

(i) Printed Pages : 4 Roll No.

(ii) Questions : 7 Sub. Code :

0	9	1	1
---	---	---	---

Exam. Code :

0	0	2	7
---	---	---	---

Bachelor of Computer Applications 1st Semester

(2123)

ENGLISH (Compulsory)–A

Paper : BCA-16-101

Time Allowed : Three Hours] [Maximum Marks : 65

Note :—Attempt *all* parts of a question together.

SECTION—A

1. Explain how Baron Hausberg was both a millionaire model and a model millionaire ?

OR

How has Edgar Allan Poe presented a study in psychology in the story 'The Tell Tale Heart' ? 10

2. How does Mahatma Gandhi bring out the power and efficacy of prayer in his essay 'Prayer' ?

OR

How did J.L. Nehru like, as a child, the behaviour of English towards Indians as described in 'My Childhood'. 10

3. (a) Give Summary of the poem :—

On the Morning of Christ's Nativity.

OR

Sigh No More, Ladies.

5

(b) Give short answers of any **TWO** of following questions :—

(i) What does the poet say about the eyes of his mother as shown in picture ?

(On Receipt of My Mother's Picture)

(ii) What are the poet's views about hope in human life ?

(When I Consider Life).

(iii) How would objects of Nature act as Lucy's guides and teachers in poem 'Lucy' ?

5

(c) Explain with Reference to the context :

Faithful remembrances of one so dear,

Oh welcome guest, though unexpected here !

Who bidd'st me honour with an artless song,

Affectionate a mother lost so long.

OR

Only with speeches fair

She woos the gentle air

To hide her guilty front with innocent snow,

And on her naked shame,

Pollute with sinful blame.

5

SECTION—B

4. Change the form of any *five* of the following words as instructed and use the changed form in sentences of your own :—

Bold (Adverb), Solve (Noun), Long (Noun), Examination (Verb), Organisation (Verb), Clear (Adverb), Fame (Adjective), Power (Adjective). 10

5. Use any *five* of the following *Words and Idioms* in sentences :—

As a Rule, Extinguish, To Cut off, Apology, Trifles, Commitment, Tale, Childhood. 10

6. Translate the following Passage into English :—

पुस्तकें भी एक वरदान है। यह दुःख में, सुख में, बचपन में, जवानी में और बुढ़ापे में हर जगह हमारा साथ देती हैं। जब कष्टों और मुसीबतों के बादल हमारे जीवन को अंधकारमय बना देते हैं तब यह रोशनी की मीनार की तरह हमें रास्ता दिखाती हैं। पुस्तकें वे मित्र हैं जो जरूरत के समय हमारा साथ देती हैं। यह हमारा मनोरंजन भी करती हैं और हमारा ज्ञान भी बढ़ाती हैं।

OR

ਪੁਸਤਕਾਂ ਵੀ ਇੱਕ ਵਰਦਾਨ ਹਨ। ਇਹ ਦੁੱਖ ਵਿੱਚ, ਸੁੱਖ ਵਿੱਚ, ਬਚਪਨ ਵਿੱਚ, ਜਵਾਨੀ ਵਿੱਚ ਅਤੇ ਬੁਢਾਪੇ ਵਿੱਚ ਹਰ ਥਾਂ ਸਾਡਾ ਸਾਥ ਦਿੰਦੀਆਂ ਹਨ। ਜਦ ਕਸ਼ਟ ਅਤੇ ਮੁਸੀਬਤਾਂ ਦੇ ਬਾਦਲ ਸਾਡੇ ਜੀਵਨ ਨੂੰ ਅੰਧਕਾਰਮਈ ਬਣਾ ਦਿੰਦੇ ਹਨ ਤਾਂ ਇਹ ਰੋਸ਼ਨੀ ਦੀ ਤਰ੍ਹਾਂ ਸਾਨੂੰ ਰਸਤਾ ਦੱਸਦੀਆਂ ਹਨ। ਪੁਸਤਕਾਂ ਉਹ ਮਿੱਤਰ ਹਨ ਜੋ ਜ਼ਰੂਰਤ ਦੇ ਵੇਲੇ ਸਾਡਾ ਸਾਥ ਦਿੰਦੀਆਂ ਹਨ। ਇਹ ਸਾਡਾ ਮਨੋਰੰਜਨ ਵੀ ਕਰਦੀਆਂ ਹਨ ਅਤੇ ਗਿਆਨ ਵੀ ਵਧਾਉਣੀਆਂ ਹਨ।

OR

(For Foreign Students)

Draft Paraphrasing of following passage :—

Money is our madness, our vast collective madness. And of course, if the multitude is mad the individual carries his own grain of insanity around him. We quail, money makes us quail.

