

FACULTY OF INFORMATICS

M.C.A. III Year I – Semester (New) (Main & Backlog) Examination, Jan. / Feb. 2015

**Subject: Cloud Computing
(Elective – II)**

Time: 3 Hours

Max.Marks: 80

Note: Answer one question from each unit. All questions carry equal marks.

Unit – I

- 1 a) Explain the basic principles of cloud computing. What are the desired features of a cloud?
b) With reference to cloud computing, what are the service models. Explain them.

OR

- 2 a) Discuss about the layers and types of clouds.
b) Explain the challenges and risks in cloud computing.

Unit – II

- 3 a) What are virtual machines? Explain the levels of virtualization.
b) Write about virtualization data-center automation.

OR

- 4 a) Discuss about VM ware products and VM ware features.
b) List and explain the features of Microsoft Virtual Server.

Unit – III

- 5 a) Describe the architectural design of compute and storage clouds.
b) Write about Data-Center design.

OR

- 6 Write short notes on:
a) GAE b) Inter-Cloud Resource Management

Unit – IV

- 7 a) Discuss about Onion Encryption layers of crypt DB.
b) Discuss about cloud security.

OR

- 8 Write briefly on the following:
a) Homomorphic Encryption b) Trust Management

Unit – V

- 9 a) Write about programming on Amazon AWS.
b) Discuss about Internet Messaging Access Protocol (IMAP).

OR

- 10 a) Explain the standards for security and messaging.
b) What are the emerging cloud software environments? Explain them by giving examples.

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M.C.A. III Year I – Semester (New) (Main & Backlog) Examination, Jan. / Feb. 2015

Subject: Electronic Commerce (Elective – II)

Time: 3 Hours

Max.Marks: 80

Note: Answer one question from each unit. All questions carry equal marks.

Unit – I

- 1 Explain the Anatomy of E-Commerce Applications.
- OR**
- 2 Write notes on Mercantile Models from the consumer's perspective.

Unit – II

- 3 Describe the following:
 - a) Smart Cards and Electronic Payment Systems.
 - b) Risk and Electronic Payment Systems.
- OR**
- 4 Explain about credit card – Based Electronic Payment Systems.

Unit – III

- 5 Discuss about Electronic Data Interchange.
- OR**
- 6 Explain the following:
 - a) EDI Software Implementation.
 - b) Differentiate between Vertical Organisational Structure and Horizontal Organisational Structure.

Unit – IV

- 7 Write notes on dimensions of internal electronic commerce systems.
- OR**
- 8 Explain in detail about advertising on the internet.

Unit – V

- 9 Explain the following:
 - a) Wide Area Information Service (WAIS) Engine.
 - b) Indexing methods.
- OR**
- 10 Discuss about Desktop Video Processing.

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M.C.A. III-Year I – Semester (Main & Backlog) Examination, January / February 2014

Subject : Human Computer Interaction (Elective – II)

Time : 3 hours

Max. Marks : 80

Note: Answer ONE question from each unit. All questions carry equal marks.

UNIT – I

- 1 a) Explain importance of user interface.
b) Write about principles of user interface design.
- OR**
- 2 a) Explain the principles of good screen design.
b) Explain about direct and indirect methods in requirement analysis.

UNIT – II

- 3 a) Write notes on structures, functions and content of menus.
b) Discuss briefly about components of a window.
- OR**
- 4 a) Discuss about select the proper Device-Base controls.
b) Write about selection controls and presentation controls of screen.

UNIT – III

- 5 Explain about guidance and assistance, international considerations in design.
- OR**
- 6 Explain about choosing the proper colors.

UNIT – IV

- 7 a) What is conceptual model of interaction design? Explain 3 conceptual models based on activities.
b) Write about usability goals.
- OR**
- 8 a) Write about external cognition.
b) Explain any two social mechanisms used in communication and collaboration.

UNIT-V

- 9 Write notes on :
- i) Expressive interfaces ii) Four basic activities of interaction design
iii) Life cycle models in software engineering.
- OR**
- 10 a) Write about conceptual design.
b) Explain briefly evaluation paradigms and techniques.

