

F-6399

Sub. Code

7MCE1C1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

First Semester

Computer Science

APPLIED MATHEMATICS FOR COMPUTER SCIENCE

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define tautology. Give example.
2. What is well-formed formula?
3. What is the equivalent form of biconditional in terms of conditional?
4. What is conjunctive normal form?
5. Define Binary tree.
6. Define Graph.
7. Define the basic feasible solution of linear programming problem.
8. What is meant by slack and surplus variables.
9. What is degenerate transportation problem?
10. Write the mathematical formulation of an assignment problem.

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Show the following implication.
(i) $(P \wedge Q) \Rightarrow (P \rightarrow Q)$
(ii) $P \Rightarrow (Q \rightarrow R)$
Or
(b) Show that the formula $Q \vee (P \wedge \neg Q) \vee (\neg P \wedge \neg Q)$ is a tautology.
12. (a) Obtain the principal disjunctive normal form of
 $P \rightarrow ((P \rightarrow Q) \wedge \neg(\neg Q \vee \neg P))$
Or
(b) Show that
 $(x)(H(x) \rightarrow M(x)) \wedge H(x) \Rightarrow M(x)$
13. (a) Write short notes on
(i) Spanning Trees
(ii) Rooted Trees
Or
(b) Explain matrix representation of graphs with examples.
14. (a) An airline offers coach and first-class tickets. For the airline to be profitable, it must sell a minimum of 25 first-class tickets and minimum of 40 coach tickets. The company makes a profit of \$225 for each coach ticket and \$200 for each first-class ticket. At most, the plane has a capacity of 150 travelers. How many of each ticket should be sold in order to maximize profits. Solve using graphical method.

Or

- (b) Solve by using Two phase simplex method.

Minimize $z = 3x + y$

Subject to

$$x + 2y \geq 4$$

$$x + 3y \geq 6$$

$$x, y \geq 0$$

15. (a) Solve the following assignment problem.

From\To	Denver	Edmonton	Fargo
Austin	250	400	350
Boston	400	600	350
Chicago	200	400	250

Where should you send each of your salespeople in order to minimize airfare

Or

- (b) Find an initial basic feasible solution of the given transportation problem using northwest corner rule.

Factory	Ware House				Supply
	W ₁	W ₂	W ₃	W ₄	
F ₁	1	2	1	4	30
F ₂	3	3	2	1	50
F ₃	4	2	5	9	20
Demand	20	40	30	10	

Part C

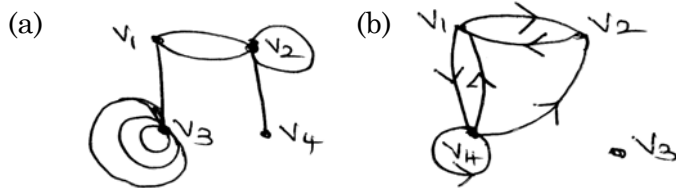
(3 × 10 = 30)

Answer any **three** questions.

16. Obtain the principal conjunctive normal form of the formula S given by $(\bigwedge P \rightarrow R) \wedge (Q \leftrightarrow P)$. Deduce principal disjunctive normal form of S by using $\bigvee \bigvee S \leftrightarrow S$.

17. Prove that $(P \rightarrow Q) \Leftrightarrow (\neg P \vee Q)$ is a tautology.

18. Find the adjacency matrix of the following graphs.



19. Solve the following LPP using two-phase simplex method.

$$\text{Max } z = 2x_1 + 3x_2 + x_3$$

S.t.

$$x_1 + x_2 + x_3 \leq 40$$

$$2x_1 + x_2 - x_3 \geq 10$$

$$-x_2 + x_3 \geq 10$$

$$x_1, x_2, x_3 \geq 0.$$

20. Solve the following Assignment problem using Hungarian algorithm to assign the job to worker to minimize the cost.

	J ₁	J ₂	J ₃	J ₄
W ₁	82	83	69	92
W ₂	77	37	49	92
W ₃	11	69	5	86
W ₄	8	9	98	23

F-6400

Sub. Code

7MCE1C2

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021.

First Semester

Computer Science

DESIGN AND ANALYSIS OF ALGORITHMS

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define Graphs?
2. What is Dictionaries?
3. Delineate the Divide and Conquer method?
4. What is Defective Chessboard?
5. Differentiate feasible solution and optimal solution?
6. Write the concept behind the Minimum Cost Spanning Tree?
7. Pen down the working principle of Dynamic Programming?
8. Define 0/1 Knapsack problem?
9. What is sum of subsets?
10. What is Hamiltonian cycle?

