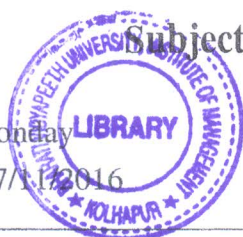


B.C.A. - I / II / III

Subject : Introduction to the Internet Technologies

Day : Monday

Date : 07/11/2016



32284

Time : 02.00 PM TO 05.00 PM

Max Marks : 100 Total Pages : 1

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 **SAME** answer book.

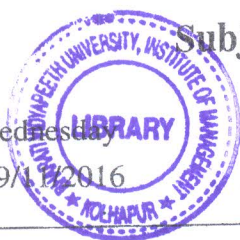
SECTION – I

- Q.1 Distinguish between Internet and Intranet. Explain the need of HTML with its features. (15)
- Q.2 Explain <FRAMESET> and <Frame> tag in detail with example. (15)
- Q.3 Explain following HTML5 elements: (any three) (15)
 <ROOT>
 <HEAD>
 Footers
 Navigation
- Q.4 What is a cookie? Explain cookies in Java script with suitable example. (15)
- Q.5 Explain with example Date and Math objects in Java Script. (15)
- Q.6 Explain following tags with example: (15)
 i) List ii) Image map iii) Anchor

SECTION – II

- Q.7 Write a code for creating following external style sheet 8 (20)
 i) Text having arial font, font-size 20, Italic style
 ii) Border of paragraph must be blue color
 iii) Set hyperlink without underline
 iv) Character spacing 10 pixels
- Q.8 Design HTML form for accepting book publisher details and validate any four fields using Java Script. (Assume suitable structure.) (20)
- Q.9 Design following table structure: (20)

<u>Date of Journey</u>	<u>From to Place</u>		<u>K.M.</u>	<u>Mode</u>	<u>T.A</u>	<u>D.A.</u>	<u>Total</u>
10/8/2017	Sangli –Pune	Pune-Sangli	500	Bus	700	115	815



B.C.A. I / II / III

Subject : Object Oriented Analysis & Design

Day : Wednesday

Date : 09/12/2016



32285

Time : 02.00 PM TO 05.00 PM

Max Marks : 100 Total Pages : 1

N. B. :

- 1) Solve **ANY FOUR** questions from Section – I.
- 2) Solve **ANY TWO** questions from Section – II.
- 3) Figures to the right indicate **FULL** marks.

SECTION - I

- Q. 1** Explain the following concepts: (15)
- | | | |
|------------------|-----------------|-------------------|
| i) Encapsulation | ii) Inheritance | iii) Polymorphism |
| iv) Abstraction | v) Class | |
- Q. 2** a) What is Inception? What are Three kinds of actors in use case diagram? (08)
- b) How to evolve use cases and other specifications in iterations? (07)
- Q. 3** a) How are requirements organized in UP artifacts? (08)
- b) Explain relationship between SSP and use cases with example. (07)
- Q. 4** Illustrate use-case diagram. Explain generalization, include and extends relationship in use case diagram. (15)
- Q. 5** What is class diagram? What are various associations between classes? Explain each association with example. (15)
- Q. 6** What is requirement gathering? Describe the UML diagrams used in requirement gathering. (15)
- Q. 7** Write short note on **ANY THREE** of the following: (15)
- a) Pre and Post condition
 - b) Interfaces
 - c) Multiplicity
 - d) Qualifiers
 - e) CRC Card

SECTION – II

- Q. 8** Draw activity diagram for Order Management System. (20)
- Q. 9** Draw use case diagram for Recruitment System of a Multinational Company. (20)
- Q.10** Draw sequence diagram for Hotel Management System. (20)

B.C.A. - I / II / III
Subject : C# Programming



Day : Friday
 Date : 11/11/2016



Time : 02.00 PM TO 05.00 PM
 Max Marks : 100 Total Pages : 1

N.B.:

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

SECTION – I

- | | | |
|-----|--|------|
| Q.1 | Discuss features of C # programming under Dot Net Framework. | [15] |
| Q.2 | Define term 'Constructor' and discuss their types with applicability. | [15] |
| Q.3 | Write a comparative note on:
a) Partial class and Sealed class
b) Value type and Reference type | [15] |
| Q.4 | Discuss term 'Inheritance' along with its type and suitable example. | [15] |
| Q.5 | Discuss implementation of OOPS concepts in C # programming. | [15] |
| Q.6 | Write a note on 'Operator Overloading' with suitable example. | [15] |
| Q.7 | Write note on ANY THREE of the following:
a) Loops in C #
b) Jagged Array
c) Indexers
d) Abstract class | [15] |

SECTION – II

- | | | |
|------|--|------------------|
| Q.8 | Write a C # Program to demonstrate implementation of 'Interface'
(Make necessary assumption). | [20] |
| Q.9 | Using Try, Catch and Finally block. Write a program in C # to demonstrate various types of error. | [20] |
| Q.10 | a) Write a C # Program to sort 10 Integers/elements with the help of a method Sort ().

b) Write C # Program to check whether a number is Palindrome or not. | [10]

