

**University of Rajshahi**  
**Department of Computer Science and Engineering**  
**B. Sc. (Engg.) Part-III Odd Semester Examination 2020**  
**Course: CSE 3111 (System Analysis and Design)**  
**Full Marks: 52.5 Time: 3 Hours**

[Answer any Six (06) questions taking any three (03) from each group]

**Group A**

- |  |                |
|--|----------------|
| <span style="color: green;">✓</span> 1. a) Distinguish between a Physical and Abstract system.<br>b) What are the elements of a system? Can you have a viable system without feedback? Explain. <span style="color: blue;">ch-1</span><br>c) Discuss the primary characteristics of open systems. In what way is a system entropic?  | 2<br>2.75<br>4 |
| 2. <span style="color: red;">a</span> ) To what extent and how quickly a user-originated idea is converted to a feasibility study depends on which factors?<br><span style="color: blue;">b</span> ) What is system development life cycle? Write down the steps of system development life cycle and discuss them briefly. <span style="color: green;">ch-2</span>  | 2<br>6.75      |
| 3. a) What academic and personal qualifications are required of a person to be a system analyst? <span style="color: green;">ch-3</span><br><span style="color: red;">b</span> ) Do you think it is necessary to fulfill all demands of the target users for a system developer? Justify your answer.<br><span style="color: red;">c</span> ) Discuss major characteristics of human as information processor.   | 4<br>1.75<br>3 |
| 4. a) Suppose you are assigned for gathering information about a present system using the tool "On-site observation". Which rules, as an observer you should follow? <span style="color: blue;">4 ta - no talk- listen, genuine interest info is conveyed, no judge/advice, no argue-hostile/ undue friendliness</span><br>b) Answer to which key questions you need to consider, when deciding whether to use On-site observation as information gathering tool? <span style="color: blue;">5 ta</span><br>c) What are the possible drawbacks if you choose On-site observation as your information gathering tool? | 2.75<br>3<br>3 |

**Group B**

- |  |                |
|--|----------------|
| <span style="color: green;">✓</span> 5. a) What is structured analysis? Why structured analysis is necessary?<br>b) Consider the following discount policy, and construct decision tree and decision table from it: <span style="color: green;">chapter-6</span><br>For any customer, if order is less than 6 copies, no discount is given. Else, Bookstores get a trade discount of 25%; for orders from libraries and individuals, 5% allowed on orders of 6-19 copies per book title; 10% on orders for 20- 49 copies per book title; 15% on orders for 50 copies or more per book title. | 2.25<br>6.5    |
| 6. a) What is feasibility analysis? <span style="color: blue;">chpt-7</span><br>b) What considerations are involved in feasibility analysis? Which consideration do you think is the most crucial? Justify your answer. <span style="color: blue;">partial answer</span><br>c) Discuss the method of "Weight system performance and cost data" with proper example.  | 1<br>3<br>4.75 |

chapter-7

- ✓ 7. a) What makes up a system performance definition? Explain the steps to prepare the definition with an example situation. **chapter-7**  
    a) Discuss briefly Net Benefit Analysis and Present Value Analysis. **chapter-8**  
    b) What is the present value of \$2250 invested at 10% interest at the end of 5th year? **chapter-8**
- ✓ 8. a) What is the goal of system testing? **Chapter-12**  
    b) Describe briefly the factors that affect the quality of a system.  
    c) What is meant by quality assurance? Explain in your own words what level of quality assurance must a system meet.

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University of Rajshahi  
Department of Computer Science and Engineering  
B. Sc. (Engg.) Part-III, Odd Semester, Examination 2019  
Course: CSE 3111 (System Analysis & Design)  
Full Marks: 52.5 Time: 3 Hours  
[Answer any six (6) questions taking three (3) from each group]

