

B.C.A. SEM-II (CBCS 2018 Course) : SUMMER - 2019
SUBJECT: COMPUTER ORGANIZATION AND ARCHITECTURE

Day: Monday
Date: 15/04/2019

S-2019-2053

Time: 10.00 AM TO 01.00 PM
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) Draw the Half adder and full adder circuit and explain its functioning.
- b) What are the special registers in a typical computer? Give their purposes.

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

- a) What is hard-wired control unit? How is it different from micro-programmed control unit?
- b) Discuss any two mapping techniques used in cache memories with their relative merits and demerits.

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

- a) Describe the functioning of 4 bit binary counter with help of diagram.
- b) With a neat diagram explain the working of DMA.

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

- a) Number systems
- b) Multiplexer
- c) Types of Interrupt
- d) Control word
- e) Daisy chaining priority interrupt

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 and y and one output z. The flip flop input equations and circuit output is as follows.

$$D_A = x'B + yA$$

$$D_B = x + y'A$$

$$z = y'B + x'y$$

- 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.
($BC' + A'D$) ($AB + CD'$)
- b) Solve the following.
 - a. 10000010 - 01010101 using 2's complement method.
 - b. $110 * 110$

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

Explain the functioning of 4 bit arithmetic circuit with help of diagram.

B.C.A. SEM-II (CBCS 2018 Course) : SUMMER - 2019

SUBJECT: DBMS-I

Day: Tuesday
Date: 30/04/2019

S-2019-2054

Time: 10.00 AM TO 01.00 PM
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) Discuss different database users.
- b) What are attributes of an entity? Explain its types.

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

- a) What do you understand by lossy and lossless decomposition?
- b) Elaborate different physical storage media used in DBMS.

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

- a) Is multiprogramming different from multiprocessing? Explain.
- b) Explain the shadow paging technique with example.

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

- a) Data abstraction
- b) Strong entity
- c) Responsibilities of DBA
- d) Data Dictionary
- e) Deadlock

SECTION - II

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

- a) Difference between database oriented approach and file oriented approach.
- b) Explain the difference between terms serial schedule and serializable schedule. Give relevant example.

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

- a) What do you understand by normalization? Discuss data normalization process.
- b) Discuss the ACID properties of a transaction. Give relevant example.

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

- a) What is two phase locking? How does it work?
- b) Construct an E-R diagram for a car insurance company whose customers own one or more cars each. Each car has associated with it, zero to any numbers of recorded accidents. State any assumptions you make.

Day: Monday
Date: 22/04/2019

S-2019-2055

Time: 10.00 AM TO 01.00 PM
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 various operations performed on data structures.
- b) What is circular linked list? How the end-of-list condition will be tested in circular linked list.

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

- a) What is Stacks? Explain stacks operations in details.
- b) What is a file? Explain how the file open and file close functions handled in 'C'.

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

- a) Describe different type of trees.
- b) Develop an algorithm for binary search.

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

- a) Non-atomic data
- b) Advantages of linked list
- c) infix, prefix and postfix notation
- d) Sequential file organization
- e) Differences between tree and graph

SECTION - II

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

- a) Write a program to delete an element of array at position of user choice.
- b) Write a program to delete an element from doubly linked list

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

- a) Write a C program to traverse a stack using Recursion.
- b) Write a program to convert the content of file to lowercase.

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 20, 35, 40, 100, 3, 10, 15 using bubble sort.

B.C.A. SEM-II (CBCS 2018 Course) : SUMMER - 2019

SUBJECT: FINANCIAL ACCOUNTING

Day: Wednesday

Date: 24/04/2019

S-2019-2056

Time: 10.00 AM TO 01.00 PM

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) Use of simple calculator is allowed.

SECTION - I

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

- a) Define the term "Book-keeping". Discuss its meaning with its features?
- b) Elaborate in detail the convention of Consistency and Convention of Conservatism.

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

- a) What is a Ledger Account? Write utility of the ledger.
- b) Explain the Purchase Book and Purchase Return Book with their respective format.

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

- a) Elaborate the users of Financial Statement in detail.
- b) Elaborate the various objectives of Financial Accounting in detail.

