Bachelor of Computer Applications Iˢᵗ Sem.

(2122)

ENGLISH

Paper : BCA-16-101

Time Allowed : Three Hours]   [Maximum Marks : 65

Note :— Attempt **ALL** questions.

SECTION—A

1. Justify the title of the story, "The Tell Tale Heart".

OR

Draw a character sketch of Hughie Erskine.   10

2. Describe the influences that shaped Jawahar Lal Nehru's personality.

OR

Write a note on the theme of the essay, John Fitzgerald Kennedy.   10

3. (a) Give summary of any **one** of the following poems :—

Lord ullin's Daughter

OR

On the Receipt of Mother's Picture.   5

(b) Answer any **two** of the following questions :—

    (i) What according to Balthazar is the attitude of lovers towards young ladies ?

    (ii) What was the state of Nature at the time of Christ's birth ?

    (iii) How does William Wordsworth describe Lucy ?

                              5

(c) Explain the following passage with reference to the context :—

      A slumber did my spirit seal

      I had no human fears;

      She seemed a thing that could not feel,

      The touch of earthly years.

OR

      When I consider life, 'tis all a cheat;

      Yet, fooled with hope, men favour the deceit;

      Trust on, and think tomorrow will repay;

      Tomorrow's falser than the former day.   5

SECTION—B

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

Haste, Innocence (Adjective)

Futile, Dead (Noun)

Growth, Definition (Verb)

Happy, Slow (Adverb)   10

5. Use any **five** of the following in sentences of your own :—

   Shriek, a capital story, to be stone dead, Mandate, proponent, Egotism, Repartee, Erroneous.   10

6. Translate the following passage into English :—

   एक सामाजिक प्राणी होने के नाते मनुष्य को अपने कर्त्तव्यों के प्रति भी उतना ही जागरूक होना चाहिए जितना वह अपने अधिकारों को लेकर होता है। कर्त्तव्य और अधिकार एक ही सिक्के दो पहलू है यदि हमें अपने अधिकारों के लिए भी संघर्ष करना पड़ेगा। उदाहरण के तौर पर एक जिम्मेदार नागरिक की तरह यदि हम कचरा कूड़ेदान में ही डालेंगे तो हम एक स्वच्छ वातावरण का आनन्द उठा सकते है।

   OR

   For Foreign Students only :—

   Paraphrase the following passage in your own words :

   Hold fast to dreams

   For if dreams die

   Life is a broken-winged bird

   That cannot fly.   5

7. Write a letter to the editor of a newspaper expressing your views on harmful effects of global warming.

   OR

   Write an application for the post of a Computer Teacher in an Institute.   5

Bachelor of Computer Applications 1st Semester

(2122)

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. How do you think that the knowledge of statistics is essential in decision making ? Give example. 6

   (b) The mean age of a group of 50 students is 15 years and the mean age of another group of 70 students is 20 yrs. Find the mean age of all the 120 students together. 7

2. (a) Define tabulation of data and its objectives. Also write advantages and disadvantages of tabulation. 6

   (b) Explain the use of harmonic mean as an average. Given the following frequency distribution of first year students of a particular college, calculate the harmonic mean.

Age	13	14	15	16	17
No. of students	2	5	13	7	3

7

SECTION—B

3. (a) Calculate the value of x and y from the following data. Given the median of the distribution is 28.5 and total students are 60.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of Students	5	x	20	15	y	5

6

(b) Calculate Standard deviation and coefficient of variation of the following data :

Items	10	12	14	16	18	20	22
Frequency	4	6	10	15	9	4	2

7

4. (a) Define various absolute measures of dispersion. 6

(b) Find out median and mode for the following data :

Classes	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	4	8	10	12	10	4	2

7

SECTION—C

5. (a) Define Concurrent Deviation method of correlation. Calculate coefficient of concurrent deviation for the following data :

Price	25	28	30	23	35	38	39	42
Demand	35	34	35	30	29	38	26	23

6

(b) Following are the marks obtained by eight students in two subjects as given below :

Students	Marks	
	Computer	Statistics
1	46	55
2	65	54
3	86	77
4	69	75
5	75	66
6	48	55
7	70	60
8	68	52

Calculate the Spearman's rank correlation coefficients.