Part A

- ✓ 1. a) What is a system? Distinguish between Physical and Abstract system. ✓ 3  
b) What are the elements of a system? Can you have a viable system without feedback? Explain. 3  
c) What is system development life cycle? How does it relate to systems analysis? 2.75 ch-1
- ✓ 2. a) What do you mean by candidate system? 1.75  
b) What are the internal and external factors influence the system change? 2.5  
c) What are the considerations that act as important factors in deciding a candidate system? Discuss briefly. 2.5 ch-2  
d) What is the concept of Prototyping? 2
- ✓ 3. a) What is the importance of initial investigation? Why is it necessary for system analysis context? 3  
b) Why is it difficult to determine user requirements? Explain. ch-3 3.75  
c) What is meant by the analyst/user interface? Why is it a problem? 2
- ✓ 4. a) What are the technical and interpersonal skills required of system analysts? When is one skill favored over the other? Explain. 3.75  
b) Discuss the role of the system analyst as a "Change agent", "Investigator and Monitor". 2  
c) Discuss the limitations of humans (according to Davis), which cause problems specifying information requirements. 3

Part B

- ✓ 5. a) What are the problems of traditional approach to system analysis? How does the structured analysis differ from the traditional approach? chapter-6 4  
b) What is a decision table? Discuss with an example. Why is it important in system analysis and design? 4.75
- ✓ 6. a) Why is it important for an analyst to learn organization's policies and objectives? 1  
b) How would one conduct an on-site observation? Lay out a plan. chapter-5 4.25  
c) Explain briefly the procedures used to construct questionnaires. 3.5
- ✓ 7. a) Discuss the concept of Structured design. 2.75  
b) Distinguish between logical and physical design. chapter-9 3  
c) Define coupling, Module coupling and Module cohesion. 3
- ✓ 8. a) Elaborate on the steps in feasibility analysis. If you want to shorten them to four steps, which ones would you pick? Why? chapter-7 2  
b) What cost elements are considered in cost/benefit analysis? Which element do you think is the most difficult to estimate? Why? chap-8 2.75  
c) Distinguish between the following: (a) Opportunity and sunk costs; (b) Direct and indirect costs; (c) Fixed and tangible costs; (d) Tangible and intangible benefits. 4

Hardware  
Personnel  
Facility  
Operating  
Supply

University of Rajshahi  
Department of Computer Science and Engineering  
B. Sc. (Engg.) Part-III (Even Semester), Examination 2018  
Course: CSE3211 (System Analysis and Design)  
Full Marks: 52.5 Time: 3 Hours

[Answer any six questions taking three from each section]

Section A

- |  |      |
|--|------|
| 1. a) Write down the three basic implications of system concept.   | 1.50 |
| b) Briefly describe the characteristics of a system. ch-1  | 4.00 |
| c) Define System. What are the elements of a system?   | 3.25 |
| 2. a) What is the system development life cycle? How does it relate to system analysis? ch-2   | 2.50 |
| b) Give insight into the contents of a formal system proposal. Explain why a system proposal is so crucial for system design.  | 3.25 |
| c) What activities make up a system design? How does system design simplify implementation?  | 3.00 |
| 3. a) What do you mean by initial investigation of a system? Why is it necessary for system analysis? 2019 3-a   | 3.00 |
| b) What is System Requirement Specification (SRS)? Briefly explain any three characteristics of SRS. ch-3  | 3.75 |
| c) What is meant by analyst/user interface? <u>Why is it a problem?</u>  | 2.00 |
| 4. a) Suppose a group of 10 people including you who work on a system are scheduled for interviewing by an analyst. What would you expect from him while he conducts your interview? | 4.25 |
| b) Explain the difference between structured and unstructured interviewing.  | 2.00 |
| a) In which ways Questionnaire is a better information gathering method than Interviewing?   | 2.50 |

## Section B

5. a) What do you mean by the traditional approach to system analysis? What are the disadvantages of this approach? ch-6 3.00

b) What is structured analysis? How does it differ from the traditional approach? 3.25

c) Distinguish between validity and reliability. How are they related? 2.50

6. It is possible for a system analyst involved in the introduction of a new or upgraded computer system to encounter resentment and opposition from existing employees. This may take many forms from outright opposition to active hostility towards the new system during fact finding interviews.

a) Outline the reasons for employees to react in this manner. 3.00

b) Outline the measures that can be taken by the system analyst to alleviate this resistance. 3.00

(c) ABC Company Ltd. will need Tk. 250,000 at the end of 3 years for restructuring. 2.75  
Calculate the present investment value the company needs to invest at an annual compound interest rate of 10%.

