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(20222)   Roll No.

B.C.A.-III Sem.

18014 (CV-III)

B.C.A. Examination, Dec.-2021

BUSINESS ECONOMICS

(BCA-304)

Time : 1½ Hours | *|Maximum Marks : 75*

Note : Attempt questions from **all** sections as per instructions.

Section-A

(Very Short Answer Questions)

Note : Attempt any **two** questions. Each question carries 7.5 marks. Very Short Answer is required not exceeding 75 words.   2×7.5=15

1. What do you understand by elasticity of demand ?

2. What is perfect competition?

3. Define profit maximization.

4. Define Fiscal Policy.

5. Define the objectives of W.T.O.

Section-B

(Short Answer Questions)

Note : Answer any **one** question out of the following three questions. Each question carries 15 marks. Short answer is required not exceeding 200 words.   1×15=15

6. Discuss the scope of Business Economics.

7. What are the various types of Internal Economics available to a firm? Discuss.

8. Explain the price determination under perfect competition.

Section-C

(Long Answer Questions)

Note : Attempt any **two** questions out of the following five questions. Each question carries 22.5 marks. Answer is required in detail.   2×22.5=45

9. Explain the anomalies in India's Tax Policy.

10. What are the various sources of Foreign capital flows in India?

11. What is perfect competition? Discuss how price is determined under perfect competition.

12. Explain the classifications of Market.

13. Discuss the various methods of measuring National Income.

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BCA-III Sem.

18013 (CV-III)

B.C.A. Examination, Dec.-2021

COMPUTER ARCHITECTURE AND

ASSEMBLY LANGUAGE

(BCA-303)

Time : 1½ Hours]   *[Maximum Marks : 75*

Note : Attempt questions from **all** sections as per instructions.

Section- A

Note : Attempt any **two** questions. Each question carries 7.5 marks.

2×7.5=15

1. Define the Computer Registers.

P.T.O.

2. Differentiate between Micro-instruction and micro program.

3. What is the advantage of using Booth Algorithm?

4. What is cache memory? Describe its operations in brief.

5. Convert the following into reverse polish notation.

A*B+C

Section - B

Note: Attempt any **one** question. Each question carries 15 marks. 1×15=15

6. Differentiate between direct and indirect addressing with an example.

7. Discuss basic computer organization. How is it different from computer architecture.

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8. Explain subroutine in assembly language.

Section - C

Note: Attempt any **two** questions. Each question carries 22.5 marks. $2 \times 22.5 = 45$

9. What is Booth algorithm? Explain it in detail. Multiply 24 and -7 using Booth algorithm.

10. Describe Direct Memory Access (DMA) Explain its functioning of DMA transfer with the help of diagram.

11. What is Priority Interrupt? Explain polling and Daisy chaining Priority.

12. What do you mean by Input-output processor (IOP)? Explain with the help of block diagram.

13. Write short note on:

    (a) RISC/CISC

    (b) Array Processor

    (c) Parallel Processor

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BCA-III Sem.

18012 (CV-III)

B.C.A. Examination, Dec.-2021

DATA STRUCTURE USING C AND C++

[BCA-302]

Time : 1½ Hours]   *[Maximum Marks : 75*

Note : Attempt questions from **all** Sections

as per instructions.

Section-A

(Very Short Answer Type Questions)

Note : Attempt any **two** questions. Each

question carry **7.5** marks.

$$2 \times 7.5 = 15$$

1. What is hashing?

2. What is Binary Tree?

3. What is deque?

4. What is analysis of algorithm?

P.T.O.

5. Explain principle of Recursion?

Section-B

(Short Answer Type Questions)

Note : Attempt any **one** out of the following

three questions. Each question carry

15 marks. $1 \times 15 = 15$

6. What is linked list? Explain with suitable

example and give an algorithm for insert

an element.

7. Explain heap sort with suitable example.

8. Define and explain the stack data

structure with suitable example.

Section-C

(Long Answer Type Questions)

Note : Attempt any **two** questions out of

the following five questions. Each

question carry **22.5** marks.

$$2 \times 22.5 = 45$$

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9. What is Binary Tree? Explain it. The following binary tree has the inorder and preorder traversal. Draw the tree and give the postorder traversal. Write algorithm for the same.

Inorder- ABCEDFJGIH

Preorder- JCBADEFIGH

10. Explain Merge sort sorting algorithm and show step by step procedure to sort the data.

11. Explain Binary search and linear search? Give the supportive example for both.

12. (a) What is Multi dimensional Array? Explain with example.