7

6. (a) What is meant by coefficient of correlation between two variables ? Also distinguish between positive correlation and negative correlation. 6

(b) Calculate Karl Pearson's coefficient of correlation between X and Y :

X	7	4	6	9	3	8
Y	8	5	4	8	3	6

7

SECTION—D

7. (a) What do you mean by regression ? Why are there two regression lines in a bivariate series ? Can there be one regression line ? 6

(b) The two regression equations, Regression equation of X on Y is $10x - 2y = 4$ and regression equation of Y on X is $2y - 5x = 8$, Find $\bar{x}$, $\bar{y}$ and coefficient of correlation.

7

8. For the following data :

   (i) Calculate two regression equations

   (ii) Estimate the value of x when y = 30

   (iii) Determine the correlation coefficient using regression coefficients.

X	10	14	16	24	26
Y	5	6	7	9	13

   13

SECTION—E

9. Answer the following questions :

   (i) Define probable error.

   2

   (ii) Mention any two limitations of regression analysis.

   2

   (iii) Define variance.

   2

   (iv) Define the term frequency density.

   2

   (v) Write merits and demerits of range.

   2

   (vi) If the sum and difference of upper and lower quartiles are 55 and 11 respectively, find the coefficient of quartile deviation.

   3

(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

(2122)

COMPUTER FUNDAMENTALS AND COMPUTING SOFTWARE

Paper :BCA–16–103

Time Allowed : Three Hours]   [Maximum Marks : 65

Note :— Attempt **FIVE** questions in all, including Question No. **IX** (Unit-V) which is compulsory and selecting **ONE** question each from Units I-IV.

UNIT—I

I.   (a) Describe the classification of computers based on Size.

(b) Explain the different types of Printers.   6,7

II: (a) Write notes on :

(i)   Types of Software

(ii) Generation of Languages.

(b) Describe the following devices :

(i)   Trackball

(ii) Magnetic tape

(iii) Flash Drive.   6,7

UNIT—II

III. (a) What is an Operating System ? Explain its functions.

(b) Explain the following DOS Commands. Give example to show their use.

  (i) PATH

  (ii) ATTRIB

  (iii) DELTREE.   6,7

IV. (a) Describe the Anatomy of Windows.

(b) What is a Batch File ? How is a batch file created and Run ? Explain with example.   6,7

UNIT—III

V. Explain how the Mail Merge feature is used to create Letters and Envelopes.   13

VI. Explain the following features of Word Processing Package :

(a) Using Styles

(b) Formatting Paragraphs

(c) Autotext.   5,5,3

UNIT—IV

VII. (a) What is a Cell Address ? What is the difference between Absolute and Relative Cell Address ? Explain with examples.

(b) Describe the following features of a Spreadsheets :

    (i)   Sorting Records

    (ii)   Deactivating Automatic Changes

    (iii) Validating Cell Contents.   6,7

VIII. (a) Explain the basics of creating a presentation.

(b) Explain how are Macros Created, Recorded and Run in Spreadsheet.   6,7

UNIT—V (Compulsory Question)

IX. (a) Distinguish between RAM and ROM.   2

   (b) Draw and label Block Diagram of a Computer.   2

   (c) Distinguish between Copy and Move Commands.   2

   (d) What is the difference between Save and Save As ?   2

   (e) What is the use of Recycle Bin ?   2

   (f) Explain the use of Fill tool used in Spreadsheets.   3

Bachelor of Computer Applications 1ˢᵗ Semester

(2122)

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. Compare merits and limitations of data flow diagram, decision table, pseudo code and flow charts as tools of programming process.   13

2. Discuss various operators available in C language along with hierarchy of operations. What is the role of identifiers and keywords in developing C programs ?   13

SECTION—B

3. Explain various loop control structures available in C language along with illustrative examples of your own choice.   13

4. Explain the calling and definition of function in C language. Compare various methods of parameter passing to the function with example.

                                                                   13

SECTION—C

5. How is a two dimensional array initialized ? Write a C program to compute multiplication of two matrices of order 4×4. 13

6. Write a note on following :
   - Array of pointers
   - Dynamic memory allocation functions. 13

SECTION—D

7. How are string variables declared and initialized in C language ? Explain the working of following :
   strlen(), strcat(), strcmp(), strcpy(). 13

8. Differentiate between structures and unions by taking sample code of your own choice. Write a C program illustrating basic I/O operation on C files. 13

(Compulsory Question)

9. (a) Distinguish between testing and debugging. 3

   (b) Define the role of goto statement. 2

   (c) What is the relevance of switch statement ? 2

   (d) Give an example of arrays of characters. 2

   (e) Write about array of pointers. 2

   (f) What are nested structures ? 2