7. a) What makes up a system performance definition? Explain the steps to prepare the definition with an example situation. Chapter: 7 3.00

b) Discuss the step of "Weight system performance and cost data" with proper example. 3.75

c) How is data flow diagram (DFD) useful in analyzing the data and processes used in a system? chapter-6 2.00

8. a) In your own words, describe the process of logical system design. chapter-9 4.00

b) Why the scientists are trying to transform the "art" of system analysis and design into an "engineering-type" discipline? What are currently being attempted to achieve that? 3.25

c) What is the goal of the functional decomposition approach to structured design? 1.50

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**University of Rajshahi**  
**Department of Computer Science and Engineering**  
**B. Sc. (Hons.) Part-III Even Semester Examination 2017**  
**Course: CSE 3211 (System Analysis)**  
**Full Marks: 52.5 Time: 3 Hours**  
[Answer any six questions taking 3 from each Section]



**Section A**

- ✓ 1. a) Distinguish between a Physical and Abstract system. 2  
b) What are the elements of a system? Can you have a viable system without feedback? 2.5  
c) What will be the aftermath of your system if you build your system as a (i) Open system, (ii) Closed system? ch-1 3.25  
d) In what way is a system entropic? 1
  
2. a) What do you mean by candidate system? 2019- 2a,b,c same 1.25  
b) What internal and external factors influence the system change? 2.5  
c) What are the considerations that act as important factors in deciding a candidate system? Discuss briefly. ch-2 2.5  
d) What do you mean by "Paralysis by analysis"? How can you overcome this situation? 2.5
  
3. a) What are the technical and interpersonal skills required of systems analysts? 3.75  
Which skill is favored over the other in the following stages:  
i. Feasibility study  
ii. Design  
iii. Implementation ch-3  
iv. Maintenance.
  
- b) Discuss the behavioral issues involved in understanding the analyst/user difference. 3  
c) Do you think it is necessary to fulfill all demands of the target users for a system developer? Justify your answer. →2020 3b 2
  
4. a) What planning dimensions determine information system development? Elaborate. 3  
b) Why is it difficult to determine user requirements? Explain. 2.75  
c) Discuss the limitations humans have (according to Davis), which cause problems specifying information requirements. 3

**Section B**

5. a) Why is it important that an analyst learns the organization's policies and objectives? 1.5  
b) What are the advantages and disadvantages of on-site observation? 2  
c) Explain and give an example of each type of questionnaires. 5.25
  
6. a) State the pros and cons of the traditional approach to system analysis. chapter-8 1.5  
b) Discuss the concept and procedure used in constructing DFD with an example. 3.5  
c) Define data dictionary. How it overcomes the limitations of DFD? What are the advantages and disadvantages of data dictionary? 3.75
  
7. a) What makes up a system performance definition? Explain the steps to prepare the definition with an example situation. 2018 - 7a,b 3  
b) Discuss the step of "Weight system performance and cost data" with proper example. 3.25  
c) What makes up a feasibility report? How would you change it? Explain. 2.5

- hardware
8. a) What cost elements are considered in cost/benefit analysis? Which element do you think is the most difficult to estimate? Why? 19 8b 3.5
- b) Define and explain the procedure for cost/benefit determination. chapter-8 2.25
- c) Distinguish between the following:  
(i) Direct and indirect costs, (ii) Tangible and intangible benefits. 3

**University of Rajshahi**  
Department of Computer Science and Engineering  
**B.Sc. (Engg.) Part – III (Even Semester), Examination – 2016**  
**Course: CSE-3211 (System Analysis and Design)**  
Marks: 52.5 Times: 3 Hours  
**[Answer any six questions taking at least three from each part.]**