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Draw and represent the Terminologies used in Trees?

Or

- (b) Illustrate the Asymptotic notation used to analyze the Performance of an Algorithm?

12. (a) Explain the Merge sort algorithm with suitable example.

Or

- (b) Pen down how the Strassen's Matrix Multiplication computes the product of two $n \times n$ matrices.

13. (a) Elucidate the Greedy method in solving Knapsack Problem.

Or

- (b) Inscribe the Prim's Algorithm with Graph diagram.

14. (a) Explain the Single Source Shortest Path algorithm in Dynamic Programming.

Or

- (b) Elucidate the Depth First Search and Traversal.

15. (a) How can the 8-Queens's problem be tackled via a backtracking solution?

Or

- (b) What is Graph Coloring Problem? Explicate the methods to solve it.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Define Binary Search Tree and Write about any two operations that are performed in it?
17. How to find the maximum and minimum items in n elements using Divide and Conquer method?
18. Describe the Optimal Storage on Tapes in detail?
19. What is Multistage Graph? Illustrate the role of Dynamic Programming in Multistage Graph?
20. With example explain the Knapsack Problem in Backtracking method?

F-6401

Sub. Code

7MCE1C3

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021.

First Semester

Computer Science

ADVANCED JAVA PROGRAMMING

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is JDBC?
2. What are the elements used in Data Truncation object?
3. List out the instance methods of InetAddress class.
4. Write the properties of URL Connection object.
5. Mention the steps involved to start the BDK.
6. What is the use of customizer in BDK?
7. What are the methods used in life cycle of a Servlet?
8. Define session tracking. -
9. What is a Tabbed pane'?
10. Write a code to obtain the names of the available font on your machine?

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain the methods of connection class.

Or

- (b) Explain the methods of resultset object.

12. (a) How will you create TCP Client sockets in java?

Or

- (b) Demonstrate how datagrams implemented in a communication network.

13. (a) Elucidate the command options used to generate the JAR files.

Or

- (b) Write about the concept of persistence for bean.

14. (a) Explain the methods of HttpServlet class.

Or

- (b) How will you read servlet parameters? Explain with example.

15. (a) Write a Java code for creating tables.

Or

- (b) Write a java code for displaying different shapes using graphics methods.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. What are the types of statements involved in JDBC? Explain its methods with example.

17. Write a java code for creating a simple client/server application using RMI.
 18. Briefly explain the design patterns for properties with example code.
 19. Illustrate how to use cookies in servlet.
 20. How do you create Swing buttons and combo boxes? Explain.
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F-6402

Sub. Code

7MCE1C4

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

First Semester

Computer Science

PRINCIPLES OF COMPILER DESIGN

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is cross-compiler?
2. Define a transition diagram.
3. Draw a parse tree for $id+id*id$.
4. Why LR parsers are named like this?
5. Write down the post fix notation of $a*(b+c)$.
6. Give the three address code of if $A<B$ then 1 else 0.
7. Mention any two data structures used for symbol tables.
8. What is meant by semantic errors? Give any one semantic type error.
9. What is DAG?
10. What do you mean by peephole optimization?

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write about compiler writing tools.

Or

- (b) Write an algorithm for constructing DFA from NFA.

12. (a) Write down the shift reduce parsing actions with its working principles.

Or

- (b) Draw the schematic diagram of LR parser and explain in brief.

13. (a) Write down the procedure to evaluate the postfix expressions.

Or

- (b) Describe with an example, indirect triples.

14. (a) Discuss the purpose of symbol table.

Or

- (b) Write in brief about the storage allocation in block-structured languages.

15. (a) Write an algorithm to partition a sequence of three-address statements into basic blocks.

Or

- (b) Discuss about the optimal ordering for trees.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Describe the structure of a compiler.
 17. Describe the model of a predictive parser with its working principle.
 18. Discuss about the statements that alter the flow of control.
 19. List down the data structures used for symbol tables and explain any one.
 20. Discuss the problems in code generation.
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F-6404

Sub. Code

7MCE1E3

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

First Semester

Computer Science

***Elective* — SOFTWARE ENGINEERING**

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is meant by system software? Give examples.
2. State the drawbacks of RAD Process model.
3. What is QFD? State the requirements identified by QFD.
4. What is requirement validation?
5. Mention the approaches suggested by Putnam and Myers to the sizing problem.
6. State the project planning objectives.
7. Define Cyclomatic complexity.
8. What is meant by verification and validation? Give Examples.
9. State the architectural ingredients that should be present to achieve component composition.
10. What is the intent of Domain Engineering?

