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III Semester M.C.A. Degree Examination, June/July - 2024
COMPUTER SCIENCE
Big Data Analytics (Elective)
(CBCS Scheme Y2K20)

Time : 3 Hours**Maximum Marks : 70****Instructions to Candidates :**

1. Answer any **FIVE** questions from Part-A.
2. Answer any **FOUR** questions from Part-B.

**PART - A**

Answer any **FIVE** of the following. Each question carries **6** marks.

(5×6=30)

1. Describe the characteristic of Big Data.
2. What are the types of data in Big Data Analytics?
3. Discuss about Data Mining Primitives.
4. List out the issues of classification.
5. Write Short notes on
 - a) Web mining
 - b) Text mining.
6. Describe the HDFS basic commands.
7. Differentiate between Hbase and RDBMS.
8. Write short notes on
 - a) Supervised Learning
 - b) Unsupervised Learning.

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PART - B

Answer any **FOUR** of the following. Each question carries 10 marks.

$(4 \times 10 = 40)$

9. What is Big Data? Explain any 4 Industry applications of Big Data. (2+8)
10. Explain the steps involved in Data Preprocessing. (10)
11. Explain classification using Decision Tree with an example. (10)
12. Briefly Explain the Architecture of Hadoop. (10)
13. What is Pig? Explain any 4 Relational Operators of Pig. (2+8)
14. Write Short notes on :
 - a) HIVE
 - b) Collaborative filtering.

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III Semester M.C.A. Degree Examination June/July - 2024

COMPUTER SCIENCE

Cryptography and Network Security (Elective)
(CBCS Y2k20 Scheme)

Time : 3 Hours

Maximum Marks : 70

Instructions to Candidates :

1. Answer any **Five** questions from Part-A. Each carries 6.
2. Answer any **Four** questions from Part-B. Each carries 10.

PART - A

Answer any FIVE questions. Each question carries SIX marks.

$(5 \times 6 = 30)$

1. Briefly explain the stream cipher with an example.
2. Draw a neat diagram of AES general structures and explain it.
3. Explain Diffie-Hellman Key exchange.
4. What are the properties a digital signature should have?
5. What four requirements were defined for Kerberos?
6. Explain the X.509 standard with a neat diagram.
7. What is the difference between SSL connection and SSL session?
8. Explain the concepts of Message Authentication code.

PART - B

Answer any FOUR questions. Each question carries TEN marks.

$(4 \times 10 = 40)$

9. ~~a~~ Compare Cryptography and Steganography.
10. Explain the different types of Attacks on Encrypted Message. (5+5)

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10. a) Explain Fermat's and Euler's Theorem.
b) Explain the Data Encryption Standard with a neat diagram. (5+5)
11. a) Explain the concept Chinese Remainder Theorem with an example.
b) Describe the RSA Algorithm step by step. (5+5)
12. a) What is Message Authentication Code? Explain in detail.
b) Explain the Elliptic curve cryptography. (5+5)
13. a) What are the roles of the public and private keys.
b) What is Hash function? Explain in detail. (5+5)
14. a) Explain the various types of firewalls.
b) What are the basic approaches of Security Association. (5+5)

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III Semester M.C.A. Degree Examination June/July - 2024

COMPUTER SCIENCE

Cloud Computing (Elective)
(CBCS Y2K20 Scheme)



Time : 3 Hours

Maximum Marks : 70

Instructions to Candidates :

1. Answer any Five full questions from Part-A. Each question carries Six marks.
2. Answer any Four full questions from Part-B. Each question carries Ten marks.

PART - A

Answer any **Five** of the following. Each question carries Six marks.

(5×6=30)

1. Define Cloud Computing? Explain Its working process.
2. What is SaaS? Explain challenges in SaaS Model.
3. Define Virtual Machine. Explain Virtual Machine services.
4. Explain the Integration of Private and Public cloud.
5. Discuss Parallel and Distributed programming paradigms.
6. Explain Google App Engine in programming support.
7. Discuss Network level Security in Cloud.
8. Explain Multi-Tenancy Issues in Cloud Security.

PART - B

Answer any **Four** full questions of the following. Each question carries Ten marks.

(4×10=40)

9. a) Explain the Types of Cloud.
b) Explain Leveraging Cloud Computing.

