

Possible Question: System Analysis and Design (Chapter 7,8,9,11,12)

Chapter 7:

Short Notes/ Questions:

1. Use case centered development. (Page 245)
2. Use-case modeling (Page 245)
3. Use- case diagram (Page 246)
4. Use- case narrative (Page 246)
5. Actors (Primary business, Primary System, external server, external receiver) (Page 247, 248)
6. Use case relationships (Page 248)
7. Functional decomposition (Page 246)
8. Inheritance (Page 250)
9. Business requirements (Page 252)

Broad Questions:

1. What is a use case? Describe all the use-case actors with appropriate diagram. / Design your own system and mention all the use-case actors of your system. (Page 246, 247, 248)
2. What is a use-case relationship? Describe all the use case relationships with appropriate diagram/ Design your own system and mention all possible relationship of your system with appropriate diagram. (Page 248, 249, 250)
3. Describe the process of requirement use-case modeling with all 4 (four steps) and the 2 (two) steps of how using tools benefits use-case and project management/ Describe all the 4 (four) requirements of your systems use-case modeling and the how the tools will help your use-case model and system? (Page 251-262)

Chapter 8:

Short Notes/ Questions:

1. Data modeling. (Page 270)
2. ERD (Page 271)
3. Entity (Page 271)
4. Instance (Page 272)

5. Attribute, Compound attribute (Page 272)
6. Data type, domain, default value (Page 273)
7. Key, Candidate key, Primary key, alternate key (Page 273, 274)
8. Relationship, Cardinality, degree (Page 275)
9. Recursive relationship, Associative relationship, foreign key, child key, parent key (Page 276, 277)
10. Non-identifying relationship, identifying relationship, non-specific relationship (278, 279)
11. Application data model, context data model, key based data model, fully attributed data, normalized data (Page 285, 286)
12. Data analysis, normalization, First Normal Form (1NF), Second Normal Form (2NF), Third Normal Form (3NF) (Page 299)
13. Generalization, super type, subtype (Page 283)
14. 3 (three) components of a good data model (Page 299/ Note)

Broad Questions:

1. Briefly describe system concepts for data modeling (Page 271-283)
2. Briefly describe the process of logical data modeling and the benefits of using data model. Also describe the requirements for logical data model design/ or;

Describe the process of logical data modeling of your system. what benefits you will get using the data model on your system? Also describe the requirements of logical data model design of your system. (Page 283-288)

3. What is normalization? Describe the characteristics of all 3 (three) normalization. Also design a database and show the steps of all 3 (three) normalization. (Notes provided)

Chapter 9:

Short Notes/ Questions:

1. What is a model? (Page 316)
2. Define logical model. (Page 316)
3. Define physical model. (Page 316)
4. Write down 3 (three) reasons for using logical model. (Page 316)
5. What is a process model? (Page 317)
6. What is data flow diagram? (Page 317)

7. What is a process? (Page 322)
8. What is decomposition? (Page 322)
9. Define a decomposition diagram. (Page 323)
10. What is composite data flow? (Page 326)
11. What is data conservation? Define diverging and converging data flow. (Page 329, 333)
12. What is a context data flow diagram? (Page 335)
13. Define functional decomposition diagram. (Page 335)
14. Define external events, temporal events and state events. (Page 341)
15. Define 2 (two) types of synchronizing system model. (Page 359,360)
16. Define balancing. (Page 348)
17. Define Structured English. (Page 353)

Broad Questions:

1. What is data flow diagram? Describe 4 (four) symbols of data flow and draw a data flow diagram of a system. (Page 317-319)
2. What is a process modeling. Briefly describe a system concept for process modeling. (Page 319-334)
3. Briefly describe the process of logical process model. (Page 334-337)
4. Describe how to construct a data flow diagram. (Page 338-358; follow class notes)
5. Describe 2 (two) types of synchronizing system model. Also draw both the matrix models. (Page 353) (Page 359,360)

Chapter 11:

Short Notes/ Questions:

1. Feasibility (Page 414)
2. Feasibility Analysis (Page 414)
3. Operational feasibility (Page 417)
4. Cultural feasibility (Page 417)
5. Tangible benefit, intangible benefit (Page 420, 421)

Broad Questions:

1. What is feasibility analysis? Write down the six tests for feasibility. (Page 417-419)
2. Describe cost benefit analysis technique or how would you determine how much will your system cost? (Page 419-426)
3. Write down the feasibility analysis of candidate system? Also think about a system and create both of the matrix model according to the candidates of your system. (Page 426-429)
4. Describe your system proposal with appropriate steps of your system proposal. (Page 431-437)

Chapter 12:

Short Notes/ Questions:

1. Define system design. (Page 447)
2. What is a model driven design (Page 447)
3. Define RAD (Page 451)
4. What is application architecture (Page 453)

Broad Questions:

1. What is a system design? Describe the steps of a system design approach (Page 446-453)
2. Describe the steps of system design for In-House development. (Page 453-460)
3. Describe the system design steps for integrating commercial software. (Page 460-467)