BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)
B.C.A. Sem-V : WINTER- 2022
SUBJECT : INTRODUCTION TO THE INTERNET TECHNOLOGIES

Day : Tuesday | Time : 02:00 PM-05:00 PM

Date : 29-11-2022 | **W-18787-2022** | Max. Marks : 60

N.B :

1) **Q. No. 4** from **Section – I** is **COMPULSORY.**
2) Solve **Any TWO** from **Q.No.1** to **Q. No.3** in **Section – I.**
3) Solve **Any TWO** from **Q.No.5** to **Q. No.7** in **Section – II.**
4) Figures to the right indicate **FULL** marks.
5) Answers to both sections should be written in **SAME** answer book.

SECTION - I

Q.1 **a)** Differentiate between internet and intranet. **[06]**

b) What is a domain? Explain the process of domain registration. **[06]**

Q.2 Explain various types of lists with appropriate examples. **[12]**

Q.3 Describe concept of hyperlink in HTML. Explain different types of hyperlinks in detail. **[12]**

Q.4 Write short notes on **ANY THREE** of the following: **[12]**

a) Web browser and Web Server
b) Structure of HTML program
c) Features of HTML 5
d) Functions in Javascript
e) Date object

SECTION - II

Q.5 Enlist different types of CSS. Explain any one of them with example. **[12]**

Q.6 Describe different dialogue boxes supported by JavaScript. **[12]**

Q.7 Design a webpage which have student's biodata with proper formatting and having student name as title. **[12]**

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)
B.C.A. Sem-V : WINTER- 2022
SUBJECT : OBJECT ORIENTED ANALYSIS & DESIGN

Day : Thursday | Time : 02:00 PM-05:00 PM

Date : 1/12/2022 | **W-18788-2022** | Max. Marks : 60

N.B :

1) **Q. No. 4** from **Section – I** is **COMPULSORY.**
2) Solve **Any TWO** from **Q.No.1** to **Q. No.3** in **Section – I.**
3) Solve **Any TWO** from **Q.No.5** to **Q. No.7** in **Section – II.**
4) Figures to the right indicate **FULL** marks.
5) Answers to both sections should be written in **SAME** answer book.

SECTION - I

Q.1 **a)** Define 'Object Orientation'. Explain following concepts: **[06]**
i) Class and Object ii) Inheritance iii) Polymorphism

b) How to write Use Case? Explain with example. **[06]**

Q.2 **a)** Differentiate between System Sequence Diagram and Collaboration Diagram. **[06]**

b) Explain Package Diagrams with example. **[06]**

Q.3 **a)** When to draw Class Diagrams? Explain advantages of it. **[06]**

b) Explain various relationships used in UML with suitable examples and symbols. **[06]**

Q.4 Write short notes on **ANY THREE** of the following: **[12]**

a) Modeling Principles
b) Component Diagrams
c) State Chart Diagram
d) Rational Unified Process
e) Actors

SECTION-II

Q.5 Identify conceptual classes and draw Class Diagram for 'Health Insurance Policy'. The policy should cover job-based coverage, self-coverage benefits etc. **[12]**

Q.6 Draw Deployment Diagram for Library Management System. **[12]**

Q.7 List and describe various activities involved in recruitment process. Draw Activity Diagram for Online Recruitment Process. **[12]**

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)
B.C.A. Sem-V : WINTER- 2022
SUBJECT : C# PROGRAMMING

Day : Saturday | Time : 02:00 PM-05:00 PM

Date : 3/12/2022 | **W-18789-2022** | Max. Marks : 60

N.B.:

1) **Q.4** from Section I is **COMPULSORY**.
2) Answer **ANY TWO** questions from **Q.1, 2, 3** in **Section-I**.
3) Answer **ANY TWO** questions from **Q.5, 6, 7** in **Section-II**.
4) All questions **CARRY EQUAL** marks.
5) Answers to Both the sections should be written in **SAME** answers book.
6) Draw a labelled diagram **WHENEVER** necessary.

SECTION – I

Q.1 Answer the following **(12)**

a) How to declare interface? Explain in detail the implementation of interface with suitable example?

b) Explain ADO.NET architecture? Bring out the difference between ADO & ADO.NET?

Q.2 Answer the following **(12)**

a) State and explain various operators in C# with proper example.

b) Explain the windows form control? How it is different from previous version of VB?

Q.3 Answer the following **(12)**

a) Explain procedure & function with example?

b) Explain types of error in VB.NET?

Q.4 Write short note on the following attempt ANY THREE **(12)**

a) Console Class
b) Collection object
c) Delegate
d) Constructor and their types
e) COM

SECTION - II

Q.5 Answer the following **(12)**

a) Write a C# program check whether number in palindrome or not.

b) Using Try, Catch and Finally block write a program in C# to demonstrate various types error.