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) What are the characteristics of software? Discuss.

Or

- (b) Describe the Waterfall Model in brief.

12. (a) Explain the most commonly used requirements elicitation technique.

Or

- (b) Explain how to write effective use-cases with examples.

13. (a) Explain software scope and feasibility used during project planning.

Or

- (b) Enlighten about COCOMO estimation model.

14. (a) Discuss in detail about software testability.

Or

- (b) Describe basis path testing in detail.

15. (a) Write short notes on Engineering of Component Based Systems.

Or

- (b) Describe in detail about the metrics used for software quality.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Enlighten about the Evolutionary Software Process Models in detail.
 17. Describe the functions accomplished during requirement engineering process.
 18. Discuss briefly about Problem-based estimation and Process-based estimation with examples.
 19. Explain in detail about black-box testing methods.
 20. Describe in detail about Domain Engineering.
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F-6405

Sub. Code

7MCE2C1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

Second Semester

Computer Science

COMPUTER SYSTEM ARCHITECTURE

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define CPU.
2. Give the infix notation of the following reverse polish expressions:
 - (a) $ABCDE^*/-+$
 - (b) $AB*CD^*+EF^*+$
3. Show the hardware for conditional control statement
 $T : \text{If}(C = 0) \text{ then } (F = 1).$
4. Draw the three different instruction code formats of basic computer.
5. Define hard-wired control unit.
6. State four advantages of the micro-programmed control unit organization.

7. What are the commands that an interface may receive when it is addressed by the CPU?
8. What are the components of storage hierarchy in a large computer system?
9. List out the areas of computer design where the pipeline organization is applicable.
10. Define RISC.

Part B

(5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Demonstrate the arithmetic micro-operations obtained by controlling one set of inputs to a parallel adder.

Or

- (b) Explain the different types of interrupts that cause a break in the normal execution of a program.

12. (a) Annotate about shift micro operations.

Or

- (b) Write short note on memory-reference instructions.

13. (a) How the hardware controls the address sequencing of control memory?

Or

- (b) Explain the functioning of a micro-programmable bit-sliced CPU.

14. (a) What are the differences between central computer and peripherals?

Or

- (b) Describe handshaking in data transfer.
15. (a) Describe the Flynn's classification of computers.

Or

- (b) Explain the two different types of array processors in detail.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain the organization of a 64 word memory stack with diagram.
17. How the control unit distinguish the three computer cycles? Explain in detail.
18. Write short notes on multiple word format, vertical microinstructions, nanomemory, nano instructions and direct control of bus system.
19. Explain with example, the three types of mapping procedures in cache memory organization.
20. Explain the floating-point addition and subtraction pipeline in detail.

F-6411

Sub. Code

7MCE3C1

M.SC DEGREE EXAMINATION, NOVEMBER 2021.

Third Semester

Computer Science

CRYPTOGRAPHY AND NETWORK SECURITY

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is steganography?
2. Differentiate symmetric and asymmetric key encryption.
3. Write the use of 56 bit keys in DES algorithm.
4. What is the difference between Rijndael and AES?
5. What are the keys used for asymmetric encryption?
6. List four general categories of schemes for the distribution of public keys.
7. What is MAC?
8. What is strong collision resistance?
9. Differentiate passive attack and active attack.
10. List out the components of SSL protocol stack.

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) List and briefly define categories of security services.

Or

- (b) Briefly define play fair cipher.

12. (a) Explain the purpose of S-boxes in DES?

Or

- (b) Describe key expansion algorithm.

13. (a) What requirements a public key cryptosystems must fulfill to be a secure algorithm?

Or

- (b) Write a brief note on elliptic curve cryptography.

14. (a) Discuss the different types of attacks addressed by message authentication.

Or

- (b) Describe Megamall digital signature.

15. (a) Summarize the handshake protocol action of SSL scheme.

Or

- (b) Write a note on general format of PGP message.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Explain with model for network security.
17. Describe the procedure for DES algorithm.

18. Briefly explain Diffie-Hellman key exchange.
 19. Discuss about Schnorr digital signature scheme.
 20. Summarize applications and benefits of IP security.
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F-6412

Sub. Code

7MCE3C2

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021.

Third Semester

Computer Science

PROGRAMMING IN PHP

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Write the features of PHP.
2. Specify the PHP supported data types.
3. What are the functions used for sorting arrays?
4. Define functions.
5. How do you determine the size of a file?
6. What are the functions used to modularize form handling?
7. What is object serialization?
8. Write a code for removing some rows from a table.
9. What is the use of session Id?
10. Expand AJAX.

