

B.C.A. SEM-V (2014 Course) CBCS : WINTER - 2018
SUBJECT: INTRODUCTION TO THE INTERNET TECHNOLOGIES

Day: Wednesday
Date: 14/11/2018

W-2018-1840

Time: 02.00 PM TO 05.00 PM
Max Marks: 100

N.B.

- 1) Answer **ANY FOUR** questions from Section – I and **ANY TWO** questions from Section. – II.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Both the sections should be written in **SEPARATE** answer books.

SECTION – I

- Q.1** What is internet? Explain the difference between internet and intranet. (15)
- Q.2** What is HTML? Describe the structure of HTML program. Also give any three advantages of HTML. (15)
- Q.3** Write HTML code to create the following structure:- (15)

Sr. No.	Name	Marks in Subjects (Out of 20)		
		Marathi	English	German
1	x	18	17	15
2	y	13	14	12
3	z	19	16	11

- Q.4** What are the two types of web storage in HTML? Explain in detail. (15)
- Q.5** a) What is CSS? List the advantages of using CSS. (15)
b) Design an in line CSS.
- Q.6** What is client server architecture? Explain three tier architecture. (15)
- Q.7** Write short notes on **ANY THREE** of the following. (15)
a) Advantages of JavaScript
b) Built in functions in JavaScript
c) JDOM
d) Cookies

SECTION – II

- Q.8** Write a Java Script to find entered number is prime or not? (20)
- Q.9** Create a form having text boxes, radio buttons and check boxes on clicking submit button the entire form should be cleared? (20)
- Q.10** Design HTML form which accepts mathematical expression in one textbox and display result in another textbox after clicking on a button. (20)

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B.C.A. SEM-V (2014 Course) CBCS : WINTER - 2018
SUBJECT: OBJECT ORIENTED ANALYSIS & DESIGN

Day: Friday
Date: 16/11/2018

W-2018-1841

Time: 02.00 PM TO 05.00 PM
Max. Marks: 100

N.B.:

- 1) Attempt any **FOUR** questions from Section –I and any **TWO** questions from Section –II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION-I

- Q.1** Describe the following concepts in brief: (15)
a) Abstraction d) Encapsulation
b) Object e) Aggregation
c) Interface
- Q.2** What do you know about Rational Unified Process (RUP) ? Describe stages in it. (15)
- Q.3** Explain the role of class diagram in domain modeling. (15)
- Q.4** Illustrate the role of state chart diagram in software modelling. (15)
- Q.5** Illustrate use of component and deployment diagram. (15)
- Q.6** What is object Interaction? List and briefly describe diagrams used in object interaction. (15)
- Q.7** Write short notes on any **THREE** of the following: (15)
a) Swimlane
b) CRC Card
c) Package diagram
d) Polymorphism

SECTION-II

- Q.8** A Retail store wants to go for online portal, where customer can browse catalog and select items to buy and add into cart. If required customer can review cart and remove items from it or add new items in it. Identify and draw Use Case diagram for same. (20)
- Q.9** An Institute is interested to go for online Library Management System. Identify classes in it and draw Class diagram for same. (20)
- Q.10** A software company is interested to recruit new employees. Write a suitable process for it and draw Activity diagram for same. (20)

B.C.A. SEM-V (2014 Course) CBCS : WINTER - 2018

SUBJECT : C # PROGRAMMING

Day : Monday
Date : 19/11/2018

W-2018-1842

Time: 02.00 PM TO 05.00 PM
Max. Marks: 100

N. B.

- 1) Attempt **ANY FOUR** questions from Section – **I** and **ANY TWO** questions from Section – **II**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Answers to both the sections should be written in **SEPARATE** answer books.
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SECTION – I

- Q. 1** Explain with diagram Dot Net Framework architecture. (15)
- Q. 2** What is constructor? Explain default constructor. (15)
- Q. 3** Write a C# program to demonstrate features of C# using command line arguments. (15)
- Q. 4** What is dynamic polymorphism? Write a C# program to demonstrate the use of operator overloading. (15)
- Q. 5** What is partial class? Write a program to demonstrate use of partial class and partial methods. (15)
- Q. 6** State and explain various operators in C#. Write a C# program to display the greatest number among three numbers using relational operator. (15)
- Q. 7** Write short note on **ANY THREE** of the following: (15)
- a) Foreach loop
 - b) Sealed class
 - c) C# Events
 - d) Exception Handling

