ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA - 520 008
III MCA -V - SEMESTER I MID EXAMINATIONS - AUGUST - 2019
PAPER-VrlNTERNET OF THINGS

Time :2Hrs Date:07.08.2019(M) Max.Marks:100M

PART- A

Answer All Questions (5*16=80M)

1. a) Define IOT in brief about the IOT with examples such as IOT Umbrella & street lights.?

(OR)

b) Discuss in detail about smart and Hyper connected devices. ?

c) Explain IOT conceptual framework.?

2. a) What is server end technology.? Discuss major components of IOT system.?

(OR)

b) Write about Development tools and open source frame work for IOT?

c) Write about popular IOT Development Boards?

3. a) Explain about design principles for connected devices.?

(OR)

b) Explain types of communication technologies, Explain in detail about wireless commuTech.?

4. a) Explain in detail about web communication protocol COAP for connected devices.?

(OR)

b) Explain in detail about REST and RESTFUL.?

5. a)Explain in detail about message communication protocols.?

(OR)

b) Explain applications of IOT as smart cities and smart Home.?

PART- B

Answer all 10*2=20M

6. Vision of IOT.

7. Wireless sensor Network. (WSN)
8. Wireless sensor Node. (WSN node)
9. UART/USRT.
10. SPI.
13. Wired USB.
12. Polling.
13. JSON.
14. TLV.
15. MIME.

ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA - 520 008
III MCA -V - SEMESTER I MID EXAMINATIONS - AUGUST - 2019
PAPER-V INTERNET OF THINGS

Time :2Hrs Date:07.08.2019(M)
Max.Marks:100M

PART- A

Answer All Questions (5*16=80M)

11. a) Define IOT in brief about the IOT with examples such as IOT Umbrella & street lights.?

(OR)

d) Discuss in detail about smart and Hyper connected devices. ?

e) Explain IOT conceptual framework.?

12. a) What is server end technology.? Discuss major components of IOT system.?

(OR)

d) Write about Development tools and open source frame work for IOT?

e) Write about popular IOT Development Boards?

13. a) Explain about design principles for connected devices.?

(OR)

b) Explain types of communication technologies, Explain in detail about wireless commuTech.?

14. a) Explain in detail about web communication protocol COAP for connected devices.?

(OR)

b) Explain in detail about REST and RESTFUL.?

15. a)Explain in detail about message communication protocols.?

(OR)

b) Explain applications of IOT as smart cities and smart Home.?

PART- B

Answer all 10*2=20M

16. Vision of IOT.
17. Wireless sensor Network. (WSN)
18. Wireless sensor Node. (WSN node)
19. UART/USRT.
20. SPI.
14. Wired USB.
16. Polling.
17. JSON.
18. TLV.
19. MIME.

ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA - 520 008

III MCA -V- SEMESTER I MID EXAMINATIONS - AUGUST - 2019

PAPER-III: BOTNET PROGRAMMING

Time :2Hrs **Date:06.08.2019(M)** **Max.Marks:100M**

PART - A
Answer all questions
All questions carry equal marks

5X16: 80M

1. **a)** "Is Dot Net is a programming language or a Framework". Justify your answer, **b)** Explain basic principles of Object Oriented program.

2. **a)** Write the differences between POP and OOP with an example, **b)** Explain and briefly discuss about Visual Basic 2012 Operators.

3. a) Define (a) A Class (b) Inheritance (c) Interfaces (d) Polymorphism, **b)** Explain and differentiate data type conversions.

4. **a)** Explain about Windows Form Control I: BUTTON; COMBO BOX; PICTURE; GROUP, **b)** Explain about Windows Form Control I: TEXT BOX; TIMER; PROGREE; BUTTON.

5. a) Explain about Windows Form Control II: Open File; Tool Strip; Menu Strip; Color Dialog.
. b) Write a program for "Fruit Billing System", with an expected output.

PART-B
Answer all questions
All questions carry equal marks

10X2=20 M

6. What is the difference between textbox and richtext box?
7. What do you mean by explicit conversion?
8. Explain try, catch, finally statement?
9. What is an error? Explain types of errors?
10. Define an array?
11. Explain a Jump statement?
12. Write a console application to add two numbers?
13. Explain throw statement?
14. To insert an image in a design which window form controls you use?
15. Explain iteration of statements?

ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA - 520 008 III MCA - V -

SEMESTER I MID EXAMINATIONS - AUGUST - 2019

PAPER - IV - ARTIFICAL INTELLIGENCE

Time: 2Hrs Date: 06.08.2019(M) Max.Marks: 100M

PART -A

ANSWER ALL QUESTIONS

1. Explain about Problem system characteristics?
2. Explain about the state space and production rulrs of water jug problem?
3. Explain about AND-OR graphs in problem reduction?
4. Compare and contrast between A* and AO* algorithms?
5. Explain about Means-Ends Analysis algorithm in detail?

PART -B

Answer all questions

6. Define AI? 2X10=20 M
7. What is an AI technique?
8. Define the different types of tasks in AI?
9. Define production system and 4 types of production systems?
10. Define state and state space?

11 .Explain the steps of generate and test algorithm?

12. How is search technique used in Aland write about 3 types of search techniques?
13. Define heuristic function?
14. What are the 4 things to be done to build a system to solve a particular problem?
15. What are the requirements of a control strategy?

Reg-No

Time: 3Hrs

ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA - 520 008 III MCA- V - SEMESTER END EXAMINATIONS - OCTOBER - 2019 PAPER - III- DOTNET PROGRAMMING

Max Marks: 100 Pass Mark: 40

PART A

Answer any fivequestions All questions carry equal marks 5X16=80M

1. a) Discuss Briefly about the various operators in Visual Basic 2012.
   b) What are the basic Principles of Object Oriented Programming? Explain.

   (OR)

   c) Discuss the Concept of Exception Handling
   d) Write about Control Class. Discuss any three Controls.
2. a) Demonstrate different Data Types in C#.
   b) Write about Control Flow Statements in C#.

   (OR)

   c) Discuss about Polymorphism.
   d) Explain the Concept of working with arrays.
3. a) Write about any three Navigation Controls
   b) What are Validation Controls? Briefly Explain with Examples.

   (OR)

   c) How the Login Controls are used? Explain.
   d) what are the Radio Button and Check Box Controls?
4. a) Explain ADO.NET Architecture?
   b) Write about Data Source Controls .

   (OR)

   c) Explain any two Web Parts Controls
   d) Explain the Data-Bound Controls.
5. a)How do you create master page? Explain
   b) How caching is done in ASP.NET4.5? Explain.

   (OR)

   c) What are the Services Offered by WCF ? Explain
   d) Discuss Briefly about Silverlight5.

PART-B Answer All Questions 10X2=20M

6. What is an Enumerator?
7. What is a Constant?
8. What is the Difference between Checkbox and Radio Button?
9. What is Pointer Type?
10. What is a Runtime Error?
11. .Write down the Applications of Silver Light.
12. What is Explicit Type Conversion?
13. Define Array?
14. What is operator Precedence? 15) Give syntax for try-catch-finally statement.

ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA – 520 008

III MCA - V - SEMESTER I MID EXAMINATIONS – AUGUST – 2019

PAPER – IV – ARTIFICAL INTELLIGENCE

Time: 2Hrs **Date: 06.08.2019(E)** **Max.Marks:100M**

PART -A

ANSWER ALL QUESTIONS **5X16=80M**

1. Explain about Problem system characteristics?
2. Explain about the state space and production rulrs of water jug problem?
3. Explain about AND-OR graphs in problem reduction?
4. Compare and contrast between A* and AO* algorithms?
5. Explain about Means-Ends Analysis algorithm in detail?

PART -B

Answer all questions **2X10=20M**

6. Define AI?
7. What is an AI technique?
8. Define the different types of tasks in AI?
9. Define production system and 4 types of production systems?
10. Define state and state space?
11. Explain the steps of generate and test algorithm?
12. How is search technique used in AIand write about 3 types of search techniques?
13. Define heuristic function?
14. What are the 4 things to be done to build a system to solve a particular problem?
15. What are the requirements of a control strategy?

ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA – 520 008

III MCA - V - SEMESTER I MID EXAMINATIONS – AUGUST – 2019

PAPER – IV – ARTIFICAL INTELLIGENCE

Time: 2Hrs **Date: 06.08.2019(E)** **Max.Marks:100M**

PART -A

ANSWER ALL QUESTIONS **5X16=80M**

1. Explain about Problem system characteristics?
2. Explain about the state space and production rulrs of water jug problem?
3. Explain about AND-OR graphs in problem reduction?
4. Compare and contrast between A* and AO* algorithms?
5. Explain about Means-Ends Analysis algorithm in detail?

PART -B

Answer all questions **2X10=20M**

6. Define AI?
7. What is an AI technique?
8. Define the different types of tasks in AI?
9. Define production system and 4 types of production systems?
10. Define state and state space?
11. Explain the steps of generate and test algorithm?
12. How is search technique used in AIand write about 3 types of search techniques?
13. Define heuristic function?
14. What are the 4 things to be done to build a system to solve a particular problem?
15. What are the requirements of a control strategy?

ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA – 520 008

III MCA -V- SEMESTER I MID EXAMINATIONS – AUGUST – 2019

PAPER-III: DOTNET PROGRAMMING

Time :2Hrs **Date:06.08.2019(M)** **Max.Marks:100M**

PART - A
Answer all questions
All questions carry equal marks

5X16: 80M

1. **a)** "Is Dot Net is a programming language or a Framework". Justify your answer.
   b) Explain basic principles of Object Oriented program.
2. **a)** Write the differences between POP and OOP with an example.
   b) Explain and briefly discuss about Visual Basic 2012 Operators.
3. **a)** Define (a) A Class (b) Inheritance (c) Interfaces (d) Polymorphism.
   b) Explain and differentiate data type conversions.
4. **a)** Explain about Windows Form Control I: BUTTON; COMBO BOX; PICTURE; GROUP.
   b) Explain about Windows Form Control I: TEXT BOX; TIMER; PROGREE; BUTTON.
5. **a)** Explain about Windows Form Control II: Open File; Tool Strip; Menu Strip; Color Dialog.
   b) Write a program for "Fruit Billing System", with an expected output.

PART – B
Answer all questions
All questions carry equal marks

10X2=20M

6. What is the difference between textbox and richtext box?
7. What do you mean by explicit conversion?
8. Explain try, catch, finally statement?
9. What is an error? Explain types of errors?
10. Define an array?
11. Explain a Jump statement?
12. Write a console application to add two numbers?
13. Explain throw statement?
14. To insert an image in a design which window form controls you use?
15. Explain iteration of statements?

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ANDHRA LOYOLA COLLEGE (AUTONOMUS): VIJAYAWADA-08

V SEMESTER: MASTER OF COMPUTER APPLICATIONS

MID EXAMINATIONS – II

Subject: DATA SCIENCES

Time: 2 hrs. **Date:03.10.2019(M)** **Maximum: 100 Marks**

PART-A

Answer any 5 of the following questions **5x16=80marks**

1) Write about the comparison of Apache pig with databases and data processing operations in Apache Pig.
2) Explain about Hive shell, Hive QL, Hive services and user defined functions.
3) Write about HBASE and explain HBase versus RDBMS.
4) Define Machine Learning and explain in detail about all the ML algorithms.
5) Write a procedure of how big data analytics with R.
6) Write about anatomy of Map reduce job run

PART-B

Answer all the following questions **2x10=20marks**

7. K-means algorithm
8. Naïve Bayes
9. Clustering
10. Classification
11. Grunt shell
12. Commands of apache pig
13. Commands of Hive
14. Big SQL
15. Regression in ML
16. Collaborative filtering

Reg. No

PAPER CODE: MCA354AI

NMCA (2017-19 BATCH)

ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA – 520 008

III MCA - V - SEMESTER END EXAMINATIONS – OCTOBER– 2019

PAPER – IV– ARTIFICIAL INTELLIGENCE

Time: 3Hrs **Max Marks: 100**

Pass Mark: 40

Part- A

Answer all questions. All questions carry equal marks. **5X16=80M**

1. a) Explain the production rules for water jug problem.
   b) Explain problem characteristics.
   OR
   c) Explain A* algorithm.
   d) Explain means-ends analysis.
2. a) Explain Forward Versus Backward reasoning .
   b) Explain about Instance and IsA relationship.
   OR
   c) Explain issues in knowledge representation.
   d) Explain the concept of Matching in solving searching problems.
3. a) How Symbolic reasoning can be implemented using (i) Depth- First Search (ii) Breadth – First Search.
   OR
   b)Explain logics for non-monotonic reasoning.
4. a) Explain the components of planning.
   b) Explain Goal stack planning by taking the blocks problem.
   OR
   c) Explain Partitioned Semantic nets.
   d) Describe Hierarchical Planning.
5. a) Discuss about memory organization.
   b) Explain about Case-based Reasoning.
   OR
   c) What is Rote learning?
   d) Discuss Expert systems with suitable examples.