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain the details of PHP scripts work.

Or

- (b) What are the ways used for defining a string in PHP? Explain.

12. (a) Illustrate the for and foreach looping statements in PHP with suitable example.

Or

- (b) How do you return multiple values from a function? Explain.

13. (a) Explain the details of writing the data to a file.

Or

- (b) Elucidate the concept of user authentication.

14. (a) Write about the details of creating objects with its properties and methods.

Or

- (b) Why the session using cookies? Write a code for setting cookies with PHP.

15. (a) Explain the configuration directives in PHP mail() function.

Or

- (b) Write about the methods and properties of XMLHttpRequest.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Explain the decision-making statements in PHP with example code.
 17. Discuss in details about the user-defined functions in PHP with suitable example.
 18. How do you import and access the user input in PHP? Explain.
 19. Write a code for database table creation and update the table structure.
 20. How do you create and destroy a session and manage session variables? Explain.
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F-6413

Sub. Code

7MCE3C3

M.SC DEGREE EXAMINATION, NOVEMBER 2021.

Third Semester

Computer Science

DATA MINING AND DATA WAREHOUSING

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is Data Warehouse? How is it related to Data mart?
2. Write any four methods of handling missing data.
3. What is a Concept Hierarchy? When is it called as Schema hierarchy?
4. What are the four key features of a Data Warehouse?
5. Define the two measures used for defining the goodness of Association Rules
6. What is meant by Supervised learning?
7. What is an Outlier? What is the purpose of Outlier analysis?
8. How is classification tree different from decision tree?
9. What is spatial data mining?
10. What is a DOM structure of a web page?

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) What is the purpose of Data Transformation? Discuss various techniques involved in Data Transformations

Or

- (b) Discuss any two major issues in Data Mining

12. (a) Discuss various schemas for Multidimensional Databases

Or

- (b) Discuss various types of OLAP servers.

13. (a) What is meant by Attribute selection measure in Decision Tree induction? Explain any two measures.

Or

- (b) Explain Naïve Bayesian Classification with an example.

14. (a) Explain any one partitioning methods

Or

- (b) What is an Outlier? Discuss any one Outlier detection technique.

15. (a) Discuss spatial data cube construction and spatial OLAP

Or

- (b) What is multimedia database? Discuss similarity search in Multimedia data.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. What is meant by Data reduction? Explain Dimensionality reduction and Numerosity reduction strategies with examples
17. How do data warehousing and OLAP relate to data mining?
18. Discuss Rule Induction using a Sequential Covering Algorithm
19. How are dissimilarity calculated for various types of data?
20. Explain dimensionality reduction for text

F-6414

Sub. Code

7MCE3E6

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021.

Third Semester

Computer Science

Elective: WAP AND XML

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is meant by WAP?
2. List any two software development tools for WAP.
3. What is the basic structure of WML?
4. What is the use of WAP gateway?
5. What is variable?
6. What is meant by literals?
7. Define XML.
8. List any two elements of XML document.
9. What is meant by metadata?
10. Define script.

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Discuss about the internal structure of WAP.
Or
(b) Explain about WTA and push features.
12. (a) Compare Web model and WAP model.
Or
(b) Write a note on WML structure.
13. (a) Explain about the operators used in WML with example.
Or
(b) How to deal with errors in WML? Explain.
14. (a) How XSL is more powerful style language?
Or
(b) Discuss about the advantages of XML format.
15. (a) Compare XSL and CSS.
Or
(b) Discuss about the Unicode character set.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Explain about the architecture of WAP application.
17. Explain about the WML card.
18. Explain about WML script with example.
19. How the style sheet is prepared for document display? Explain.
20. Explain in detail about legacy character set.

F-6544

Sub. Code

7MCE1E1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021.

First Semester

Computer Science

**Elective — OBJECT ORIENTED ANALYSIS AND
DESIGN**

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define Encapsulation.
2. What is an abstract class?
3. Define Events and Scenarios.
4. What is a Dataflow? What are the components used in representing a dataflow?
5. To what type of systems, Dynamic models are useful?
6. What is an irrelevant association?
7. What is closed layer architecture?
8. What is continuous transformation?
9. What is meant by coherence of entities?
10. How are link attributes implemented during Object design?

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) What is Aggregation? Discuss how they are represented in a model?

Or

- (b) Discuss the basic modeling concepts of Objects and Classes.

12. (a) What is a state diagram? Represent the ways of denoting events, states and operations with an example.

