KSRM COLLEGE OF ENGINEERING, (Autonomous) KADAPA

B.Tech. VI Semester (CSE) (R15) Degree Examinations

(1505601) OBJECT ORIENTED ANALYSIS & DESIGN

Model Question Paper

Time: Three Hours   **Maximum: 70 Marks**

Note: Answer any **FIVE** questions choosing one from each unit.
All questions carry equal marks.

UNIT-I

1 What is modeling? List and explain principles of modeling.   (14 M)

(OR)

2. Discuss about Basic Building Blocks in Conceptual Model of UML.   (14 M)

UNIT-II

3. Explain Interfaces, Types and Roles.   (14 M)

(OR)

4. a) Discuss Class diagrams with an example.   .   (10 M)
   b) Explain the common modeling technique for modeling logical database schema.   (4 M)

UNIT-III

5. What is interaction? Explain sequence diagram with example.   (14 M)

(OR)

6.Define Usecase? Discuss about Usecase diagrams in detail.   (14M)

UNIT-IV

7. Write Short notes on
   a.) Processes and Threads   (7 M)
   b.) Time and Space   (7 M)
      .

(OR)

8. Explain state chart diagrams in detail.   (14M)

UNIT-V

9. Briefly analyze and develop class, sequence, and Usecase diagrams for Library
   Management System.   (14M)

(OR)

10. Discuss in detail about Component Diagrams.   .   (14M)

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA

B.Tech. VI Semester (CSE) (R15) Degree Examinations

(1505602) DESIGN & ANALYSIS OF ALGORITHMS

Model Question Paper

Time: 3 Hrs.   Max. Marks: 70

Note: Answer any **FIVE** questions choosing one question from each unit.
        All questions carry equal marks.

UNIT-I

1 a) Define Algorithm and discuss Space and Time complexity of Linear search.   (7M)
  b) Discuss Selection sort algorithm with one example.   (7M)
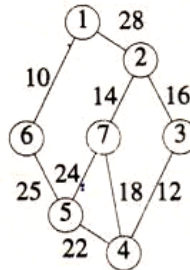

(OR)

2. a) What is brute force method and discuss Bubble sort algorithm.   (7M)
  b) Discuss in detail about brute force string matching.   .   (7M)

UNIT-II

3. a)Explain in detail about Merge sort Algorithm.   (7M)
  b) Discuss in detail about strassen's matrix multiplication.   (7M)

(OR)

4. Find minimum spanning tree of the following using prim's.   .   (14M)

UNIT-III

5. Explain in detail about Multi stage Graph.   (14M)

(OR)

6.Define travelling sales person problem and discuss optimal solution of the following.   (14M)

$$C = \begin{Vmatrix} 0 & 10 & 15 & 20 \\ 5 & 0 & 9 & 10 \\ 6 & 13 & 0 & 12 \\ 8 & 8 & 9 & 0 \end{Vmatrix}$$

UNIT-IV

7. Let w = {5,7,10,12,15,18,20} and m=35.Find all possible subsets of w that sum to m. Do this using SumOfSub.Draw the portion of the state space tree that is generated. (14M)

.

(OR)

8. Explain in detail about 8-Queen problem. (14M)

UNIT-V

9. Explain in detail about FIFO branch and bound. (14M)

(OR)

10. a) Define the following terms
    (i) NP   (ii) NP HARD (6M)
   b) Discuss in detail about Cook's theorem. (8M)

Time: Three Hours   **Maximum: 70 Marks**

Note: Answer any FIVE questions choosing one question from each unit.
      All questions carry equal marks.

UNIT – 1

1. a) what is meant by computer security? Explain different types of security attacks with appropriate diagrams.   7M
  b) Define security Mechanism. Discuss network security model with a neat diagram.   7M

(OR)

2. a) Explain Hill Cipher encryption technique with an example.   7M
  b) What is meant by transposition technique? Discuss Rail fence technique with an example.   7M

UNIT – 2

3. a) What is the difference between Block cipher and stream cipher? Explain DES with appropriate diagrams.   7M
  b) Discuss any two block cipher modes of operations with a diagram.   7M

(OR)

4. a) Discuss modular arithmetic and explain $GF(2^n)$ fields with addition and multiplication.   7M

  b) What is prime factorization? Discuss Chinese Remainder theorem with an example.   7M

UNIT – 3

5. a) What is meant by Public-Key cryptography? Explain RSA algorithm with an example.   7M
  b) Discuss Diffie – HellMan Key exchange technique with an example.   7M

(OR)

6. a) List out the applications of cryptographic Hash – functions. Discuss briefly on Hash functions based on Cipher Block Chaining technique.   7M
  b) Discuss Secure Hash Algorithm.   7M

