

ARTIFICIAL INTELLIGENCE - 417
SAMPLE QUESTION PAPER
SESSION 2023-24

CLASS - IX

Please check total printed pages before start : 8

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ANNUAL EXAMINATION 2023-24

SUBJECT : AI

CLASS : IX

Time : 2 hours


Marks :50

General Instructions:

1. Please read the instructions carefully.
2. This Question paper consists of 22 Questions in two sections: Section A & Section B.
3. Section A has Objective type Questions whereas Section B contains Subjective type questions.
4. All questions of a particular section must be attempted in the correct order.
5. **SECTION A - OBJECTIVE TYPE QUESTIONS (20 Marks):**
 - a. This section has 05 questions.
 - b. Marks allotted are mentioned against each question/part.
 - c. There is no negative marking.
 - d. Do as per the instructions given.
6. **SECTION B – SUBJECTIVE TYPE QUESTIONS (30 Marks):**
 - a. This section has 17 questions.
 - b. A candidate has to do 12 questions.
 - c. Do as per the instructions given.
 - d. Marks allotted are mentioned against each questions /part.

SECTION A : OBJECTIVE TYPE QUESTIONS

- 1 Answer any 4 out of given 5 questions on Employability Skills
(i x 4 = 4 marks)
 - i) Which of the following statement is False?

- a. The individual who has the ability to work independently need not be supervised for the task completion.
- b. Self-direction is needed for success.
- ~~c.~~ Goals are a not set of dreams with a deadline.
- d. Personal hygiene create a good image of ourselves.1
- ii) Geetanjali asked her daughter to eat slowly.
Here slowly is
- | | | |
|----------------------|------------|---|
| a. Adverb | b. Pronoun | |
| c. Adjective | d. Subject | 1 |
- iii) LPG stands for _____ .
- | | |
|---------------------------|---------------------------------------|
| a. Liquefied Pressure Gas | b. Liquefied Petroleum Gas |
| c. Liquefied Plant Gas | d. Liquefied Preserve Gas1 |
- iv)  represents _____ in mobile phones.
- | | |
|---|------------------------------|
| a. Wi-fi | b. Global Positioning System |
| c. Cellular network connectivity | d. Chargeable Battery 1 |
- v) Find the correct order of steps of starting a business.
- Understanding customer needs
 - Getting money and material
 - Improving Product/Service
 - Think of an Idea
- | | |
|-------------------|--------------------------------|
| a. iv, i, ii, iii | b. i, ii, iii, iv |
| c. i, iv, ii, iii | d. iv, iii, ii, i 1 |

2 Answer any 4 out of given 5 questions. (1 x 4 = 4 marks)

- (i) Which of the following is not an issue in respect of AI ethics?
- Google search shows female saloon as top search whenever search for a makeover place.
 - User must give permission to allow access of his / her gallery, if want to use any social media app.
 - Candidates are using ChatGPT to build up the impressive resumes.
 - An experienced electrician who served in houses to repair electrical appliances would not be able to serve in a smart home with the same knowledge he / she have.1

- i. Under the sketchy graphs activity, we will visualize our collected data in a graphical format for better understanding.
- ii. Sometimes, you use the internet and try to collect data for your project from some random websites.
- iii. To build an AI based project, we need to work around Artificially Intelligent models or algorithms.
- iv. Under the "What" block, we need to look into what we have on hand.

a. iii, i, ii, iv

b. i, ii, iii, iv

c. iv, i, ii, iii

d. iv, ii, i, iii

1

iii)

Identify AI out of the following.

- a. Two friends playing chess while sitting at their respective homes.
- b. In an international conference, Indian representative is addressing in HINDI and every representative from other countries are able to understand the speech in his / her language by using headphones they are provided.
- c. Creating a 3D image of a building in the laptop.
- d. Tagging of people in the photographs on social media platforms.

1

iv) >>> is a part of _____.

a. Script Mode

b. Interactive Mode

c. Manual Mode

d. Graphic Mode

1

- v) Following are the two statements regarding assertion and reasoning.

Assertion A: Traditional machine learning algorithms stop improving after a certain saturation point.

Reasoning R: Neural network is a fast and efficient way to solve problems for which the dataset is very large. ↑

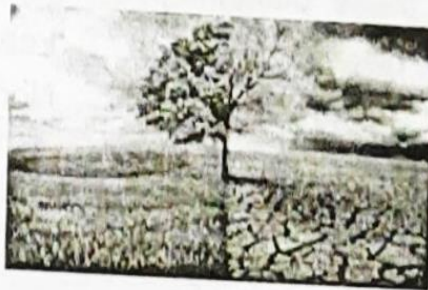
Which of the following statement is True?

- a. Both A and R are True and R is the correct explanation of A.

- ~~b.~~ Both A and R are True and R is the not the correct explanation of A
- c. A is True but R is False.
- d. A is false but R is True.

1

- 4 Answer any 4 out of given 5 questions. (1 x 4 = 4 marks)
- i) Following figure represents _____ of SDG.



- a. Life below Water
- b. Life on Land
- c. Climate Action
- d. Sustainable cities and Communities

1

- ii) Most advanced form of AI is _____

- | | |
|---------------------|------------------------|
| 1. Machine learning | 2. Neural Networks |
| 3. Deep Learning | 4. Supervised learning |
| a. 1 & 4 | b. 2 & 3 |
| c. 2 & 4 | d. Only 2 |

1

- iii) Data transferred with in a Neural Network is through _____.

- ~~a.~~ Nodes
- b. Output layer
- c. Neurons
- d. Input layer

1

- iv) Which of the following statement is true in respect of system maps?

