

# Model Test Paper-2

Time: 2 Hours

Max. Marks: 50

## SECTION A: OBJECTIVE TYPE QUESTIONS

1. Answer any 4 out of the given 6 questions on Employability Skills. (1 × 4 = 4 marks)

- (i) ..... is the process by which a message is sent by an individual and it passes through a chain of recipients. **1**
- a) Self-Motivation                       b) Self-Confidence   
c) Self-Control                       d) Self-Management
- (ii) Realistic belief and trust of an individual in one's own judgement, capabilities and worthiness is ..... **1**
- a) Self-Motivation                       b) Self-Confidence   
c) Self-Control                       d) Self-Management
- (iii) ..... refers to a state of psychological tension and discomfort originating from unforeseen, difficult, confusing and challenging situations. **1**
- a) Self-Motivation                       b) Self-Confidence   
c) Self-Control                       d) Self-Management
- (iv) ..... are electronic devices that can hold hundreds of books in digital form. **1**
- a) Self-Motivation                       b) Self-Confidence   
c) Self-Control                       d) Self-Management
- (v) ..... is the process of identifying an opportunity and turning it into a venture. **1**
- a) Self-Motivation                       b) Self-Confidence   
c) Self-Control                       d) Self-Management
- (vi) A ..... in an economy is someone who has the ability to affect or be affected by the growth or fall of the economy. **1**
- a) Self-Motivation                       b) Self-Confidence   
c) Self-Control                       d) Self-Management

2. Answer any 5 out of the given 6 questions. (1 × 5 = 5 marks)

- (i) Which of the following is not an application of AI? **1**
- a) Visual Reality                       b) Driverless cars   
c) Netflix recommendations                       d) Siri
- (ii) Which among the following is the second component of the Project Cycle? **1**
- a) Data Acquisition                       b) Data Exploration   
c) Problem Scoping                       d) Modelling
- (iii) Which of the following is not a part of 4W Problem Canvas? **1**
- a) Why                       b) What   
c) Which                       d) Where



(iv) Which of the following best describes the application of Google Maps?

- a) It is a web mapping service.
- b) It is developed by Google.
- c) It offers satellite imagery, aerial photography.
- d) All of the above

(v) The y-axis on the chart represents:

- a) Data horizontally
- b) Data vertically
- c) Both (i) and (ii)
- d) None of the above

(vi) Price comparison websites falls under which category?

- a) NLP
- b) Computer Vision
- c) Data Science
- d) Machine Learning

**3. Answer any 5 out of the given 6 questions.**

(1 × 5 = 5 marks)

(i) In classification, you teach the machine to perform with what kind of data?

- a) Labelled
- b) Large
- c) Complex
- d) Continuous

(ii) Which layer is present in-between input and output layers?

- a) Middle
- b) Next
- c) Process
- d) hidden

(iii) Name the important step where the AI model is evaluated for its efficiency and accuracy.

- a) Data acquisition
- b) Evaluation
- c) Modelling
- d) Data Exploration

(iv) What does NLP stand for in AI?

- a) Nature Language Processing
- b) Natural Language Processing
- c) Natural Language Programming
- d) d

(v) Expand the term BNN.

- a) Big Neural Network
- b) Bias Neural Network
- c) Biological New Network
- d) Biological Neural Network

(vi) What is Machine Learning?

- a) Machine learning is the study of computer algorithms that improve automatically through experience.
- b) Refers to any technique that enables computers to mimic human intelligence.
- c) Machine learning refers to computer systems (both machines and software) enables machines to perform tasks for which it is programmed.
- d) Machine Learning refers to projects that allow the machine to work on a particular logic.

**4. Answer any 5 out of the given 6 questions.**

(1 × 5 = 5 marks)

(i) ..... covers a broad range of domains and applications and is expected to impact every field in the future.

