MCA / SEM V (CBSGS) / Advanced Web Technologies / MAY 2018
Dot Net

Q.P. Code :02542

[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.

Q.1 Attempt any **four:-** 20

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

b) Explain Proprieties in C#.

c) What is Page event? Explain in detail.

d) Explain WWW Architecture.

e) Explain Assemblies with its types.

Q.2 a) Explain Session state in ASP.NET with IN-Process and Out-of-Process state server. 08

b) Explain the Architecture of .NET Frameworks. 07

Q.3 a) Explain File handling in C# with an example. 08

b) Explain validation controls in ASP.NET with example. 07

Q.4 a) Explain PostBack and CrossPage Posting in ASP.NET 08

b) What are the different types of collection in C#? Explain Generics with example. 07

Q.5 a) Explain PostBack and CrossPage Posting in ASP.NET 08

b) What is Web Service Architecture and explain S.O.A. characteristics supported by Web Services. 07

Q.6 a) What is XAML? Explain importance of XAML in modern Presentation technologies. 08

b) Explain Inheritance and polymorphism in C# with an example. 07

Q.7 a) What is ADO.NET? Explain connected and disconnected architecture. 08

b) Explain Cookieless Session IDs. Write a program based on Cookies for maintaining state. 07

CA. | sem-II (CBSGS) | Wireless & Mobile Technology |

May-2018.

Q.P. Code :05634

[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 spread spectrum? Explain the frequency hopping spread spectrum. **10**
B Explain the GPRS architecture in detail. **10**

Q.2 A Explain the indirect TCP and snooping TCP with its advantages and disadvantages. **08**
B Explain the IEEE 802.11 system architecture with diagram. Discuss the services provided by IEEE 802.11. **07**

Q.3 A Explain how the transport layer security is achieved in Bluetooth. **08**
B What is a convolution code? Draw a shift register and state diagram for the encoder (2,1,3). **07**

Q.4 A Discuss how the mobile origination and termination calls handled in GSM. **08**
B Discuss about the different hand over procedures of GSM in detail. **07**

Q.5 A List the entities of mobile IP and describe data transfer from a mobile node to a fixed node and vice versa. Why and where is encapsulation needed? **08**
B Discuss the following impairments in wireless environments. **07**
1) Atmospheric Absorption 2) Free Space Loss 3) Fading

Q.6 A Discuss the different state of Bluetooth devices in brief. **08**
B Discuss IEEE 802.16 architecture and its services. **07**

Q.7 A Write short notes **any 3** of the following **15**
1 FDMA
2 WML script
3 Far and near terminal
4 Mobile Number Portability

MCA/SEM V (CBSGS)/Soft Computing/MAY2018 **Q.P. Code: 22702**

(3 Hours) **[Total Marks: 80]**

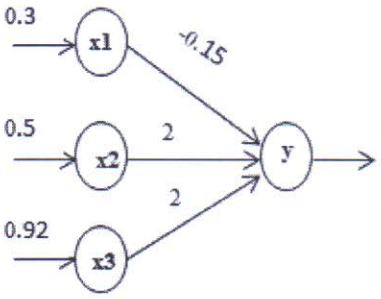
NOTE:

I. Question **No. 1** is Compulsory
II. Attempt any **FOUR** question from **2 to 7**
III. **Group Question** must be **answered together**
IV. Use of calculator is allowed.

1 **A** a. Differentiate between operations of Crisp sets and Fuzzy sets.. **05**

b. What are the various CrossOver techniques? **05**

B a. For the given network calculate net input to the output neuron: **05**



b. Consider the two fuzzy sets **05**

$$\underset{\sim}{A}=\left\{\frac{0.35}{0.7}+\frac{0.625}{0.725}+\frac{0.256}{0.75}\right\}$$

$$\underset{\sim}{B}=\left\{\frac{0.95}{0.7}+\frac{0.815}{0.725}+\frac{0.67}{0.75}\right\}$$

Using Zadeh's notation, express the fuzzy sets as $\lambda - cut$set for λ=0.8 for the following operations: $\overline{\underset{\sim}{A}\cup\underset{\sim}{B}}$, $\overline{\underset{\sim}{A}\cap\underset{\sim}{B}}$

2 **A** For the following fuzzy sets **07**

$$\underset{\sim}{P}=\left\{\frac{0.1}{2}+\frac{0.3}{4}+\frac{0.7}{6}+\frac{0.4}{8}+\frac{0.2}{10}\right\}$$

$$\underset{\sim}{Q}=\left\{\frac{0.1}{0.1}+\frac{0.3}{0.2}+\frac{0.3}{0.3}+\frac{0.4}{0.4}+\frac{0.5}{0.5}+\frac{0.2}{0.6}\right\}$$

$$\underset{\sim}{T}=\left\{\frac{0.1}{0}+\frac{0.7}{0.5}+\frac{0.3}{1}\right\}$$

The following operations performed over the fuzzy sets

$$\underset{\sim}{R}=\underset{\sim}{P}\times\underset{\sim}{Q}$$

$$\underset{\sim}{S}=\underset{\sim}{Q}\times\underset{\sim}{T}$$

$$\underset{\sim}{M}=\underset{\sim}{R}\circ\underset{\sim}{S}$$

$$\underset{\sim}{M}=\underset{\sim}{R}\bullet\underset{\sim}{S}$$

B What is a difference between Genetic algorithm and Traditional algorithm? Explain selection operation in Genetic algorithm. **08**

