

MCA/Sem-V (CBSCS)/Advanced Web Technology & Dot Net/

MAY 2017

Q.P. Code :02541

[Time: Three Hours]

[Marks:80]

Please check whether you have got the right question paper.

- N.B: 1. Question.No.1 is Compulsory.
2. Answer any Four from Question No.2 to Question No.7.

Q1 Attempt any four:-

a) What is AJAX? Explain execution process of AJAX.

b) Write a note on C# Constructors.

c) Explain Page Events in ASP.NET Page.

d) Explain Semantic Web Architecture

e) Explain Assemblies with its types.

Q2 a) Explain any how will you manage Sessions in an ASP .NET application.

b) Explain the Architecture of .NET Framework.

Q3 a) Explain File handling In C# with an example.

b) Explain any four web Server Controls in ASP.NET with example.

Q4 a) What is WCF? Explain the architecture of WCF

b) What are the different types of collections in C#? Explain Generics with example.

Q5 a) What are Delegates? Explain unicast and multicast delegates In C# with an example of each.

b) What is Web Service Architecture and explain S.O.A characteristics supported by Web Services.

Q6 a) What is XAML? Explain importance of XAML in modern Presentation technologies.

b) Explain Inheritance and polymorphism In C# with an example.

Q7 a) What is ADO.NET? Explain connected and disconnected architecture.

b) What is VIEWSTATE? Write a program to illustrate use of ViewState.

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MCA / Sem-V (CBSGS) / Wireless & Mobile Technology /
May - 17

Q.P. Code : 05636

[Time: 3 Hours]

[Marks:80]

Please check whether you have got the right question paper.

- N.B:
1. Question No. 1 is compulsory.
 2. Attempt any four from the remaining six questions.
 3. Figures to the right indicate full marks.

- Q.1 A What is antenna? Write any three functions performed by an antenna? Describe the types of antennas? 10
B Explain in detail the GSM system architecture? Distinguish between user-related and system related identifiers? 10
- Q.2 A Discuss the IEEE 802.11 protocol architecture in detail. 08
B What is voice over IP? What are the advantages and the disadvantages of this approach? 07
- Q.3 A Explain packet flow if two mobile nodes communicate and both are in foreign networks. What additional routes do packets take if reverse tunneling is required? 08
B Explain the GSM SMS architecture with diagram? Describe the types of short messages. 07
- Q.4 A What are the convolution codes? Draw an encoder and state diagram with $n=2$ $k=1$ and $k=3$ encode the bit sequence 1011001 using (2,1,3) encoder. 08
B What is Multiplexing? Compare Time Division Multiplexing and Code Division Multiplexing. 07
- Q.5 A Describe WAP programming model. Explain the role of WAP gateway and WAP user agent profile. 08
B How dynamic source routing (DSR) handles routing. What is the motivation behind DSR compared to other routing algorithms from fixed networks? 07
- Q.6 A Compare the different types of transmission errors that can occur in wireless networks. How and why does I-TCP isolate problems on the wireless link? What are the main drawbacks of this solution? 08
B What is the relationship between master and slave in a piconet? Explain the different states of Bluetooth device. 07
- Q.7 Write short notes on any 3 15
1. Generation of cellular networks
2. Handoff
3. Snooping TCP
4. Fading

Q.P. Code :02868

[Time: Three Hours]

[Marks:80]

Please check whether you have got the right question paper.

- N.B:
1. Question.No.1 is compulsory.
 2. Attempt any four from the remaining six questions.
 3. Use of calculator is allowed.

- Q.1 A) With a flowchart, explain the operation of Genetic Algorithm. Also explain various types of crossover and mutation techniques. 10
- B) Consider two given fuzzy sets 10
- $A = \{1/2 + 0.3/4 + 0.5/6 + 0.2/8\}$
 $B = \{0.5/2 + 0.4/4 + 0.1/6 + 1/8\}$
- Perform union, intersection, difference and complement over fuzzy set A and B. Also find the Lambda-cut set for the same for Lambda=0.5.
- Q.2 A) Explain in brief any 2 fuzzy decision making techniques. 08
- B) Draw and explain Perceptron network. Explain Perceptron Learning rule. 07
- Q.3 A) Explain in brief fuzzy reasoning. 08
- B) Explain in detail different types of neuron connection architecture. 07
- Q.4 A) Differentiate between the following 08
1. Genetic Algorithm and Traditional algorithm
 2. Biological Neural Network and Artificial Neural Network
- B) Consider two fuzzy sets R and S 07
- | | | | | | | |
|--------|-----|-----|--------|-----|-----|-----|
| | Y1 | Y2 | | Z1 | Z2 | Z3 |
| R = X1 | 0.6 | 0.3 | S = Y1 | 1 | 0.5 | 0.3 |
| X2 | 0.2 | 0.9 | Y2 | 0.8 | 0.4 | 0.7 |
- Find Max-min composition and Max-product composition.
- Q.5 A) Explain Associative memory network with its types. 08
- B) Explain working principle of Fuzzy Inference system (FIS) with its types. 07
- Q.6 A) Explain architecture of Adaline with its training algorithm. 08
- B) Explain in detail the belief and plausibility measures. 07
- Q.7 Write Short Notes on any three :- 15
- a) travelling salesman problem using GA approach
 - b) GA v/s Traditional Algorithm
 - c) Extension principle
 - d) Set of operations performed on Interval.

