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Degree (Part-II) Vocational Examination, 2021

(Honours)

# BCA

[ Paper : Third ]

[ PPU-D-II-(V)-(H)-BCA-3 ]

Time : Three Hours]                    [Maximum Marks : 75

**Note :** Candidates are required to give their answers in their own words as far as practicable. Answer **any five** question in all. All the questions are of **equal** value.

1.  (a)    Define Network Topology. Discuss the types of Network Topology.

    (b)    What is switching techniques ? Discuss advantages of Packet Switching.

2.     (a)    What is ISP ? Discuss the role of ISP.

       (b)    What is E-mail ? Write steps to send a mail to many recipients.

3. (a) State and prove the De'Morgan theorem in Boolean Algebra.

   (b) What is K-Map ? Discuss K-Map for 2-variable using suitable example.

4. (a) What is Internet ? Discuss advantages of Internet.

   (b) Discuss encoder and decoder with suitable example.

5. (a) Write formatted input/output function of C-language.

   (b) What is Variable ? Discuss the scope of variable.

6. (a) What is Operator ? Discuss Binary operator with suitable example.

   (b) What is type casting ? Discuss the types of type casting.

7. (a) Write the difference between while and do-while loop.

   (b) What is pointer ? Write a program to take two number add them using pointer.

8. (a) Discuss dynamic memory allocation with suitable example.

   (b) Write a program to take a number and print factorial of that number.

9. (a) What is structure ? Discuss the advantages of structure.

   (b) Write a program to take student name, roll no. and marks display using structure.

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

    (a) f print f ()

    (b) f scan f ()

    (c) Recursion function

    (d) Call by reference function

    (e) size of ()

    (f) Union

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Degree (Part-II) Vocational Examination, 2021

( Honours )

# BCA

[ Paper : Fourth ]

[ PPU-D-II-(V)-(H)-BCA-4 ]

Time : Three Hours]

[Maximum Marks : 75

**Note :** Candidates are required to give their answers in their own words as far as practicable. Attempt **any five** questions in all. All the questions are of equal value.

1. (a) What is ADT ? Discuss some ADT with suitable example.

   (b) What is algorithm ? Discuss the role of algorithm in data structure.

2. (a) What is Linear data structure ? Discuss with some suitable example.

(b)  What is STACK ? Write a function using C-language PUSH, POP operation of stack.

3.  (a)  What is circular queue ? Advantages over simple queue discuss.

(b)  Write a function to insert a number in circular queue.

4.  (a)  What is single linked list ?

(b)  Discuss advantages of linked list.

5.  (a)  What is Tree ? Discuss the types of Tree.

(b)  Construct a Binary Tree for in-order 4, 7, 8, 5, 1, 6, 9, 3

6.  (a)  Define polish notations Infix, Postfix and prefix.

(b)  Input expression (A-B/C)*(A/K-L) convert into prefix and postfix notation.

7.  (a)  Write a function to count the nodes of Binary Tree.

(b)  What is GRAPH ? Discuss the types of Graph.

8. (a) Write the difference between Linear and non-linear data structure.

(b) Write the difference between queue and doubly queue.

9. (a) What is AUTOCAD ? Write the features of AUTOCAD.

(b) Writer the steps to design a building layout and interior design.

10. Write short notes on **any five** of the followings :

(a) Hash Table

(b) DFS

(c) Binary Search

(d) Heap Sort

(e) Radix Sort

(f) Quick Sort

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