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

- a) Limitations of financial Accounting
- b) Convention of Materiality
- c) Real A/C
- d) Purchase Book
- e) Need of Accounting
- f) Importance of accounting principles

SECTION - II

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

Mr. Nirmal has the following transactions in the month of April. Write Journal Entries for the transactions.

1st April : Commenced business with a capital of 1,00,000

5th April : Purchased goods from Veeru for 20,000

9th April : Purchased Goods for Cash 15,000

14th April : Purchased Goods from Abhiram for cash 9,000

17th April : Bought Goods from Shyam on credit 12,000

20th April : Sold goods worth 15,000 to Tarun

23rd April : Sold goods for cash 20,000

25th April : Sold goods to Utsav for cash 6,000

27th April : Sold goods to Pranav on credit 17,000

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)

The following trial balance is available of Mr. Bhatia. You are required to prepare Trading A/C, Profit and Loss A/C and Balance Sheet.

Trial Balance
As on 31/3/2018

(Amount in Rs.)

Particulars	Debit Balance	Credit Balance
Land & Building	6,00,000	
Opening Stock	1,00,000	
Purchases	4,50,000	
Salary	50,000	
Sales		10,00,000
Factory Expenses	1,00,000	
Wages	1,50,000	
Administrative Expenses	50,000	
Selling & Distribution Expenses	25,000	
Machinery	5,00,000	
Debtors	1,50,000	
Creditors		60,000
Outstanding Expenses		15,000
Commission		25,000
Capital		7,50,000
Bills Receivables	15,000	
Loan From Bank		3,30,000
Cash at Bank	10,000	
Bills Payables		20,000
	22,00,000	22,00,000

Additional Information :

1. The closing stock was valued at Rs. 1,50,000/-
2. Outstanding Salaries Rs. 5000/-
3. Commission received in Advance Rs. 3000/-
4. Provide R.D.D. on debtors @ 5%.

B.C.A. SEM-II (CBCS 2018 Course) : SUMMER - 2019

SUBJECT: PRINCIPLES OF MANAGEMENT

Day: Saturday
Date: 27/04/2019

S-2019-2057

Time: 10.00 AM TO 01.00 PM
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) What are the objectives of planning? Discuss the process of planning in detail.

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 are the important steps in selection process?

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

- a) Define leadership and discuss various leadership styles with suitable examples.
- b) What are the requirements for effective controls? Explain feed forward and feedback controls.

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

- a) Importance of management
- b) Planning premises
- c) Organization chart
- d) Recruitment and selection
- e) Leadership assessment
- f) Problems in the control process

SECTION - II

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

- a) Are there any difference in planning, organizing, leading, controlling and coordinating between a restaurant and a food processing firm?
- b) Discuss the importance of planning. Explain the advantages and limitation of planning.

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) What is management by objectives? Explain its effectiveness with example.

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

- a) Define leadership and discuss the various approaches to the concept of leadership.
- b) Explain the basic steps in control process. Do you agree that controlling function is important in any kind of organization? Justify your answer with suitable examples considering plastic industry.

B.C.A. SEM–II (CBCS 2018 Course) : SUMMER - 2019

SUBJECT : ENVIRONMENTAL STUDIES

Day : Friday
Date : 03/05/2019

S-2019-2058

Time : 10.00 AM TO 01.00 PM
Max. Marks : 60

N.B.:

- 1) **Q. 4** from **Section – I** is **COMPULSORY**.
 - 2) Solve **ANY TWO** from **Q. 1** to **Q. 3** in **Section – I**.
 - 3) Solve **ANY TWO** from **Q. 5** to **Q. 7** in **Section – II**.
 - 4) All questions **CARRY EQUAL** marks.
 - 3) Both the sections should be written in **SAME** answer books.
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SECTION – I

- Q.1** Define the term Environmental Studies. Explain its scope and importance. (12)
- Q.2** Write a note on renewable and non-renewable resources. (12)
- Q.3** Explain the concepts of food webs, ecological pyramids and its types. (12)
- Q.4** Write short notes on the following: (**Any Two**) (12)
- a) Solid Waste Management
 - b) Environmental Ethics
 - c) Organic Farming

SECTION – II

- Q.5** Describe energy flow in ecosystem with suitable model. (12)
- Q.6** Highlight the methods of water conservation and its importance in today's scenario. (12)
- Q.7** Prepare an action plan to face the disaster like floods, earth quakes. (12)

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