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NI—20—2023

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (First Year) (First Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(CBCS/Revised Pattern)

ELEMENTS OF STATISTICS

(Wednesday, 6-12-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

(*iv*) Non-programmable calculator is allowed.

(*v*) Each question carries equal marks.

1. Attempt any *five* of the following : 15

(*a*) Write functions of Statistics.

(*b*) Write scope of statistics in field of industry.

(*c*) Define mean, median and mode.

(*d*) Explain variations.

(*e*) Explain multiple correlation.

(*f*) Explain random experiment.

(*g*) If A is any event and A' is complementary event of A, then prove that :

$$P(A) = 1 - P(A').$$

P.T.O.

2. Attempt any *three* of the following : 15

(*a*) Explain data in detail.

(*b*) Write disadvantages of Statistics.

(*c*) Explain Statistics.

(*d*) Calculate mean from the following data :

Class	**Frequency**
20—25	12
25—30	19
30—35	22
35—40	16
40—45	11
45—50	7

(*e*) Calculate median from the following data :

Weight	**No. of Students**
37	8
25	10
28	15
17	11
45	9
54	6

3. Attempt any *three* of the following : 15

(*a*) Explain scatters diagram of correlation.

(*b*) Write merits and demerits of mode.

(*c*) Explain Variance.

(*d*) Calculate standard deviation from the following data :

X	**F**
45	6
17	11
31	18
19	13
14	10
20	4

(*e*) Find variance from the following data :

Score	**Frequency**
0—15	11
15—30	20
30—45	26
45—60	13
60—75	9

P.T.O.

4. Attempt any *three* of the following : 15

(*a*) Explain Positive and Negative correlation.

(*b*) Explain regression in detail.

(*c*) Calculate coefficient of correlation from the following data :

X	**Y**
3	2
5	4
7	8
9	12
11	14

(*d*) Obtain the regression equation of X on Y from the following data :

X	**Y**
2	4
3	7
5	6
9	3
6	5

(*e*) Find means of X and Y from the two regression line is :

$$7X - 2Y + 4 = 0;$$

$$4X + 8Y - 4 = 0.$$

5. Attempt any *three* of the following : 15

(*a*) Explain probability.

(*b*) Explain permutations and combinations in short.

(*c*) If A and B are any *two* not mutually exclusive event, then prove that :

$$P(A \cup B) = P(A) + P(B) - P(A \cap B).$$

(*d*) What is the probability of occurring 53 Sunday's in a non-leap year.

(*e*) If one card is drawn from a pack of 52 cards, then find the probability that it is a queen or heart.

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NI—01—2023

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (First Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(CBCS/Revised Pattern)

COMPUTER APPLICATION

Paper-BCA-101

(Fundamentals of Computer Science and Information Technology)

(Wednesday, 29-11-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

(*iv*) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) What is Computer ? Explain in brief Basic Computer Organization.

(*b*) Write a short note on Client and Server.

(*c*) Describe Joystick in detail.

P.T.O.

(*d*) Write a short note on Cache Memory.

(*e*) Explain in brief Compact Disk.

(*f*) Explain Workstations in brief.

(*g*) Explain types of Web Browser.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Describe in detail characteristics of Computer.

(*b*) Explain the generations of computer.

(*c*) Explain RAM and ROM in detail.

(*d*) Explain in detail the working of Dot Matrix Printer.

(*e*) Explain in detail the Minicomputer.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain in detail Keyboard and Mouse.

(*b*) Explain in brief the different types of Monitors.

(*c*) Explain in detail the working of laser printer.

(*d*) Explain in detail USB Flash Drive.

(*e*) What is E-Mail ? Explain.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) What is Operating System ? Explain types of Operating System.

(*b*) Explain Windows Operating System.

(*c*) Explain in detail Hard Disk Drive.

(*d*) What is Network ? Explain the types of Network.

(*e*) Describe in detail the Data Transmission Modes.

5. Write short notes on any *three* of the following (**5** marks each) : 15

(*a*) Memory Card

(*b*) Biometric Devices

(*c*) File Transfer Protocol

(*d*) Web Browser

(*e*) Digital Versatile Disk.

This question paper contains **3** printed pages]

NI—07—2023

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (First Year) (First Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(CBCS/Revised Pattern)

COMPUTER APPLICATION

(Office Automation)

(Friday, 01-12-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data if required.

1. Attempt any *five* of the following :

(*a*) Insert Tab

(*b*) Custom dictionary

(*c*) Slide show

(*d*) Paragraph tab

(*e*) Find and replace

(*f*) View button

(*g*) Slide transition.

P.T.O.

2. Attempt any *three* of the following :

(*a*) Explain in detail opening screen of MS-Word.

(*b*) Explain print dialog box in detail.

(*c*) What is chart ? Explain types of chart in detail.

(*d*) Explain adding audio and video on slide.

(*e*) Describe creating database in MS-Access in detail.

3. Attempt any *three* of the following :

(*a*) Discuss about editing options in MS-Word.

(*b*) How to create index in MS-Word.

(*c*) What is formula ? Explain basic functions in detail with example.

(*d*) Explain reports in Ms-Access in detail.

(*e*) Explain custom animation effect in detail.

4. Attempt any *three* of the following :

(*a*) Explain opening screen of MS-Excel.

(*b*) Explain mail merge in detail.

(*c*) Explain advantages of Ms-Access.

(*d*) Explain row height and merging cell.

(*e*) Explain string function.

5. Attempt any *three* of the following :

(*a*) Explain Excel mathematical function

(*b*) Explain data validation in detail

(*c*) Explain conditional formatting

(*d*) Explain procedure to creating forms in Ms-Access

(*e*) Explain style tab

(*f*) Describe the use of slideshow in MS-power point.

This question paper contains **3** printed pages]

NI—13—2023

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (First Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(CBCS/Revised Pattern)

COMPUTER APPLICATION

(Programming in C)

(Monday, 4-12-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

(*iv*) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) Explain the structure of C program with example.

(*b*) What is flowchart ? Explain the basic symbol of flowchart.

(*c*) Explain pointer with suitable example.

P.T.O.

(*d*) Explain if-else statement with example.

(*e*) Explain functions in C.

(*f*) Explain recursion.

(*g*) Explain switch statement with example.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain different types of operators available in C.

(*b*) Write a program to print Fibonacci series.

(*c*) Explain various data types in C.

(*d*) What is array ? Explain different types of array.

(*e*) Explain formatted I/O statements in C.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain do-while loop with example.

(*b*) Explain user defined functions.

(*c*) What is structure ? Explain array of structure with example.

(*d*) Write a program to calculate sum of ten numbers using array.

(*e*) Explain two-dimensional arrays with example.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain user defined functions.

(*b*) Explain array declaration and initialization.

(*c*) Explain if-else ladder statement with example.

(*d*) Write a program to do the arithmetic operations on user choice using switch.

(*e*) Explain unformatted I/O statements.

5. Write short notes on any *three* of the following (**5** marks each) : 15

(*a*) Unions

(*b*) Tokens in C

(*c*) Passing array to function

(*d*) Standard string library functions

(*e*) Compiler and interpreter.