

- (i) Printed Pages: 3 Roll No. ....
- (ii) Questions : 7 Sub. Code : 

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- Exam. Code : 

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**Bachelor of Computer Applications 1<sup>st</sup> Semester  
(1129)**

**ENGLISH (Compulsory)—A  
Paper—BCA-16-101**

**Time Allowed : Three Hours] [Maximum Marks : 65**

**Note :— Attempt parts of the question together.**

**SECTION—A**

1. Write a note on the title of the story 'The Tell-Tale Heart'.  
Bring out its meaning and significance.

**OR**

Draw, in your own words, character sketch of Baron Hausberg  
in the story 'The Model Millionaire'. 10

2. How does Mahatma Gandhi dwell upon the need and value  
of Prayer ?

**OR**

What light does B.K. Nehru throw on the role of John F.  
Kennedy as national and world leader ? 10

3. (a) Give the summary of the poem :

On the Receipt of My Mother's Picture

**OR**

Lord Ullin's Daughter. 5

(b) Give short answers of any *two* of the following questions :

(i) What does the poet say about Nature at the birth of Christ ? (On the Morning of Christ's Nativity)

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

(iii) How were all plans of nature, to train and educate Lucy, upset ?

(iv) Give in brief, theme of the poem 'Sigh no more, Ladies'. 5

(c) Explain with reference to the context :

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.

**OR**

She dwelt among the untrodden ways  
Beside the springs of Dove  
A maid whom there were none to praise  
And very few to Love. 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 :

True (Noun), Examination (Verb), Tolerate (Adjective),  
Heavy (Adverb), Rich (Verb), Solve (Noun), Book (Adjective). 10

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

Maiden, Kindle, Rivulets, Tears and Tatters, Endeavour,  
Impromptu, On behalf of, Folklore. 10

6. Translate the following passage into English :

समाचार-पत्र पढ़ना अत्यंत आवश्यक है। समाचार-पत्रों के द्वारा हमें देश की तथा संसार की स्थिति के बारे में पता चलता है। विज्ञान, खेलों, व्यापार, साहित्य और विद्या के क्षेत्र में जो नई बातें हो रही हैं उनके बारे में भी समाचार-पत्र जानकारी देते हैं। ये प्रचार का एक शक्तिशाली साधन है। ये लोगों की आवाज़ है और इन द्वारा वे अपने विचार प्रकट करते हैं।

ਅਖਬਾਰ ਪੜਨਾ ਬਹੁਤ ਜ਼ਰੂਰੀ ਹੈ। ਅਖਬਾਰ ਰਾਹੀਂ ਸਾਨੂੰ ਦੇਸ਼ ਅਤੇ ਸੰਸਾਰ ਦੀ ਸਥਿਤੀ ਬਾਰੇ ਪਤਾ ਲੱਗਦਾ ਹੈ। ਸਾਇੰਸ, ਖੇਡਾਂ, ਵਪਾਰ, ਸਾਹਿਤ ਅਤੇ ਵਿਦਿਆ ਦੇ ਖੇਤਰ ਵਿੱਚ ਜੋ ਨਵੀਆਂ ਗੱਲਾਂ ਹੋ ਰਹੀਆਂ ਹਨ। ਉਨ੍ਹਾਂ ਬਾਰੇ ਵੀ ਅਖਬਾਰ ਸਾਨੂੰ ਦੱਸਦੇ ਹਨ। ਇਹ ਪ੍ਰਚਾਰ ਦਾ ਇੱਕ ਸ਼ਕਤੀਸ਼ਾਲੀ ਸਾਧਨ ਹਨ। ਇਹ ਲੋਕਾਂ ਦੀ ਆਵਾਜ਼ ਹਨ ਅਤੇ ਇਹਨਾਂ ਰਾਹੀਂ ਉਹ ਆਪਣੇ ਵਿਚਾਰ ਪ੍ਰਗਟ ਕਰਦੇ ਹਨ।

**OR**

**For Foreign Students**

Draft paraphrasing of the following passage :

I think I could turn and live with animals,  
They are so placid and self contained,  
I stand and look at them long and long.  
They do not sweat and whine about their condition.

5

7. Write a letter to the Editor of a newspaper expressing your views on how the standard of sports can be improved in India.

**OR**

Draft a letter to the Deputy Commissioner of your district complaining against the use of Loudspeakers in your town.

