BCA Sixth Semester Examination, May - 2019

(Faculty of Science)

FIRST PAPER

Management Information System

Paper Code :6611

Time Allowed: Three Hours **Maximum Marks : 70**

No supplementary answer book will be given to any candidate. Hence the candidates should write the answers precisely in the main answer book only.

(Attempt all six questions)

Part I (Question No. 1& 2) is compulsory & Part II (Question No. 3, 4, 5 & 6) has internal choice.

PART-I

1. Answer any 10 questions. Each question carries 1 mark. **10x1= 10**
(Words limit up to 20 words each)

a) What is Open System? Explain.

b) Differentiate between logical and physical design.

c) Differentiate between formal and informal systems.

d) List out system components.

e) List our levels of management.

f) List out any four potfalls in MIS development.

g) What is System Evaluation?

h) What is the role of end user in MIS?

i) What is Export System?

j) List out components of Personnel MIS.

k) Differentiate between verification and validation.

l) What are the activities involved in MIS implementation?

2. Attempt all questions. Each question carries 5 marks. **4x5=20**
(Word limit upto 50 words each)

a) What is the role of Information System in decision making? Explain.

b) Differentiate between MIS and DSS. Explain.

c) Explain the role of top management during design and implementation of MIS.

d) What are the applications of MIS in marketing?

PART-II

UNIT I

3. Define MIS and discuss its objectives and characteristics. **10**

OR

Explain various types of systems with examples. **10**

UNIT II

4. Discuss various types of information requirements in MIS development. **10**

OR

Explain the structure and components of DSS in detail. **10**

UNIT III

5. How would you determine the information needs and information sources in conceptual system design phase of MIS project ? **10**

OR

Discuss various phases involved in preparation of detailed system design. **10**

UNIT IV

6. Explain a MIS for Accounting and Financial function. **10**

OR

What is Product – based evaluation? Discuss in detail the model which may be employed for product based MIS evaluation. **10**

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BCA Sixth Semester Examination, May-2019

SECOND PAPER

Network Security & Cryptology

Paper Code-6621

Time Duration: Three Hours **Maximum Marks-70**

(1) No supplementary answer book will be given to any candidate. Hence the candidates should write the answers precisely in the main answer book only.

(2) All the parts of one question should be answered at one place in the answer book.

(Attempt all six questions.)

Part I (Question No. 1& 2) is compulsory & Part II (Question No. 3, 4 , 5 & 6) has internal choice.

Part-I

1. Answer any 10 questions out of the following. Each question carries 1 mark. 10x1= 10

a) What do you mean by security threats?

b) Define the term 'Stream Cipher'.

c) What do you mean by 'Birthday Attack'?

d) Explain function of Firewall?

e) Explain Iterated DES.

f) Explain the term "Digital Signature Standard".

g) Define the term "Cryptology".

h) What does network security ensure?

i) State Fermat's Theorem.

j) What do you mean by security of CTR modes?

k) Explain Malicious Software.

l) What do you mean by IP security?

2. Answer all the questions. Each question carries 5 marks. 4x5= 20

a) Describe Network Security Model.

b) Explain RSA algorithm.

c) Explain cipher block chaining method.

d) Write a short note on digital signature.

Part-II

Unit-I

3. Describe challenges and threats of E – Security. **10**

OR

Describe Cryptography. What do you mean by symmetric key and public key cryptology? **10**

Unit-II

4. Explain Data Encryption Standard (DES) in detail. **10**

OR

Describe Advanced Encryption Standard (AES) by explaining drawbacks of DES. **10**

Unit-III

5. Write a short note on Hybrid Encryption Scheme. **10**

OR

What are Pseudorandom Numbers? Explain their importance in cryptology. How can they be generated? **10**

Unit-IV

6. What is e-mail security? Explain the techniques for e-mail security. **10**

OR

What do you mean by Hash function? Explain Secured Hash Algorithm. **10**

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BCA Sixth Semester Examination, May – 2019

(Faculty of Science)

THIRD PAPER

Data Warehousing and Data Mining

Paper Code : 6631

Time Allowed: Three Hours **Maximum Marks : 70**

No supplementary answer book will be given to any candidate. Hence the candidates should write the answers precisely in the main answer book only.

