

# CENTRE FOR DISTANCE EDUCATION

Aligarh Muslim University, Aligarh

Session 2018-2019

B.Sc. (Computer Science) Part – I

COMPULSORY ENGLISH

(EN-102)

## ASSIGNMENT

**Maximum Marks: 10**

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a) Attempt any two questions.

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1. You are Ayan, you want to open your account in S.B.I. Frame a dialogue between Nikhil and the Bank Clerk.
2. Write an application for the post of a Librarian in a college.
3. You are John; you meet your old fiend at a Birthday Party. Write a dialogue inviting him for a tea party.
4. Read the following passage and write the meaning of underlined phrases.

Sajid and Masud were friends. They never left each other in their thick and thin. At night, Sajid heard a cracking sound; Sajid was in two minds whether he should go out or not. He mustered up his courage and went out; he found that his motorbike was stolen. He reached Masud's house at an unearthly hour and felt bad about disturbing him and his family. They reported to the police. The officer gave the dead line to catch the thieves.

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# CENTRE FOR DISTANCE EDUCATION

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B.Sc. (Computer Science) Part – I

Calculus

(MM-101)

## ASSIGNMENT

Maximum Marks: 15

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a) Attempt any two questions.

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1. Find the angle of intersection of two curves  $r = a \cos \theta$ ,  $2r = a$
2. Find the volume of the region that lies inside  $z = x^2 + y^2$  and below the plane  $z = 16$ .
3. Trace the polar curves: **a)**  $r = a \cos 2\theta$ , **b)**  $r = a \sin 2\theta$ , **c)**  $r = a + b \cos \theta$
4. Expand  $\sin(x + h)$  in terms of powers of  $h$ .

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# CENTRE FOR DISTANCE EDUCATION

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B.Sc. (Computer Science) Part – I

Differential Equation

(MM-102)

## ASSIGNMENT

Maximum Marks: 15

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a) Attempt any two questions.

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1. Use Eulers method to solve for  $y[0.1]$  from  $y'' = x + y + xy$ ,  $y(0) = 1$  with  $h = 0.01$  Also estimate how small  $h$  would need to obtain four-decimal accuracy.
2. Find the Laplace transform of  $f(t) = e^{2t^3}$
3. Find a solution of the PDE  $z_x + zz_y = 6x$  satisfying the condition  $z(0, y) = 3y$ .
4. Find the FS of the following function:

$$(a) f(x) = \begin{cases} 0 & -2 \leq x \leq -1, \\ 1, & -1 < x \leq 2. \end{cases}; \quad (b) f(x) = \begin{cases} x^2 & -1 \leq x \leq 0, \\ 1 + x, & 0 < x \leq 1. \end{cases}$$

$$(c) f(x) = |\sin x|, \quad -\pi < x < \pi.$$

If the  $2\pi$ -periodic even function is given by  $f(x) = |x|$  for  $-\pi < x < \pi$ , show that

$$f(x) = \frac{\pi}{2} - \frac{4}{\pi} \sum_{n=1}^{\infty} \frac{\cos(2n-1)x}{(2n-1)^2}.$$

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# **CENTRE FOR DISTANCE EDUCATION**

**Aligarh Muslim University, Aligarh**

**Session 2018-2019**

**B.Sc. (Computer Science) Part – I**

**Descriptive Statistics**

**(ST-101)**

## **ASSIGNMENT**

**Maximum Marks: 15**

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a) Attempt any two questions.

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1. What is Ratio Data?
2. What is Karl's Pearson coefficient of correlation and its properties?
3. What is Analysis of seasonal fluctuations?
4. What are Price relatives and quantity relatives?

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# **CENTRE FOR DISTANCE EDUCATION**

**Aligarh Muslim University, Aligarh**

**Session 2018-2019**

**B.Sc. (Computer Science) Part – I**

**Probability and Probability Distribution**

**(ST-102)**

## **ASSIGNMENT**

**Maximum Marks: 15**

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a) Attempt any two questions.

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1. What is Properties of probability, addition and multiplication theorems of probability
2. What is the Moment generating function and its properties?
3. What is Standard continuous distributions: Uniform (rectangular), exponential and normal, their mean and variance?
4. What is Statement and application of weak law of large numbers?

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# **CENTRE FOR DISTANCE EDUCATION**

**Aligarh Muslim University, Aligarh**

**Session 2018-2019**

**B.Sc. (Computer Science) Part – I**

**Fundamentals of Information Technology**

**(CC-101)**

## **ASSIGNMENT**

**Maximum Marks: 20**

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**a) Attempt any two questions.**

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1. How many types of computer languages are?
2. How many types of numbers and how to convert octal number into binary number?
3. What is the basic difference between Social Media and Social Networking?
4. What are the different types of data that can be entered into worksheet cells?

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# **CENTRE FOR DISTANCE EDUCATION**

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**Session 2018-2019**

**B.Sc. (Computer Science) Part – I**

**Structured Programming Using ‘C’**

**(CC-102)**

## **ASSIGNMENT**

**Maximum Marks: 20**

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**a) Attempt any two questions.**

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1. Explain the difference between While and Do-While statements. Give examples to support your answers.
2. Differentiate between Switch and Goto Statement.
3. How do you declare a structure variable in C. Give examples.
4. How Structures can be used as Function Arguments.

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