Code No.: **405A2** **MR14**

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

III B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS, MAY-2018

Subject: **Software Testing Methodologies**

Branch: **CSE**

Time: 3 hours **Max. Marks: 75**

PART – A

I. Answer ALL questions of the following **5x1Mark=5 Marks**

1. What is another name for white box testing?
2. What do you meant by achievable paths?
3. What is configuration testing?
4. Define path expression.
5. What is the name of a relation which satisfies the properties of Reflexive, Transitive and Symmetric?

II. Answer ALL questions of the following **10x2Mark=20 Marks**

1. What are the phases of Testing?
2. List the phases in tester's mental life.
3. What is bug locality hypothesis?
4. Define the control flow graph and list the elements in it.
5. What are the advantages of boundary value analysis?
6. Discuss the purpose of domain testing?
7. Define KV chart.
8. Illustrate the properties of good and bad state graphs.
9. Write a brief note on test plan attachments.
10. Elaborate any three outcomes of software test process.

PART-B

Answer ALL questions of the following **5x10 Marks= 50Marks**

1. a) What are the principles of test case design and Explain?
   b) Distinguish between functional and structural testing.

(OR)

2. Discuss the need for testing software. Discuss in detail the taxonomy of bugs.
3. What are the applications of path testing?

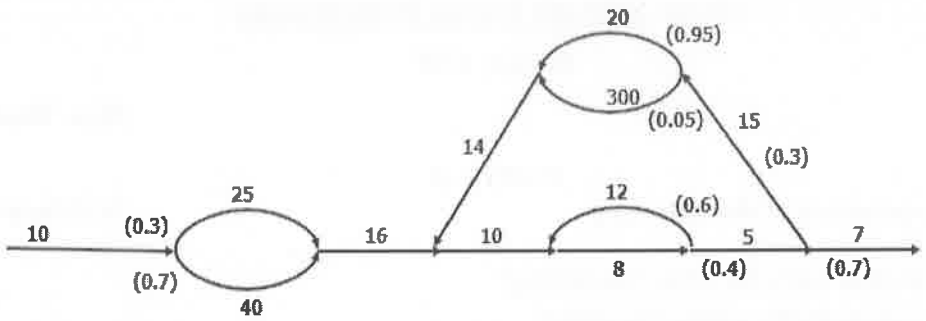
(OR)

4. a) Compare data flow and path flow testing strategies.
   b) What is meant by transactional flow testing? What is its significance?
5. Write a short note on user documentation testing and compatibility testing.

(OR)

6. Explain test case design using black box approach.

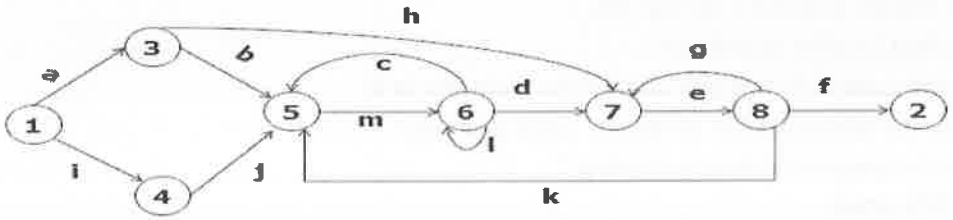
7. Obtain the mean processing time of a program represented by the following flow graph. Numbers in the brackets are the probabilities and the other numbers are processing times.



(OR)

8. a) Explain the significance of decision table and structures.
   b) How can we expand immaterial cases in decision table? Explain.

9. What is Cyclomatic Complexity? Find out the Cyclomatic Complexity for the given directed graph.



(OR)

10. a) Write a brief note on organization structure for test teams.
    b) Write in detail about components available for test plan.

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III B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS, MAY-2018

Subject: **Computer Graphics And Animation Application**

Branch: **CSE**

Time: 3 hours **Max. Marks: 75**

PART – A

I. Answer ALL questions of the following **5x1Mark=5 Marks**

1. Define resolution.
2. Define Clipping.
3. Define Blobby objects.
4. What is point clipping?
5. Define Animation.

II. Answer ALL questions of the following **10x2Mark=20 Marks**

1. What are the properties of circle?
2. List out the merits and demerits of DVST.
3. Analyze that the composition of two rotations is additive. What are the types of clipping?
4. Difference between world coordinate system and viewing coordinate system. What is the use of normalized device coordinates?
5. What are open uniform B-Splines?
6. Discuss about Ellipsoid surfaces.
7. Discuss about two functions of depth sorting method.
8. Discuss about perspective projections.
9. List some design steps for computer animation.
10. What is the use of story board in animation sequence?

PART-B

Answer ALL questions of the following **5x10 Marks= 50Marks**

1. a) Explain in detail about Flood Fill Algorithm.
   b) Explain about the Polyline () and Fill Area ().