(Attempt all six questions)

Part I (Question No. 1& 2) is compulsory & Part II (Question No. 3, 4, 5 & 6) has internal choice.

PART-I

1. Answer any 10 questions from 12. Each question carries 1 mark. **10x1= 10**

a) What is Data Warehouse?
b) What are the things necessary for maintaining a date warehouse?
c) Define Meta Data?
d) How is a Data Warehouse different from a Database?
e) Differentiate between Star and Snowflake Schema.
f) List the characteristics of data warehouse.
g) What are the components of data warehouse?
h) What do you mean by Data Cleaning?
i) Differentiate Fact Table and Dimension Table.
j) Mention the various tasks to be accomplished as part of data pre-processing.
k) Why is it important to have data mining query language?
l) Define Database Schema.

2. Attempt all questions. Each question carries 5 marks. **4x5=20**

Discuss about the phases of Warehouse Architecture.

a) Differentiate between OLAP and OLTP.
b) Elaborate conceptual view of data warehouse.
c) Explain Horizontal Partitioning.
d) Explain the steps to design a summary table.

PART-II

UNIT I

3. Explain data warehouse planning strategies in detail? **10**

OR

What do you mean by Data Mining? Describe and differentiate between Data Warehouse and Data Mining. **10**

P.T.O

UNIT II

4. Explain multi-dimensional model of a data warehouse. **10**

OR

Write a short note on-
(a) Star Flake Schema
(b) Process Architecture **10**

UNIT III

5. What do you mean by Aggregation? Explain different aggregate function. **10**

OR

Explain Process Architecture in detail. **10**

UNIT IV

6. Elaborate the forms of data preprocessing along with data cleaning. **10**

OR

Define Data Transformation. Elaborate the technologies used for data mining. **10**

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BCA Sixth Semester Examination,May-2019

FOURTH PAPER

Artificial Intelligence & Expert Systems

Paper Code - 6641

Time Duration: Three Hours **Maximum Marks-70**

(1) No supplementary answer book will be given to any candidate. Hence the candidates should write the answers precisely in the main answer book only.

(2) All the parts of one question should be answered at one place in the answer book.

(Attempt all six questions.)

Part I (Question No. 1& 2) is compulsory & Part II (Question No. 3, 4 , 5 & 6) has internal choice.

Part-I

1. Answer any 10 questions out of the following. Each question carries 1 mark. 10x1= 10

a) Describe D.F.S.

b) What is Forward Reasoning?

c) Define Neural Networks.

d) What is Knowledge Representation?

e) What is Natural Language Processing?

f) What is Resolution?

g) What is Propositional Logic?

h) What do you mean by Procedural Knowledge?

i) Describe Inference Rule.

j) What is Learning?

k) Write the syntax of Predicate Calculus Logic.

l) Define Frame.

2. Answer all the questions. Each question carries 5 marks. 4x5= 20

a) Explain characteristics of Production System.

b) Write short note on Propositional Calculus with an example.

c) Differentiate between DFS & BFS.

d) Explain Baye's Theorem in detail.

P.T.O.

Part-II

Unit-I

3. What is the meaning of Artificial Intelligence? Explain different application of Artificial Intelligence. **10**

OR

Describe the production system and problem solving techniques in A.I. What are the advantages and disadvantages of Production System? **10**

Unit-II

4. Explain the Resolution in Prepositional Logic in debit. **10**

OR

Write short note on the following:-

a) Generate and Test Algorithm **5**
b) Simple Hill Climbing Algorithm **5**

Unit-III

5. What is Dempster Shafer Theory? Explain in detail. **10**

OR

Explain in detail.

a) Fuzzy Logic **5**
b) Monotonic Reasoning **5**

Unit-IV

6. Define Expert System. Explain the needs of an expert system. Explain different components and categories of an expert system. **10**

OR

What are the principles that are followed by any learning procedure? **10**

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