

Wednesday 13-11-2019

02:00 PM-05:00 PM

W-18759-2019

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 question CARRY EQUAL marks.
- 5) Answer to both the section 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)

- a) Explain various types of Flip flops with their merits and demerits.
- b) Discuss asynchronous data transfer with strobe control method in brief.

Q.2) Answer the following: (6 Marks X 2 = 12)

- a) Explain instruction cycle with help of flow chart.
- b) What is associative memory? Why it is content addressable memory? Explain.

Q.3) Explain the following: (6 Marks X 2 = 12)

- a) What is an addressing mode? Describe various addressing modes that exist in a modern processor.
- b) What is interface? Why is it needed?

Q.4) Write short notes on the following: Attempt ANY THREE (4 Marks X 3 = 12)

- a) Logic micro-operations
- b) Assembly language
- c) Register transfer language
- d) Program control Instructions
- e) Memory mapped I/O

SECTION - II

Q.5) Answer the following: (12 Marks X 1 = 12)

The sequential circuit has two D flip flops A and B, two inputs x, y and one output z. The flip flop input equations and circuit output are as follows.

$$D_A = x'y + xA$$

$$D_B = x'B + yA'$$

$$z = xA + yB'$$

- a) Draw logic diagram
- b) Tabulate state table

Q.6) Answer the following: (6 Marks X 2 = 12)

- a) Draw the circuit diagram and tabulate the truth table.
 $A'(A + B) + (B + AA)(A + B')$
- b) Solve the following.
 - a. 11100010 - 01111110 using 2's complement method.
 - b. 111 * 11

Q.7) Explain the following: (12 Marks X 1 = 12)

Explain the functioning of 4 bit bidirectional shift register with parallel load with help of block diagram.

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE) B.C.A.

Sem-II: WINTER- 2019

SUBJECT: DBMS-I (UE)

Friday 15-11-2019
02:00 PM-05:00 PM

W-18760-2019
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 question CARRY EQUAL marks.
 - 5) Answer to both the section should be written in **SAME** answer book.
 - 6) Draw a labeled diagram WHEREVER necessary.
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SECTION - I

Q.1) Answer the following: (6 Marks X 2 = 12)

- a) Discuss different types of database system.
- b) Explain conceptual data modelling with example.

Q.2) Answer the following: (6 Marks X 2 = 12)

- a) What is normalization? Discuss its advantages and disadvantages.
- b) Describe deadlock prevention schemes.

Q.3) Explain the following: (6 Marks X 2 = 12)

- a) Explain B+ tree index file.
- b) Discuss log based recovery.

Q.4) Write short notes on the following: Attempt ANY THREE (4 Marks X 3 = 12)

- a) Drawbacks of file oriented approach
- b) Derived and composite attribute
- c) Network data model
- d) RAID Technology
- e) Data access

SECTION - II

Q.5) Answer the following: (6 Marks X 2 = 12)

- a) What is data independence? Why it is desirable?
- b) Create an ERD for Bus Reservation System.

Q.6) Answer the following: (6 Marks X 2 = 12)

- a) Construct an E-R diagram for a hospital with a set of patients and a set of medical doctors. Each patient is associated with log of various tests and examinations conducted.
- b) What is file organization? Explain any two types of file organization.

Q.7) Explain the following: (6 Marks X 2 = 12)

- a) Explain the protocol that is used to maintain concurrency concept.
- b) Explain the basic structure of a relational database with an example.

Monday 18-11-2019
02:00 PM-05:00 PM

W-18761-2019
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 question CARRY EQUAL marks.
- 5) Answer to both the section 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)

- a) How array of strings can be represented in main memory? Compare and contrast between different approaches.
- b) What is doubly linked list? Explain with example.

Q.2) Answer the following: (6 Marks X 2 = 12)

- a) What is stack? Explain it with example.
- b) What are the basic file operations in c programming? Explain with example.

