BC-201

Disc. Maths

BCA 2nd Sem. (Session-2018-21)

Time : 3 Hrs   . Full Marks : 80

Candidates are required to give their answers in

their own words as far as practicable.

The questions are of equal value.

Answer any five questions.

1 Define the following terms:

  (i)   Inclusion & Exclusion of Set

  (ii) Venn Diagram

  (iii) Equality of Sets

  (iv) Rings

2. If $A = \{1,2,3\}$ $B = \{2,4,5\}$ & $\Omega = \{x : x \text{ is a digit}\}$

  (a) $(A \cap B)^c$

  (b) $A^c - B^c$

  (c) $(A - B)^c$

  (d) $(A \cup B) \cap (B - A)$

3. If A={1·2 3 4 5] let R={(1,1) (1,2) (2,3) (2,4) (3,4) (3,5)

  (4,5) (5,5) }

  be a relation on set A. Then find

  (a) Matrix Representation of R

  (b) Graphical Representation of R

P.T.O.

(c) Domain & Range of R

(d) Inverse Relation of R

4. List all pártition of sets:

   (a) A = {a, b, c}

   (b) A = {1, 2, 3, 4}

5. Find fog and gof where $f(x) = x^2 + x + 1$ $g(x) = x - 2$ are the function from R_1 to R.

6. Define function and types of function.

7. Show that set of all divisions of 70 from Lattice.

8. Use Karnaugh map to simplify the following expression;

   $$x = A'BC'D' + ABC'D' + A'BCD' + ABCD'$$

9. Minimize the Boolean expression by the function:

   (a) $f(p, q, r, s) = ? (5, 8, 9, 10, 11, 12, 13, 14, 15)$

   (b) $f(p, q, r, s) = ? (1, 2, 3, 6, 8, 9, 10, 12, 13, 14)$

10. Write short notes on any two of the following :

    (a) Equivalence Relation

    (b) Monoacid

    (c) Semi-group

    (d) Partitions of Set

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BC-201   2

BC-202

Computer Architecture

BCA 2nd Sem. Exam.-2019

Time : 3 Hrs   Full Marks : 80

Candidates are required to give their answers in

their own words as far as practicable.

The questions are of equal value.

Answer any five questions.

1. What do you mean by addressing modes? Discuss any four addressing modes.

2. Explain K-Map with example.

3. What is Hierarchical Memory Organization? Draw memory organization hierarchy map for access time and cast.

4. What is the difference between RAM and ROM.

5. What is the need of memory hierarchy. Explain their interaction in details with diagram.

6. What is the Direct and Indirect address construction.

7. What is instruction set? Critically examine different addressing models.

8. Draw the internal structure of CPU with control signal.

9. What is floating point Representation ? Explain it with example and its advantage over fixed point representation.

P.T.O.

10. Write short notes on any two of the following:

    (a) Boolean Algebra

    (b) Register

    (c) Memory Hierarchy

    (d) Logic Gates

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BC-203

C Prog. & Data Struc.

BCA 2nd Sem. Exam.-2019

Time : 3 Hrs   *Full Marks : 80*

Candidates are required to give their answers in

their own words as far as practicable.

The questions are of equal value.

Answer any five questions.

1. What is operator in "C"? Discuss the types of operator in C with suitable example.

2. What is conditional statement? Describe the types of conditional statement with example.

3. What is Array ? Describe the types of Array. Write a "C" programme to enter n number in an array. Print the number in sorted order.

4. What is structure? Discuss the difference between structure and unions with suitable example.

5. What is linked list? Describe the types of linked list.

6. What is double dimensional array? Write a "C" programme to m × n number in an Array. Print sum of all elements in the given array.

P.T.O.

7. Write a "C" Programme to print the following series using function:

   [0, 1 1 2 3 5 8 13 21.................. n]

8. Write a "C' programme to enter three numbers and print minimum of given three numbers.

9. What is strong? Write a "C' programme to enter a string. Print how many vowels and consonants are present in the given string.

10. Write short notes on any two of the following:

    (a) Library function in "C"'

    (b) Features of "C"

    (c) Binary Tree

    (d) String Function

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BC-204

Business Accounting

BCA 2nd Sem. (Session-2018-21)

Time : 3 Hrs   Full Marks : 80

Candidates are required to give their answers in

their own words as far as practicable.

The questions are of equal value.

Answer any five questions.

1. Define Accounting. Explain its functions.

2. Explain Golden Rule of Accounting with suitable examples.

3. Discuss the classification of Journal.

4. Define Bill of Exchange. Differentiate between Bill of Exchnage and cheque.

5. Discuss different types of Receipts with suitable examples.

6. What is consignment? Discuss importance of consignment business in our country.

7. Write Journal entries for the following transactions in the books of Shyam Sundar:

January 2019

1	Business started with cash Rs. 50,000.	
2	Purchased goods for cash Rs. 10,000.	
5	Purchased goods from Mohan on Credit Rs. 6,000.	

P.T.O.

10   Purchased Furniture of Rs. 2,000

15   Sold goods for cash Rs. 7,000.

20   Sold goods to Ram on Credit Rs. 5,000

29   Paid Rent Rs. 2,000

30   Paid Salary by cheque Rs. 20,000

8. Prepare Double column cash Book of Raushan for the month of March, 2019 with the following details:

March 2019

1   Cash in hand Rs. 5,000

1   Bank overdraft Rs. 1,000

2   Paid wages Rs. 1,500

3   Cash deposited into Bank Rs. 2,000

4   Cash sales Rs. 7,500

5   Sold goods for cheque which was deposited in Bank on the same day Rs. 5,000

6   Purchased goods of Rs. 4,000 from Hariom on Credit

7   Withdraw from Bank for personal use Rs. 1,000

9. Following Trial Balance has been extracted from the books of M/S Dhanpat Rai and Sons on 31st March, 2019:

Debit Balance	Rs.	Credit Balance	Rs.
Machinery	400,000	Capital	900,000
Cash at Bank	100,000	Sales	1600,000
Cash in hand	50,000	Creditors	450,000
Wages	100,000	Interest	30,000
Purchases	800,000		
Opening Stock	600,000		
Debtors	440,000		
B/R	290,000		
Rent	45,000		
Commission	25,000		
General Expenses	80,000		
Salaries	50,000		
	2980,000		2980,000

Adjustments:

(i) Outstanding Salaries Rs. 45,000

(ii) Depreciate Machinery @ 10% p.a.

(iii) Wages outstanding Rs. 5,000

(iv) Prepaid Rent Rs. 10,000

(v) Closing Stock Rs. 800,000

You are requried to prepare Trading and profit and Loss Account and Balance Sheet as on 31st March, 2019.

10. Write short notes on any two of the following:

    (a) Accounting Concepts

    (b) Double Entry System

    (c) Capital Expenditure

    (d) Distinction between sale and consigment

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