5

- (i) Printed Pages: 4 Roll No. ....
- (ii) Questions : 9 Sub. Code : 

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Exam. Code : 

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Bachelor of Computer Applications 1<sup>st</sup> Semester  
(1129)

**FUNDAMENTALS OF MATHEMATICAL STATISTICS**  
**Paper—BCA-16-102**

**Time Allowed : Three Hours] [Maximum Marks : 65**

**Note :—**Attempt any **ONE** question from each section.  
Section E is compulsory.

**SECTION—A**

1. (a) Define Statistics. Explain the various stages involved in statistical investigation. 6
- (b) Define Weighted Arithmetic Mean. Calculate Weighted Arithmetic Mean of marks obtained by the students in different subjects :

Subject	A	B	C	D	E	F
Marks	81	76	74	58	70	73
Weights	2	3	6	7	3	7

2. (a) Define Secondary Data. Discuss the criteria for evaluating secondary data. 6

- (b) Explain the use of Geometric Mean as an average. Given the following frequency distribution, calculate the Geometric Mean :

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	30	26	14	8	7	6	5

7

### SECTION—B

3. What do you mean by partition value ? Define Quartiles, Quintiles, Octiles, Deciles and Percentiles. Calculate  $Q_3$ ,  $Qu_2$ ,  $O_5$ ,  $D_9$ ,  $P_{81}$  from the following information concerning marks obtained by 10 students.

Marks	44	47	55	15	73	13	51	88	21	39
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13

4. Define variance, standard deviation and coefficient of variation as measure of dispersion. The following data gives the mean and variance of the height of boys and girls studying in the college. Find :

- (i) The standard deviation of the height of boys and girls taken together, and

- (ii) Which group has more variability in heights ?

	Boys	Girls
Number	400	100
Average Height	68 inches	65 inches
Variance	9 (inches) <sup>2</sup>	4 (inches) <sup>2</sup>

13

**SECTION—C**

5. (a) Define correlation and its types on the basis of direction of change, changes in proportion and number of variables. 6

- (b) Calculate rank correlation between marks in Computers and Statistics, as given below :

Computer :	15	10	20	28	12	10	16	18
Statistics :	16	14	10	12	11	15	18	12

7

6. Define Karl Pearson Coefficient of correlation. State its characteristics. Find out Karl Pearson Coefficient of correlation between given data :

X	23	27	28	29	30	31	33	35	36	39
Y	18	22	23	24	25	26	28	29	20	32

13

**SECTION—D**

7. (a) Equations of two lines of regression are  $3X + 2Y = 21$ ,  $4X + Y = 23$ . Find out coefficient of correlation. 6

- (b) Define Regression. Why are there in general, two lines of regression ? Explain its usage and limitations. 7

8. (a) Define regression coefficients and prove that the coefficient of correlation is the geometric mean between regression coefficients. 6

- (b) From the following data, find out regression equation of  $y$  on  $x$ . Hence predict the value of  $Y$  for  $X = 3.5$  :

X	1	2	4	5	7	6	10	13
Y	10	12	14	15	20	25	30	26

7

**SECTION—E**

9. Answer the following question :—
- (i) Define frequency polygon. 2
  - (ii) Distinguish between geometric mean and harmonic mean. 2
  - (iii) Define Scatter diagram. Mention its uses. 2
  - (iv) What do you understand by dispersion ? List two characteristics of a good measure of dispersion. 2
  - (v) Define range. Write merits and limitations of range. 2
  - (vi) A student calculates the coefficient of correlation ( $r$ ) as 0.7 when the size of sample ( $n$ ) is 5 and concludes that coefficient of correlation ( $r$ ) is highly significant. Is he correct ? Justify your answer. 3

- (i) Printed Pages: 3 Roll No. ....
- (ii) Questions : 9 Sub. Code : 

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**Bachelor of Computer Applications 1<sup>st</sup> Semester  
(1129)**

**COMPUTER FUNDAMENTALS AND  
COMPUTING SOFTWARE**

**Paper—BCA-16-103**

**Time Allowed : Three Hours] [Maximum Marks : 65**

**Note :—** Candidates are 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) What do you mean by a generation of computer ? Explain the various generations of computer with the advantages and disadvantages of each. 6
- (b) Explain working principle of keyboard and laser printer in detail. 7
2. (a) What do you mean by software ? Explain and compare various types of software. 6
- (b) Write short note on : CD-RW and Flash Memory. 7