(b) Write the step by step for following expression.

R|D−x * (G/E * (A+B) + D−E * (Y−F)) + S*J

13. (a) Why doubly linked list is better than linked list? Justify it with example.

(b) What is threaded Binary tree? Explain it with suitable example.

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B.C.A.-III Sem.

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B.C.A. Examination, Dec.-2021

ELEMENTS OF STATISTICS

(BCA-305)

Time : 1½ Hours]   *[Maximum Marks : 75*

Note : Attempt questions from **all** sections as per instructions.

Section-A

(Very Short Answer Questions)

Note : Attempt any **two** questions. Each question carries 7.5 marks. Very Short Answer is required not exceeding 75 words.   2×7.5=15

1. Define Discrete and continuous variables.

2. Discuss in brief geometric mean along with its merits and demerits.

3. Define partition values? What purpose do partition values serve?

P.T.O.

4. State addition theorem of probability for three events.

5. Distinguish between defects and defectives.

Section-B

(Short Answer Questions)

Note : Answer any **one** question out of the following three questions. Each question carry 15 marks. Short answer is required not exceeding 200 words.   1×15=15

6. What is statistical average or central tendency? Discuss the uses of all measure of central tendency.

7. What is dispersion/Variability? Explain various methods of measuring dispersion along with their merits and demerits?

8. Define combinations and permutations. How many baseball teams are possible of nine members among twelve boys, without regard to the position played by each member?

Section-C

(Detailed Answer Questions)

Note : Attempt any **two** questions out of

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the following five questions. Each question carry 22.5 marks. Answer is required in detail. $2 \times 22.5 = 45$

9. Find the mean, median and mode wage of the following distribution.

Wages (in Rs.)	No. of labourers
20-30	3
30-40	5
40-50	20
50-60	10
60-70	5

10. A consumer affairs agency wants to check the average weight and standard deviation in weight of a new product on the Market. The weights (in grams) of these items are as follows:

Class limits	Frequency
74-77	3
77-80	6
80-83	9
83-86	3
86-89	4

11. (i) Define Mutually exclusive events and Independent events.

(ii) From a group of 3 Indians, 4 Pakistanis, and 5 Americans a subcommittee of four people is selected at random. Find the probability that the sub-committee will consist of

(a) 2 Indians and 2 Pakistanis

(b) 1 Indian, 1 Pakistani and 2 Americans

12. (i) Define Classical Definition of Probability? What are its limitations?

(ii) A can hit a target 3 times in 5 shots, B 2 times in 5 shots, and C 3 times in 4 shots. They fire a volley. What is the probability of hitting 2 shots?

13. Distinguish between process control and product control. Explain the construction and operation of control chart for number of defective.

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BCA-III Sem.

18011 (CV-III)

B.C.A. Examination, Dec.-2021

Object Oriented Programming

Using C++

(BCA-301)

Time : 1½ Hours]   [Maximum Marks : 75

Note : Attempt questions from **all** Sections as per Instructions.

Section-A

Note : Attempt any **two** parts. Each part carries 7.5 marks.   2×7.5=15

1. (a) Differentiate between << & >> operators.

   (b) What is the difference between structured and an object-oriented language?

(c) What is the difference between high level and a low-level language?

(d) What is a class?

(e) What is the syntax of it statement?

Section-B

Note : Attempt any **one** question. Each question carries 15 marks. 1×15=15

2. Define classes and objects. Explain the concept of base and derived class using an example.

3. Explain various Data Types used in C?

4. To check a number or a string is palindrome or not.

Section-C

Note : Attempt any **two** questions. Each question carries 22.5 marks.

2×22.5=45

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5. (a) Define Array and its types. Explain one dimensional Array?

   (b) WAP to compare two strings.

6. WAP to print the following pattern:

```
* * * * * *

* * * * *

* * * *

* *

*
```

7. Define algorithm and flowchart. Write an algorithm to check whether a given number is prime or not? Draw its flowchart as well. https://www.ccsustudy.com

8. (a) Define user defined functions and write the benefits of using user defined functions.

   (b) Write a program in C to find the sum of the series $1 + 2 + 3 + 4 \ldots \ldots n$ terms?

9. (a) What is Constructor? Explain various types of constructor with examples.

   (b) Explain the concept of reusability with example.