

B.C.A. SEM–V (2014 Course) CBCS : SUMMER - 2019
SUBJECT: INTRODUCTION TO THE INTERNET TECHNOLOGIES

Day: Monday
Date: 15/04/2019

Time: 02.00 PM TO 05.00 PM
Max Marks: 100

S-2019-2075

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 **SAME** answer books.
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SECTION – I

- Q.1** What is client server architecture? Explain three tier architecture. (15)
- Q.2** What is CSS? Explain external CSS with example. (15)
- Q.3** Explain the form object with example. (15)
- Q.4** Explain looping statements form JavaScript. (15)
- Q.5** What is cookie? Explain cookie with example. (15)
- Q.6** Explain Image and frame tag with its attributes. (15)
- Q.7** Write short notes on **ANY THREE** of the following. (15)
- a) Need of IP addressing
 - b) Table Tag
 - c) Dialog Boxes
 - d) JDOM

SECTION – II

- Q.8** Writ a program using Java Script to display Date and time in Message Box. (20)
- Q.9** Create HTMLform that has a number of textboxes. When form runs, fill the text boxes with data. Write java script code that verifies that all the textboxes have been filled. If a textbox has been left empty, pop up an alert indicating which textbox is left empty. (20)
- Q.10** Write JavaScript code to find the Factorial of a given number. (20)

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B.C.A. SEM-V (2014 Course) CBCS : SUMMER - 2019
SUBJECT : OBJECT ORIENTED ANALYSIS & DESIGN

Day : Tuesday
Date : 30/04/2019

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

S-2019-2076

N.B.:

- 1) Attempt **ANY FOUR** questions from Section – I. Each question carries **15** marks.
- 2) Attempt **ANY TWO** questions from Section – II. Each question carries **20** marks.
- 3) Answers to both the sections should be written in **SAME** answer books.

SECTION – I

- Q.1** What is RUP? Describe phases of RUP and purpose of each phase.
- Q.2** What is use case diagram? Explain generalization and extends relationship in use case diagram.
- Q.3** What are System Sequence Diagrams? What is the relationship between SSDs and Use cases? Explain with an example.
- Q.4** Discuss the role of GRASP in assigning responsibility to classes and objects in OOAD.
- Q.5** What is activity diagram? Explain the features of activity diagram with example.
- Q.6** a) Explain CRC cards with example.
b) Differentiate between aggregation and composition with example.
- Q.7** Write short notes on **ANY THREE** of the following:
a) Polymorphism
b) Use case realization
c) Attributes and foreign keys
d) Qualifiers
e) Events in state diagram
f) Package diagram

SECTION – II

- Q.8** Draw sequence diagram for withdraw and deposit of cash for ATM system.
- Q.9** Draw use case diagram for Online Shopping System.
- Q.10** Draw class diagram for College Management System.

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B.C.A. SEM-V (2014 Course) CBCS : SUMMER - 2019
SUBJECT : C# PROGRAMMING

Day : Monday
Date : 22/04/2019

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

S-2019-2077

N.B.

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

SECTION – I

- Q.1** “C # is very powerful language in terms of security and other features”. [15]
Justify.
- Q.2** Discuss the importance of following keywords: [15]
a) ‘var’ b) ‘this’ c) ‘ref’
- Q.3** Explain in detail looping structures mentioned below with suitable example: [15]
a) do.....while ()
b) while ()
c) for ()
- Q.4** Illustrate concept of interface with suitable example. [15]
- Q.5** Differentiate the following: [15]
a) Value Type and Reference Type
b) Abstract Class and Sealed Class
c) Method Overloading and Method Overriding
- Q.6** How generic classes do helps in coding? Illustrate with suitable example. [15]
- Q.7** Write short notes on **ANY THREE** of the following: [15]
a) Delegates
b) Abstract class
c) Constructor and their types
d) Indexers

SECTION – II

- Q.8** a) Write C# program to generate divide by zero exception and handle with try and catch block. [10]
b) Write C# program to demonstrate jagged array (make necessary assumption). [10]
- Q.9** Write a C# program for ‘BCABank’ wherein ‘BCABankTran’ is a class, contains methods withdrawal(), deposit(), balance_enquiry() to operate account types such as saving and current with the help of method overloading. [20]
- Q.10** a) Write C# program to demonstrate the implementation of Inheritance using virtual function. [10]
b) Write C# program to find prime numbers between 10.....100. [10]
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B.C.A. SEM-V (2014 Course) CBCS : SUMMER - 2019
SUBJECT : COMBINATORICS & GRAPH THEORY

Day : Wednesday
 Date : 24/04/2019

S-2019-2078

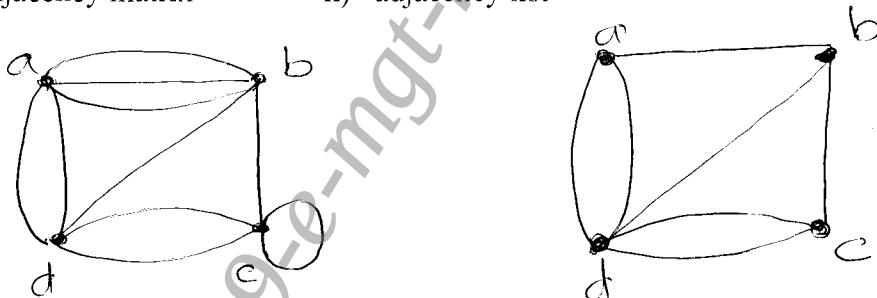
Time : 02.00 PM TO 05.00 PM
 Max. Marks : 100

N.B.:

- 1) Attempt **ANY FOUR** questions from Section – I. Each question carries **15** marks.
- 2) Attempt **ANY TWO** questions from Section – II. Each question carries **20** marks.
- 3) Answers to both the sections should be written in SAME answer books.

