

C-1475

Sub. Code

80513

B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

First Semester

IT and Logistics

PROGRAMMING IN C

(2019 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. List the features of C.
2. What are keywords?
3. Write down the structure of a C program.
4. What is the purpose of Goto statement?
5. Define Functrons.
6. What is the need for storage classes?
7. What is an array?
8. How will you initialise array elements?
9. What is the difference between structures and unions?
10. What are pointers?

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Describe the character set of C.

Or

- (b) Write a note on data types in C.

12. (a) Explain the scanf () function with example.

Or

- (b) Discuss about branching statements.

13. (a) What do you mean by function prototyping? Describe.

Or

- (b) What is recursion? Explain.

14. (a) Explain how to define an array.

Or

- (b) Write a program to sort numbers in ascending order.

15. (a) Discuss about structures.

Or

- (b) Explain the modes of file opening.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Discuss in detail about different operators in C.

Or

- (b) Explain the working of switch statement with an example.

17. (a) With suitable example discuss about function with arguments.

Or

- (b) Discuss in detail about storage classes.

18. (a) With an example program explain the steps to declare and process a string array.

Or

- (b) Explain the usage of pointers in C.
-

C-1476

Sub. Code

80514

B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

First Semester

IT and Logistics

MATHEMATICS - I

(2019 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Expand $\text{Cos } n\theta$
2. Find $\sin 5\theta$
3. Define proper subset.
4. How will you define complement of a set?
5. What do you mean by Symmetric matrix?
6. Define transpose of a matrix.
7. Write a short note on Polynomial.
8. State Fundamental theorem of Algebra.
9. If $x = \sin t, Y = \sin pt$ Find $\frac{dy}{dx}$.
10. Find n^{th} derivative of $(ax + b)^m$

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) Expand
- $\cos^3 \theta$
- in a series of cosines.

Or

- (b) Prove that
- $\sin^6 \theta = \frac{-1}{32} [\cos 6\theta - 6 \cos 4\theta + 15 \cos 2\theta - 10]$

12. (a) Define equivalence relation and explain it by suitable example.

Or

- (b) Show that any subset of a partially ordered set is a partially ordered set.

13. (a) Prove that if
- A
- is a square matrix of order
- n
- then
- $A + A^T$
- is symmetric.

Or

- (b) Show that
- $\begin{bmatrix} \cos \theta & \sin \theta \\ -\sin \theta & \cos \theta \end{bmatrix}$
- is orthogonal.

14. (a) Solve
- $x^4 + 2x^3 - 5x^2 + 6x + 2 = 0$
- if
- $1 + i$
- is a root.

Or

- (b) From the equation of rational coefficients whose roots are
- $1 + i$
- and
- $-2 + \sqrt{3}$

15. (a) Find
- n^{th}
- derivative of
- $\log(ax + b)$
- .

Or

- (b) If
- $y = e^{ax} \sin bx$
- , show that
- $y_2 - 2ay_1 + (a^2 + b^2)y = 0$

Part C $(3 \times 10 = 30)$ Answer **all** questions.

16. (a) Express $\frac{\cos 7\theta}{\cos \theta}$ in powers of $\cos \theta$.

Or

- (b) Prove that when $x = 2 \cos \theta$,

$$2(1 + \cos 8\theta) = (x^4 - 4x^3 + 2)^2$$

17. (a) State and Prove DeMorgan Laws.

Or

- (b) Show that $\frac{1}{3} \begin{bmatrix} -1 & 2 & 2 \\ 2 & -1 & 2 \\ 2 & 2 & -1 \end{bmatrix}$ is orthogonal.

18. (a) Solve $x^3 - 12x^2 + 39x - 28 = 0$ whose roots are in Arithmetic progression.

Or

- (b) Find the maximum Values of $2(x^2 - y^2) - x^4 + y^4$
-

C-1477

Sub. Code
80517/80416/ 84716

U.G. DEGREE EXAMINATION, NOVEMBER 2019

First Semester

ENVIRONMENTAL STUDIES

**(Common for B.Sc. (IT & Logistics)/ B.Com. (L&S)/
B.B.A. (S&LM)**

(2019 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is Environmental Studies?
2. Define Environmental disasters.
3. Define Biomass.
4. What do you mean by Natural Resources?
5. Define Renewable Resources.
6. What is desertification?
7. Define Genetic and Species.
8. What is Ecological Pyramids?
9. List out different types of resources.
10. What are different types of Pollutions that affects the environmental Pollution?

Part B**(5 × 5 = 25)**

Answer **all** questions, choosing either (a) or (b).

11. (a) What is the scope and importance of Environmental Studies?

Or

- (b) List out and explain the need for Public awareness.

12. (a) Explain the Forest resources in detail.

Or

- (b) Explain the Water Resources.

13. (a) List out the role of individual in conservation of natural resources and explain it.

Or

- (b) What are the equitable use of resources for sustainable life style? Explain.

14. (a) Explain renewable and non-renewable resources.

Or

- (b) Explain bio-diversity and its conservation.

15. (a) Explain the Causes and Control measures of Air Pollution.

Or

- (b) Explain the Effects, Causes and Control measures of Water Pollution.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Discuss about Multidisciplinary Nature of Environmental Studies.

Or

- (b) Explain different types of Natural resources.

17. (a) India as a Mega – Diversity Nation. Discuss.

Or

- (b) Explain Bio-Geographical classification of India.

18. (a) What are the structure and function of an Ecosystem? Explain.

Or

- (b) Explain the endangered and endemic species of India.
-