R.B.V.R.R.WOMEN'S COLLEGE

Narayanaguda, Hyderabad-500027. T.S
(AUTONOMOUS), Affiliated to Osmania University
Accredited with B++ Grade by NAAC
"College with Potential For Excellence" Selected by UGC

PG EXAMINATION APRIL/MAY- 2019
SEMESTER –I (CBCS)

Examination: M.Sc | Code No: S1/May-19/Cs-/TSE104/8L
Subject: Computer Science | Time: 3Hrs
Paper: Software Engineering | Max. Marks: 60

SECTION-A

4x5=20

I. Answer the following questions:

1. a) Define Software Engineering. Write about Software Engineering Practice .

   OR

   b) Explain Cloud Computing Architecture.

2. a) What is Coupling? Discuss different types of Coupling.

   OR

   b) Discuss User Interface design rules.

3. a) Discuss various factors that effect Software quality.

   OR

   b) Explain about Informal reviews.

4. a) Write about Project Management Spectrum.

   OR

   b) Explain various types of Maintenance.

SECTION-B

4x10=40

II.Answer the following questions:

5. a) Explain Generic Process model in detail.

   OR

   b) Describe Extreme programming (XP).

6. a) Explain in detail about requirements Elicitation.

   OR

   b) What is a Software Component? Explain class based component design with examples.

7. a) Explain SQA tasks, goals and metrics.

   OR

   b) Describe object oriented testing strategies and methods.

8. a) Explain Software Configuration Management (SCM) process.

   OR

   b) Explain Reverse Engineering.

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PG EXAMINATION April/May- 2019
SEMESTER – II (CBCS)

Examination: M.Sc | Code No:S2/Apr-19/Cs-TCN202
Subject: Computer Science | Time: 3 Hrs
Paper: Computer Networks | Max.Marks: 60

SECTION-A

4x5=20

I. Answer the following :

1. a) Explain the communication model in brief.
   OR
   b) Write briefly about i) Frequency Division Multiplexing.
   ii) Time Division Multiplexing

2. a) Define the terms i) Repeaters ii) Bridges
   OR
   b) What are Network layer Services?

3. a) Write About Tunneling?
   OR
   b) Write the duties of Transport Layer.

4. a) Write about TCP protocol.
   OR
   b) Write about Domain Name Services.

SECTION-B

4x10=40

II. Answer the following :

5. a) Explain in detail about OSI reference Model.
   OR
   b) Explain in detail about Data Link Layer protocols.

6. a)Write in detail about Aloha Protocols.
   OR
   b) Explain about Sliding window protocol in detail.

7. a) Give a detail explanation about IPV4 and IPV6 of internetworking.
   OR
   b) Write in detail about Connection-oriented transmission of transport layer.

8. a) Write about TCP service model and TCP time management.
   OR
   b) Explain about a) FTP b) HTTP c) SSH in detail.

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PG EXAMINATION April/May- 2019
SEMESTER – II (CBCS)

Examination: M.Sc

Subject: Computer Science — Code No:S2/Apr-19/Cs-TPP201

Paper: Programming in Python — Time:3 Hrs, Max. Marks: 60

SECTION-A

I. Answer the following : **4x5=20**

1. a) Write briefly about Program Development Life Cycle with a neat diagram.

   OR

   b) Write the rules to be followed for naming and identifier in Python.

2. a) Illustrate Global variable and Global constant with an example.

   OR

   b) Explain the various features of functions in python.

3. a) What are built-in dictionary functions? Explain.

   OR

   b) Define Recursion. Write a program to find Factorial of a given number using Recursion.

4. a) Write short notes on Inheritance.

   OR

   b) Explain Radio Buttons and Check Buttons.

SECTION-B

II. Answer the following : **4x10=40**

5. a) Give the syntax for while and for loops. Explain break and continue statement with the help of for loop with an example.

   OR

   b) i) Give the operator precedence in python.
   ii) Illustrate a program to display different data types using variables and literal constants.

6. a) How to handle an exception using try except block? Explain with the help of a program.

   OR

   b) i) What are the uses of Random Numbers.
   ii) Explain any 3 functions of random module with an example program.

7. a) i) Explain the basic List Operations with suitable examples.
   ii) Write a Python program to multiply two matrices.

   OR

   b) Explain Basic String Operations and different String Formatting Operators with example.