Q.3) Explain the following: (6 Marks X 2 = 12)

- a) Explain traversal technique of binary tree.
- b) What is hashing? Give the characteristics of hash function.

Q.4) Write short notes on the following: Attempt ANY THREE (4 Marks X 3 = 12)

- a) Recursion
- b) ADT
- c) Push operation on stack
- d) Objectives of Data Structure
- e) Applications of graph

SECTION - II

Q.5) Answer the following: (6 Marks X 2 = 12)

- a) Write a program for delete operation in array.
- b) Write a program to traverse a singly linked list in reverse order.

Q.6) Answer the following: (6 Marks X 2 = 12)

- a) Write a 'C' program to implement a stack operations using arrays.
- b) Write a program to create file "odd.txt" to store all odd numbers between 1 and n.

Q.7) Explain the following: (6 Marks X 2 = 12)

- a) Write a C program for depth first search of a graph.
- b) Write a program to sort 10, 30, 40, 100, 3, 25, 30 using bubble sort.

Wednesday 20-11-2019
02:00 PM-05:00 PM

W-18762-2019
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 question CARRY EQUAL 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) Answer the following: (6 Marks X 2 = 12)

- a) Describe the Scope and Objectives of Financial Accounting?
- b) Discuss in brief the different Accounting Branches with their major objectives.

Q.2) Answer the following: (6 Marks X 2 = 12)

- a) What is Journal? Discuss the importance and utility of Journal.
- b) What are the advantages of Subsidiary Books?

Q.3) Explain the following: (6 Marks X 2 = 12)

- a) What do you understand by Final Accounts? Why are they prepared?
- b) Write a detailed note on accounting software.

Q.4) Write short notes on the following: Attempt ANY THREE (4 Marks X 3 = 12)

- a) Users of financial accounting information
- b) Separate Entity Concept
- c) Nominal A/C
- d) Triple Column Cash Book
- e) Trial Balance

SECTION - II

Q.5) Solve the following problems: (12 Marks X 1 = 12)

Journalize the following transactions in the books of Sudesh.

- | | |
|--------------------------|--|
| 1 st Jan.2018 | - Sudesh started business with cash Rs.1,50,000/- . |
| 3 rd Jan. | - Purchased goods on credit Rs.10,000/- at 10% trade discount from Mukesh. |
| 7 th Jan. | - Sold goods to Lata on credit Rs.8,000/- at 5% trade discount |
| 12 th Jan. | - Paid Salaries Rs.5,000/- |
| 16 th Jan. | - Goods destroyed by fire Rs.1,500/- |
| 20 th Jan. | - Received cash from Mahendra Rs.5,000/- |
| 25 th Jan | - Goods distributed as a free sample Rs.2,000/- |
| 27 th Jan | - Commission Received from Uddit Rs.5,000/- |
| 29 th Jan | - Interest paid Rs.800/- |
| 31 st Jan | -Income Tax paid Rs.6,000/- |

Q.6) Solve the following problems: (12 Marks X 1 = 12)

Enter the following transactions in the Three Column **Cash Book**.

Opening balance of Cash Rs. 25,000/- and Bank Rs. 2,50,000/-

2018

- | | |
|------------------------|---|
| 1 st April | Invested into Business Rs. 25,000/- |
| 2 nd April | Deposited into Bank Rs. 10,000/- |
| 5 th April | Purchased Furniture by issuing a Cheque of Rs. 1,00,000/- |
| 10 th April | Paid office Rent Rs. 10,000/- |

15 th April	Purchased goods of Rs. 20,000/- by Cheque.
20 th April	Withdrew Rs. 10,000/- from the bank for Official use.
25 th April	Paid to Suresh Rs. 25,000/- in full settlement of his account of Rs. 27,000/-
30 th April	Received from Mahesh Rs. 18,500/- in full settlement of Rs. 20,000/-

Q.7) Solve the following problems: (12 Marks X 1 = 12)

From the following Trail Balance prepare Trading, Profit and Loss account and Balance Sheet as on 31st March 2018 of M/S Janata Traders.

