CENTRAL UNIVERSITY OF HARYANA

Second Sessional, May 2023

Programme: B. Tech. (CSE)
Course Title: Environmental Studies
Course Code: BT AUD 308A

Semester: Fourth
Max. Time: 1 Hour
Max. Marks: 20

Instruction: Attempt any two questions out of the following. Each question carries equal marks.

Q:1 Define the environmental laws. What are environmental protection law and water prevention and pollution control law discuss in details?

Q:2 What are the biogeographical zones of India? Define each one with the area, suitable examples of plants, animals and degree of endemism?

Q:3 Explain the protected areas with two Ex-situ and In-situ examples in details. What is the concept of man and biosphere reserve discussing in details?

Central University of Haryana
Department of Computer Science and Engineering.

Mid Sem-II Branch: CSE (2nd year) Subject- Discrete structure

Time: 01:00 Hours **MM: 20**

Note: All questions are compulsory.

Part A	1. Prove Lagrange's theorem that states "for any finite group G the order of every group H divides the order of G". 2. Prove that the fourth roots of unity and cube root of unity form an abelian multiplicative group. OR Describe the Homomorphism, Isomorphism and Endomorphism with suitable Example.	5+5=10
Part B	1. State and prove pigeonhole principle. Find the minimum number of teacher in a college to be sure that four of them are born in the same month. 2. Explain Tautologies, Contradiction, and Contingencies with suitable examples. OR Define quantifiers, universal quantifiers and existential quantifiers by giving an example. 3. In how many ways can 12 students be arranged in a circle?	5+3+2=10

Central University of Haryana
Branch: B.Tech Computer Science and Engineering

Course Code: BT CS 401 **Max Time:1 Hr**

Course Title: DBMS **Max Marks:20**

Attempt any four questions: -

1. What are the desirable properties of transaction? 5M
2. Illustrate the concept of JOIN and its types. 5 M
3. What is a deadlock? Discuss in detail. 5 M
4. Write about aggregate functions in detail. 5 M
5. Describe concurrency control and locking technique in detail. 5M

Computer Science and Engineering Department

Sessional 2

Time: 60 mins. **Question Paper (B.Tech. 4th sem)** **Maximum marks:** 5*4=20

Subject: Economics **Subject-Code:** BT ECO 507A

Q1. Attempt any two sub parts [2.5 marks each]

a. Differentiate between Average cost and Marginal cost?
b. Define law of supply?
c. Define Opportunity cost?

Attempt any three questions out of four given questions:

Q:2. Describe Diseconomies of scale with suitable example? [5 marks]

Q:3. Explain the nature and characteristics of Indian economy? [5 marks]

Q:4. Explain the Law of returns to scale with suitable example? [5 marks]

Q:5. Explain the Monopoly and Oligopoly Market structures with suitable examples? [5 marks]

Central University of Haryana

Sessional Examination (May-2023)

Time: 60 mins. Question Paper (B.Tech. 4th sem CSE) Maximum marks: 10

Subject: Object Oriented Programming with C++ Subject-Code: BT CS-402

Q1: Explain the concept of passing one function as the argument to another function with an example. (2)

Q2: Create a class by name Date with the member data day, month, and year. Include member functions to perform the following: (4)

a. To find whether the date is valid or not
b. To check whether one date is earlier than the other
c. To increment a date
d. To find the next date after adding a number of days

Q3: How can we return an object from a function using a constructor? Exemplify. (2)

Q4: When do we require friend functions in operator overloading? Give an example situation. (2)