3 **A** What is membership function? What are the different methods of membership value assignment? Explain any two methods in brief. 07

B Implement AND function using perceptron networks for bipolar inputs and targets. The truth table is : 08

x1	x2	t
1	1	1
1	-1	-1
-1	1	-1
-1	-1	-1

4 **A** Explain different types of Fuzzy Decision Making. 07

B Define neural net architecture and gives its classification. 08

5 **A** Compare Mamdani and Takagi-Sugeno Fuzzy Inference System. 07

B The two Fuzzy vectors of length 6 are defined as 08

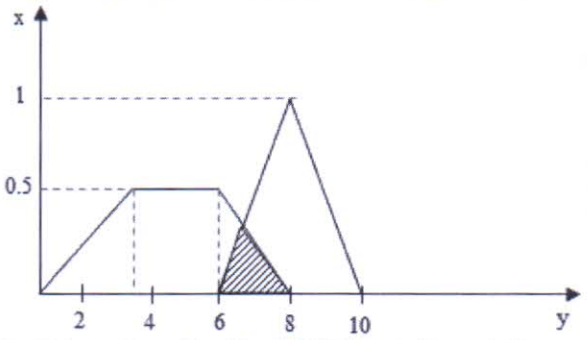
$\underset{\sim}{A}$ = (0.5, 0.7, 0.2, 0.3, 1, 0.8)

$\underset{\sim}{B}$ =(0, 0.2, 0.1, 0.4, 0.6, 1.0)

Find the inner product and outer product of two vectors.

6 **A** Discuss the architecture of Fuzzy Logic Controller. 07

B For given A_1, A_2 illustrate center of largest area defuzzification method: 08



7 **A** Write short note on (Any three): 15

a. Fuzzy Expert System
b. Fuzzy Measures
c. Optimization of Traveling Salesman Problem using GA approach
d. Extension principle

****

MCA/Sem-V (CBSGS)/ Distributed Computing & Cloud Computing /May-2018

Q.P. Code: 22620

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 are different types of memory consistencies? What is the difference between sequential and release consistency. Which is preferred and why? **10**

b. Explain various distributed computing models with their difference. **10**

2 a. What is the difference between a procedural call and remote procedural call? Explain the RPC model with diagram. **8**

b. Explain Election Algorithm in detail with diagram. **7**

3 a. Why process migration is important in distributed system? Explain the mechanism of migration with the help of diagram. **8**

b. What is Cloud Computing? Discuss the characteristics of Cloud Computing. **7**

4.a. What is Stub? Explain how the use of Stubs helps in making an RPC mechanism transparent. **8**

b. What do you mean by absolute ordering, consistent ordering and casual ordering; explain with the help of diagram. **7**

5 a. What are the main difference between the Load balancing and Load sharing approaches in process scheduling in Distributed system? **8**

b. In your opinion where (in server memory, in client disk or in client memory) should a cache for caching data be located in the following types of distributed file system? **7**

(i) One that supports the diskless work station.

(ii) One in which the ratio of number of client to the number of file server is very large.

6.a. Explain 'Happened Before' relation with the help of diagram. **8**

b Describe various process-addressing mechanisms. **7**

7. Write a short note on any Three of the following :- **15**

i. Grid computing

ii. Mutable and Immutable File

iii. Multi datagram messaging

iv. Threads

v. Remote Method Invocation(RMI)

MCA | CBSGS | SEM-IV / Multimedia Tech / MAY-2018

Q.P. CODE: 35612

(Time: 3 Hours) **Total marks: 80**

N.B (1) Question NO.1 is compulsory.
(2) Attempt any **four** from remaining **six** questions.
(3) Illustrate answers with neat sketches wherever required.
(4) Answers to question should be grouped and written together.

Q1 **(a)** What is Multimedia? Discuss in detail Applications of Multimedia? **10**

(b) A video clip is captured with a resolution of 320 x 240, and using a colour depth of 16 bits. The frame rate is 25 fps, and the clip has duration of 29 seconds. Calculate the file size of the video clip. **10**

Q2 **(a)** Explain in detail various principles of Animation? **8**

(b) Explain in detail Bitmap image and vector Drawing image? **7**

Q3 **(a)** Explain television standard- NTSC, PAL, SECAM, HDTV? **8**

(b) Explain the roles and responsibilities of all the Multimedia team members? **7**

Q4 **(a)** Explain Multimedia authoring tools and its different types in detail? **8**

(b) Discuss the importance of text and ways text can be leveraged in multimedia presentations? **7**

Q5 **(a)** Explain the process of making Multimedia? **8**
(b) Construct a huffman code tree for the five letters A B C D E which are listed in decreasing order of frequency of use **7**

Symbol	A	B	C	D	E
Frequency	24	12	10	8	8

Calculate the total number of bits required to transfer these alphabets.

Q6 **(a)** Discuss the important role of planning and costing in Multimedia? **8**
(b) What is compression? Explain JPEG compression process in Detail? **7**

Q7 Write short notes on any three. **15**
(a) MIDI
(b) Animation Techniques
(c) Entropy encoding Run length
(d) CBT
(e) Multimedia development life cycle

2751D78227C359606D4F367387B80D6C