**PART-A**

- ✓ 1. a) What is a system? Briefly describe the characteristics of a system. 4  
b) Can you have a viable system without feedback? Explain. ch-1 1.75  
c) What is information system? Discuss different types of information system. 3
2. a) What internal and external factors influence the system change? 19 2b 2.50  
b) What is system development life cycle? Write down the steps of system development life cycle and discuss them briefly. ch-2 6.25
3. a) Discuss the behavioral issues involved in understanding the analyst/user difference. 2017 3b 4  
b) What is a management information system (MIS)? Discuss the primary functions of an MIS facility. ch-1
4. a) How would an analysis determine the user's needs for a system? Explain. 2  
b) Distinguish between initial investigation and feasibility study. In what ways they are related? 2  
c) Why a system project may be dropped at any time? 2  
d) Why a new system does not meet user requirements? 2.75

**PART-B**

- ✓ 5. a) What are the cons of traditional approach to system analysis? chapter-6 1  
b) What is structured analysis? How does it differ from the traditional approach? 3  
c) Describe the concept and procedure used in constructing DFDs. Use an example of your own to illustrate a DFD. 4.75
6. a) What is feasibility analysis? 2020 6 same question 1  
b) What considerations are involved in feasibility analysis? Which consideration do you think is the most crucial? State your reasons. 3  
c) Discuss the step of "Weight system performance and cost data" with proper example. partial answer 4.75
- ✓ 7. a) Discuss the concept of structured design. 2.75  
b) Distinguish between logical and physical design. 2019 7 full set 3  
c) Define coupling, module coupling and module cohesion. 3
8. a) What is testing? Mention different types of testing. 2.75  
b) What is project planning? Briefly discuss the Gantt chart technique of project planning. 6

**University of Rajshahi**  
**Department of Computer Science and Engineering**  
 B. Sc. (Engg.) Part-III Odd Semester, Examination 2016 (Syllabus 2012-13)  
**Course: CSE 3111 (System Analysis & Design)**  
**Full Marks: 52.5      Time: 3 Hours**

Answer any six questions taking at least three from each group

Property of Seminar Unit  
 Dept. of Computer Science  
 Chittagong University  
 University of Rajshahi

**Group A**

1. a) What is a system? Write down the three basic implications of system concepts. 2  
b) Distinguish between Open and Closed system. ch-1 2.75  
c) Write down and discuss the elements of a system. 4
2. a) What internal and external factors influence the system change? 19 2b  
b) What is system development life cycle? Write down the steps of system development life cycle and discuss them briefly. ch-2 2.75 6
3. a) Write down the steps that should be taken for a successful interview and explain each of them briefly. ch-5 5.75  
b) Write down the procedure to construct a Questionnaire. 3
4. a) What is the importance of initial investigation?  
b) In which way questionnaire is a better information gathering method than interviewing?  
c) What are the advantages and disadvantages of on-site observation? 2.75 3 3

**Group B**

5. a) What is structured analysis? 1.75  
b) What is the purpose of DFD? Mention its pros and cons. 3  
c) What is data dictionary? Why it is important for system analysis and design? 4
6. a) Explain the concept of direct and indirect costs and benefits. chapter-8 3  
b) Discuss briefly Net benefit analysis and present value analysis. 4  
c) What is the present value of \$1500 invested at 10% interest at the end 4<sup>th</sup> year? 1.75
7. a) What is feasibility study? Illustrate the key considerations that are involved in feasibility analysis. chapter-7 4.75  
b) Discuss the steps involved in feasibility analysis. 4
8. a) What makes up a system performance definition? Explain the steps to prepare the definition with an example situation.  
b) Discuss the steps of "weight system performance and cost data" with proper example. 4 4.75

**University of Rajshahi**  
**Department of Computer Science and Engineering**  
**B. Sc. (Engg.) Part-III (Even Semester) Examination 2015**  
**Course: CSE 3211 (System Analysis & Design) (Session: 2011-12)**  
**Full Marks: 52.5 Time: 3 Hours**  
**[Answer any six questions taking 3 from each group]**

**Group A**

- ✓ 1. a) Define system with example. Mention the basic implications of system concepts. 3.5  
b) Discuss different characteristics of a system. ch-1 4  
c) What do you mean by a candidate system? 1.25
  
