

BACHELOR OF COMPUTER APPLICATIONS (C.B.C.S.) (2014 COURSE)B.C.A.

Sem-V: WINTER- 2019

SUBJECT: INTRODUCTION TO THE INTERNET TECHNOLOGIES (UE)

Wednesday 13-11-2019

10:00 AM-01:00 PM

W-11050-2019

Max. Marks: 60

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) Answer to both the section should be written in **SAME** answer book.

SECTION-I

- Q.1** What is Internet? Explain in detail.
- Q.2** What is CSS? Explain the types of CSS with its syntax and example.
- Q.3** Explain MIME types in detail.
- Q.4** Explain various operators in JavaScript.
- Q.5** Explain any Five Input Types of HTML Form.
- Q.6** Write a short notes on any **TWO** of the following:
- a) Confirm Dialog box
 - b) Dense Array in Java script
 - c) Date and Time Functions in Java Script
 - d) Image tag

SECTION-II

- Q.7** What are cookies? Explain cookies in detail
- Q.8** Design a HTML Webpage to display information about BCA course using text formatting. Make necessary assumptions.
- Q.9** Write a HTML code for the following structure using table tag. Assume suitable data.

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BACHELOR OF COMPUTER APPLICATIONS (C.B.C.S.) (2014 COURSE) B.C.A.
Sem-V: WINTER- 2019 (Common for IMCA - 2014 Sem V)
SUBJECT: OBJECT ORIENTED ANALYSIS & DESIGN (UE)

Friday 15-11-2019
10:00 AM-01:00 PM

W-11051-2019
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) Answer to both the section should be written in **SAME** answer book.

SECTION-I

- /+
- Q.1** What is Rational Unified Process? Explain various phases of Rational Unified Process. (15)
- Q.2** a) Explain the purpose of use-case diagram. Give an appropriate example of extend and include relationship. (08)
b) Explain use case realization. (07)
- Q.3** What is Class diagram? Explain the steps in constructing Class diagram. (15)
- Q.4** Explain the term CRC card? Explain the components of CRC with diagram. (15)
- Q.5** What is behavioural modeling? Illustrate the role of activity diagram in behavioural modeling. (15)
- Q.6** Discuss Software Development Life Cycle. (15)
- Q.7** Write short notes on any **THREE** of the following: (15)
- a) Package diagram
 - b) UP artifacts
 - c) Qualifiers
 - d) Inheritance
 - e) GRASP

SECTION-II

- Q.8** A customer wants to book a movie ticket from *book my show* application. Draw activity diagram for the same. (20)
- Q.9** Specify the components of ATM system and draw component and deployment diagram for ATM system. (20)
- Q.10** Draw a class diagram for a car rental application. The car rental agency has multiple offices / branches. The customer visits the agency for enquiry and takes a test ride, then selects the car by signing the terms and conditions form. The customer can also book the car through telephone, email and SMS. The agency checks the availability of the car and gives the status to the customer. The customer can also avail the driver facility if required, by paying additional charges. The billing is done based on the type of vehicle and distance travelled. (20)

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BACHELOR OF COMPUTER APPLICATIONS (C.B.C.S.) (2014 COURSE) B.C.A.

Sem-V: WINTER- 2019

SUBJECT: C# PROGRAMMING (UE)

(Common for IMCA - 2014 course Sem -I)

Monday 18-11-2019

10:00 AM-01:00 PM

W-11052-2019

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) Both the sections should be written in **SAME** answerbook.
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SECTION – I

- Q.1** Explain following components of Dot Net Framework (15)
a) CLR b) CLS c) CTS.
- Q.2** What is Hierarchical Inheritance? Write a C# program to implement hierarchical inheritance. (15)
- Q.3** What is Interface? Explain the concept of explicit interface with example. (15)
- Q.4** Define Polymorphism. Explain the concept of method overriding with example. (15)
- Q.5** Write a C# program to display features of C# using command line arguments. (15)
- Q.6** Write short notes on **ANY THREE** of the following: (15)
a) Finally Statement
b) Destructors
c) Switch Statement
d) C# Events

SECTION – II

- Q.7** a) Write in detail the concept of collection initializer. (20)
b) Write a C# program to find maximum and minimum number from the list.
- Q.8** What is String? State and explain C# string manipulation methods with example. (20)
- Q.9** What are the types of Array? Explain jagged array with example. (20)

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BACHELOR OF COMPUTER APPLICATIONS (C.B.C.S.) (2014 COURSE) B.C.A./
IMA - Sem-V: WINTER- 2019
SUBJECT: COMBINATORICS & GRAPH THEORY (UE)

Wednesday 20-11-2019
 10:00 AM-01:00 PM

W-11053-2019
 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) Answer to both the section should be written in **SAME** answer book.
- 4) Use of non-programmable calculator is **ALLOWED**.

SECTION – I

Q.1 What is a graph? Explain Isomorphic and Homomorphic graphs with suitable example. (15)

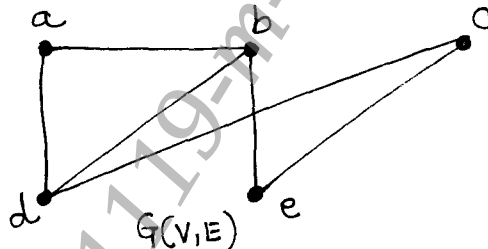
Q.2 A bag contains 30 balls numbered from 1 to 30. One ball is drawn at random. Find the probability that the number on the ball will be (15)

- i) a multiple of 5 or 7
- ii) a multiple of 4 or 6
- iii) Even number or a multiple of 5.

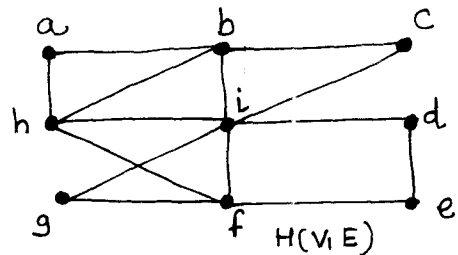
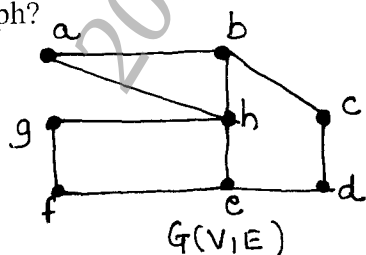
Q.3 Find the values of the following (15)

- i) ${}^{15}C_{11}$
- ii) ${}^{10}C_3$
- iii) 7P_2

Q.4 Represent the given graph with incidence matrix and adjacency matrix. (15)



Q.5 What is an Euler and Hamilton graph? Which of the given graph is an Euler and Hamilton graph? (15)



Q.6 Explain Depth-first search and Breadth-first search with suitable example. (15)

Q.7 Write short notes on **ANY THREE** of the following. (15)

- a) Coloring of graph
- b) Representation of Directed Graphs
- c) Inclusion-Exclusion Principle
- d) Random Variable

P.T.O.

SECTION – II

- Q.8** A factory has two machines A and B. Machine A producing 300 units and machine B producing 700 units, of the total output. 5% of the items produced on A are defective and only 1% produced by B are defective. If a defective item is drawn at random, what is the probability that it is produced by machine A? Also find the probability that an item drawn randomly from the output is defective. (20)
- Q.9** 7 coins are tossed simultaneously. Find the probability of getting (20)
- i) atleast 6 heads
 - ii) not more than 3 heads.
- Q.10** Explain the following applications of graph theory in detail. (20)
- i) Seating Arrangement Problem
 - ii) Travelling Salesman Problem

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