
e) Viva. 15

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d) Project work and presentation of report.
e) Viva.

5
10
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25+10
15

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Patuakhali Science and Technology University
B.Sc.Engg. (CSE) 4th Semester (Level-2, Semester-II.), July-December-2022, Session: - 2020-21
Course Code: CIT-221 Course Title: Information System Analysis and Design
Mid Exam Credit Hour: 3.00 Full Marks: 20 Duration: 1.00 Hours

1. a) Discuss between electronic commerce (e-commerce) and electronic business (e-business). 3
b) Differentiated between the role of system analysis and the role of the rest of the stakeholders 2
c) What kind of knowledge and skills should a system analyst possess? 2
d) Discuss the popular tool used to identify tasks in the project management life cycle. 2
e) Show the PERT and Gantt charts. How do we decide which one to use? 3

2. a) In system analysis if you use questionnaire as fact finding process which advantages and disadvantages you can get? 4
b) Show with example what are the most common process errors occur when a Data Flow Diagram are drawn for a system? 4

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Mid Exam Credit Hour: 3.00 Full Marks: 20 Duration: 1.00 Hours

1. a) Show the four steps in a system development process. Discuss what happens in each step. 3
b) Differentiated between the role of system analysis and the role of the rest of the stakeholders. 2
c) Discuss the popular tool used to identify tasks in the project management life cycle. 2
d) Show the PERT and Gantt charts. How do we decide which one to use? 3

2. a) Why do many new systems analysts fail to effectively analyze problems? What can they do to become more effective? 2
b) Define model-driven analysis. Why It is used? Give examples. 3
c) What are the differences between forward scheduling and reverse scheduling? 2
d) Show the key reason for object reusability. Which methods developer's use to achieve object reusability? 3

Patuakhali Science and Technology University
B.Sc. Engg. (CSE) 4th Semester, (Level-2, Semester-II) Session :2020-21
Course Code: CIT-221 Course Title: Information System Analysis and Design
Final Examination (July-December-2022) Credit Hour: 3.00 , Full Marks: 70 Duration: 3.00 Hours

[Figures in the right margin indicate full marks. **Split answering of any question is not recommended.** Write the full question number e.g. 4(b)(ii) before the answer paragraph]

Answer any 5 of the following questions

1. a) What are business to consumer (B2C) and business to business (B2B) Web applications, and what are some examples of each type? List out some of the business drivers for today's information system. 3
   b) You are a new systems analyst and eager to prove your abilities on your first project. You are at a problem analysis meeting with the system owners and users and find yourself saying, "we need to do this to solve the problem," into what common trap are you in danger of falling? What technique could you use to avoid the trap? 3
   c) Why do many new systems analysts fail to effectively analyze problems? What can they do to become more effective? 2
   d) Briefly describe the four steps in a system development process. Discuss what happens in each step? 4
   e) Assume you are a systems analyst who will be conducting a requirements analysis for an individually owned brick-and-mortar retail store with a point-of-sale system. Identify who the typical internal and external users might include? 2

2. a) As a new project manager in a rapidly growing organization, you have been asked to lead a project team for an important project. The scope of the project is not too broad, project time frames are somewhat on the tight side but definitely doable, and the budget is more than generous. In fact, you have been given the authority to hire as many people as you want for your project team. You estimate that 5 people would be about right for this type of project, 8 would provide a healthy amount of backup, and 10 could give you the resources to deliver an outstanding system in record time. What is something you might want to keep in mind before making your decision on how many people to hire? 2
   b) What is the trigger for communicating the project plan, and who is the audience? Why is communicating the project plan important? 2
   c) Show the business factors that are driving system analysis. Based on these factors, what should system analysis address? 2
   d) Briefly describe about the eight major activities in the project management life cycle. 5
   e) Which responsibility project managers do to manage changes that occur and/or are requested during a project? List out the factors to consider in estimating task durations. 3

3. a) What is the objective of refining the Use-case model in object design? Why is it important? 2
   b) Why do many new systems analysts fail to effectively analyze problems? What can they do to become more effective? Show the categories of resources to be allocated to the project. 4
   c) Show the commonly used technique for prioritizing system requirements. 2
   d) Describe the steps needed to construct the state chart diagram. Show the relationship between an object state and state transition event. 3
   e) Define the visibility in object-oriented design. Explain the different levels of visibility. Why are the three kinds of objects needed in object-oriented design? 3

4. a) i. What do you mean by information systems and technology? 7
      ii. "A dollar today is worth more than a dollar one year from now"-What is the significance of this statement?
   b) i. What is the number of symbols required for a Data Flow Diagram? How is it different from an ERD? 7
      ii. Provide examples of data flows that are illegal.

5. a) i. What actions should I take and what should I avoid during an interview session? 7
      ii. "The time value of money is not taken into account for Payback Analysis"- Explain the statement with appropriate example.
   b) i. Make the distinction between databases and conventional files. 7
      ii. Explain the various types of questionnaires. Outline the advantages and disadvantages of questionnaires.

6. a) i. What are the benefits and drawbacks of interviews? 7
      ii. Give an explanation of the following terms:
         a. Body language,
         b. spatial zones,
         c. Office automation systems
   b) i. What are the most common process errors that result from drawing a Data Flow Diagram for a system? 7
      ii. What does the following mean?
         a. Proxemics
         b. Expert systems
         c. Brainstorming.

