

Department of Information and Communication Engineering
Pabna University of Science and Technology

Session: 2019-2020

Course Code: ICE-4203

Course Title: System Analysis and Software Testing
Part A (Outline)

S	Question	p
1.	Define a system. Explain the characteristics of a good system.	15
2.	Discuss the role and responsibilities of a System Analyst in system development.	
3.	Compare and contrast SDLC with the Agile model.	
4.	Define Candidate System. Write down the basic steps that are used for prototyping a system.	55
5.	Differentiate between project-oriented and pool-oriented structures of system analysis.	74
6.	What do you mean by interview? Write the stages of the interview.	138 140
7.	Write down the advantages and drawbacks of structured and unstructured interview techniques.	146
8.	Describe the steps involved in an initial investigation of a system.	200 202
9.	What considerations are involved in feasibility analysis? Which consideration do you think is the most crucial? Why?	201
10.7	How can feasibility studies help in planning a successful system?	
11. 8	Define and explain the procedure for cost/benefit determination.	237
12. 8	Write the formula for computing the present value from future value and rate of interest and for 10 years. To find the present value of \$1,500 that will be received at the end of the fourth year, with a 10% annual interest rate.	243
13.	Distinguish between tangible and intangible benefits with examples.	238
14.	What design methodologies are used in system design	264
15.	Distinguish between HIPO and IPO	270
16.	What do you mean by input and output design	283 296
17.	What are the key principles of good input/output design?	
18.	What are the advantages and disadvantages of File organisation methods?	332
19.	Describe file organization techniques and their relevance in database design.	
20.	What do you mean by system testing? Why system is tested?	360
21.	Explain the importance of Quality Assurance (QA) in system development.	
22.	What is a Gantt chart? How is it used in project scheduling?	
23.	Discuss the importance of security measures and disaster recovery planning in systems.	447
24.	What is encryption? How does it work? What type or level of system would incorporate this technology?	483

Part B(Outline)

S	Question	Page
1.	Describe the key phases of the Software Development Life Cycle (SDLC).	8
2.	Define the project management spectrum and explain each of its components.	18
3.	What are the steps involved in the Change Control process in software configuration management?	23
4.	Write short note on project management tools	24
5.	What do you mean by Requirement Elicitation? Draw and Describe Requirement Elicitation process.	29
6.	What are the differences and similarities between Coupling and Cohesion? Write the advantage of modularization.	37-38
7.	Describe the role of DFD and Data Dictionary in system analysis.	
8.	What are the steps of design process. Which software design approach is better to design a software describe as your own word.	56-57
9.	What are the guidelines for designing user-friendly interfaces?	
10.	Distinguish between LOC-based and FP-based estimation methods.	70
11.	What do you mean by software testing? Categorize software according to Lehman's evolution.	
12.	Describe about software documentation.	77
13.	Explain the basic idea of the COCOMO model with its different types.	
14.	Describe various software testing levels.	84
15.	Suppose you want to test a software. Which document are needs before and after test a software.	85
16.	What is software reengineering? Explain its need and process.	90
17.	Differentiate between software re-engineering and Reverse Engineering.	92
18.	Draw and describe component Reuse Process.	93
19.	Why case tools are needed. Describe the component of software case tools.	101
20.	Write short notes on CASE tools and CASE workbenches.	101