Trial Balance
as on 31/3/2018

Debit Balance	Amount (Rs.)	Credit Balance	Amount (Rs.)
Purchases	414000	Capital	194000
Trade Debtors	72500	Sales	551000
Opening Stock	41000	Trade Creditors	38000
Sales Returns	1000	Purchase Returns	1000
Bank Balance	39000	RDD	2500
Drawings	46000	Discount	9000
Office Expenses	5000		
Motor Van	62500		
Rent & Rates	7500		
Salaries	81000		
Bad debts	2000		
General Expenses	11000		
Discount	10500		
Insurance	2500		
	795500		795500

Adjustments:

- Closing stock valued on 31st March 2018 is Rs. 55000/-
- Outstanding Salaries Rs. 8000/-
- Insurance paid in advance Rs. 400/-
- Depreciation on Motor Van @ 10% p.a.

Friday 22-11-2019
02:00 PM-05:00 PM

W-18763-2019
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 question CARRY EQUAL marks.
- 5) Answers to Both the sections to be written in SAME answer books.
- 6) Draw a labeled diagram WHEREVER necessary.

SECTION - I

Q.1) Answer the following: (6 Marks X 2 = 12)

- a) Explain different levels of Management with suitable examples.
- b) Highlight the nature of planning, its mission and objectives and also state the various types of plans.

Q.2) Answer the following: (6 Marks X 2 = 12)

- a) Explain the important principles of organizing. How this function is important when you are going to form an organization?
- b) What is importance and need for proper staffing?

Q.3) Explain the following: (6 Marks X 2 = 12)

- a) What is meant by direction? Explain the principles of direction.
- b) State the requirements of effective controls in an Organization. How can Managers ensure flexibility of controls within the Organization?

Q.4) Write short notes on the following: Attempt ANY THREE (4 Marks X 3 = 12)

- a) Functions of Managers
- b) Characteristics of planning
- c) Organization chart/structure
- d) Sources of recruitment
- e) Essential qualities of a leader
- f) Problems in the control process

SECTION - II

Q.5) Answer the following: (6 Marks X 2 = 12)

- a) Trace the evolution of Management thought and discuss whether 'Management' is an art or science.
- b) Prepare a plan for recruiting a batch of 10 BCA candidates as Management Trainee.

Q.6) Answer the following: (6 Marks X 2 = 12)

- a) Authority and responsibility go hand in hand for successful execution of any task in an organization. Do you agree with this? Elaborate with suitable examples.
- b) The importance of management is increasing day by day in our industrial organizations. Why?

Q.7) Explain the following: (6 Marks X 2 = 12)

- a) State the importance of motivation in organization with suitable example.
- b) Brief about social responsibility of management in today's organizations.

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE) B.C.A.

Sem-II: WINTER- 2019

SUBJECT: ENVIRONMENTAL STUDIES (UE)

Monday 25-11-2019

02:00 PM-05:00 PM

W-18765-2019

Max. Marks: 60

N.B.

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

- Q.1** Define ecosystem. Give an account of the structure and function an (12)
ecosystem.
- Q.2** Discuss the uses and effects of over utilization of surface and ground water (12)
sources.
- Q.3** What is air pollution? What are its effect on human health? (12)
- Q.4** Write short note on any **TWO** of the following: (12)
- a) Genetic Biodiversity
 - b) Rain Water Harvesting
 - c) Solid Waste Management
 - d) Food Web

SECTION – II

- Q.5** “Protection and Promotion of environmental health is one of the major issue (12)
today.” Discuss with suitable example.
- Q.6** Zoom cultivation has been in practice from earlier days, but it is considered (12)
more problematic these days. Why? Give examples.
- Q.7** What is e-waste? Why are they creating more problems in developing (12)
countries in comparison to the developed countries?

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