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Session : July-December-2020 Final Examination, Credit Hour: 3.00 , Full Marks: 70 Duration: 3.00 Hours

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Answer any 5 of the following questions

1. a) Suppose your company has a contract with a XYZ local firm to link all of their system so they can transparently work together. Their applications include a number of existing legacy systems, which were built at different times by different developers using a variety of languages and platforms, as well as several newer contemporary applications. What is the term for this type of linking? What type of tool would you most likely use, and shows some examples of these tools? 3
   b) What are the four steps in a system development process? Discuss what happens in each step. 3
   c) Write down the most important technology drivers for today's information systems. 2
   d) Differentiated between the role of system analysis and the role of the rest of the stakeholders. 2
   e) How do communication and collaboration systems improve efficiency and effectiveness? What are some of the communication and collaboration system that are being used by an increasing number of organizations? 4

2. a) Suppose you are the project manager of a medium-size project that is scheduled to take 10 months from project Initiation on September 1st through delivery on June 30th. It is now April 1st, seven months since the project began, and the project is slightly behind schedule, by perhaps a week. Draw a Gantt chart. Assume you are using the FAST methodology, and that project phases can overlap. 3
   b) Briefly describe about the eight major activities In the project management life cycle. 4
   c) Why is critical path analysis important for project management? 2
   d) Show the popular tool used to Identify tasks In the project management life cycle. 2
   e) Suppose you assigned a project manager for a XYZ project. During one phase of the project, you review the project schedule and realize that a member of your project team has been assigned multiple tasks that add up to more hours than the person bas available to work during that period. What technique could you use to resolve this? 3

3. a) Discuss about the main activities of object-oriented design. Show the steps needed to construct the state chart diagram. 3
   b) What is visibility in object-oriented design? Explain the different levels of visibility. 3
   c) Show the key reason for object reusability. Which methods developer's use to achieve object reusability? 3
   d) Describe the goal of constructing object robustness diagrams? What are the components of those diagrams? 2
   e) Compare the relationship between an object state and state transition event? 7

4. a)
   i. What are the most important skills that a system analyst must have?
   ii. Describe different types of questionnaires. What are the advantages and disadvantages of questionnaires? 7

   b)
   i. What is Present Value of money? How we can calculate Present Value of money?
   ii. What should do and avoid for an interview session?

3	B	i.	What role does network technology play in developing an organizations information system?	7
		ii.	The Capability Maturity Model (CMM) was developed by the Software Engineering Institute at Carnegie Melon, and is widely used by both the private and public sectors. What is the purpose of the CMM framework and how does it achieve this?	
4	A	i.	What are the most important skills that a system analyst must have?	7
		ii.	What are the advantages and disadvantages of interviews?	
4	B	i.	How many symbols are used for Data Flow Diagram? Make comparison between DFDs and ERD?	7
		ii.	Describe different types of questionnaires. What are the advantages and disadvantages of questionnaires?	
5	A	i.	Give an outline for a standard oral presentation.	7
		ii.	Make comparison between factual and administrative format for written report.	
5	B	i.	What are the most common process errors occur when a Data Flow Diagram are drawn for a system?	7
		ii.	"A dollar today is worth more than a dollar one year from now"-What is the significance of this statement?	
6	A	i.	How different reports differ for different persons and places?	7
		ii.	Show the cases where illegal data flows.	
6	B	i.	"The time value of money is not taken into account for Payback Analysis "- Explain the statement with appropriate example.	7
		ii.	Define the following: a) Proxemics b) Brainstorming.	

Patuakhali Science and Technology University

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Course Code: CTT-221 Course Title: **Information System Analysis and Design**

Final Examination (July-December-2021) Credit Hour: 3.00 , Full Marks: 70 Duration: 3.00 Hours

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Answer any 5 of the following questions

c1. a) How do communication and collaboration systems improve efficiency and effectiveness? What are some of the communication and collaboration system that are being used by an increasing number of organizations? 3

b) You are a new systems analyst and eager to prove your abilities on your first project. You are at a problem analysis meeting with the system owners and users and find yourself saying, "we need to do this to solve the problem," into what common trap are you in danger of falling? What technique could you use to avoid the trap? 3

c) What kind of knowledge and skills should a system analyst possess? 2

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e) Define the visibility in object-oriented design. Explain the different levels of visibility. Why are the three kinds of objects needed in object-oriented design? 3

4. a) (I). In system analysis if you use questionnaire as fact finding process which advantages and disadvantages you can get? 7

(II). How DFD differs from ERD?

b) (I). "The time value of money is not taken into account for Payback Analysis"- Explain the statement with appropriate example. 7

(II). Differentiate between databases and conventional files.

5. a) (I). Show with example what are the most common process errors occur when a Data Flow Diagram are drawn for a system? 7

(II). Define the following terminologies:

i. Proxemics

ii. Brainstorming.

b) (I). What is the necessity of data collection? List several data collection methods. What are the advantages and disadvantages of interviews over other methods? 7

(II). How reports differ for different persons and places?

6. a) (I). "A dollar today is worth more than a dollar one year from now"-What is the significance of this statement? Explain with a suitable example. 7

(II). What are the significances of database integrity in System Analysis and Design?

b) (I). What are the cases where illegal data flows happen? 7

(II). Explain the following terminologies with related examples:

i. Body language

ii. Spatial zones