

International Islamic University Chittagong (IIUC)

Dept. of Computer Science & Engineering (CSE)

Final Examination: Spring-2021

Program: B.Sc. in CSE

Course Code: CSE-3529

Course Title: System Analysis & Design.

Time: 2.5 Hours

Full Marks: 50

All questions should be answered.

Group A

- CO3 1.(a) The passenger is required to fill in a reservation form giving details of his journey. The counter clerk ensures whether the place is available. If so, entries are made in the register, tickets are prepared, amount is computed and cash is accepted. A booking statement is prepared in triplicate from the reservation register. One copy of it is retained as office copy, the other is pasted on the compartment and the third is passing on to the train conductor. Besides booking statement, cash statement is prepared at the end of each shift. Prepare a DFD to describe this situation., Give the following terms for the above "Railway Reservation System": (i) Input design of the system (ii) Draw Data Flow Diagram (DFD) (iii) Draw context free diagram (iv) Output design of the system 5
- CO3 1.(b) Construct a decision tree and calculate Expected Value (EV) based on the values in the table below: Formula: $EV = \sum P(X_i) \times X_i$ 5

Alternatives	Growing	Declining
Stocks	70	-13
Mutual Funds	53	-5
Bonds	20	20
Probability	0.4	0.6

Or

- CO3 1.(a) When CASE keyword is used in Structure English? Describe with example. Name the popular CASE tools. State the advantages and Disadvantages of Indexed Sequential File Organization and Direct File Organization 5
- CO3 1.(b) Draw a decision tree and decision table for a project management 5
- CO3 2.(a) What is input design and its objectives 3
- CO3 2.(b) What is form design? Objectives of good form design. 4
- CO3 2.(c) What is database design? What is the logical design of a database? 3

Group B

- CO3 3.(a) What is system testing? Is testing compulsory for a system or not? Justify your answer 3
- CO3 3.(b) What is white box testing and black box testing? Describe with example. 5
- CO3 3.(c) What are the difference between Alpha testing and Beta testing? 2
- CO4 4.(a) What is system maintenance? Why it is necessary? 3
- CO4 4.(b) Discuss the process of system maintenance. 3
- CO4 4.(c) What are the types of system maintenance? Distinguish between adaptive and corrective maintenance? 4
- CO2 5.(a) Write some criteria for software selection and hardware selection 2
- CO2 5.(b) What is Threats? Briefly discuss about physical threat and non-physical threat. 4
- CO2 5.(c) Write short notes on the following: i) Network security ii) End-point security iii) Internet security iv) Cloud security 4

Or

- CO2 5.(a) What is meant by "Project Management"? Why it is needed? Write short note on: (i) PERT (iii) ROI 3
- CO2 5.(b) Prepare Data Dictionary entries for i) The data elements Basic Pay, Professional Tax ii) The data stores Salary Summary File, Arrears Files iii) The data flows Earning details, Deduction details 4
- CO2 5.(c) Write the importance of documentation in software development, 3