- 2. a) What internal and external factors influence the system change? 19 2b 2  
b) What is system development life cycle? Write down the steps of system development life cycle and discuss them briefly. ch-2 6.75
  
- 3. a) Elaborate on the technical and interpersonal skills required of systems analysts. 3  
b) What academic qualifications are important for systems work? Explain. 3  
c) What is meant by the analyst/user interface? Why is it a problem? 2018 3c 2.75
  
- 4. a) What planning dimensions determine information system development? 3  
Elaborate.  
b) Why is it difficult to determine user requirements? Explain. 3  
c) Discuss the strategies which according to Scharer, users use to define their information requirements to satisfy the analyst. 2.75

**Group B**

- 5. a) Where does information originate? 1  
b) How would one conduct an on-site observation? Lay out a plan. 4.75  
c) Explain briefly the procedures used to construct questionnaires. 3
  
- 6. ✓ a) What is structured analysis? Explain the concept of decision table with a proper example. chapter- 6 4  
b) Write down the pros and cons of each tools of structured analysis. 4.75
  
- 7. a) What is feasibility study? Explain why feasibility study is so important in system analysis? 2016 ses-2012-13 7a,b 3.25  
b) Discuss the steps involved in feasibility study. 3  
c) What is structured analysis? Briefly discuss the concepts of DFD. chapter-6 2.5
  
- 8. ✓ a) Explain the concept of Direct and Indirect costs and benefits. 3  
b) Discuss briefly Net Benefit Analysis and Present Value Analysis. 4  
c) What is the present value of \$1250 invested at 10% interest at the end of 5th year? 1.75

✓

**University of Rajshahi**  
**Department of Computer Science and Engineering**  
B. Sc. (Engg.) Part-III, Odd Semester, Examination 2015  
Course: CSE 3111 (System Analysis & Design)  
Full Marks: 52.5 Time: 3 Hours  
[Answer any Six questions taking three from each group]

**Part A**

1. a) Distinguish between a Physical and Abstract system. 2
- b) What are the elements of a system? Can you have a viable system without feedback? Explain. ch-1 2.75
- c) Discuss the primary characteristics of open systems. In what way is a system entropic? 4
2. a) What is system development life cycle (SDLC)? Briefly discuss the steps of SDLC. ch-2 6
- b) What is Prototyping? Write down the basic steps of prototyping. 2.75
3. a) What is meant by initial investigation? Why is it necessary for system analysis context? 2019 3a 3
- b) Why is it difficult to determine user requirements? Explain. 2019 3b 3.75
- c) What is meant by the analyst/user interface? Why is it a problem? 2
4. a) Elaborate on the technical and interpersonal skills required of systems analysts. When is one skill favored over the other? Explain. 5.75
- b) Discuss major characteristics of human as information processor. 3

**Part B**

5. a) What are the problems of traditional approach to system analysis? How does the structured analysis differ from the traditional approach? chapter-6 4
- b) What is a decision table? Discuss with an example. Why is it important in system analysis and design? 4.75
6. a) How would one conduct an on-site observation? Lay out a plan. 4.75
- b) Explain briefly the procedures used to construct questionnaires. 4
7. a) Discuss the concept of Structured design. 2.75
- b) Distinguish between logical and physical design. 2019 7 full set 3
- c) Define coupling, Module coupling and Module cohesion. 3
8. a) What is the goal of system testing? 2
- b) Describe briefly the factors that affect the quality of a system. 3.25
- c) What is meant by quality assurance? What level of quality assurance must a system meet? Explain. 3.5

**University of Rajshahi**  
**Department of Computer Science and Engineering**  
**B. Sc. (Engg.) Part-III, Even Semester, Examination 2014**  
**Course: CSE 3211 (System Analysis & Design)**  
**Full Marks: 52.5 Time: 3 Hours**  
**[Answer any Six questions taking three from each group]**