3. a) Define Class, Object, Inheritance. Explain creating a class in Python with an example program.

   OR

   b) Design a GUI program in Python to take three subject marks and display their average in a text box.

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PG EXAMINATION April/May-2019
SEMESTER–II (CBCS)

Examination:M.Sc

Subject: Computer Science — Code No:S2/Apr-19/Cs-TDA203

Paper: Design and Analysis Algorithm — Time: 3 Hrs, Max. Marks:60

SECTION A

I. Answer any four of the following : **4x5=20**

1. a) Give definitions of theta(θ),omega(Ω),Big oh(O) notations.
   OR
   b) What is an algorithm? Define Time Complexity and Space Complexity.

2. a) Write about Balanced Search Tree.
   OR
   b) Explain Topological Sort with an example.

3. a) Explain Optimal Binary Search tree with an example.
   OR
   b) Explain the Prim's algorithm with an example.

4. a) What is n-queen's problem?
   OR
   b) What is Travelling Salesperson problem? What are its applications?

SECTION B

II. Answer the following : **4x10=40**

5. a) Briefly Explain Depth First Search with an Example.
   OR
   b) Explain the Bubble sort algorithm with an example.

6. a) Define Heap. Explain Heap Sort Algorithm with the following data 80 70 35 60 40 45 100.
   OR
   b) Explain Strassen's matrix multiplication problem.

7. a) Solve the following knapsack problem with LC Branch and Bond technique.
   N=4,(p1-p4)=(10,10,12,18),(w1-w4)=(2,4,6,9) and M=15.
   OR
   b) Explain Dijkstra's algorithm for finding the shortest path with an example.

8. a) Disucss in detail about NP-Hard and NP-Complete problem.
   OR
   b) Solve following travelling sales person problem using dynamic programming.

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

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PG EXAMINATION APRIL/MAY- 2019
SEMESTER –II (CBCS)

Examination: M.Sc — Code No: S2/May-19/Cs-TC202/BL
Subject: Computer Science — Time: 3Hrs
Paper: Client Server Programming using Java — Max. Marks: 60

SECTION-A

I. Answer the following questions: **4x5=20**

1.a) Write about Multithreading in JAVA.

OR

b) Explain Socket and ServerSocket classes.

2.a) Write about Stub and Skeleton.

OR

b) Write about web containers.

3.a)Explain different JSP's implicit objects.

OR

b) Write about POP , SMTP and IMAP.

4.a)Write short notes on EJB container services.

OR

b) Explain Publish /subscribe messaging in JMS.

SECTION-B

II.Answer the following questions: **4x10=40**

5.a) Explain different types of Inheritance with examples.

OR

b) Explain JButton, JTextField and JList.

6.a) Explain various technologies involved in J2EE.

OR

b) Define JDBC driver. Explain different types of drivers.

7.a) Explain different approaches to Session Tracking.

OR

b) Discuss about Servlet interface, GenericServlet class and HttpServlet class.

8.a) Explain J2EE Connector Architecture.

OR

b) Distinguish between Session bean and Entity bean.

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PG EXAMINATION – APRIL/MAY – 2019
SEMESTER – III (CBCS)

Examination: M.Sc | Code No: S3/May-19/Cs-304
Subject: Computer Science | Time: 3 Hrs
Paper: Object Oriented Analysis and Design | Max. Marks: 60

SECTION-A

I Answer the following: **4x5=20**

1. a) What are the elements of Object Model?
   OR
   b) Explain the structure of Complex Systems.

2. a) What is the Nature of Class?
   OR
   b) What are the importance of Proper Classifications?

3. a) Briefly Describe about Micro Process.
   OR
   b) What are the essential elements of Object Diagrams?

4. a) Define the boundaries of Problems.
   OR
   b) Explain Inception Process.

SECTION-B

II Answer the following: **4x10=40**

5. a) Explain the Five attributes of Complex Systems.
   OR
   b) Differentiate between i) Object oriented Programming ii) Object Oriented Design iii) Object Oriented Analysis.

6. a) Explain Key abstractions and Mechanisms.
   OR
   b) Explain the Deployment diagrams.

7. a) Explain the Micro process. The Software Development Life Cycle.
   OR
   b) Explain the Management and Planning.

8. a) Explain various steps taken to Develop Traffic Management.
   OR
   b) Explain the various steps taken to Artificial Intelligence: Cryptanalysis.

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