Part – B

Answer all the following questions. Each question carries equal marks. **10X2=20M**

6. Define AI.
7. Define Heuristic function.
8. Write the steps for Generate and Test Algorithm.
9. Define Constraint Satisfaction
10. Define Resolution.
11. What is Turing Machine?
12. Define frames.
13. What is Logic Programming?
14. Mention Common sense ontologies.
15. Define Expert Shell

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ANDHRA LOYOLA COLLEGE (AUTONOMUS): VIJAYAWADA-08

V SEMESTER: MASTER OF COMPUTER APPLICATIONS

MID EXAMINATIONS – II

Subject: INTERNET OF THINGS

Time: 2 hrs. **Date:05.10.2019(M)** **Maximum: 100 Marks**

PART-A

Answer All Questions **5*16=80M**

1. a)Classify ways of organizing data?
   (or)
   b).Explain knowledge discovery , knowledge management reference architecture ?
2. a)Explain in detail the functions and usage of data analytics and data visualizations for IOT applications and business process?
   (or)
   b)Give Examples of sensors?
3. a)Explain in detail about various business models? with examples?
   (or)
   b)Explain In detail about IOT based business models scenarios?
4. a)Explain in detail about Xively and Nimbits platforms?
   (or)
   b)Discuss in detail about cloud computing paradigm for data collection, storage and computing?
5. a) Explain in detail about Analog sensors with examples?
   (or)
   b) Explain in detail about wireless sensor network technology?

PART-B

Answer All Questions **10*2=20M**

6. Transaction
7. query
8. Bussiness process
9. Edge computing
10. XAAS
11. Device Hub
12. Actuator
13. IIOT
14. WSN
15. Decentralised model

Library

ANDHRA LOYOLA COLLEGE (AUTONOMUS): VIJAYAWADA-08

V SEMESTER: MASTER OF COMPUTER APPLICATIONS

MID EXAMINATIONS – II

Subject: ARTIFICIAL INTELLIGENCE

Time: 2 hrs. **Date:04.10.2019(E)** **Maximum: 100 Marks**

PART -A

Answer all the following questions **16 X5 = 80M**

1) Explain about the concept of resolution including refutation ?

2) Write the procedureal rules for conceptual dependency ?

3) What is ment by goalstack planning ?

4) What is difference between non-linear planning using constraint satisfaction and hierarchial planning ?

5) Explain about semantic nets ?

PART - B

Answer all the following questions **2X 10 =20M**

1) Define Matching ?

2) Differernce between strong and weak slot and filler structures ?

3) Define script ?

4) What is a reactive system ?

5) Define Frame ?

6) Diagramatically represent tangled hierarchies ?

7) Write the algorithm for inheritance ?

8) What is meant by CYC ?

9) Write about global ontology ?

10) What are the other techniques of planning ?

ANDHRA LOYOLA COLLEGE (AUTONOMUS): VIJAYAWADA-08

V SEMESTER: MASTER OF COMPUTER APPLICATIONS

MID EXAMINATIONS – II

Subject: DOT NET PROGRAMMING

Time: 2 hrs. **Date:04.10.2019(M)** **Maximum: 100 Marks**

Answer all questions
All questions carry equal marks

5X16: 80M

1. Explain ASP.NET Life cycle. Discuss any two navigation controls?
2. Write a program to design an application for dynamically populating a check box list?
3. Explain ADO.NET architecture?
4. What is a Master page and write different steps to create a Master Page?
5. What is caching? Write about adding, retrieving and deleting data/item from cache?