Q.6 Answer the following **(12)**

a) Write a C# program to display date in various formats.

b) Write a C# program to sort the given array elements.

Q.7 Answer the following **(12)**

a) Write a C# program to display the greatest number among three numbers using relational operator.

b) Write a program to demonstrate abstract class and abstract method in C#.

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)
B.C.A. Sem-V : WINTER- 2022
SUBJECT : GRAPH THEORY

Day : Tuesday | Time : 02:00 PM-05:00 PM

Date : 6/12/2022 | **W-18790-2022** | Max. Marks : 60

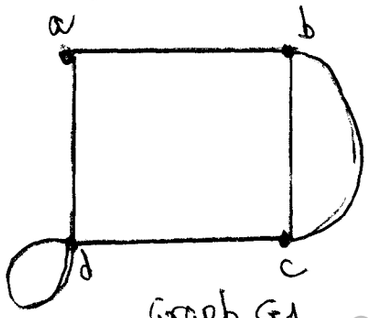
N.B.:

1) **Q.No. 4** from Section-I is COMPULSORY.
2) Attempt **ANY TWO** questions from Q.No. 1 to Q. No. 3 in Section – I.
3) Attempt **ANY TWO** questions from Q.No. 5 to Q. No. 7 in Section – II.
4) Figures to the **RIGHT** indicate **FULL** marks.
5) Answers to both the sections should be written in **SAME** answer book.
6) Draw a labeled diagram **WHEREVER** necessary.

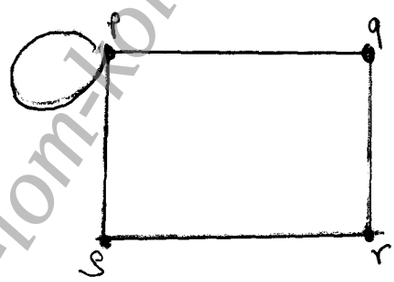
SECTION – I

Q.1 Represent the following graph diagrammatically and explain in short: **(12)**
a) Undirected graph
b) Subgraph.

Q.2 Define the term 'Isomorphism'. Determine whether the graphs G1 and G2 are Isomorphic. **(12)**



Graph G1



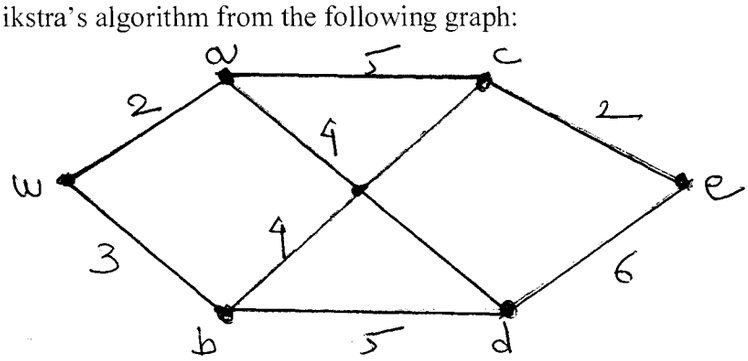
Graph G2

Q.3 **a)** Differentiate between 'Eulerian graph' and 'Hamiltonian graph' with example. **(06)**
b) Explain the term 'Bridge' with suitable example. **(06)**

Q.4 Write short notes on **ANY TWO** of the following : **(12)**
a) Konigsberge Bridge problem
b) Puzzle problem
c) Maximum Bipartite Matching

SECTION – II

Q.5 Compute the Shortest distance between source 'u' and destination 'e' using Dijikstra's algorithm from the following graph: **(12)**

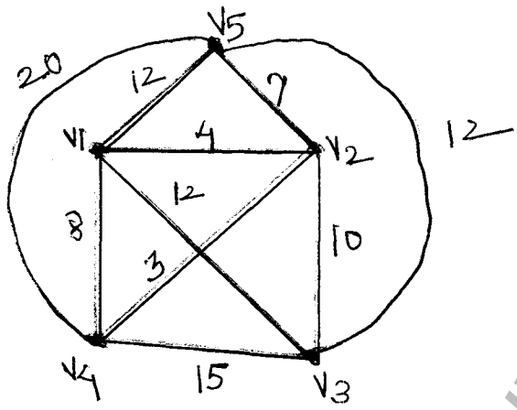


PTO

Q.6 **a)** What is 'Binary Tree'? Discuss properties of 'Binary Tree'. **(06)**

b) Represent the expression in the 'Binary Tree' (4+a)+(5–(6*b)) / (x–4*d) . **(06)**

Q.7 What is 'Spanning Tree'? Find the Spanning Tree of the following graph using Kruskal's algorithm. **(12)**



OR

Explain in detail :

i) Depth First search

ii) Breadth First search.