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M.C.A. III - Year I - Semester (New) (Main & Backlog) Examination, Jan / Feb 2015

**Subject : Software Reuse Techniques
(Elective – II)**

Time : 3 Hours

Max. Marks: 80

Note: Answer one question from each unit. All questions carry equal marks.

Unit-I

- 1 (a) Write about the Reusable Analysis components. (10)
(b) Describe an Interface constraint interactions between systems with an, example. (6)
- OR**
- 2 (a) Write in detail about Expressing use case variability with suitable examples. (12)
(b) Write brief notes on Group components into component systems. (4)

Unit-II

- 3 (a) What is a design pattern? And explain its four essential elements. (8)
(b) How do we describe Design Patterns? (8)
- OR**
- 4 How design patterns solve design problems – explain in detail. (16)

Unit-III

- 5 Write about the motivation, structure, consequences, and known users of Adapter in structural patterns. (16)
- OR**
- 6 Discuss in detail about the chain of responsibility of behavioural patterns.

Unit-IV

- 7 Differentiate between observer pattern and state pattern in behavioural patterns. (16)
- OR**
- 8 Write notes of the following:
(i) Structure of master-slave design pattern (4)
(ii) Benefits of master-slave design pattern (4)
(iii) Dynamics of Whole-part design pattern (4)
(iv) Consequences of View-handler design pattern (4)

Unit-V

- 9 Write about the structure, dynamics, implementation, and benefits of layer architectural pattern. (16)
- OR**
- 10 (a) Write about the problem, and structure of pipes and filters architectural patterns. (8)
(b) Discuss the dynamics and implementation of black board architectural pattern. (8)

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M.C.A. III-Year I – Semester (Main & Backlog) Examination, January / February 2015

Subject : Soft Computing (Elective – II)**Time : 3 hours****Max. Marks : 80****Note: Answer ONE question from each unit. All questions carry equal marks.****UNIT – I**

- 1 a) Write about different neural network architecture. 10
 b) What are the applications of neural networks? 6
- OR**
- 2 a) Differentiate between single layer perceptrons and multilayer perceptrons. 8
 b) Explain back propagation algorithm. 8

UNIT – II

- 3 a) Discuss about Wang Et Al's multiple training encoding strategy. 8
 b) What is meant by sensitives of ordering of data? 8
- OR**
- 4 a) How are associative memories used to coding patterns? 8
 b) Write about different features of ART1. 8

UNIT – III

- 5 a) Give the overview of fuzzy sets. 8
 b) Obtain the relations between crisp and fuzzy sets. 8
- OR**
- 6 a) Discuss about fuzzy rule based system. 8
 b) What are the properties of crisp sets? 8

UNIT – IV

- 7 a) Illustrate mutation and cross over. 8
 b) How is Fitness function computed in Genetic algorithm? 8
- OR**
- 8 a) What are the similarities between genetic algorithm and other traditional methods? 8
 b) Write about multilevel optimization. 8

UNIT-V

- 9 Explain the process of hybridizing genetic algorithms, fuzzy logic and neural networks. 16
- OR**
- 10 a) Explain the role of genetic algorithm in FLC design. 8
 b) What are the different fuzzy constraints. 8

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M.C.A. III-Year I – Semester (Main & Backlog) Examination, January / February 2015

Subject : XML and Web Services (Elective – II)

Time : 3 hours

Max. Marks : 80

Note: Answer ONE question from each unit. All questions carry equal marks.

UNIT – I

- 1 a) Describe the role of XML in web services.
b) Explain the SOAP with neat sketch.

OR

- 2 Write about revolutions of XML.

UNIT – II

- 3 Explain the XML-name spaces and structuring with schemas.

OR

- 4 Describe about XML-transformation.

UNIT – III

- 5 Write short notes on following :
a) HTTP b) RPC

OR

- 6 Write briefly about design patterns.

UNIT – IV

- 7 Explain the J2EE architecture and services.

OR

- 8 Describe the architecture of UDDI and services.

UNIT-V

- 9 a) Write the procedure of XML encryption.
b) Write about guidelines for signing XML documents.

OR

- 10 Describe about the XKMS structure and XML digital signature.