**Group A**

- |  |                     |
|--|---------------------|
| <span style="color: green;">✓</span> 1. a) What is a system? Write down the three basic implications of system concepts.<br>b) Distinguish between a Physical and Abstract system.<br>c) Write down and discuss the elements of a system.  | 2<br>2.75<br>4      |
| <span style="color: green;">✓</span> 2. a) What do you mean by a candidate system?<br>b) What are the considerations that act as important factors in deciding a candidate system? Discuss briefly.<br>c) Discuss the concept of Prototyping?  | 1.5<br>4.75<br>2.5  |
| 3. a) What is the difference between interpersonal and technical skill?<br><span style="color: blue;">✓</span> b) Discuss the multifaceted role of the analyst. ch-3   | 2.75<br>6           |
| 4. a) What is the importance of initial investigation?<br>b) What internal and external factors influence the system change?<br>c) Why is it important that an analyst learns the organization's policies and objectives?<br>d) What are the advantages and disadvantages of onsite observation? | 2<br>2.75<br>2<br>2 |

**Group B**

- |   |                |
|---|----------------|
| 5. a) What is structured analysis?<br><span style="color: red;">✓</span> b) What is the purpose of DFD? Mention its pros and cons.<br>c) What is a data dictionary? Discuss with an example. Why is it important in system analysis and design? chapter-6   | 1.75<br>3<br>4 |
| <span style="color: red;">✓</span> 6. a) Write down the steps that should be taken for a successful interview and explain them briefly.<br><span style="color: blue;">✓</span> b) Discuss the steps involved in feasibility analysis. chapter-7   | 4.75<br>4      |
| <span style="color: green;">✓</span> 7. a) What do you mean by cost elements? Write down the steps to determine cost/benefit of a system. chapter-8<br>b) What are tangible and intangible costs and benefits? Explain with example.<br>c) What design methodologies are used in system design? chapter 9 | 3<br>4<br>1.75 |
| <span style="color: red;">✓</span> 8. a) Explain the goals of input and output design.<br>b) What is unique about online data entry? Explain briefly three approaches for data entry.<br>c) Briefly write the characteristics of action, memory and report forms.   | 2<br>4<br>2.75 |

# ai question set badddd

University of Rajshahi  
Department of Computer Science and Engineering  
B. Sc. Engg. Part-3 Odd Semester Examination-2017 (Session: 2012-13)  
Course: CSE-3111 (System Analysis and Design)  
Full Marks: 52.5      Time: 3 Hours  
[Answer three questions from each part]

## Part-A

1. a) What is a system? Can you have a viable system without feedback? Explain. 2  
b) Briefly discuss the elements of a System. ch-1 5  
c) Differentiate between open system and closed system. 1.5
2. a) What do you mean by candidate system? ch-2 1.5  
b) What internal and external factors influence the system change? 19 2b 2.5  
c) What are the considerations that act as important factors in deciding a candidate system? Discuss briefly. 2.5  
d) What is the concept of Prototyping? 2
3. a) What are the technical and interpersonal skills required of systems analysts? Which is more skillful? 1.5  
b) Discuss the behavioral issues involved in understanding the analyst/user分歧. 3  
c) What is a Management Information System (MIS)? Discuss the primary facilities of an MIS. 2.5
4. a) Briefly discuss traditional information gathering tools. 5  
b) In what respect interviewing is an art? Explain. 2  
c) Explain briefly the procedure used to construct questionnaires. 1.5

## Part-B

5. a) What is structured analysis? Why structured analysis is necessary? 1.5  
b) Consider the following discount policy: Bookstores get 25% discount for orders from libraries and individuals 5% allowed on orders of 6-10 copies per book title; 10% on orders for 20-49 copies per book title; 15% on orders for 50 or more copies per book title. Now construct decision tree and decision table. 6
6. a) How important is a project team in feasibility analysis? Is it mandatory? Where are the exceptions? 1.5  
b) Distinguish between tangible cost/benefit and intangible cost/benefit. 3  
c) Briefly discuss present value analysis method. 3
7. a) What makes up a system performance definition? Explain the steps to prepare an example situation. 3  
b) Discuss the step of "Weight system performance and cost data" with proper 1.5  
c) What makes up a feasibility report? How would you change it? Explain. 1.5
8. a) Write down the concepts of logical and physical design. 3  
b) Define coupling, Module coupling and Module cohesion. 2.5  
c) What are the goals of design methodologies? 2.5