**SECTION—B**

3. Explain the following DOS commands with proper syntax and example :  
PATH, REN, TYPE, DIR, COPY, XCOPY, FIND, FORMAT, ATTRIB, CHKDSK, SYS, TREE, SCANDISK, CD. 13

4. Differentiate between DOS and WINDOWS operating system. Explain various components of WINDOWS Desktop. What is the significance of control panel ? 13

#### SECTION—C

5. What do you mean by word processor ? Write a step-by-step procedure to do each of the following activities using Word Processing software :
- (i) Replacing text
  - (ii) To check the spelling mistakes
  - (iii) Mail-Merge
  - (iv) Inserting table. 13
6. (a) Explain the following facilities of a word processor :
- (i) Format painter
  - (ii) Autocorrect and Autotext
  - (iii) Page setup. 6
- (b) Differentiate between table of content, index and bibliography. Write the steps to include table of content, index and bibliography. 7

#### SECTION—D

7. (a) What is a slide ? How can we apply transition and animation to a slide ? 6
- (b) What do you mean by conditional formatting ? Explain the steps to sort the records using conditional formatting in spread sheet package. 7

8. (a) Define macro. Write down the procedure to create record and run a macro in a spread sheet package. 6
- (b) Write a step-by-step procedure to create a simple presentation using the PowerPoint package whose slides include a title page (slide), a figure, bulleted text, a bar-graph and an organisation chart. 7

#### SECTION—E

9. (i) What is a template in any Word processor software ? 2
- (ii) Differentiate between absolute cell addressing and relative cell addressing. 2
- (iii) What is wildcard in DOS ? 2
- (iv) What is Recycle Bin ? 2
- (v) What do you mean by volatile memory ? Give example. 2
- (vi) Differentiate between bit, byte and word. 2
- (vii) Give the full form of the abbreviations : VLSI, UNIVAC. 1

(i) Printed Pages: 2 Roll No. ....  
(ii) Questions : 9 Sub. Code : 

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Exam. Code : 

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**Bachelor of Computer Applications 1<sup>st</sup> Semester**  
**(1129)**

**PROBLEM SOLVING THROUGH C**  
**Paper—BCA-16-104**

**Time Allowed : Three Hours] [Maximum Marks : 65**

**Note :—** Attempt *five* questions in all, selecting *one* question each from Units-I, II, III and IV. Unit-V is compulsory.

**UNIT—I**

1. (a) What is a decision table ? What are the components of a decision table ? Explain with the help of an example decision table. 6  
(b) Discuss different data types available in C language. 7
2. (a) Discuss arithmetic, relational and logical operators used in C language. Discuss the hierarchy among these operators. 6  
(b) What is a variable ? How is it different from a constant ? Discuss the rules to name variables. 7

**UNIT—II**

3. (a) What is the use of goto statement in a program ? Show with the help of an example. 6  
(b) Write a program in C language to convert an integer into binary. 7
4. (a) Discuss storage classes available in C language. 6  
(b) How to define a function ? Write a function to check whether given number is even or not. Use this function to print all even numbers from 1 to 100. 7

### UNIT—III

5. (a) Discuss call by value and call by reference methods of passing arguments to a function with the help of example code. 6
- (b) Write a program to search the smallest and the largest elements in an array. 7
6. (a) How to use malloc, calloc, realloc and free in a program ? Explain with the help of example code. 6
- (b) What is a pointer ? How to use pointers with single dimensional array ? Write a program to print all the elements in an array with the help of a pointer. 7

### UNIT—IV

7. (a) How to read and write strings in a C program ? Discuss any four string handling functions used in C language. 6
- (b) What is a structure ? How structures are different from arrays ? How to define and use structures in a program ? Explain with the help of example code. 7
8. (a) How to use structures with pointers ? Write a program to get information about students from user and store the information in structures. Now using pointers print the information of all the students on screen. 6
- (b) Write a program to get a string from user and store the string in a file. Now read the alternate characters in the string and print on screen. 7

### UNIT—V

9. (a) What is a keyword ? Give example. 2
- (b) What do you understand by character set of a language ? 2
- (c) What is a library function ? Give example. 2
- (d) What do you understand by function prototype ? Give example. 2
- (e) What is the difference between getch() and getche() ? 2
- (f) What is a union ? Give example. 3