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10. a) Explain the Cloud Application Development Life cycle.
b) Explain advantages of SaaS Services.
 11. Discuss the Following Computing Components:
 - a) Utility Computing
 - b) Grid Computing
 - c) Distributed Computing
 12. Explain the Open Nebula and Cloud Sim - Cloud software Environments.
 13. Explain Access Control and Authentication techniques in Cloud Computing.
 14. Write short Note on:
 - a) Data Security in Public Cloud
 - b) Amazon AWS
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III Semester M.C.A. Degree Examination, June/July - 2024
COMPUTER SCIENCE
Cyber Space (Open Elective)
(CBCS Scheme 2020-21 Y2K20)
Paper : 3MCA1

Time : 3 Hours**Maximum Marks : 70**

1. Answer All the questions from Part - A.
2. Answer any Four questions from Part - B.
3. Answer any Three full questions from Part - C.

PART - A**Answer All the questions.****(10×2=20)**

1. What are the basic Services of Internet?
2. What is HTTP and ARPANET?
3. Define Cyber terrorism.
4. What is Phishing?
5. What is Social media?
6. What is G2G and G2C?
7. What is Cyber stalking?
8. What is digital repository?
9. Define the term E-Governance.
10. Who is adjudicator according to IT Act, 2000?

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PART - B

Answer any FOUR questions.

(4×5=20)

11. Explain the architecture of search engine.
12. Discuss the significant Issues that are required to implement e-commerce.
13. Why e-governance is needed? Explain in detail.
14. Explain digital signature under the IT Act, 2000.
15. Write a short note on DNS.
16. Discuss offences under IT Act, 2000.

PART - C

Answer any THREE Full questions.

(3×10=30)

17. a) Explain the various classes of IP address.
b) Write a short note on LinkedIn.
 18. a) Explain the modules of e-commerce in detail.
b) Write a short note on any Popular e-commerce sites.
 19. Explain various e-governance models.
 20. Explain salient features of It Act 2000.
 21. Write note on :
a) Whatsapp
b) Twitter.
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III Semester M.B.A. (Day & Eve) Degree Examination, June/July- 2024
MANAGEMENT (OE)
Management Perspective
(CBCS Scheme 2019 Onwards)

Time : 3 Hours

Maximum Marks : 70

SECTION - A

Answer ALL the questions from the following each question carries 2 marks. ($10 \times 2 = 20$)

1. a) Define Staffing.
- b) What is Motion Study?
- c) Mention the Various Hierarchy of reporting.
- d) What do you mean by matrix organizational Structure?
- e) Mention the functional areas of Organization.
- f) What is Delegation of authority?
- g) Mention any two important Brain Storming.
- h) What is quality circle?
- i) Define Extrinsic motivation.
- j) Define Single use plan.



SECTION - B

Answer any FOUR questions from the following each question carries 5 marks. ($4 \times 5 = 20$)

2. What is planning? Explain the importance of planning.
3. Discuss different styles of leadership with examples.
4. What is business communication? Explain the barriers of communication.
5. Define management. Explain any two functional areas of an organization.
6. Elucidate the concept of delegation with examples.
7. What is Co-ordination? Explain the process of co-ordination.

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SECTION - C

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Answer any **THREE** questions from the following each question carries **10** marks. ($3 \times 10 = 30$)

8. Define organization structure. Explain the various types of organizational structures.
 9. Define motivation. Explain any two theories of motivation.
 10. Write a short note on:
 - a) SWOT analysis
 - b) Fishbone diagram
 11. What is teamwork? Discuss its importance and stages in the development of the team.
 12. What is effective E-mail? Explain the importance of elements of E-mail Messages.
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III Semester M.C.A. Degree Examination June/July - 2024
COMPUTER SCIENCE

Soft core - Quantitative, Teaching and Research Aptitude
(CBCS Y2k20 Scheme)
Paper : 3MCA2

Time : 3 Hours**Maximum Marks : 70****Instructions to Candidates :**

Answer any 5 Questions from Part - A.

Answer any 4 Questions from Part - B.

**PART - A**

Answer any FIVE of the following questions. Each carries SIX marks. (5×6=30)

1. The product of two numbers is 4017. If HCF of these numbers is 37, then find the greater number.
2. If two pipes function simultaneously, the reservoir will be filled in 12 hours. One pipe fills the reservoir 10 hours then the other. How many hours does it take the second pipe to fill the reservoir.
3. In a mixture of 60 litres, the ratio of milk and water is 2:1. If this ratio is to be 1:2, then what quantity of water should be added?
4. A,B and C Start a business each investing Rs. 20,000. After 5 months A withdrew Rs. 5000, Rs. 4000 and C invests Rs. 6000 more. At the end of the year, a total profit of Rs. 69,900 was recorded. Find the share of each.
5. The average of 25 student's marks is 18. The average of first twelve of students is 14 and that of the last twelve is 17. Find the marks of thirteenth student.
6. How many numbers between 11 and 90 which are divisible by 7?
7. Explain governance, policy and administration of higher education system in India.
8. Distinguish between formal and distance education.

