Sem-V (CBSGS) / Adv. Web Technology & Dot Net

May' 16

**QP Code : 26732**

**(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 and code snippet wherever required.
(4) Answers to questions should be **grouped** and written **together.**

| | | | |
|---|---|---|---|
| Q.1 | (a) | Explain the role of client and server side state management in ASP.NET. | 10 |
| | (b) | What is ADO.NET? Explain various steps involved to connect a database using C# with an example. | 10 |
| Q.2 | (a) | What is WPF? Describe the WPF class hierarchy. | 08 |
| | (b) | Write a C# program to overload '+' operator. | 07 |
| Q. 3 | (a) | What is jQuery? Differentiate between jQuery and JavaScript. | 08 |
| | (b) | What is Exception Handling? Explain various Exception Handling Keywords in C#. | 07 |
| Q. 4 | (a) | What is Constructor? Explain various types of Constructors in C# with suitable example. | 08 |
| | (b) | What is AJAX? Explain Timer Control and UpdatePanel Control with suitable example. | 07 |
| Q. 5 | (a) | What is Silverlight? Explain various Silverlight Controls in detail. | 08 |
| | (b) | Create a student registration form with appropriate fields. Validate the data using Validation controls (Make your own assumptions). | 07 |
| Q. 6 | (a) | Explain various ASP.NET coding modules in detail. | 08 |
| | (b) | What is Web Service? Explain UDDI, SOAP, and WSDL with respect to web services. | 07 |
| Q. 7 | | Write the short notes on any three | 15 |
| | (a) | Global Assembly Cache | |
| | (b) | Difference between Java and .Net | |
| | (c) | Use of global.asax file | |
| | (d) | Search Engine Optimization | |
| | (e) | SOAP. | |

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/Sem-V (CBSGS) / Wireless & Mobile Technology /

May-2016

**QP Code : 26737**

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

**N.B:** (1) Question **No.1** is compulsory.
(2) Answer any **four** from remaining **six** questions.
(3) Assumptions should be made whenever required and should be clearly stated
(4) Answers to sub questions should be answered together
(5) Illustrate answers with diagrams whenever necessary

| | | | |
|---|---|---|---|
| Q.1 | (a) | Explain GSM architecture in detail. | 10 |
| | (b) | What is frequency hopping spread spectrum? List the benefits of using it. | 10 |
| Q.2 | (a) | What are piconet and scatternet? Explain the various protocols supported by Bluetooth protocol architecture. | 7 |
| | (b) | Explain the architecture and components of GPRS. | 8 |
| Q.3 | (a) | Discuss WAP protocol architecture in detail. | 7 |
| | (b) | Explain the concept behind Dynamic Source Routing (DSR). How it is different from Destination Sequenced Distance Vector(DSDV)? | 8 |
| Q.4 | (a) | What are Convolution codes? Draw an encoder with value k=1, n=2, K=3. Give example of its usage. | 7 |
| | (b) | Explain Indirect TCP and Snooping TCP. | 8 |
| Q.5 | (a) | Explain the operation of Mobile IP. | 7 |
| | (b) | Explain the generation of cellular networks. | 8 |
| Q.6 | (a) | Describe WAP Programming Model. | 7 |
| | (b) | Describe IEEE 802.11 Architecture. | 8 |
| Q.7 | | Write short notes on **(Any three)**<br>(a) WML and WML Script<br>(b) Antennas<br>(c) Fading<br>(d) WIMAX | 15 |

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**YQ-Con. 7246-16.**

CA/ SEM-V(CBSGS)/ Soft Computing / May-2016

**QP Code : 26740**

**[Total Marks : 80**

**(3 Hours)**

**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 Attempt the following
A) What is fuzzification? Explain in brief intuition method. 5
B) Explain in brief reinforcement learning. 5
C) Write a short note on mutation operator in GA. 5
D) Differentiate between Hard Computing and Soft Computing. 5

Q.2 A) What is defuzzification? What are the different methods of defuzzification process? 8
B) Explain architecture of Adaline with its training algorithm. 7

Q.3 A) Using Zadeh's notation, determine the λ-cut sets for the given fuzzy sets: 8

$$A = \left\{\frac{0}{x1} + \frac{0.1}{x2} + \frac{0.2}{x3} + \frac{0.3}{x4} + \frac{0.4}{x5} + \frac{0.5}{x6} + \frac{0.6}{x7}\right\}$$

$$B = \left\{\frac{1}{x1} + \frac{0.9}{x2} + \frac{0.8}{x3} + \frac{0.7}{x4} + \frac{0.6}{x5} + \frac{0.5}{x6} + \frac{0.4}{x7}\right\}$$

Express the following for λ=0.4

1. $\overline{A}$ 2. $A \cup B$ 3. A ∩ B 4. $A \cup \overline{A}$ 5. $\overline{A} \cap \overline{B}$ 6. $\overline{A} \cup \overline{B}$ 7. $\overline{A \cap B}$ 8. $\overline{A \cup B}$

B) Explain in brief fuzzy approximate reasoning. 7

Q.4 A) Explain in brief individual and Multi-person fuzzy decision making techniques with the help of suitable example. 8
B) Consider two fuzzy sets R and S 7

| R = | | Y1 | Y2 |
|---|---|---|---|
| | X1 | 0.4 | 0.6 |
| | X2 | 0.3 | 0.5 |

| S= | | Z1 | Z2 | Z3 |
|---|---|---|---|---|
| | Y1 | 1 | 0.4 | 0.3 |
| | Y2 | 0.7 | 0.2 | 0.4 |

Find Max-min composition T = R ∘ S and Max-product composition U = R . S

Q.5 A) What is Fuzzy Inference system (FIS)? Explain it along with its types. 8
B) What is the difference between Genetic algorithm and traditional algorithm? Explain encoding techniques in GA. 7

Q.6 A) Using inference method, find the membership values for each of the triangular shapes ( I, R, E, IR, T) for each of the following (all in degrees): 8
i) 20 , 40, 120
ii) 45 , 45 , 90
B) Explain in brief architecture of Fuzzy Logic Controller (FLC). 7

Q.7 Write a short note on **any three** 15
i) Associative Memory Networks
ii) Crossover operator in GA
iii) Travelling Salesman Problem
iv) Operations on Fuzzy Relations
v) Special Networks

**YQ-Con. 7249-16.**

-V-CCBSAS) / Distributed Computing & Cloud Computing

May -2016.

**QP Code : 26741**

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.

**Q1a** Attempt the following (any five) 10

i What are the issues in designing distributed systems?

i Explain Mutual Exclusion.

iii Name the various consistency models in distributed shared memory (DSM).

iv What is Virtualization?

v Name the benefits of service oriented computing.

vi Write a note on False sharing .

b What is cloud computing? What are the benefits of cloud models? 10

**Q2a** What is clock synchronization? Explain with a diagram, how logical clocks are implemented with counters and physical clocks. 08

b Discuss implementation of DSM systems . 07

**Q3a** Discuss Implementation of RPC mechanism. 08

b What are different address space transfer mechanism used in process transfer? 07

**Q4** a Discuss various techniques of DFS implementation. 08

b Explain Load Balancing Model. 07

**Q5a** What is ordered message delivery? Compare the various ordering semantics for message passing. 08

b Discuss IPC in MACH. 07

**Q6a** What are the various consistency models in distributed shared memory (DSM)? 08

Discuss any one in detail.

b What is software oriented Architecture (SOA)? 07

Q7 Answer any three:

a Fault tolerance with respect to distributed systems 15

b Map reduce

c Grid computing versus cloud computing

d Discuss software as a service

e Group communication