Enrollment No.....

Bachelor of Computer Application
Third Semester Main Examination, December-2021
Digital Computer Electronics [BCA303T]

Time: 3:00 Hrs **Max Marks 50**

Note : Attempt all questions. All questions carry equal marks.

Q.1 (a) Explain De-Morgan's theorem.
(b) Describe half adder
(c) Define syschornoun counter

Q.2 (a) State the necessity of multiplexer.
(b) Write Excitation table of D flip flop.
(c) Draw the block diagram of programmable logic array

Q.3 (a) Convert the following
(i) $(5C7)_{16} = ()_{10}$
(ii) $(2598)_{10} = ()_{16}$
(b) Draw the symbol and write logic expression and truth table of the two input universal gates.
(c) SRAM with DRAM memory.

Q.4 (a) Minimize the following expression using K= Map
$f(P, Q, R, S) = \sum_m(0,1,5,7,8,9,12,13,15)$
(b) Convert Binary to decimal.
(i) 01111111
(ii) 00110110
(c) Describe excess -3 code

Q.5 (a) Describe the operation of TTL logic circuit.
(b) Differentiate multiplexer and DE multiplexer.
(c) Draw the block diagram and write the truth table of half subtractor

Enrollment No.....

Bachelor of Computer Application
Third Semester Main Examination, December-2021
Accounting & Financial Management [BCA304T]

Time: 3:00 Hrs **Max Marks 40**

Note : Attempt all questions. All questions carry equal marks.

Q.1 (a) Give the meaning and advantages of book keeping.
(b) What is accounting equation.
(c) Sumer commenced his business of 1th jaunary 2019 with 50,000/- is cash and 8000/- in goods other transaction for the month of January are as following:-
Jan 1 - Sold goods to surrender Rs. 4.050.
Jan 4 - Purchased furniture for the business Rs. 3,800
Jan 5 - Purchased vehicle for the business 28,000.
Jan 6 - Sold goods to Sunil for cash Rs. 6,000.
Jan 9 - Purchased good from Anand Rs. 24,000.
Journalizes the above transaction in journal.

Q.2 (a) Write the name of subsidiary books.

(b) What is cash disscount.

(c) Distinguish between cash book & cash account.

Q.3 (a) Is trail balance a conclusing proof of accuracy of ledger.
(b) What is the objective of final accounts.
(c) From the following details and additional information prepare trading account & determine profit

	Dr. (Rs)	Cr. (Rs)
Opening stock	55,700	-
Purchases	1,38,160	-
Sales	1,52,840	
Purchase Return	3,900	-
Sales Return	5,040	-
Wages	400	-
Import Duty	2,520	-
Freight	4000	-
Octroi	200	-

Additional information – (i) Credit purchase of 12,000 have been incuuded in stocks but not recorded
(ii) Goods worth 1500 were with drawn of private use.

(iii) Goods of 500 were given in charity

(iv) Closing stock valued at 86,800Rs.

Q.4 (a) What is Cash flow statement.

(b) State the different types of Branches.

(C) On 1st January 2013 a machine was purchased for 80000/- Rate of depreciation is 10% per annum prepase machine account for there years when depreciation is charged under fixed installment method

Q.5 (a) What is replacement cost.

(b) Calculate the amount of sales if –

Manufacturing cost	1,20,000
Closing stock of finished goods	3,00,000
Opening stock of finished goods	2,00,000
Selling expenses	80,000
profit 20% on sale	

(c) What is work in Progress?

Enrollment No.....

Bachelor of Computer Application

Third Semester Main Examination, December-2021

Data Structure Using C++ [BCA305T]

Time: 3:00 Hrs **Max Marks 50**

Note : Attempt all questions. All questions carry equal marks.

Q.1 Describe Data structure? Write difference between primitive data structure and non primitive data structure.

Or

What is Array? mention its proportion. Write a program to store records of 100 student using array.

Q.2 Write Application of stacks. Write a program to perform push and pop operation on stack using Array.

Or

Write a short note on following with example.

(a) Prefix (b) Postfix (c) Infix

Q.3 Write a short note on Queue. Write a program implement Enquire and Deqnueve.