Answer all questions
All questions carry equal marks

10X2: 20M

1. What are the radio buttons and check box controls?
2. Explain any two web part controls?
3. What are the types of Master Page?
4. Explain data source controls?
5. Explain the features of WCF 4.5?
6. Explain exploring the key features of silver light 5?
7. Explain validation control?
8. Explain the process of Data Base Control?
9. What is the use of login controls?
10. What is data list control?

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ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA – 520 008

III MCA -V - SEMESTER I MID EXAMINATIONS – AUGUST – 2019

PAPER-V:INTERNET OF THINGS

Time :2Hrs **Date:07.08.2019(M)** **Max.Marks:100M**

PART- A

Answer All Questions **(5*16=80M)**

1. a) Define IOT in brief about the IOT with examples such as IOT Umbrella & street lights.?
   (OR)
   b) Discuss in detail about smart and Hyper connected devices. ?
   c) Explain IOT conceptual framework.?
2. a) What is server end technology.? Discuss major components of IOT system.?
   (OR)
   b)Write about Development tools and open source frame work for IOT?
   c) Write about popular IOT Development Boards?
3. a) Explain about design principles for connected devices.?
   (OR)
   b) Explain types of communication technologies, Explain in detail about wireless commuTech.?
4. a) Explain in detail about web communication protocol COAP for connected devices.?
   (OR)
   b) Explain in detail about REST and RESTFUL.?
5. a)Explain in detail about message communication protocols.?
   (OR)
   b) Explain applications of IOT as smart cities and smart Home.?

PART- B

Answer all **10*2=20M**

6. Vision of IOT.
7. Wireless sensor Network. (WSN)
8. Wireless sensor Node. (WSN node)
9. UART/USRT.
10. SPI.
11. Wired USB.
12. Polling.
13. JSON.
14. TLV.
15. MIME.

Reg. No

PAPER CODE: MCA353DP *DMCA* **(2017-19 BATCH)**

ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA – 520 008

III MCA– V - SEMESTER END EXAMINATIONS – OCTOBER – 2019

PAPER – III– DOTNET PROGRAMMING

Time: 3Hrs **Max Marks: 100**

Pass Mark: 40

PART A

Answer any fivequestions All questions carry equal marks **5X16=80M**

1. a) Discuss Briefly about the various operators in Visual Basic 2012.
   b) What are the basic Principles of Object Oriented Programming? Explain.
   (OR)
   c) Discuss the Concept of Exception Handling
   d) Write about Control Class. Discuss any three Controls.
2. a) Demonstrate different Data Types in C#.
   b) Write about Control Flow Statements in C#.
   (OR)
   c) Discuss about Polymorphism.
   d) Explain the Concept of working with arrays.
3. a) Write about any three Navigation Controls
   b) What are Validation Controls? Briefly Explain with Examples.
   (OR)
   c) How the Login Controls are used? Explain.
   d) what are the Radio Button and Check Box Controls?
4. a) Explain ADO.NET Architecture?
   b) Write about Data Source Controls .
   (OR)
   c) Explain any two Web Parts Controls
   d) Explain the Data-Bound Controls.
5. a)How do you create master page? Explain
   b)How caching is done in ASP.NET4.5? Explain.
   (OR)
   c) What are the Services Offered by WCF ? Explain
   d)Discuss Briefly about Silverlight5.

PART-B

Answer All Questions **10X2=20M**

6.What is an Enumerator?

7.What is a Constant?

8.What is the Difference between Checkbox and Radio Button?

9.What is Pointer Type?

10.What is a Runtime Error?

11.Write down the Applications of Silver Light.

12.What is Explicit Type Conversion?

13.Define Array?

14.What is operator Precedence?

15.Give syntax for try-catch-finally statement.