SECTION – I

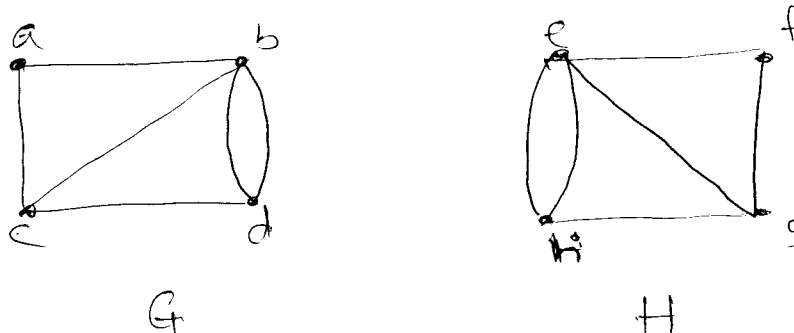
- Q.1** Three cards are drawn from a well shuffled pack of 52 playing cards. What is the probability that:
- i) all the three cards drawn are red cards?
 - ii) all the three cards drawn bear number?
 - iii) all the three cards drawn belong to same suit?
- Q.2** How many permutations of the letter ABCDEFG contain
- i) the string BCD?
 - ii) the string BA and GF?
 - iii) the strings CBA and BED?
- Q.3** Represent the following graphs by using :
- i) adjacency matrix
 - ii) adjacency list



- Q.4** Following table shows p.d.f. of discrete random variable X. Find:
- i) $E(X)$
 - ii) $V(X)$
 - iii) Standard Deviation.

$X = x$	1	2	3	4	5	6
$P(X = x)$	0.14	0.18	0.24	0.20	0.18	0.08

- Q.5** Explain : i) Utilities problem ii) Traveling salesman problem.
- Q.6** Check whether the following graphs are isomorphic :



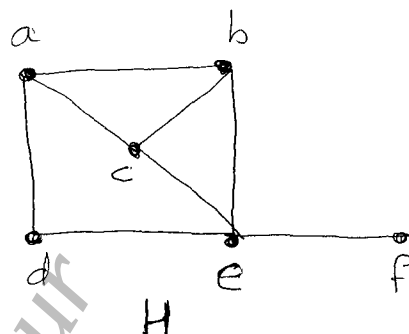
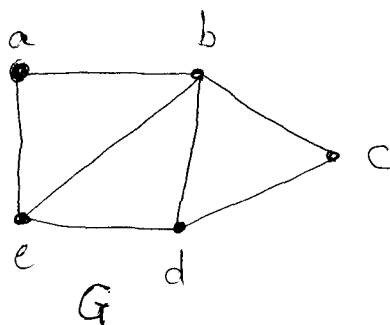
P.T.O.

Q.7 Write short notes on **ANY THREE** of the following:

- Binomial distribution
- Planer graphs
- Types of graphs
- Coloring of graphs
- Sheep cabbage problem

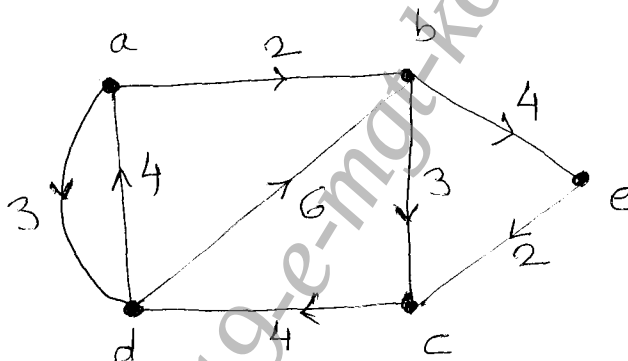
SECTION – II

Q.8 a) Determine whether the following graphs have:
i) Hamilton circuit ii) Hamilton path



- b) Explain : i) Complete graphs ii) Pigeonhole principle

Q.9 Explain Warshall's algorithm. Use Warshall's algorithm to find the shortest path from each vertex to each of the other vertex from the following graph:



- Q.10** a) A product is manufactured on three machines A, B and C. 30% of total products are manufactured on machine A, 35% of total products are manufactured on Machine B and remaining products are manufactured on machine C. The probabilities that the manufactured product is defective on these machines are 2% , 3 % and 5 % respectively. A manufactured product is selected at random from the lot and is found to be defective. What is the probability that,
i) the product is manufactured on machine A?
ii) the product is manufactured on machine C?
- b) When three fair coins are tossed simultaneously, what is the probability that
i) all three coins show same result?
ii) at least two coins show head?