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)
B.C.A. Sem-V : WINTER- 2022
SUBJECT : E-COMMERCE

Day : Thursday
Date : 8/12/2022

Time : 02:00 PM-05:00 PM
W-18791-2022
Max. Marks : 60

N.B.:

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

SECTION-I

Q.1 What is e-commerce? Explain in detail its advantages and disadvantages. **(10)**

Q.2 What is ISP? Explain in detail various ISPs. **(10)**

Q.3 Explain the following with suitable example: **(10)**
Business to consumer (B2C) and Business to Business (B2B).

Q.4 Explain E-cash and debit card payment system of e-commerce. **(10)**

Q.5 Explain in detail 'Applications of e-commerce in e-branding'. **(10)**

Q.6 Write short notes on: :**(ANY TWO)** **(10)**

a) Cryptography
b) EDI (Electronic Data Interchange)
c) Digital Signature

SECTION-II

Q.7 What is firewall? Explain in detail functions and types of firewall. (15)

Q.8 Explain in detail various security threats of e-commerce. (15)

Q.9 What is e-Bay? How the e-Bay has been expanded? Explain in detail. (15)

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)
B.C.A. Sem-V : WINTER- 2022
SUBJECT : INTRODUCTION TO BIG DATA

Day : Thursday | Time : 02:00 PM-05:00 PM

Date : 8/12/2022 | **W-22704-2022** | Max. Marks : 60

N.B.:

1) **Q.No.4** from Section-I is **COMPULSORY**.
2) Attempt **ANY TWO** questions from **Q.No.1** to **Q.No.-3** in **Section-I.**
3) Attempt **ANY TWO** questions from **Q.No.5** to **Q.No.-7** in **Section-II.**
4) Figures to the **RIGHT** indicate full marks.
5) Answer to both the sections should be written in same answer book.

SECTION – I

Q.1 Answer the following:

a) Draw a neat block diagram of Big Data Architecture and explain it. **[06]**

b) Discuss how Big Data helps in Business Transformation and Imperatives. **[06]**

Q.2 Answer the following:

a) Define Big Data. Discuss Big Data Analytic Life Cycle in detail. **[06]**

b) Explain value creation drivers with an example. **[06]**

Q.3 Answer the following:

a) Elaborate unintelligent user experience in detail. **[06]**

b) Illustrate the role of Big Data Analysis to improve Customer Engagement. **[06]**

Q.4 Write short notes on **ANY TWO** of the following: **[12]**

a) Business Intelligence

b) Weka

c) Decision Support System

SECTION – II

Q.5 Explain in detail Big Data Envisioning process. **[12]**

Q.6 How Big Data helps in improving crop productivity and sale with reference to Agriculture Domain with an examples. **[12]**

Q.7 Elaborate Michael Porter's Five Forces Analysis. **[12]**

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)
B.C.A. Sem-V : WINTER- 2022
SUBJECT : INFORMATION SECURITY CONCEPTS

Day : Thursday | Time : 02:00 PM-05:00 PM

Date : 8/12/2022 | **W-22708-2022** | Max. Marks : 60

N.B.

1) **Q.No.4** from Section – I is **COMPULSORY**.
2) Answer **ANY TWO** from Q, 1, 2, 3 in section – I.
3) Answer **ANY TWO** from Q, 5, 6, 7 in section – II.
4) Figure to the right indicate **FULL** marks.
5) Answers to both the sections should be written in **SAME** answer book.
6) Draw neat and labelled diagram **WHEREVER** necessary.

SECTION - I

Q.1 Answer the following:

a) Explain CIA triad for information security? **(06)**

b) Explain in brief security measures to be taken for the information from unauthorized user. **(06)**

Q.2 Answer the following:

a) Discuss in brief windows security Measures. **(06)**

b) Discuss in detail command line interface. **(06)**

Q.3 Answer the following:

a) Describe in detail how to secure local area and wide area network. **(06)**

b) Explain in brief various measures to protect operating system. **(06)**

Q.4 Write short notes on any **THREE** of the following **(12)**

a) Virtual Private Network
b) ITIL Framework
c) WLAN Security
d) Fire Protection measures
e) Cyber crime

SECTION - II

Q.5 Answer the following:

a) Explain in detail parameters to be considered while designing secure network. **(06)**

b) What are compliance standards? Explain in detail about ISO 27001 standard. **(06)**

Q.6 Answer the following:

a) Discuss different access control methods for file. **(06)**

b) What are the concepts of Network security? **(06)**

Q.7 Answer the following:

a) What is Firewall? Explain in detail types and function of Firewall? **(06)**

b) Suggest secure coding techniques for a Web Application. **(06)**

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