Name: Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2022

Course: Java Programming   Semester: III
Program: BCA(AI_ML/IoT/CS)   Time   : 03 hrs.
Course Code: CSBC2024   Max. Marks: 100

Instructions:

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	What is the significance of using java operators.	4	CO2

Q 2	Creating an ArrayList and perform the following:
	  a) Add elements
	  b) Accessing all the elements
		4	CO4

Q 3	Write a short note on the following:
	  a) continue
	  b) break
		4	CO2

Q 4	Define Wrapper class. Explain float wrapper with its methods.	4	CO1

Q 5	Describe following string class method with example:
	  a) compareTo( )
	  b) equalsIgnoreCase( )
		4	CO4

	SECTION B **(4Qx10M= 40 Marks)**		
Q 6	What is package? How do we create it? Give the example to create and to access package.	10	CO1
Q 7	Define array and write a program to demonstrate 3D array. *Note: Take input using Scanner class and display*	10	CO3

Q 8	Write a short note on the following:
	  a) Package
	  b) final
		10	CO1

Q 9	Write a program to print the following pattern using nested for loop: 1 2 3 2 3 4 5 4 3 4 5 6 7 6 5 4 5 6 7 8 9 8 7 6 5	10	CO2

	OR Write a program to print Pascal's Triangle 1 1 1 1 2 1 1 3 3 1 1 4 6 4 1 1 5 10 10 5 1		
SECTION-C **(2Qx20M=40 Marks)**		
Q 10	a) Explain multilevel inheritance with the help of abstract class in your program. b) Write a single program to implement inheritance and polymorphism in java. **OR** What is an exception? WAP to accept a password from the user and throw "Authentication Failure" exception if the password is incorrect.	**20**	**CO4**

Q 11	In Java, constructors can be divided into 3 types:
	  a) No-Arg Constructor
	  b) Parameterized Constructor
	  c) Default Constructor
	Write the programs to demonstrate the above.
		20	**CO3**