

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)

B.C.A. Sem-V : : SUMMER - 2022

SUBJECT : INTRODUCTION TO THE INTERNET TECHNOLOGIES

Day : Monday
Date : 23-05-2022

S-18787-2022

Time : 02:00 PM-05:00 PM
Max. Marks : 60

N.B.

- 1) Q.No. 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) Answer to both the sections should be written in **SAME** answer book.
 - 6) Draw a labeled diagram **WHEREVER** necessary.
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SECTION – I

- Q.1** Explain following HTML tags with example (12)
a) Image b) Heading c) Anchor.
- Q.2** What is CSS? Describe universal and class selectors with example. (12)
- Q.3** What is table tag? Explain cell padding and cell spacing attributes in detail. (12)
- Q.4** Write short notes on **ANY TWO** of the following: (12)
a) Need of HTML
b) Switch statement in JavaScript
c) Need of IP addressing
d) Data types in JavaScript

SECTION – II

- Q.5** Design a form using HTML that accepts information about your qualification, extra curricular activities, achievements, skill sets, hobbies and expectation for a particular job. (12)
- Q.6** Write a JavaScript code to display factorial of first 5 natural numbers. (12)
- Q.7** What is JavaScript? Explain alert dialog box and prompt dialog box with syntax and example. (12)

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)

B.C.A. Sem-V : : SUMMER - 2022

SUBJECT : OBJECT ORIENTED ANALYSIS & DESIGN

Day : Wednesday
Date : 25-05-2022

S-18788-2022

Time : 02:00 PM-05:00 PM
Max. Marks : 60

N.B.

- 1) Q.4 from Section- I is **COMPULSORY**.
- 2) Answer any **TWO** questions from Section – I Q.1 to Q.3.
- 3) Answer any **TWO** questions from Section – II Q.5 to Q.7.
- 4) Figures to the right indicate **FULL** marks.
- 5) Answers to both the sections should be written in the **SAME** answer book.

SECTION – I

- Q.1** a) What is object oriented modeling? Explain system development using object orientation. (06)
- b) Define the term 'actor' in use cases. Also explain its various types. (06)
- Q.2** a) What is work flow? Explain static dimension of RUP. (06)
- b) Define 'requirements'. Explain Requirement Modeling in brief. (06)
- Q.3** a) Explain the following concepts of activity diagrams using their symbols: (06)
i) Fork ii) Joins iii) Swimlanes
- b) What is a class? How to identify conceptual classes in structural modeling? What are different ways to represent classes in structural modeling? (06)
- Q.4** Write short notes on **ANY THREE**: (12)
- a) Package diagram
 - b) Relationships in UML
 - c) Collaboration diagram
 - d) Dynamic Diagrams of UML
 - e) Object modeling

SECTION – II

- Q.5** a) Draw use case diagram for ordering Pizza using mobile application. (06)
- b) Find various components of hospital system and draw component diagram. (06)
- Q.6** a) Draw activity diagram for filling examination form using online process. (06)
- b) Show variations in the states by using state charts in order management system. (06)
- Q.7** a) What is the need of interaction diagram? Explain advantages of it. (06)
- b) Explain how the object orientated style helps for reusability, extensibility and robustness. (06)

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

Day : Friday
Date : 27-05-2022

S-18789-2022

Time : 02:00 PM-05:00 PM
Max. Marks : 60

N.B.

- 1) Q.4 from Section – I is **COMPULSORY**.
- 2) Answer any **TWO** questions from Q.1, Q.2, Q.3 in Section – I.
- 3) Answer any **TWO** questions from Q.5, Q.6, Q.7 in Section – II.
- 4) All questions carry **EQUAL** marks.
- 5) Answers to both the sections should be written in the **SAME** answer books.
- 6) Draw neat and labelled diagrams **WHEREVER** necessary.

SECTION – I

- Q.1** Answer the following (6 x 2 = 12 Marks)
- a) What are the important components of DOT NET? Explain what is common type system (CTS)?
 - b) Differentiate between C++ and C#.
- Q.2** Answer the following (6 x 2 = 12 Marks)
- a) Explain the use of private constructor and static constructor in C#
 - b) Explain the textbox and label control in visual studio with example.
- Q.3** Explain the following (6 x 2 = 12 Marks)
- a) What are the data providers in ADO.NET framework?
 - b) What is custom exception and how to raise it in C#?
- Q.4** Write short notes on **ANY THREE** of the following (4 x 3 = 12 Marks)
- a) Just in time compilation
 - b) Type conversion in C#
 - c) Nesting of classes in C#
 - d) Data adapter
 - e) Using exception for debugging

SECTION – II

- Q.5** Answer the following (6 x 2 = 12 Marks)
- a) Write a c# program to find if a given string is palindrome or not?
 - b) Write a c# program to find the sum of digits of a given positive integer.
- Q.6** Answer the following (6 x 2 = 12 Marks)
- a) Write a c# program to find the factorial of a given number.
 - b) Write a c# program to print transpose of matrix.
- Q.7** Explain the following (6 x 2 = 12 Marks)
- a) Write a c# program to find the roots of quadratic equation $ax^2 + bx + c = 0$, read coefficient a,b,c from users.
 - b) Write a c# program to demonstrate use of copy constructors?

