



BK BIRLA CENTRE FOR EDUCATION
SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL
POST MID TERM EXAM (2024-25)
ARTIFICIAL INTELLIGENCE (417)



Class: IX
Date: 04-01-2025
Adm No:

Duration: 1 hr.
Max Marks: 25
Roll No. :

NOTE : (i) All questions are compulsory.
(ii) Do as per the instructions given in the questions.

I. Multiple Choice Questions :

(12 X 1 = 12)

- (1) The fundamental unit of neural network is
- (a) Brain (b) Nucleus (c) Neuron (d) Axon
- (2) Which of the following are the advantages of neural networks over computers ?
- (a) They have ability to learn by examples
(b) They have real time high computational rates
(c) They have more tolerance
(d) All of the mentioned
- (3) Which of the following is an application of Neural Network ?
- (a) Sales forecasting (b) Fraud detection
(c) Speech Recognition (d) All of the mentioned
- (4) A is a decision support tool that uses a tree-like graph or model of decisions and their possible consequences, including chance event outcomes, resources costs and utility.
- (a) Decision tree (b) Graphs (c) Trees (d) Neural Networks
- (5) If Data is represented as "Answer", Processing is represented as "Data" and Answer is represented as "Processing", which of the following can be related to the description of layers in a neural network ?
- (a) Input Layer -> Data; Output Layer -> Processing; Hidden Layer -> Answer
(b) Input Layer -> Processing; Output Layer -> Data; Hidden Layer -> Answer
(c) Input Layer -> Answer; Output Layer -> Processing; Hidden Layer -> Data
(d) Input Layer -> Answer; Output Layer -> Data; Hidden Layer -> Processing
- (6) Reena wants to know about the three layers of the neural network. Which of the following statement is TRUE about the layers of neural networks ?
- (a) Input Layer (Corresponds to Axon in a neuron) -> Hidden Layer (Extraction is done) -> Output Layer (Corresponds to Dendrites)
(b) Hidden Layer (Extraction is done) -> Input Layer (Corresponds to Axon in a neuron) -> Output Layer (Corresponds to Dendrites)
(c) Hidden Layer (Corresponds to Dendrites) -> Input Layer (Corresponds to Axon in a neuron) -> Output Layer (Extraction is done)
(d) Input Layer (Corresponds to Dendrites) -> Hidden Layer (Extraction is done) -> Output Layer (Corresponds to Axon in a neuron)
- (7) What symbol is used in Python to assign values to a variable ?
- (a) equals = (b) plus + (c) forward slash / (d) asterisk *

- (8) What will be the output ?
`name = "Python"`
`print(name)`
 (a) Python (b) "Python" (c) Name (d) (name)
- (9) What is an input function in Python ?
 (a) A function that allows us to ask the user to enter some data.
 (b) To plug in something
 (c) Data displayed on a screen (d) A function None of the above
- (10) Which symbol do we use if we want to add a comment to our code ?
 (a) @ (b) # (c) * (d) &
- (11) To create a variable named `new_var` and assign it a value of 81 divided by 9, which statement would you use ?
 (a) `new_var = 81\9` (b) `new_var = '81/9'`
 (c) `new_var = '81\9'` (d) `new_var = 81/9`
- (12) Numbers with a decimal point belong to a type called
 (a) Pointing (b) Integers (c) decimal (d) float

II. Short Answer Type Questions : (Answer any four) (4 X 2 = 8)

- Write at least two differences between Decision Trees and Neural Networks.
- Compare Biological Neural networks with Artificial Neural Networks.
- Write any two advantages and disadvantages of Artificial Neural Networks.
- What is the difference between interactive mode and script mode in Python ? Explain with examples.
- “Comments are an easy way to enhance readability and understandability of a program”. Which operators are used to write comments in Python ? Elaborate with examples.
- Mahak has just joined a bank. She has been asked to write a program for calculating simple interest for the customers. Help her in writing a Python code for the same.

III. Long Answer Type Questions : (Answer any two) (2 X 2.5 = 5)

- Write and explain any five applications of Neural networks.
- Write and explain any five applications of Python.
- Write Python code to input the temperature in Celsius and convert it into Fahrenheit using the formula ($F = C * 9/5 + 32$)

***** ALL THE BEST *****