UNIT – 4

7. a) What is a message authentication code? Explain the requirements for MACs.   5M
  b) Discuss security of MACs and HMAC.   9M

(OR)

8. a) What are the two different approaches to digital signature? Explain.   9M
  b) Discuss briefly on Schnorr digital signature scheme.   5M

UNIT – 5

9. a) What is meant by user authentication? Explain the principles of Remote user authentication. 7M
  b) What is the motivation for Kerberos? Discuss Kerberos version 4.   7M

(OR)

10. a) What is PGP? Explain the general format of PGP message.   7M
  b) What is S/MIME? Discuss variety of MIME content types.   7M

Time: Three Hours   **Maximum: 70 Marks**

Note:- Answer any **FIVE** questions choosing **ONE** question from each unit.
        All questions carry **Equal** marks.

UNIT – I

1. a) What is Data Mining? Describe KDD Process.   (7M)

    b) Explain the various tasks of data mining.   (7M)

(OR)

2. a) Discuss the various OLAP operations in the Multidimensional Data Model.   (8M)
    b) Consider the two binary vectors X=(0,1,1,0,1,0,1,0) and Y=(1,1,0,1,1,0,1,1).
       Find   i) Hamming Distance   ii) Simple Matching Co-efficient (SMC)
           iii) Jaccard Coefficient   (6M).

UNIT-II

3. a) Explain the various measures for selecting the best splits, with an example.   (7M)
    b) With an algorithm, explain the process of Decision Tree Induction.   (7M)
(OR)

4. a) Define Classification. Explain general approach for solving a classification problem. (7M)
    b) Explain the methods of evaluating the performance of a Classifier.   (7M)

UNIT-III

5. a) How does the Naive Bayesian classification works? Explain.   (7M)

    b) Describe Support Vector Machines.   (7M)

(OR)

6. a) Describe Rule-Based Classifier   (7M)
    b) Describe Nearest-Neighbor Classifiers   (7M)

UNIT-IV

7. With an example, Explain frequent item sets generation in the Apriori algorithm.   (14M)
(OR)
8.   With an example, Explain FP-Growth Algorithm.   (14M)

UNIT-V

9. a) What is cluster analysis? Explain different types of clustering in detail-.   (8M)
    b) Explain basic K-means algorithm.   (6M)
(OR)
10. a) Describe Characteristics of Data, Clusters, and Clustering Algorithms.   (7M)
    b) Write about Graph-Based Clustering.   (7M)

KSRM COLLEGE OF ENGINEERING, (Autonomous) KADAPA

B.Tech. VI Semester (CSE) (R15) Degree Examinations

(1505605) MOBILE APPLICATION DEVELOPMENT

Model Question Paper

Time: Three Hours   **Maximum: 70 Marks**

Note: Answer any five question choosing one question from each unit.
   All questions carry equal marks.

UNIT-I

1. a) Explain the procedure of installing Android SDK.   (7M)
   b) Write the steps for creating the virtual devices.   (7M)
                                   OR
2. a) Write the steps for creating the Android First Project?   (7M)
   b) Write about Android Debug Bridge (ADB).   (7M)

UNIT-II

3. a) Write about Android Application Components.   (7M)
   b) What are the commonly used controls and layouts in Android?   (7M)
                                   OR
4. a) Write about Activity Life Cycle in Android.   (7M)
   b) Explain Radio button control with example.   (7M)

UNIT-III

5. a) Explain RelativeLayout with Example.   (7M)
   b) Explain TableLayout with Example.   (7M)
                                   OR
6. a) Write an Android application using Spinner control.   (7M)
   b) Write an Android application using Progress Bar.   (7 M)

UNIT-IV

7. Create an Android application for creating image switcher application.   (14M)
                                   OR

8. What is Fragment? Explain Creating Fragments using Java Code.   (14M)

UNIT-V

9. a) Explain Menus and their types.   (7M)
   b) Explain Tabbed Action bar and Drop-Down List action bar.   (7M)
                                   OR
10. a) Write an Android application for Creating Data Entry Form using SQLite Database. (8M)
    b) Explain the use of SQLiteOpenHelperclass   (6M)

KSRM COLLEGE OF ENGINEERING, (Autonomous) KADAPA

B.Tech. VI Semester (CSE) (R15) Degree Examinations

(1505608) UNIX & SHELL PROGRAMMING

Model Question Paper

Time: Three Hours   **Maximum: 70 Marks**

Note: Answer any five questions choosing one from each unit.
All questions carry equal marks.