SECTION - II

- Q. 8** a) Explain concept of Jagged Array with example. (10)
- b) Write a C # program to sort the given array elements. (10)
- Q. 9** What is delegate? Explain the concept of multicast delegate with example. (20)
- Q.10** What is string? State and explain C# string manipulation methods with example. (20)

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Day : Thursday
Date : 22/11/2018

W-2018-1843

Time : 02.00 PM TO 05.00 PM
Max. Marks : 100

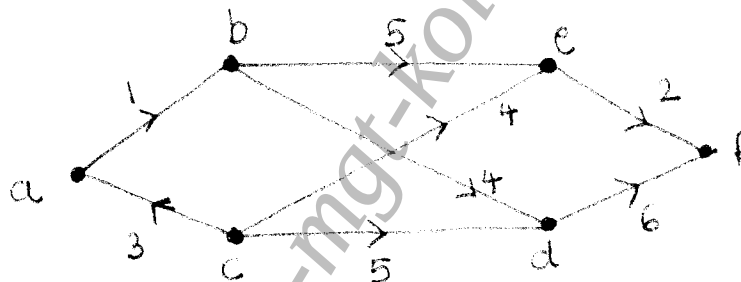
N. B. :

- 1) Attempt **ANY FOUR** questions from section – I and **ANY TWO** questions from section – II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.
- 4) Use of non-programmable calculator is **ALLOWED**.

SECTION – I

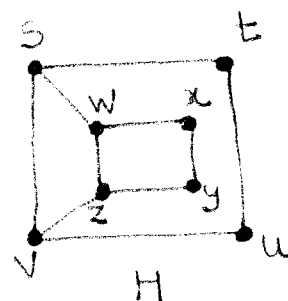
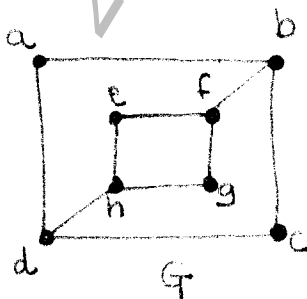
- Q. 1 An unbiased die is thrown. Find the probability of getting a score that is: (15)
- a) Less than 5 but not less than 2.
 - b) A multiple of 3 or 5.
 - c) More than 2

- Q. 2 Apply Dijkstra's algorithm and determine the shortest distance from vertex 'a' to each of the other vertices in the directed graph: (15)



- Q. 3 Find the number of distinct permutations that can be formed from all the letters of given words: (15)
- i) COMPUTER ii) STATISTICS iii) MADAM

- Q. 4 Define Isomorphism. Determine whether the graphs G and H are Isomorphic. (15)



- Q. 5 The mean of a Binomial Distribution is 20 and the Standard Deviation is 4. (15)
- Calculate:
- a) n , p and q
 - b) $P(X \leq 5)$
 - c) $P(X > 2)$

P. T. O.

- Q. 6** A bag contains six white marbles and four red marbles. Find the number of ways of drawing six marbles from the bag so that: (15)
- a) They can be of any color.
 - b) There must be equal number of white marbles and red marbles.
 - c) There must be at least three white marbles.

- Q. 7** Write short notes on **ANY THREE** of the following: (15)
- a) Travelling salesman problem
 - b) Breadth first Algorithm
 - c) Coloring of graphs
 - d) Applications of Pigeonhole principle

SECTION – II

- Q. 8** Two unbiased dice are thrown. Find the probability that: (20)
- a) The sum of the scores is a prime number or a perfect square.
 - b) The same score on the first die as on the second.
 - c) The score on the second die is greater than the score on the first.
 - d) The product on upper most faces is an even number.
- Q. 9** Let $A = \{1, 2, 3, 4\}$ and $R = \{(1, 2) (2, 3) (3, 4)\}$ be the relation of A. (20)
Find the transitive closure of R using Warshall's Algorithm.
- Q. 10** An insurance company insured 1500 scooter drivers, 3500 car drivers and 5000 truck drivers. The probability of an accident is 0.05, 0.02 and 0.10 respectively in case of scooter, car and truck drivers. One of the insured person meets an accident. What is the probability that he is a car driver? (20)

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