[10] |

BCA I/II/III

Subject : Combinotrics & Graph Theory

Day : Tuesday
Date : 15/11/2016



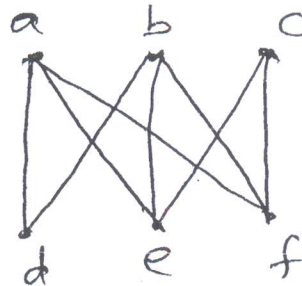
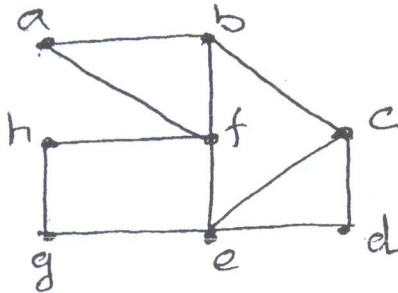
Time : 02.00 PM TO 05.00 PM
Max Marks : 100 Total Pages : 2

N.B.:

- 1) Attempt **ANY FOUR** from Section-I & **ANY TWO** from Section-II.
- 2) Use of non programmable scientific **CALCULATOR** is allowed.

SECTION - I

- Q.1** Write axioms of probability. If $P(A) = 0.35$, $P(B) = 0.75$ and $P(A \cup B) = 0.65$, find [15]
- i) $P(A \cap B)$ if A and B are independent events
 - ii) $P(A \cap B)$ if A and B are dependent events
 - iii) $P(\overline{A \cap B})$ if A and B are dependent events.
- Q.2** Find n in each of the following equations: [15]
- i) $P(n, 2) = 72$
 - ii) $P(n, 4) = 840$
 - iii) $2P(n, 2) + 50 = P(2n, 2)$
- Q.3** Write a note on probability density function of continuous random variable. [15]
- Five cards are numbered from 1 to 5. Two cards are drawn at random. If X denotes the sum of the numbers drawn,
- a) find the distribution of X
 - b) find mean.
- Q.4** Represent the following graphs diagrammatically and explain in short: [15]
- a) Multigraphs
 - b) Sub graphs
 - c) Isomorphic graphs
 - d) Complete graphs
 - e) Planner graphs
- Q.5** State whether the following graphs are Eulerian and or Hamiltonian with proper explanation. [15]



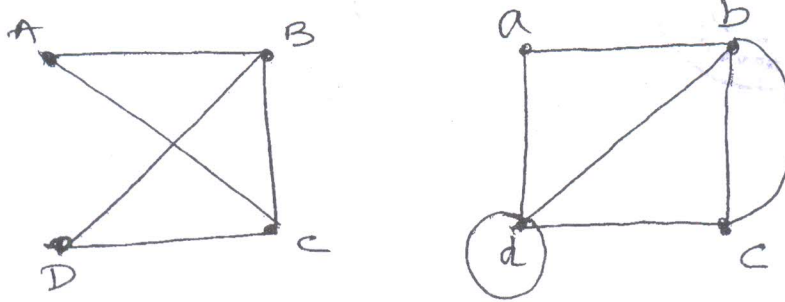
- Q.6** Write short notes on: [15]
- a) Colouring of graphs
 - b) Crossing of river problem
 - c) Inclusion - Exclusion Principle

P.T.O.

SECTION - II

Q.7 a) Find the adjacency matrix A of each of the following graph:

[10]



b) Consider the following addresses which are in random order:

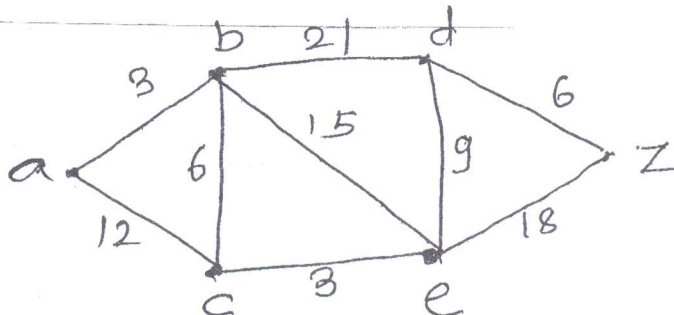
[10]

1.1, 2.2.1, 2.2.2, 3.2, 2.2.1.1, 3.2.1.1, 3.1, 3.2.1.1, 1.1.1, 1.2.1, 3.1.1, 3.2.2.

- Place the above addresses in lexicographic order.
- Draw the corresponding ordered rooted tree.

Q.8 Write Dijkstra's algorithm. Compute the shortest distance between source 'a' and destination 'z' using Dijkstra's algorithm from the following graph.

[20]



Q.9 a) An item is produced on three machines A, B and C. 50% of items are produced on machine A, 30% of items are produced on machine B and 20% of items are produced on machine C. The chances of an item to be produced as defective on these A, B, and C machines are 3%, 1.5% and 2% respectively. An item produced on any one of these machines is randomly selected and it is found to be defective. What is the probability that it is produced on machine B?

[10]

b) In Pune ladies club, 60% of the members play tennis, 40% play golf and 20% play both tennis and golf. A member is chosen at random.

[10]

- Find the probability that she plays neither tennis nor golf.
- Given that she plays tennis, find the probability that she plays golf.
- Given that she plays golf, find the probability that she plays tennis.

* * * *