Or

- (b) What is a function model? How can a functional model be related to Object and dynamic model?

13. (a) How are events between Objects identified and matched?

Or

- (b) Discuss the steps in constructing a functional model.

14. (a) How are subsystems allocated to processors and tasks?

Or

- (b) What is meant by concurrency? How is concurrency identified in analysis model?

15. (a) Explain the basic approaches in implementing the dynamic model.

Or

- (b) Discuss Design optimization? What are its merits and demerits?

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. What are the three views of modelling systems? How are they related to each other?
 17. Explain a sample Dynamic model with an example
 18. Briefly discuss about the steps in constructing an Object Model.
 19. Discuss different kinds of control flows in a software system
 20. Discuss the steps in designing algorithms.
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F-6546

Sub. Code

7MCE3E3

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021.

Third Semester

Computer Science

Elective : MULTIMEDIA SYSTEM

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define Multimedia.
2. Mention the uses of multimedia mail system.
3. What is meant by texture mapping?
4. What are the uses of Jukebox?
5. What is lossless compression?
6. Define Sampler.
7. Write the differences between deterministic and statistical guarantee?
8. What is meant by Report/Review/Consult applications?
9. Define: Parallelism.
10. List the uses of Bending.

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write a short note on Multimedia database system.

Or

- (b) List the characteristics of Multimedia.

12. (a) Mention the various Image operations and explain it.

Or

- (b) Discuss the techniques for comparing bitmaps.

13. (a) Explain the concept of speech synthesis.

Or

- (b) Write a note on DVI PLV compression.

14. (a) Mention the uses of Authoring system and presentation system.

Or

- (b) List down the applications of Multimedia.

15. (a) Discuss the hardware requirement of VR technology.

Or

- (b) Write the general-purpose HMDS displays.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Write in detail about applications of multimedia software.

17. Discuss the various audio effects and filtering.

18. Explain in detail on predictive techniques of video compression.
 19. List the various design paradigms of multimedia.
 20. Mention all types of immersive interaction of VR system.
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F-5488

Sub. Code

7MCE3E1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

Third Semester

Computer Science

Elective : SOFT COMPUTING

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is Axon?
2. Define : Network architecture.
3. Write the components of perceptron network.
4. What is a Mexican hat net?
5. State the importance of fuzzy sets.
6. What is meant by characteristic function?
7. What is linguistic hedges?
8. Mention the four structures of fuzzy prediction rule system.
9. State : schema theorem.
10. Write the importance of hybrid genetic algorithms.

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) What do you mean by learning? Discuss.

Or

- (b) What is linear separability? Explain.

12. (a) Explain the architecture of discrete hopfield network.

Or

- (b) Explain the basic architecture of ART 1 network.

13. (a) Write a note on inference.

Or

- (b) Discuss about fuzzy decomposition techniques.

14. (a) Discuss the important types of FIS.

Or

- (b) Explain about the multi objective decision making.

15. (a) Describe the concepts involved in real coded genetic algorithm.

Or

- (b) Discuss about the genetic operators.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. List some of the terminologies related with artificial neural networks and explain any five in detail.
17. Discuss the applications of counter propagation networks.

18. Explain the operations and properties of fuzzy sets.
 19. Explain the architecture and operations of fuzzy logic controller system.
 20. Discuss in detail about the various types of genetic algorithm.
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F-5491

Sub. Code

7MCE3E5

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

Third Semester

Computer Science

Elective-CLOUD COMPUTING

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is peer-to-peer computing.
2. Write the names of companies involved in the development of cloud services.
3. What is web service?
4. What is utility computing?
5. List any two web based to do list applications.
6. Write any two web based expense reporting applications.
7. Write the features in web based event management applications.
8. List out web based word processors.
9. Write the features in Airset.
10. Write any two web based blogs.

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write the benefits of cloud storage.

Or

- (b) Give a brief note on cloud services.

12. (a) Discuss the advantages of cloud development.

Or

- (b) What are the features in Google App engine cloud provider?

13. (a) How do centralize Email communications.

Or

- (b) Explain how to manage schedules and projects.

14. (a) Explain the different types of Google Calendars.

Or

- (b) Discuss the tools in event and event management applications.

15. (a) Describe about web conferencing service.

Or

- (b) Explain in detail about Instant messaging services.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Discuss the advantages and disadvantages of cloud computing.

17. Explain different types of cloud service development.

18. How to collaborate Group Projects and events? Explain.
 19. Give detailed note on Event Scheduling.
 20. Discuss the different types of web mail services.
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