(3 hours)

Total Marks:80

- N.B. 1. Question No. 1 is compulsory.
2. Answer any FOUR from the remaining SIX questions.
3. Figures to the right indicate full marks.

1 (a). What is false sharing? When is it likely to occur? Can it be completely eliminated? Give relative advantages & disadvantages of using small & large block sizes. (10)

(b). Give a mechanism for consistent ordering of messages in following cases :-

- i. One – to – Many Communication
- ii. Many – to – One Communication
- iii. Many – to – many Communication

(10)

2 (a). Discuss SaaS, PaaS and IaaS along with their relative benefits and challenges. (8)

(b). Compare and contrast Grid Computing with Cloud Computing. (7)

3 (a). Differentiate between process and thread concepts. Give suitable examples for each one of the following:

- i. A process using multiple threads that are organized in a dispatcher – worker model.
- ii. A process using multiple threads in a team model.
- iii. A process using multiple threads in a pipelined model.

(8)

(b). What is a service? What is Service-oriented Architecture? Discuss different elements of Service-oriented Architecture. (7)

4 (a). What is Callback RPC Facility? Give an example of an application where this facility may be useful. (5)

(b). Describe Blocking and Non – Blocking types of RPC. Give relative advantages and disadvantages. (5)

(c). What is an Idempotent Operation? Give three examples with explanation. (5)

5 (a). Explain various data locating strategies used in DSM system that uses Non-replicated migration blocks (NRMB) strategy. (8)

(b). Explain stateless server and stateful server concepts. Explain advantages of stateless server paradigm in crash recovery. (7)

6. Differentiate between (ANY THREE) (3 * 5)

- a) Monolithic and Microkernel
- b) Workstation – Server Model and Processor – Pool Model
- c) Public Cloud and Private Cloud
- d) Full File caching and Block caching Models for Caching Mechanism.

7. Write Short Notes (ANY THREE) (3 * 5)

- a) Multidatagram Messages
- b) Hadoop/MapReduce
- c) Real Time Distributed System
- d) Composing Services for SOA

Q.P.Code:18005

(3 Hours)

Total Marks: 80

- N.B.** (1) Question No. 1 is compulsory.
(2) Attempt any four from the remaining six questions.
(3) Illustrate answers with neat sketches wherever required.
(4) Answers to questions should be grouped and written together.
- Q. 1** (a) Explain SQL Injection attack and its prevention in detail 10
(b) List and explain Intellectual Property in the Cyberspace 10
- Q.2** (a) Explain various key challenges with respect to Cyber Security 8
(b) Describe the various attacks possible on mobile/cell phones. 7
- Q. 3** (a) Describe types and techniques of credit card fraud 8
(b) Explain Phishing techniques in detail. 7
- Q. 4** (a) What are types of ID Theft attacks? How to protect being victim of ID Theft? 8
(b) Explain the types of DOS attack in detail. 7
- Q. 5** (a) Discuss how criminals plan the attack with relevant example. 8
(b) Explain Second Schedule of the Indian ITA 2000. 7
- Q. 6** (a) Describe any four key practices in organizations end-point security program. 8
(b) Describe Incident Response Life Cycle in detail. 7
- Q. 7** Write short notes on (any 3):- 15
(a) Positive Areas of ITA 2000
(b) Keyloggers
(c) Electronic Signatures in Global and National Commerce Act (E-sign)
(d) Possible types of attack against 3G mobile network

Q.P. Code : 01118

[Time: Three Hours]

[Marks:80]

Please check whether you have got the right question paper.

- N.B: 1. Question.No.1 is compulsory.
2. Attempt any four Question between Question No.2 to 7

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|----|--|----|
| 1. | (a) Explain important considerations involved in using digital video in Multimedia? | 10 |
| | (b) Explain the various stages of developing a multimedia project. | 10 |
| 2. | (a) Explain types of graphics. Differentiate between vector image and bitmap image. | 8 |
| | (b) What is CBT? Explain the uses of multimedia in CBT? | 7 |
| 3. | (a) Explain principles of animation and its various techniques in detail. | 8 |
| | (b) Discuss the important role of Planning and Costing in Multimedia? | 7 |
| 4. | (a) Explain in detail the use of Multimedia on WEB? | 8 |
| | (b) Discuss different types of Multimedia Structures. How they are organized? | 7 |
| 5. | (a) List and describe the three different types of authoring systems and discuss the advantages of each one? | 8 |
| | (b) Discuss the types of audio file formats used in multimedia with their limitations. | 7 |
| 6. | Write Short Notes(Any Three) | 15 |
| | 1. ALPHA OR BETA TESTING | |
| | 2. Hot spots, Hyperlink and buttons | |
| | 3. Proto type Development | |
| | 4. Digital sound Sampling | |
| | 5. HDTV | |
| 7. | (a) Explain MPEG audio and video compression | 8 |
| | (b) Explain Analog display standards and Digital display standards. | 7 |