(OR)

2. Explain LED and liquid crystal displays.
3. Write about the following composite transformations:
   a) General pivot-point rotation b) General fixed point scaling

(OR)

4. Find the transformation matrix that represents rotation of objects by 30^0 counter clockwise about the origin.
5. a) Explain how Bezier methods are used in curve surface design.
   b) State the characteristics of Bezier curves.

(OR)

6. Briefly explain the mathematical procedure involved in "displaying 3-D curved lines and surfaces".
7. Explain the taxonomy of 3-D projections.

(OR)

8. Explain about Scan Line Method.
9. Explain in brief about the Computer Animation Languages.

(OR)

10. Describe the techniques to achieve the simple animation effects.

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III B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS, MAY-2018

Subject: **Principles of Programming Language**

Branch: **CSE**

Time: 3 hours **Max. Marks: 75**

PART-A

I. Answer the following Questions **5×1=5M**

1. What is a strict programming language?
2. Define a Ambiguous grammar.
3. What is type conversion?
4. Define Overloaded sub program.
5. Give the meaning for functional programming language.

II. Answer the following Questions **10×2=20M**

1. What are the phases of compilation?
2. Write short note on Preprocessors.
3. Define attribute grammar.
4. Describe the syntax and Semantics of "mapcar".
5. Define Record and write an example for record.
6. Differentiate array and associative array.
7. What is the scope of a loop variable in Ada?
8. Define competition and cooperation synchronization.
9. Write any two fundamental differences between ML and Haskell.
10. Define the inferencing process of prolog.

PART-B

Answer the following Questions **5×10=50M**

1. Describe a comparison of functional and imperative languages.

(OR)

2. Write in detail about the benefits and reasons for studying the concepts of programming language.
3. Define BNF grammar. How parse tree is generated for grammars? Explain with an example.

(OR)

4. What are the rules of EBNF? Compare BNF with EBNF.
5. Explain implementation of union types and implementation of pointer & reference types.

(OR)

6. What are the advantages and disadvantages of allowing mixed-mode arithmetic expressions?
7. Write short notes on: a) Semaphores b) Monitors

(OR)

8. Briefly explain about java threads.
9. Explain in detail about exception handling in c++.

(OR)

10. Explain with an example how user defined exception created in java.

Code No.: **40526** **MR14**

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III B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS, MAY-2018

Subject: **Data Warehousing and Data Mining**

Branch: **CSE**

Time: 3 hours **Max. Marks: 75**

PART – A

I. Answer ALL questions of the following **5x1Mark=5 Marks**

1. List out Data Mining applications.
2. Define fact table.
3. Define support and confidence in Association rule mining.
4. For decision trees, why do we use Tree-pruning?
5. What is spatial data mining?

II. Answer ALL questions of the following **10x2Mark=20 Marks**

1. Why we can use Binning and smoking techniques?
2. What do you meant by visualization?
3. Describe roll-up operation.
4. Describe slicing and dicing operations.
5. Define a) Itemset b) Frequent Itemsets
6. Explain about Association rule mining.
7. Mention the attribute selection measures in Decision tree Induction.
8. What are the issues regarding classification and prediction?
9. Explain about classification of Data Mining systems.
10. Write short note on sequential pattern mining.

PART-B

Answer ALL questions of the following **5x10 Marks= 50Marks**

1. a) Explain the architecture of typical data mining system.
   b) Describe the differences between the following approaches for the integration of a data mining system with a database or data warehouse system: no coupling, loose coupling, semi tight coupling, and tight coupling. State which approach you think is the most popular; and why?

(OR)

2. a) Briefly discuss about data cleaning techniques in data preprocessing.
   b) Briefly discuss about data integration.
3. Explain about "Efficient methods for Data Cube Computation".

(OR)

4. a) Describe the OLAP operations in the multi dimensional data model.
   b) Illustrate in detail about the following
      i) star schema ii) snow-flake schema

5. a) Describe the different techniques to improve the efficiency of Apriori? Explain.
   b) With example explain the different schemas for multidimensional data bases.

(OR)

6. a) Describe the different classifications of association rule mining.
   b) Explain about the FP-Growth algorithm with an example.

7. a) Explain about the major issues regarding classifications and predictions.
   b) Write an algorithm for k-nearest-neighbour classification given k and n, the number of attributes describing each tuple.

(OR)

8. a) Explain about Bayesian classification.
   b) Describe back propagation algorithm.

9. a) Explain the DB-SCAN algorithm for clustering.
   b) Describe mining multi-media databases.

(OR)

10. What is cluster analysis? Explain the different partitioning methods used for cluster analysis.

Code No.: **40525**

MR14

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III B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS, MAY-2018

Subject: **Mobile Computing**

Branch: **CSE**

Time: 3 hours **Max. Marks: 75**

PART-A

I. Answer ALL Questions of the following **5x1M=5M**

1. What is GSM?
2. What is carrier sense multiple access (CSMA)?
3. What is Agent Advertisement?
4. Define congestion control.
5. List out the disadvantages of hoarding.