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ANDHRA LOYOLA COLLEGE (AUTONOMUS): VIJAYAWADA-08

V SEMESTER: MASTER OF COMPUTER APPLICATIONS

MID EXAMINATIONS – II

Subject: DATA SCIENCES

Time: 2 hrs. **Date:03.10.2019(M)** **Maximum: 100 Marks**

PART-A

Answer any 5 of the following questions **5x16=80marks**

1) Write about the comparison of Apache pig with databases and data processing operations in Apache Pig.
2) Explain about Hive shell, Hive QL, Hive services and user defined functions.
3) Write about HBASE and explain HBase versus RDBMS.
4) Define Machine Learning and explain in detail about all the ML algorithms.
5) Write a procedure of how big data analytics with R.
6) Write about anatomy of Map reduce job run

PART-B

Answer all the following questions **2x10=20marks**

7. K-means algorithm
8. Naïve Bayes
9. Clustering
10. Classification
11. Grunt shell
12. Commands of apache pig
13. Commands of Hive
14. Big SQL
15. Regression in ML
16. Collaborative filtering

ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA – 520 008

III MCA - V- SEMESTER I MID EXAMINATIONS – AUGUST – 2019

PAPER-II:DESIGN AND ANALYSIS OF ALGORITHMS

Time :2Hrs **Date:05.08.2019(E)** **Max.Marks:100M**

Part:A

Answer All Questions **(5*16=80M)**

1. a) Discuss in detail various steps for design of an algorithm in detail?

   (OR)

   b). Explain performance analysis of an algorithm?
2. a).What are different asymptotic notations used? Explain.?

   (OR)

   b). Write an algorithm to count the sum of 'n' numbers.?

   c). write an algorithm to check whether given number is even (or) odd.?
3. a).Explain Binary search algorithm with an example.?

   (OR)

   b).Explain the analysis of Best, Worst and average cases for Binary search algorithm.?
4. a).Explain Merge sort algorithm with an example.?

   (OR)

   b).Explain in detail about Quick Hull algorithm.?

   c).Explain in detail about Graham's scan algorithm.?
5. a).Explain knapsack problem and solution with an algorithm.?

   b).consider the following instance of the knapsack problem n=3,m=20, (P1,P2,P3)=(25,24,15).and (w1,w2,w3)=(18,15,10).obtain solution for the Problem.?

   c).Explain in detail JOB sequencing with deadlines algorithm with an example.?

PART- B

Answer all **10X2=20M**

6. Define algorithm.
7. Notion of algorithm.
8. Characteristics of an algorithm.
9. Strassen's matrix multiplication.
10. Quick sort statement.
11. Master's Thedem condition for a>b.
12. Divide and conquer method.
13. Greedy method.
14. Worst case of Quick sort.

10.Basic efficiency classes types.

Reg. No

PAPER CODE: BIOT245MB *NMCA* **(2017-19 BATCH)**

ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA – 520 008

III MCA - V - SEMESTER END EXAMINATIONS – OCTOBER– 2019

PAPER – V– INTERNET OF THINGS

Time: 3Hrs **Max Marks: 100**

Pass Mark: 40

PART-A

Answer all questions. All questions carry equal marks **5X16=80M**

1. a) What is IoT& explain M2M communication with example.
   b) Explain Internet Connectivity Principles.
   OR
   c) What are Application Layer protocols?
   d) Explain API's, deviceinterfacing, platforms in IoT.

2. a) Discuss about Modified OSI model and ITU-t reference model.
   b) Explain Wireless Communication Technologies.
   OR
   c) Explain Data Enrichment and Consolidation?
   d) Explain ETSI M2M domains and High Level capabilities..

3. a) What is XML and XMPP explain with example.
   b) Explain SOAP Architecture.
   OR
   c) Explain REST and HTTP?
   d) What are Web Communication and Message Communication Protocols?

4. a) Explain Data acquiring, and Organizing in IoT.
   b) Explain Business models for business Processes in IoT.
   OR
   c) Explain about Organizing the data, Transactions and Business process in IoT?
   d) Explain Architecture of SOA?

5. a) Write a note on grid Computing, Web Computing.
   b) Explain RFID system of Iot Applications.
   OR
   c) Explain Distributed Computing, Web Computing?
   d) Explain Wireless Sensor Networks, Sensor Technology?

PART-B

Answer All Questions **10X2=20M**

6. Define Iot.
7. Define WSN.
8. Define RFID.
9. Define Https.
10. Define Telnet.
11. Define FTP
12. Define Nimbits.
13. Define SOAP.
14. Define REST.
15. Define Web Sockets.

