

Adikavi Nannaya University, Rajahmundry
MCA V Semester

5.1 Wireless and Adhoc Networks (Model Question Paper)

Time : 3 Hours

Max. Marks :75

SECTION – A (4X15=60 Marks)

Answer ALL Questions

1. a) Explain about various networks for connecting to the internet.
b) What is Virtual Private Network and write about the types of VPNs. [8+7]
(OR)
c) Explain about Bluetooth Technology with its architecture and protocols.
d) What is the significance of MAC protocol and explain about its protocols. [8+7]
2. a) Differentiate infrastructured networks and infrastructureless networks.
b) Write about the QoS models for Wireless Ad-hoc networks. [7+8]
(OR)
c) Explain about the Ad-hoc On-demand Distance Vector routing.
d) What are the challenges in Wireless Ad-hoc networks [10+5]
3. a) What are the properties of a MANET.
b) Explain about ZigBee with its general architecture. [5+10]
(OR)
c) What are the applications of MANET.
d) Explain about WiMAX with its architecture. [5+10]
4. a) Write about the security attacks in Ad-hoc networks.
b) Explain about intrusion detection in wireless ad-hoc networks. [7+8]
(OR)
c) What is network based intrusion prevention system, explain briefly.
d) Explain about WEP security protocol for WLANs. [7+8]

SECTION – B (5X3=15 Marks)

Answer any FIVE Questions

5. a) What are the generations of wireless networks.
b) Write one Comparison of 802.11 a,b,g and n standards.
c) What are the types of Ad-hoc networks.
d) Define Proactive, Reactive and Hybrid Routing.
e) Write about IEEE 802.15.4 and IEEE 802.16.
f) What are the protocols of MAC layer.
g) Describe grayhole attack.
h) What are the principles used in developing the IRS.

**Adikavi Nannaya University,
University College of Engineering, Rajahmundry
MCA V Semester
5.2 Cyber Security (Model Question Paper)**

Time : 3 Hours

Max. Marks :75

**SECTION – A (4X15=60 Marks)
Answer ALL Questions**

1. a) What is an attack and discuss different types of attacks?
b) What are the basic information security concepts and briefly explain each concept? [7+8]
(OR)
c) What is Data Leakage? Discuss in detail the Organization of Data Collection. 15M
2. a) Define Cyber Security. Give all Domains of Cyber Security Policies [15M]
(OR)
b) Write a brief note on Technology Configuration.
c) Explain the Counter measures of Cyber Security Evolution [7+8]
3. a) Detailed note on Cyber Security Merits.
b) Explain Security Frameworks and Security Management Goals. [5+10]
(OR)
c) Discuss Cyber Security Copyrights and trademarks.
d) Explain Net Neutrality, Internet Names and Numbers [7+8]
4. a) Describe Cyber User issues and Cyber conflict issues. 15M
(OR)
b) Describe Cyber Management issues and Cyber infrastructure issues. 15M.

**SECTION – B (5X3=15 Marks)
Answer any FIVE Questions**

5. Define the following:
 - a) Information security.
 - b) Vulnerability
 - c) Differentiate strategy versus policy
 - d) Risk Management.
 - e) Challenges of Cyber Security Evolution
 - f) Cyber sabotage.
 - g) E-Commerce.
 - h) Intellectual property Theft.

**ADIKAVI NANNAYA UNIVERSITY. :: RAJAHMUNDRY
UNIVERSITY COLLEGE OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
MCA Vth Semester
BIG DATA ANALYTICS MODEL QUESTION PAPER**

SECTION A(ANSWER ALL QUESTIONS WITH INTERNAL CHOICE)

1. Define Big Data. What are the characteristics of Big Data. Explain each character with suitable real time applications. [1+4+10]

OR

Compare data in a Warehouse and Data in Hadoop. Discuss similarities and dissimilarities. [15]

2. Explain Map Reduce concept and all building blocks of Hadoop [7+8]

OR

Explain the concepts of HDFS. Also explain how command line interface in Java works in HDFS. [15]

3. Write Matrix multiplication program with Map Reduce concept. How to construct basic template of a Map Reduce Program. [15]

OR

Write word count program with Map Reduce concept. Explain Bloom Filters. [15]

4. Explain Friends-of-Friends Algorithm in finding friends in a Social Network. [15]

OR

Explain PageRank Algorithm. [15]

SECTION B (Answer Any five...Each question carries 3 marks).

- 5.a. Explain the concept of wrapper classes in Java.
- b. Explain Serializability.
- c. Compare sql databases and Hadoop.
- d. What is Hadoop Archives. Explain.
- e. Explain anatomy of a MapReduce Program.
- f. What are chaining Map Reduce jobs.
- g. What is streaming in Hadoop.
- H. Explain Shortest Path Algorithm.

**Adikavi Nannaya University,
University College of Engineering, Rajahmundry
MCA V Semester
5.4 Cloud Computing (Model Question Paper)**

Time : 3 Hours

Max. Marks :75

**SECTION – A (4X15=60 Marks)
Answer ALL Questions**

1.a) Briefly explain the business case for going to the cloud, its services and business applications. (15M)

(OR)

b) What are benefits, limitations, security concerns and regulatory issues in cloud computing? (15M)

2 a) Write about the overview of cloud storage and cloud storage providers? (15M)

(OR)

b) What is software plus services and its overview with mobile device integration? (15M)

3.a) Explain the developing applications of Intuit Quick Base, cast iron cloud, Bungee connect? (15M)

(OR)

b) Explain virtualization in your organization? (15M)

4.a) How the cloud services aimed at the mid-market? (15M)

(OR)

b) Explain about best practices and the future of cloud computing? (15M)

SECTION-B

Answer any 5 Questions

5X3=15

- a) Salesforce.com
- b) Net A pp
- c) web Apps
- d) Microsoft Online
- e) Google developing application

- f) MC. Neilus steel

- g) cloud services for individuals

- h) future of cloud computing

Adikavi Nannaya University, Rajahmundry
MCA V Semester

MCA 5.5 Software Testing and Quality Assurance (Model Question Paper)

Time: 3 Hours

Max. Marks: 75

SECTION – A (4X15=60 Marks)

Answer ALL Questions

1. a) Explain testing activities. What are the various sources of information for test case selection?

Or

- b) What is a CFG? Explain how paths are selected for testing using CFG.

2. a) Explain different types of domain errors. Show how criterion for test selection and the test data so selected reveal domain errors.

Or

- b) Explain system integration techniques.

3. a) Explain classification of software requirements into software quality factors.

Or

- b) Explain SQA system.

4. a) What is a CASE tool? Explain the contribution of CASE tools to software product quality.

Or

- b) Explain different process and product metrics. A requirements specification document of XYZ system is analysed to obtain the following data. Number of user inputs – 28, Number of user outputs – 36, Number of user online queries – 24, Number of logical files – 8, Number of external interfaces - 12. The team estimated that 50% of the components are simple, 25% are average and 25% complex. The project's complexity is estimated as RCAF =57. Compute the function points estimate for the project.

SECTION – B (5X3=15 Marks)

Answer any FIVE Questions

5.

- a) Define verification and validation
- b) Dynamic unit testing
- c) c-use and p-use of a variable
- d) Explain data points near boundaries ON and OFF points.
- e) Give IEEE definition for software, software quality and software quality assurance.
- f) Distinguish software error, fault and a failure with example.
- g) Limitations of quality metrics
- h) Write short notes on CMM