- a) Artificial Intelligence
- b) Driverless cars
- c) Human Intelligence
- d) Virtual Reality

- (ii) ..... field is enabling computers to identify and process images like humans do. 1
  - a) NLP
  - b) Software
  - c) Computer Vision
  - d) Data Science
- (iii) SDGs stands for ..... 1
  - a) Super Developments Goals
  - b) Substantial Development Goals
  - c) Small Development Goals
  - d) Sustainable Development Goals
- (iv) ..... are loosely modelled after how neurons in the human brain behave. 1
  - a) Neural networks
  - b) Biological networks
  - c) Artificial networks
  - d) Wireless networks
- (v) Autonomous Weapons are also known as ..... 1
  - a) Killer Robots
  - b) Automatic Robots
  - c) Micro Robot
  - d) All of these
- (vi) ..... is a program that allows the computer to simulate conversation with a human being. 1
  - a) Chatbot
  - b) Augmented Reality
  - c) Virtual Reality
  - d) Internet of Things

5. Answer any 5 out of the given 6 questions.

(1 × 5 = 5 marks)

- (i) ..... of SDGs aims zero hunger. 1
  - a) Goal 1
  - b) Goal 2
  - c) Goal 3
  - d) Goal 4
- (ii) ..... detects and stops leakage of water using AI. 1
  - a) WINT
  - b) CleanRobotics
  - c) RUBSEE PROJECT
  - d) EQWATER
- (iii) The intention of ..... is to enable machines to learn by themselves using the provided data and make accurate Predictions/ Decisions. 1
  - a) Machine Learning
  - b) Deep Learning
  - c) Artificial Intelligence
  - d) Neural Networks
- (iv) ..... makes use of past data to solve a problem with the help of statistical methods and trained algorithm models. 1
  - a) Machine Learning
  - b) Data Science
  - c) Computer Vision
  - d) Deep Learning
- (v) The job of ..... layer is to acquire data and feed it to the neural network. 1
  - a) Input
  - b) Hidden
  - c) Output
  - d) Last
- (vi) ..... is artificially created efficient computing systems designed to simulate the human brain. 1
  - a) AI
  - b) BNN
  - c) ANN
  - d) CNN



## SECTION B: SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of the given 5 questions on Employability Skills.

(2 × 3 = 6 marks)

6. Name the 4 four main categories of communication styles. 2
7. Mention any 2 Self-Confidence building tips. 2
8. Mention any 2 advantages of emails. 2
9. Mention any 2 core objectives of entrepreneurship development. 2
10. Mention the stakeholders in the Green Economy. 2

Answer any 4 out of the given 6 questions in 20–30 words each.

(2 × 4 = 8 marks)

11. Mention any 2 disadvantages of using AI. 2
12. Write any two points to describe the relationship between Neural Networks with the Human nervous system. 2
13. What is a system map? What is it used for? 2
14. Mention 2 advantages of AI in the Health industry. 2
15. What is Regression? Give an example. 2
16. What is the function of Hidden layer in Neural Networks? 2

Answer any 3 out of the given 5 questions in 50–80 words each.

(4 × 3 = 12 marks)

17. Write down the rules you would set before playing any games. 4
18. Name the step under which the following are placed in an AI project cycle: 4
  - a) Identification of the goal
  - b) Designing an algorithm to solve the problem
  - c) Collection of data in large quantities
  - d) Testing the model if it is capable of achieving required goals or not
19. Create a 4W Project Canvas for theW following. 4

As more and more new technologies get into play, risks will get more concentrated into a common network. Cybersecurity becomes extremely complicated in such scenarios and goes beyond the control of firewalls. It will not be able to detect unusual activity and patterns including the movement of data.

Think how AI algorithms can scrape through vast amounts of logs to identify susceptible user behaviour. Use an AI project cycle to clearly identify the scope, how you will collect data, model and evaluation parameters.
20. What is a Rule Based AI Model? Explain with an example. 4
21. Explain the working of Neural Networks and also write down it's applications. 4