5

7. Write a letter to the Editor of a newspaper expressing your views on 'Save Girl Child' initiative of Govt. of India.

OR

Draft a letter to the Deputy Commissioner against increasing incidents of eve-teasing in your city.

5

(i) Printed Pages : 4 Roll No.

(ii) Questions : 9 Sub. Code :

0	9	1	2
---	---	---	---

Exam. Code :

0	0	2	7
---	---	---	---

Bachelor of Computer Applications 1st Semester
(2123)

FUNDAMENTALS OF MATHEMATICAL STATISTICS

Paper : BCA-16-102

Time Allowed : Three Hours] [Maximum Marks : 65

Note :—Attempt FIVE questions in all including Question No. 9 (Unit-V) which is compulsory and selecting ONE question from each unit I-IV. Use of Non-programmable calculator is allowed.

UNIT—I

1. (a) Define Statistics. Explain the various stages involved in statistical investigation.
(b) Explain the importance of graphic presentation of statistics. What are the various advantages and defects ? 6,7
2. (a) Differentiate among Arithmetic, Geometric and Harmonic Mean in detail.

- (b) The mean actual salaries paid to all employees was Rs. 5,000. The mean actual salaries paid to male and female employees were Rs. 5,200 and Rs. 4,200 respectively. Determine the percentage of males and females employed by the company. 6,7

UNIT—II

3. (a) What do you mean by Partition Values ? In what respect they are different from median ? Explain any three partition values with their formulas.
- (b) Calculate the Median, Quartiles and Sixth decile from the data :

Marks less than	80	70	60	50	40	30	20	10
No. of candidates	100	90	80	60	32	20	13	5

6,7

4. (a) Calculate Semi-inter quartile range and Quartile coefficient from the data :

Age (Years)	20	30	40	50	60	70	80
No. of Members	3	61	132	153	140	51	3

- (b) Calculate the Standard Deviation of the following two series. Which shows greater variation ?

Series A	192	288	236	229	184	260	348	291	330	243
Series B	83	87	93	109	124	126	126	101	102	108

6,7

UNIT—III

5. (a) What is a Scatter Diagram ? How does it help us in studying the correlation between two variables, in respect of both nature and extent ?
- (b) Calculate Karl Pearson's coefficient from the following data :

X	23	27	28	28	29	30	31	33
Y	18	20	20	27	21	29	27	29

6,7

6. (a) Explain probable error, standard error and coefficient of determination.
- (b) The following table shows the marks of 12 students in Mathematics and Physics. Find rank correlation coefficient.

Students	Marks in Mathematics	Marks in Physics
A	65	30
B	40	55
C	35	68
D	75	28
E	65	76
F	80	25
G	35	80
H	20	85
I	85	20
J	65	35
K	65	45
L	33	65

6,7

UNIT—IV

7. (a) Explain the method of least squares for estimating the Regression lines.
- (b) The following table shows the age (X) and blood pressure (Y) of 8 persons :

X	52	63	45	36	72	65	47	25
Y	62	53	51	25	79	43	60	33

Obtain the two regression equations. Also find the expected blood pressure of a person who is 49 years old. 6,7

8. (a) Explain Regression Coefficients and its properties.
- (b) Let $X = 9Y + 11$ and $Y = kX + 6$ be the lines of regression of X on Y and Y on X respectively. Prove that $0 \leq 9k \leq 1$. If $k = \frac{1}{18}$, find the value of correlation coefficient and means of the variables. 6,7

UNIT—V

9. Explain the following :—
- (a) Bivariate Frequency Distribution. 2
 - (b) Tabulation of data. 2
 - (c) Percentile range. 2
 - (d) Dispersion. List two characteristics of a good measure of dispersion. 3
 - (e) Objectives of regression analysis. 2
 - (f) Rank Correlation. 2

(i) Printed Pages : 3 Roll No.