- a. It is used to scope the problem.
- b. In this system, every element is interconnected.
- c. Use of '+' signs and '-' signs is to increase and decrease the quantity of elements.
- ~~d.~~ All of above are true.

1

- v) Which of the following is NOT a feature of Python?

- a. Extendable
- ~~b.~~ Expensive

- c. Easy to maintain d. Embeddable

1

5 Answer any 4 out of given 5 questions. (1 x 4 = 4 marks)

i) Suppose you have a dataset of 1000 images of random plants you had taken during a tracking trip. Now you do not have any clue of their shape, colour or any other feature. _____ approach will help you to make the patterns and cluster of these plants.

- a. Rule based ~~b.~~ Learning based
c. Both a and b d. None

1

ii) True or False

Regression Model takes the discrete data and prepare a mapping function. *False*

1

iii) Which of the following statement will store a string value in variable A.

- a. A = 6.7 b. A = True
c. A = '6.7' d. None of these

iv) Which of the following statement will give result as 10?

- a. $5+5\%8$ *x* b. $5+8\%5$ *10*
c. $8+5\%5$ *x* d. $(5+5)\%8$ *10*

1

v) Following are the two statements regarding assertion and reasoning.

Assertion A: It is a big challenge for government that learning opportunities for AI be extended to all.

Reasoning R: AI can either be a boon or a bane.

Which of the following statement is True?

- ~~a.~~ Both A and R are True and R is the correct explanation of A.
b. Both A and R are True and R is the not the correct explanation of A.
c. A is True but R is False.
d. A is false but R is True.

1

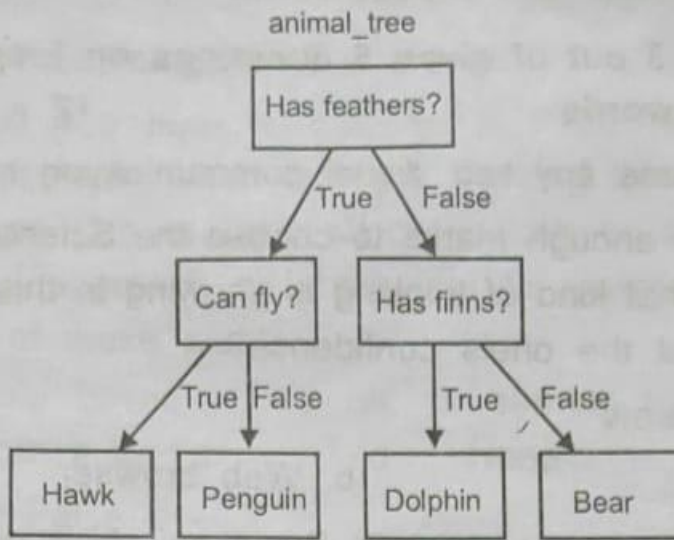
SECTION B : SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of given 5 questions on Employability Skills in 20 - 30 words
(2 x 3 = 6 marks)

- 6 Draw and name any two Visual communication methods. 2
- 7 "I did not get enough marks to choose the Science stream. My life is ruined." What kind of thinking is showing in this statement? How this will affect the one's confidence? 2
- 8 Define the terms
a. OS
b. Web browser 2
- 9 What do you mean by Hybrid Business? Also give an example. 2
- 10 Is Deforestation an example of Overexploitation? Justify your answer. 2

Answer any 6 out of given 8 questions in 20 - 30 words
(2 x 6 = 12 marks)

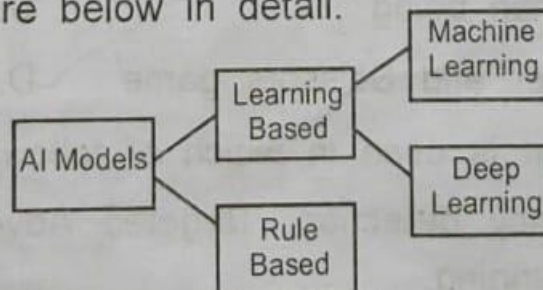
- 11 Write a statement to input two numbers, and display sum to two number. 2
- 12 Match the following.
- | | |
|---|-----------------|
| a. Story Speaker | A. SDGs |
| b. 17 | B. Data Science |
| c. This is a program that allows the computer to simulate conversation with a human being | C. Google docs |
| d. Rock, Paper and Scissors game | D. Chatbot |
- 2
- 13 Which AI domain is used in which of following?
Parking occupancy detection, Targeted Advertising, Email filters, Airline Route planning, 2
- 14 Write two characteristics of Pixel, in image detection. 2
- 15 Consider the following figure



- a. This tree has 6 number of branches.
- b. Has feathers? is the root of the tree. 2
- 16 There is usually a long waiting line for the Parking of vehicles in a MALL near to your house. People often park cars on roads rather than wait for their turn as they do not know the waiting time. Draw a 4W canvas for the said problem. 2
- 17 Define regression and classification, with diagram. 2
- 18 Write a program to calculate the perimeter of a circle. Enter the radius using input() and print the final value of perimeter. Take the PI value as 3.14. 2

Answer any 3 out of given 4 questions . (4 x 3 = 12 marks)

- 19 What are the different stages of AI project cycle to solve any problem. Explain with taking live example of any problem. 4
- 20 Explain the figure below in detail. 4



- 21 Write any four disadvantages of AI. 4
- 22 a) Write a program to check number is even or odd.
- b) Is this statement correct or not, give reason:
Print("hello") 3+1