UPES

End Semester Examination, May 2024

Course: Artificial Intelligence and Machine Learning in Health Care **Semester: VI**

Program: Integrated BSc-MSc (Clinical and N&D) **Duration: 3 Hours**

Course Code: HSCC3018 **Max. Marks: 100**

Instructions: Read Questions Carefully

S. No.	Section A Short answer questions/ MCQ/T&F (20Qx1.5M= 30 Marks)	Marks	COs
Q1	How do you start the Python interpreter in command line mode? A) Start Python B) Python C) Run Python D) Execute Python	1.5	CO4
Q2	How do you import the random library in a Python script? A) load random B) include random C) import random D) using random	1.5	CO2
Q3	How do you print "Hello, World!" in Python? A) print(Hello, World!) B) echo "Hello, World!" C) print("Hello, World!") D) say "Hello, World!"	1.5	CO3
Q4	How do you create a variable x with the value 10? A) x = 10 B) var x = 10 C) x := 10 D) int x = 10	1.5	CO3
Q5	How do you add two numbers in Python and print the result? A) print(3 + 2) B) echo 3 + 2 C) print(sum(3, 2)) D) add(3, 2) and print	1.5	CO3
Q6	How do you check if a number x is greater than 5 in Python?	1.5	CO4

	A) if x > 5: print("Yes") B) if x > 5 then print("Yes") C) check x > 5: print("Yes") D) if x > 5 print("Yes")			
Q7	How do you print numbers 1 to 5 using a loop in Python? A) while i <= 5: print(i) B) for i in 1 to 5: print(i) C) for i in range(1, 6): print(i) D) loop i from 1 to 5: print(i)	**1.5**	**CO1**	
Q8	How do you create a list of numbers [1, 2, 3]? A) [1, 2, 3] B) list(1, 2, 3) C) {1, 2, 3} D) array[1, 2, 3]	**1.5**	**CO1**	
Q9	How do you print the first item in a list numbers? A) print(numbers[0]) B) print(numbers(1)) C) print(numbers.first()) D) print(first(numbers))	**1.5**	**CO4**	
Q10	How do you create a dictionary with a key "apple" and its value "red"? A) {"apple": "red"} B) {apple: red} C) dict("apple" = "red") D) dictionary["apple" = "red"]	**1.5**	**CO3**	
Q11	How do you join two strings "Hello" and "World" with a space in between? A) "Hello" + " " + "World" B) "Hello".join("World") C) "Hello" & "World" D) "Hello" - "World"	**1.5**	**CO2**	
Q12	How do you check if two variables a and b are equal? A) if a = b B) if a == b C) if a & b D) if a equals b	**1.5**	**CO1**	
Q13	How do you find the number of items in a list items? A) length(items) B) items.length() C) len(items) D) items.count()	**1.5**	**CO2**	

Q14	How do you convert the string "123" to an integer? A) int("123") B) "123".toInt() C) convert("123", int) D) integer("123")	1.5	CO2
Q15	How do you define a function greet that prints "Hello"? A) function greet(): print("Hello") B) def greet(): print("Hello") C) create greet(): print("Hello") D) function greet = print("Hello")	1.5	CO3
Q16	How do you add the number 4 to the end of a list numbers? A) numbers.add(4) B) numbers.append(4) C) numbers.push(4) D) numbers.put(4)	1.5	CO2
Q17	How do you remove the last item from a list numbers? A) numbers.removeLast() B) numbers.deleteLast() C) numbers.pop() D) numbers.last().remove()	1.5	CO2
Q18	How do you handle errors in Python when trying to open a file? A) handle open("file.txt") B) try: open("file.txt") C) try: open("file.txt") except: print("Failed") D) open("file.txt") catch: print("Failed")	1.5	CO3
Q19	How do you check if the number 3 is in the list numbers? A) if 3 in numbers B) if numbers.contains(3) C) if 3 exists in numbers D) if numbers.has(3)	1.5	CO1
Q20	How do you create a tuple with the elements 1, 2, and 3? A) (1, 2, 3) B) tuple(1, 2, 3) C) [1, 2, 3] D) {1, 2, 3}	1.5	CO1
Section B **(4Qx5M=20 Marks)**			
Q 1	Write a program that takes two numbers as input from the user and prints their sum.	5	CO2
Q 2	Create a Python script that asks the user for their name and then prints "Hello, [name]!", where [name] is the name they entered.	5	CO2
Q 3	Write a Python program that uses a for loop to print each item in the list **['red', 'green', 'blue']**.	5	CO5

Q 4	Ask the user to input a temperature in Celsius and convert it to Fahrenheit, then print the result. Use the formula $F = C \times 1.8 + 32$	5	CO4

Section C
(2Qx15M=30 Marks)

Q 1	Define machine learning and explain its significance in the context of modern technology. How does machine learning differ from traditional programming approaches? Discuss with examples where machine learning proves advantageous over explicit programming.	15 (5+5+5)	CO5
Q2	Explain the relationship and differences between Artificial Intelligence (AI), Machine Learning (ML). How does machine learning extend the capabilities of traditional programming approaches? Provide examples of real-world applications that differentiate between the use of ML and traditional approaches.	15 (5+5+5)	CO3

Section D
(2Qx10M=20 Marks)

Q1	Define a) Supervised Learning and Unsupervised Learning b) Scaler and non-scaler	10	CO4
Q2	Discuss a) Linear Regression and KNN. b) Application of Artificial Intelligence in Health Care.	10	CO1