II. Answer ALL Questions of the following **10x2M=20M**

1. What are the Novel applications of Mobile Computing?
2. List out call handling techniques.
3. Write short notes on SDMA.
4. What is the main physical reason for the failure of many MAC schemes known from wired networks?
5. What is the Mobile IP packet delivery?
6. What is the need of reverse tunneling?
7. What is the difference between TCP & UDP?
8. Describe Selective retransmission.
9. Discuss pull based mechanisms.
10. Explain about synchronizations.

PART-B

Answer ALL Questions of the following **5x10M=50M**

1. With neat diagram explain the Radio interface.

(OR)

2. Which types of different services does GSM offer? Give some examples and reasons why these services have been separated.

3. What is hidden and exposed terminal problem in wireless networks? Explain the solution for it?

(OR)

4. Discuss the comparison between TDMA and CDMA.

5. Explain about Agent discovery in detail.

(OR)

6. a) Name the requirements for a mobile IP and justify them. Does mobile IP fulfill them all?
   b) Write short notes on Dynamic Host Configuration Protocol (DHCP).

7. a) Explain the overview of classical enhancements to TCP for mobility.
   b) Compare the different types of transmission errors that can occur in wireless and wired networks. What additional role does mobility play?

(OR)

8. Explain in detailed about Snooping TCP.

9. What are the different types of data dissemination techniques? Explain.

OR)

10. Describe hoarding techniques.

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III B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS, MAY-2018

Subject: **Object Oriented Analysis and Design**

Branch: **CSE**

Time: 3 hours **Max. Marks: 75**

PART-A

I. Answer ALL Questions of the following **5x1M=5M**

1. What are the rules of UML?
2. Define Association.
3. What is the Object Lifeline?
4. Define Branching.
5. Define node.

II. Answer ALL Questions of the following **10x2M=20M**

1. What are the various diagrams in the UML?
2. Explain the Responsibilities of a Class.
3. What three things does a UML class define?
4. What are the Common Modeling Techniques for Class?
5. How association between objects may be identified?
6. Explain the Flat Flow of Control with a neat Diagram.
7. Write several parts of state.
8. What is transition? What are the five parts of a transition?
9. What are the Uses of Deployment Diagram?
10. Draw a Deployment Diagram for ATM Machine.

PART-B

Answer ALL Questions of the following **5x10M=50M**

1. a) Define the following
   i) Use case driven
   ii) Architecture centric
   iii) Incremental Process
   iv) Artifact

   b) Draw the neat sketch of Software Development Life Cycles.

(OR)

2. Explain in detail about the Conceptual model of UML with neat diagram.
3. a) Enumerate the steps to model a workflow.

   b) Enumerate the steps to model the flows of control by time ordering.

(OR)

4. a) What are the structural diagrams? Explain.

   b) Explain the class diagram and its components with a neat sketch?

5. Explain the relationships, generalization and association in advanced relationships.

(OR)

6. a) Explain the generalization among packages with UML diagram.

   b) What are the various levels of visibility of a classifier?

7. What are the four kinds of events of the UML? Explain them in brief.

(OR)

8. Explain about Advanced States And Transitions in State Machines?

9. a) Draw component diagram for Library management system.

   b) List out the guide lines to model a physical data base.

(OR)

10. Discuss about UML deployment and Component diagrams. Draw the diagrams for a banking application.

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III B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS, MAY-2018

Subject: **Cryptography And Network Security**

Branch: **CSE**

Time: 3 hours **Max. Marks: 75**

PART-A

I. Answer ALL questions of the following **5 x 1M=5 M**

1. Define availability.
2. What are ARP attacks?
3. Define the classes of message authentication function.
4. Mention four SSL Protocols.
5. Define Malicious software.

II. Answer ALL questions of the following **10×2=20M**

1. What is feistel structure?
2. Differentiate between cryptanalysis and cryptography.
3. What is key distribution center?
4. List the schemes for the distribution of public keys.
5. Distinguish between direct and arbitrated digital signature.
6. Define weak collision property of hash function.
7. What is Secure Socket Layer?
8. What are the steps involved in SSL required protocol?
9. What are the elements of trusted systems?
10. What is IP address spoofing?

PART-B

Answer ALL questions of the following **5 x 10 M=50 M**

1. a) Explain a model for internetwork security.

   b) Discuss about AES algorithm.

(OR)

2. Explain DES algorithm.
3. What is hijacking and explain TCP session hijacking.

(OR)

4. State and explain the principles of public key cryptography.
5. a) Compare the features of SHA512 and MD5 algorithm.

   b) Discuss about the objectives of HMAC and its security features.

(OR)

6. Discuss about x.509 authentication service in detail.
7. Write short notes on S/MIME.

(OR)

8. Explain Pretty Good Privacy.
9. Explain the types of Host based intrusion detection. List any two IDS software available.

(OR)

10. Write short notes on

a) Viruses b) Firewalls