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Library

Reg. No

PAPER CODE: MCA352DA *DMCA* **(2017-19 BATCH)**

ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA – 520 008

III MCA– V - SEMESTER END EXAMINATIONS – OCTOBER – 2019

PAPER – II– DESIGN AND ANALYSIS OF ALOGRITHMS

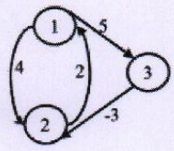
Time: 3Hrs **Max Marks: 100**

Pass Mark: 40

PART-A

Answer all Questions All Questions Carry Equal Marks **5X16=80M**

1. a) Explain about Time Complexity and Space Complexity of an Algorithm?
   b) Calculate Time Complexity of an algorithm for Matrix Multiplication?
   OR
   c)Write an algorithm to insert an element into a BinarySearchTree?
   d) Explain about elementary data structures?
2. a) Explain the process of Quicksort with an example and write an algorithm of it?
   OR
   b) Explain about Kruskals Algorithm with suitable example?
   c) Find the feasible solution for the Knapsack problem where M=10, n=3, P={25,35,16}, W={5,3,10}.
3. a)Explain Graph Traversal Techniques with example.
   OR
   b) Solve the following problem using All pairs shortest path



4. a) Write backtracking algorithm for N-Queens Problem?
   b)Write algorithm for Sum of Subsets Problem?
   OR
   c) Write the control abstraction for LCSearch?
   d)Write the procedure to solve the travelling sales person problem using FIFOBB?
5. a) Explain the terms P, NP, NP-Hard and NP-Complete?
   b) State and Prove COOKS Theorem?
   OR
   c) Explain the procedure to solve knapsack problem using NP-Complete?
   d)Explain NP Hard code Generation Problem?

PART-B

Answer All Questions: **10X2=20M**

6. Define Graph
7. Define Stack
8. Optimal Solution
9. Spanning Tree
10. BFS
11. String Editing
12. Branch and Bound
13. Hamiltonian Cycle
14. And/Or Graph
15. Decision Problem

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PAPER CODE: MCA351DS *DMCA* **(2017-19 BATCH)**

ANDHRA LOYOLA COLLEGE (AUTONOMOUS): VIJAYAWADA – 520 008

III MCA – V - SEMESTER END EXAMINATIONS – OCTOBER – 2019

PAPER – I – DATA SCIENCES

Time: 3Hrs **Max Marks: 100**

Pass Mark: 40

PART-A

Answer any fivequestions All questions carry equal marks **5X16=80M**

1. a) Define Machine learning and explain its algorithms.
   b) Define BIGDATA and Explain its Importance?
2. Explain Hadoop and Design of HDFS.
3. a) Explain Pig Latin and Data processing operations.
   b) Explain Hive with example.
4. Explain the concept of HBase with example
5. Explain Map reduce and its Features.
6. What are the Categories of Supervised Learning and Unsupervised Learning?
7. What is collaborative filtering and Big Data analytics using R.?
8. What is map Failure and Shuffle, sort in Map Side and explain Grunt.

PART-B

Answer All Questions **10X2=20M**

9. Define Bigdata.
10. Define Map reduce.
11. Define Hive.
12. Define Grunt.
13. Define Pig latin.
14. Define RDMS
15. Define HDFS.
16. Define joins.
17. Define Reinforcement learning.
18. Define Hive meta store.

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ANDHRA LOYOLA COLLEGE (AUTONOMUS): VIJAYAWADA-08

V SEMESTER: MASTER OF COMPUTER APPLICATIONS

MID EXAMINATIONS – II

Subject: DATA SCIENCES

Time: 2 hrs. **Date:03.10.2019(M)** **Maximum: 100 Marks**

PART-A

Answer any 5 of the following questions **5x16=80marks**

1) Write about the comparison of Apache pig with databases and data processing operations in Apache Pig.
2) Explain about Hive shell, Hive QL, Hive services and user defined functions.
3) Write about HBASE and explain HBase versus RDBMS.
4) Define Machine Learning and explain in detail about all the ML algorithms.
5) Write a procedure of how big data analytics with R.
6) Write about anatomy of Map reduce job run

PART-B

Answer all the following questions **2x10=20marks**

7. K-means algorithm
8. Naïve Bayes
9. Clustering
10. Classification
11. Grunt shell
12. Commands of apache pig
13. Commands of Hive
14. Big SQL
15. Regression in ML
16. Collaborative filtering