Unit-I

1. A) Draw and explain architecture of UNIX?
   B) What is buffer header? Explain the structure of buffer pool.

(OR)

2. A) Write a short notes on the structure of regular files.
   B) Explain in detail about allocation of disk blocks.

Unit- II

3. A) Explain the open system call with its syntax and algorithm.
   B) What is the use of DUP system call ? Explain.

(OR)

4. A) Explain about mounting file system.
   B) Give brief description about link system call .

Unit-III

5. A) Discuss in detail about region and layout of the kernel.
   B) Explain about the context of a process.

(OR)

6. A) Explain the role of a fork in creation of a new process.
   B) Explain about process termination.

Unit-IV

7. A) Explain about Bourne shell.
   B) Write short notes on shell commands.

(OR)

8. A) Write a shell script program using for loop.
   B) How to pass arguments to scripts? Explain with one example.

Unit –V

9. A) Briefly explain about process tracing.
   B) Write a short notes on network communications.

(OR)

10. A) Explain the problem of multiprocessor systems.
    B) Discuss a solution with master and slave processors.

Subject: **COMPUTER NETWORKS**

Time: 3 Hours   Max.Marks:70

Answer any five questions, choosing one question from each unit.
All questions carry equal marks.

UNIT-I

1. (a) Explain OSI reference model in detail.   7 M
   (b) Write short notes on Wireless LAN's.   .   7 M

OR

2. (a)Compare and contrast LAN, MAN, WAN and home networks.   7 M
   (b) Explain guided and unguided transmission media in physical layer.   7 M

UNIT-II

3. (a) Briefly explain about data link layer design issues.   7 M
   (b) Explain a go back n protocol and selective repeat protocol.   7 M

OR

4. (a) Explain the network layer design issues.   7 M
   (b) Explain the ALOHA protocols and CSMA   7 M

UNIT-III

5. (a)Explain in detail about any two routing algorithms.   7 M
   (b) Explain Ethernet types in detail.   7 M

OR

6. (a) With an example explain Hierarchical routing algorithm.   7 M
   (b) Distinguish between Virtual-circuit subnets and datagram subnets   7 M

UNIT IV

7. (a) Write a short notes on wireless TCP and UDP   7 M
   (b) Explain Elements of transport protocols   7 M

OR

8. (a) Explain transport services in detail.   7 M
   (b) Explain DNS in application layer.   7 M

UNIT V

9. (a) Write short notes on HTTP and FTP   7 M
   (b) Explain E-mail and multimedia   7 M

OR

10. (a) Explain encryption algorithms.   7 M
    (b) What is cryptography and explain firewalls.   7 M

K S R M College of Engineering (Autonomous), KADAPA – 516 003
B.Tech VI Semester - Supple Examinations, 2021- Model Paper
Sub: MANAGERIAL ECONOMICS & FINANCIAL ANALYSIS
(CE,ME&ECE)

Time: 03:00 Hrs.   Max. Marks: 70

Answer any FIVE Questions choosing One Question from each Unit.

All Questions carries equal marks

UNIT – I

1. What is Managerial Economics? Explain its focus area?   (14)M

(Or)

2. (a) Define the law of Demand. What are the types of elasticity of demand? Explain.   (7)M
   (b) Explain about survey methods of demand forecasting?   (7)M

UNIT – II

3. (a) What are ISO QUANT and ISO COST? Do they intersect each other?   (7)M
   (b) Explain about law of returns to scale.   (7)M

(Or)

4. Define Break Even Analysis. Explain with graphical presentation.   (14)M

UNIT – III

5. How to determine the price under perfect competition market.   (14)M

(Or)

6. (a) Define market. Explain any five methods of pricing based on strategy.   (7)M
   (b) What are the features of monopoly?   (7)M

UNIT – IV

7. (a) What are the sources of raising capital in different methods?   (7)M

   (b) Distinguish between sole trader and partnership   (7)M

(Or)

8. From the following information of two projects of each costing Rs.300000 each, rank the projects under the following methods if the company is about to yield 10% per annum.   (14M)

   a)   Average rate of return b) Net present value

   Cash flows after taxes plus depreciation

Year	1	2	3	4	5
Project-I	80,000	1,50,000	1,10,000	60,000	50,000
Project-II	1,50,000	1,10,000	80,000	50,000	40,000

UNIT – V

9. Journalize the following transactions in the books of SSK Ltd. (14M)

Date	Particulars	Amount
2015 Jan 1.	Business started with Capital of	20,000
,, 2.	Goods Purchased from Rao	5,000
,, 3.	Sold goods for cash	2,000
,, 4.	Sold goods to jyothi	3,000
,, 5.	Purchased goods for cash	1,500
,, 12.	Furniture bought for cash	2,000
,, 18.	Discount allowed	1,000
,, 20.	Cash received from jyothi on account	2,950
,, 24.	Cash paid to Rao	2,000
,, 28.	Salary paid	1,500
,, 31.	Rent paid to landlord	500

(Or)

10. What are the important ratios? Explain any five of them with examples to understand financial statement.

(14)M