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)

B.C.A. Sem-V : : SUMMER - 2022

SUBJECT : GRAPH THEORY

Day : Monday
Date : 30-05-2022

S-18790-2022

Time : 02:00 PM-05:00 PM
Max. Marks : 60

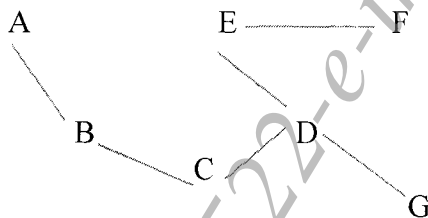
N.B.

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- 3) Answer **ANY TWO** questions from Q.5,6,7 in Section – II.
- 4) All questions carry **EQUAL** marks.
- 5) Answer to both the sections should be written in **SAME** answer book.
- 6) Draw a labeled diagram **WHEREVER** necessary.

SECTION – I

Q.1 Answer the following : (6 marks x 2 = 12 marks)

- a) Suppose that in a group of 5 people A, B, C, D & E the following parts of people are acquainted with each other
- A & C
 - A & D
 - B & C
 - C & D
 - C & E
- i) Draw a graph G to represent this situation
ii) List the vertex set and the edge set using set notation.
- b) Perform a Breadth-First-Search (BFS) of the following graph. Where E is the starting node
- i) Perform counter clockwise ordering from top
 - ii) Use clockwise ordering from top.



Q.2 Answer the following : (6 marks x 2 = 12 marks)

- a) Write and discuss 'Konigsberg Bridge Problem'.
- b) Explain the following graphs (Any Two) with neat diagram
- i) Connected graph
 - ii) Multi-graphs
 - iii) Dual graphs.

Q.3 Answer the following : (6 marks x 2 = 12 marks)

- a) Write and Discuss 'Floyde's Algorithm'.
- b) What is meant 'Isomorphic graph'. Discuss with suitable example.

Q.4 Write short notes on **ANY THREE** of the following : (4 marks x 3 = 12 marks)

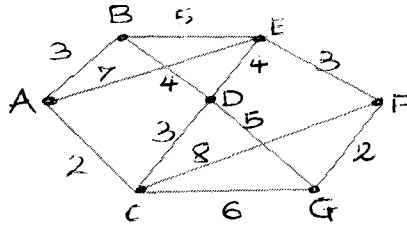
- a) Applications of Trees
- b) Vertex coloring
- c) Seating Arrangement Problem
- d) Euler's path

PTO

SECTION – II

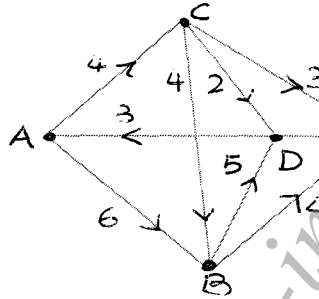
Q.5 Answer the following : (6 marks x 2 = 12 marks)

- Write Prim's Algorithm for finding minimal spanning tree.
- Find the shortest distance of all vertices from the vertex 'A' for the graph shown below. Use Dijkstra's Algorithm.



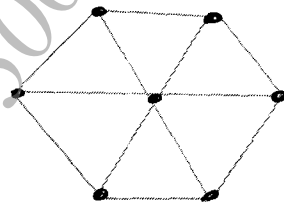
Q.6 Answer the following : (6 marks x 2 = 12 marks)

- Draw two 3-regular graphs with nine vertices.
- In the graph given below, capacity is given along each edge. Find the value of maximum flow from A to B in the network.



Q.7 Answer the following : (6 marks x 2 = 12 marks)

- What do you mean by a planar graph? Check whether $K_{2,3}$ is a planar graph.
- Find the minimum numbers of colors need to print the graph shown.



BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)

B.C.A. Sem-V : : SUMMER - 2022

SUBJECT : E-COMMERCE

Day : Wednesday
Date : 01-06-2022

S-18791-2022

Time : 02:00 PM-05:00 PM
Max. Marks : 60

N.B.

- 1) Q.No. 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.
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 - 6) Draw a labeled diagram **WHEREVER** necessary.
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SECTION – I

Q.1 Answer the following : (6 marks x 2 = 12 marks)

- a) What is e-commerce? Discuss the categories of e-commerce.
- b) How EDI is useful for business?

Q.2 Answer the following : (6 marks x 2 = 12 marks)

- a) Explain the purpose of smart-card.
- b) Explain how e-commerce is useful in banking.

Q.3 Answer the following : (6 marks x 2 = 12 marks)

- a) What is meant by cryptography?
- b) Explain the 'National Electronic Funds Transfer'.

Q.4 Write short notes on **ANY THREE** of the following : (4 marks x 3 = 12 marks)

- a) Mobile commerce
- b) Consumer-to-Consumer (B2C)
- c) E-cash
- d) Online Publishing
- e) Denial-of-Service attacks
- f) New trend in making payments online

SECTION – II

Q.5 Answer the following : (6 marks x 2 = 12 marks)

- a) Explain Business-to-Consumer (B2C) business model for e-commerce with suitable example.
- b) What are the limitations of traditional payment system?

Q.6 Answer the following : (6 marks x 2 = 12 marks)

- a) What is e-Advertising? Explain in detail with suitable example.
- b) Explain various security issues of e-commerce.

Q.7 Answer the following : (6 marks x 2 = 12 marks)

- a) Explain the working of Firewall.
- b) Explain Digital Signature and Digital Certificate in detail.