Or

Difference between LIFO and FIFO. Write a program for insertion, deletion operation of circular Queue using array.

Q.4 What is linked list. Explain types of linked list.

Or

(a) What is sorting? Write a program to sort in linked list.

(b) What searching? Write a program to search in linked list.

Q.5 Define Binary tree with syntax. Write the operation to be performed on binary tree.

Or

(a) What is Graph. Give syntax write its application.

(b) Define balanced tree with syntax.

Enrollment No.....

Bachelor of Computer Application
Third Semester Main Examination, December-2021
Communicational Skills [BCA306T]

Time: 3:00 Hrs **Max Marks 20**

Note : Attempt all questions.
All questions carry equal marks.

Q.1 How can one make communication more effective?

OR

What do you understand by Communication skills? Explain communication process.

Q.2 Explain reading comprehension? What do you understand by it .

OR

Explain non verbal communication in detail.

Q.3 How do you face interview? Write the process of interview.

OR

Explain report writing.

Q.4 Discuss various styles of resume or formats of resume.

OR

Write an application for the post of software engineer.

Q.5 Write different phases of seminar.

OR

Explain profit of a good speaker.

Enrollment No.....

Bachelor of Computer Application
Third Semester Main Examination, December-2021
Mathematics-III [BCA301T]

Time: 3:00 Hrs **Max Marks 40**

Note: (i) Attempt all questions.
(ii) All questions carry equal mark.
(iii) Attempt any two part of each question.

Q.1 (a) Solve $\frac{dy}{dx} + 2xy = \frac{4x^2}{1+x^2}$ (b) Solve $P^2 + 2Py\cot x - y^2 = 0$

(c) Solve $p^2 - 5p + 6 = 0$

Q.2 (a) Solve $\frac{d^2y}{dx^2} - \frac{3dy}{dx} - 4y = 0$ (b) Solve $\frac{d^2y}{dx^2} + \frac{4dy}{dx} + 5y = e^{2x}$

(c) Solve $\frac{dx}{yz} = \frac{dy}{zx} = \frac{dz}{xy}$

Q.3 (a) Solve $p^2 - 7p + 12 = 0$ (b) Solve $(D^3 - 6D^2 + 11D - 6)y = e^{-3x}$

(c) Solve $\frac{dx}{x} = \frac{dy}{y} = \frac{dz}{z}$

Q.4 (a) Find the partial differential equvation by eliminating a and b from the relation $2z = \frac{x^2}{a^2} + = \frac{y^2}{b^2}$

(b) Solve by Charpit method $z = p^2x + q^2y$

(c) Find the solution in series by Frobenius method .

$(1-x^2) - \frac{d^2y}{dx^2} - 2x\frac{dy}{dx} + n(n+1)y = 0$

Q.5 (a) Solve the intial value problem $(D^2+2D+2)y=0$

(b) Apply picarel's method to find the third approximation of the solution of the equation

$$\frac{dy}{dx} = x + y^2, y(0) = 0$$

(c) Solve

$$\frac{dy}{dx} + 7x - y = 0, \frac{dy}{dx} + 2x + 5y = 0$$

Enrollment No.....

Bachelor of Computer Application
Third Semester Main Examination, December 2021
Object Oriented Programming Through C++ [BCA302T]

Time: 3:00 Hrs **Max Marks 50**

Note : Attempt all questions. All questions carry equal marks.

Q.1 What do you mean by object oriented programming ? Explain its advantages ?

OR

Write notes on -
(i) Variables
(ii) Integers
(iii) Class

Q.2 What is variables ? Define its types ? with example .

OR

Explain following with syntax -
(i) For loop
(ii) While loop
(iii) Switch case

Q.3 explain array with suitable example ? .

OR

Write notes on -
(i) Constructor
(ii) Destructor
(iii) Function call

Q.4 Define operator in c++ and explain there uses ?

OR

Define following :
(i) Polymorphism .
(ii) Friend functions .
(iii) String handling functions.

Q.5 What is data encapsulation? Explain with suitable example ?

OR

Explain following :
(i) Data templates.
(ii) Pointer.
(iv) Prototype.