[P.T.O.]

**PART - B****Answer any Four questions. Each carries ten marks.****(4×10=40)**

9. (a) If $\log 2 = 0.3010$ and $\log 3 = 0.4771$, find the value of $\log_2 512$.
(b) How many 4 digits numbers can be made using the digits 0 to 9 if repetition of digits is not allowed. **(5+5)**
10. (a) A man travelled from the village to the post office at the rate of 25 kmph and walked back at the rate of 4 kmph. If the whole journey took 5 hours 48 minutes, find the distance of the post-office from the village.
(b) One year ago, the ratio of Manoj and Sachin's age was 6:7. Four years hence, this ratio would become 7:8. How old is Sachin? **(5+5)**
11. (a) If 4 men and 6 women can complete a work in 8, while 3 men and 7 women can complete it in 10 days. In how many days will 10 women complete it?
(b) A Train passes a station in 36 seconds and a passes a lamppost on the platform in 20 seconds. If the speed of the train is 54 kmph find the length of the platform. **(5+5)**
12. (a) A bag contains 6 Red and 4 Blue balls. Two balls are drawn at randomly. Find the probability that they are of the same color.
(b) What was the day of the week on 20th June 1977? **(5+5)**
13. Explain the steps, methods and ethics of research. **(10)**
14. (a) Explain the factors affecting teaching.
(b) Distinguish between Seminar, Conference and Symposium. **(5+5)**

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III Semester M.C.A. Degree Examination June/July - 2024**COMPUTER SCIENCE****Research Methodology
(CBCS Y2K20 Scheme)****Paper : 3MCA3****Time : 3 Hours****Maximum Marks : 70****Instructions to Candidates :**

1. Answer All sections.
2. Answer any FIVE questions from section - A, each question carries SIX marks.
3. Answer any FOUR questions from section - B, each question carries TEN marks.

SECTION - A**I. Answer any Five of the following questions. Each question carries 6 marks.**

(5×6=30)

1. Define Research? Discuss the objective of research.
2. What is the use of computer in research?
3. Explain a statistical test for measuring association between two variables.
4. Define qualitative research. What are the popular techniques of qualitative research.
5. Calculate the correlation coefficient of given data.

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6. Explain optimization of fuzzy system.
7. Explain the role of SPSS in data analysis.
8. Discuss any three phases of genetic algorithm.

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**SECTION - B**

II. Answer any FOUR questions. Each question carries 10 marks. $(4 \times 10 = 40)$

9. Discuss the different types of research.
 10. Explain various steps in research process.
 11. Define time series. Explain any one time series model and its use.
 12. Explain the primary goals of conducting a literature review in academic research?
 13. Explain the role of simulated annealing in research with example.
 14. What is report writing? Explain the process of writing the report.
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III Semester M.C.A. Degree Examination June/July - 2024
COMPUTER SCIENCE
Web Programming (Elective)
(CBCS Scheme YK 20)

Time : 3 Hours**Maximum Marks : 70****Instructions to Candidates :**

1. Answer any **Five** questions from **Part-A**. Each question carries **6** marks.
2. Answer any **Four** questions from **Part-B**. Each question carries **10** marks.

PART - A

Answer any **Five** of the following questions. Each question carries **6** marks. **(5×6=30)**

1. Explain Local Storage concept in HTML5.
2. Explain the drag and drop concept of HTML5 with example.
3. Discuss the various mouse and key events used in java script.
4. Explain the features of Apache Web Server.
5. Write a program to demonstrate image based Ajax.
6. Differentiate between XML and HTML5 features.
7. Explain implementation of Data base access using PHP and AJAX using an example.
8. Explain the implementation of cookies and sessions in Ajax.

PART - B

Answer any **Four** full questions. Each question carries **10** marks. **(4×10=40)**

9. a) Explain different ways of creating javascript objects with example. **(5)**
- b) Discuss Web Workers concept used in HTML5 with an example. **(5)**

[P.T.O.]

10. a) Explain methods of accessing and modifying DOM elements. (6)
b) Write a note on Event Bubbling and Event Capturing. (4)
11. a) Explain the HTTP request methods. (5)
b) Briefly explain MIME. (5)
12. a) Explain the concept of java script object, prototype Inheritance with an example. (6)
b) Explain the properties of the XMLHttpRequest Object. (4)
13. a) Compare the features of JSON and XML. (5)
b) Briefly explain Dynamic Script Loading. (5)
14. Write a note on
a) XMLHttpRequest Object methods. (5)
b) Cross - Origin Resource sharing (CORS). (5)