(ii) Questions : 9 Sub. Code :

0	9	1	3
---	---	---	---

Exam. Code :

0	0	2	7
---	---	---	---

Bachelor of Computer Applications 1st Semester

(2123)

**COMPUTER FUNDAMENTALS AND
COMPUTING SOFTWARE**

Paper—BCA-16-103

Time Allowed : Three Hours] [Maximum Marks : 65

Note :— Candidate is required to attempt *five* questions in all including Question No. 9 (which is compulsory) and attempt remaining *four* questions by selecting *one* question from each Section.

SECTION—A

1. (a) Compare and contrast the characteristics and applications of microcomputers, minicomputers, mainframe computers, and supercomputers. 7
- (b) Define and differentiate between RAM, ROM, PROM, and EPROM. 6
2. (a) Define and compare different types of translators, such as interpreters, compilers, and assemblers. 7
- (b) Describe the input devices used in computer systems, such as keyboards; mice, and scanners. 6

SECTION—B

3. (a) Explain the purpose and functionality of several internal commands in DOS, such as DIR, MD, TYPE, VER and VOL. 7
- (b) Explain the booting sequence in DOS, highlighting the key steps involved in starting up a computer and launching the operating system. 6
4. (a) Discuss the significance of CONFIG.SYS and AUTOEXEC.BAT files in DOS. Explain their roles in system configuration and startup processes. 7
- (b) Discuss the various categories and subcategories within the Control Panel and provide examples of tasks that can be accomplished through the Control Panel. 6

SECTION—C

5. (a) Explain the process of renaming and deleting files within a word processing package. Discuss the precautions and considerations when performing these operations. 7
- (b) Discuss various ways to change document views and navigate quickly through a document, enhancing user productivity and efficiency. 6
6. (a) Explain how to format text using styles, format paragraphs, format characters, and use autoformatting. 7
- (b) Provide a step-by-step guide on creating a table of contents, indexes, and bibliographies within a document. 6

SECTION—D

7. (a) Describe the steps involved in opening and saving spreadsheet files. Discuss the importance of proper file management in spreadsheet work. 7
- (b) Discuss strategies to speed up data entry in spreadsheets, such as using the fill tool, fill series, and defining custom fill series. 6
8. (a) Describe the steps for sorting records in a spreadsheet. How can users efficiently organize data for analysis ? 7
- (b) Discuss the steps involved in creating a presentation using a presentation package. How can users structure and design their presentations effectively ? 6

(Compulsory Question)

9. (a) Explain macros in context of spreadsheet. 3
- (b) What is animation, and how is it incorporated into presentations ? 2
- (c) Explain the concept of cell referencing. 2
- (d) What are some common applications of computers ? 2
- (e) What is computer memory, and how is it measured ? 2
- (f) Give examples of memory storage devices. 2

(i) Printed Pages : 2 Roll No.

(ii) Questions : 9 Sub. Code :

0	9	1	4
---	---	---	---

Exam. Code :

0	0	2	7
---	---	---	---

Bachelor of Computer Applications 1st Semester

(2123)

PROBLEM SOLVING THROUGH C

Paper—BCA-16-104

Time Allowed : Three Hours] [Maximum Marks : 65

Note :—Candidate is required to attempt *five* questions in all including Question No. 9 (which is compulsory) and attempt remaining *four* questions by selecting *one* question from each Section.

SECTION—A

1. Discuss the significance of decision table and algorithm development in the programming process. Write the algorithm for generating Fibonacci series. 13
2. Write about various operators available in C language along with their hierarchy. Write about the structure of C program along with a sample code. 13

SECTION—B

3. Differentiate between a while and for loop. Write a program in C to compute factorial of a given number. 13

4. How are library functions different from user defined functions ? Explain various methods for parameter passing to functions with the help of suitable sample codes. 13

SECTION—C

5. Explain the concept of arrays of characters with an application. Write a C Program to search the element in an array. 13
6. Elaborate on various dynamic memory allocation functions along with their importance in C programming. 13

SECTION—D

7. Discuss various I/O operations from files. Write a C Program to read a text from a file and provide number of words in the same. 13
8. Explain the concept of string manipulation in C language highlighting the use of major string handling functions with example. 13

(Compulsory Question)

9. (a) How is array passed to a function ? 3
- (b) What is a pseudo code ? 2
- (c) Define debugging. 2
- (d) What is switch ? 2
- (e) Write about address operator. 2
- (f) What are arrays of structures ? 2