DAV Public School, CRRC, Medical Road, Gaya Ji

Class – XI Sub : AI M.M. : 50

GENERAL INSTRUCTIONS:

- Please read the instructions carefully.
- This Question Paper consists of **21 questions** in two sections: Section A & Section B.
- **Section A** has Objective type questions whereas **Section B** contains Subjective type questions.
- **Out of the given (5 + 16 =) 21 questions, a candidate has to answer (5 + 10 =) 15 questions in the allotted (maximum) time of 2 hours.**
- All questions of a particular section must be attempted in the correct order.

SECTION A - OBJECTIVE TYPE QUESTIONS (24 MARKS): This section has 05 questions.

- Marks allotted are mentioned against each question/part.
- There is no negative marking.
- Do as per the instructions given.

SECTION B – SUBJECTIVE TYPE QUESTIONS (26 MARKS): This section has 16 questions.

- A candidate has to do 10 questions.
- Do as per the instructions given.
- Marks allotted are mentioned against each question/part.

SECTION A: OBJECTIVE TYPE QUESTIONS

Q1. Answer ANY 4 out of the given 6 questions on Employability Skills (1 x 4 = 4)

i) What is the purpose of communication?
a. Inform (tell someone about something) b. Influence (get someone to do something you want)
c. Share thoughts, ideas, feelings d. All of these

ii) What does an upright(straight) body posture convey or show?
a. Shyness b. Fear c. Confidence d. Intelligence

iii) What makes you complete your work or studies without others cheering you?
a. Self-confidence b. Communication c. Self-motivation d. Self-esteem

iv) Which of the following can help you manage time better?
a. Talking to friends b. Making a to-do-list
c. Making sure we don't miss our play time d. Watching favourite movie

v) Which shortcut key is used to create a new document?
a. Ctrl+ C b. Ctrl + N c. Ctrl + M d. Ctrl + D

vi) Which of the following options are word processors? Select all the correct options.
a. Google Docs b. LibreOffice Writer c. Microsoft Word d. All of these

Q.2 Answer ANY 5 out of the given 6 questions (1 x 5 = 5)

i. Divya was learning neural networks. She understood that there were three layers neural network. Help her identify the layer that does processing in the neural network
a. Output layer b. Hidden layer c. Input layer d. Data layer

ii. Who is often referred to as the "Father of AI"?

a. Alan Turing b. John McCarthy c. Marvin Minsky d. Herbert A. Simon

iii. Which category of machine learning occurs in the presence of a supervisor or teacher?

a. Unsupervised Learning b. Reinforcement Learning

c. Supervised Learning d. Deep Learning

iv. Which AI application is responsible for automatically separating emails into "Spam" and "Not Spam" categories?

a. Gmail b. YouTube c. Flipkart d. Watson

v. Which of the following is a job role in AI related to the automobile INDUSTRY?

a. Robotics Engineer b. Virtual Nurse Assistant

c. Sales Forecasting Analyst d. Autonomous Vehicle Engineer

vi. Which industry uses AI for personalized travel recommendations?

a. Tourism b. Banking c. Healthcare d. Geospatial

Q.3 Answer <u>ANY 5</u> out of the given 6 questions (1 x 5 = 5)

i. Which industry uses AI for market analysis and fraud

a. Finance b. Media c. Textile d. Design

ii. Identify the datatype L = "45"

a. String b. int c. float d. tuple

iii. Which keyword can be used to stop a loop?

a. stop b. break c. brake d. close

iv. Which is NOT correct about the Capstone project?

a. It is a project where students must research independently

b. Students can integrate all their knowledge to develop a solution to the problem

c. It is the final project of an academic program.

d. Students are made to look at real world situations, exchange their point of view and discuss potential solutions to the problem.

v. Which is the fundamental question which is asked before deciding to embark on an AI development journey?

a. Should we do the project? b. Is there a solution?

c. Can we leave the problem? d. Is there a pattern?

vi. The question, 'which option should be taken?' comes under which category?

a. Classification b. Regression c. Anomaly detection d. Recommendation

Q.4 Answer <u>ANY 5</u> out of the given 6 questions (1 x 5 = 5)

i. Which one is a part of the 5W1H method?

a. While b. How c. Whose d. Whether

ii. _____Analysis helps in identifying the patterns by asking different questions which fall into different approaches.

a. Predictive b. Prescriptive c. Probability d. Prototype

iii. Which one among the following is known as individual brainstorming?

a. Brainwriting b. Brain dump c. Brain explore d. None of these

iv. _____ is the process of generating ideas and solutions through sessions such as sketching, brainstorming etc.

a. Define b. Empathise c. Ideate d. Prototype

v. Which special symbol is used to add comments in python?

a. $ b.// c. /*.... */ d.#

vi. Which of the following function converts a string to an integer in python?

a. int(x) b. long(x) c. float(x) d.str(x)

Q.5 Answer <u>ANY 5</u> out of the given 6 questions (1 x 5 = 5)

i. After you Ideate, the next step is to _____

a. Test b. Prototype c. Define d. Empathise

ii. What does the term "Data is the new oil" imply?

a. Data is as valuable as oil. b. Data is used as fuel for machines.

c. Data is a non-renewable resource. d. Data and oil are unrelated.

iii. What is the correct way to print 'hello everyone' in python?

a. print('hello everyone') b. echo('hello everyone')

c. printf('hello everyone') d. Print('hello everyone')

iv. Design Thinking typically helps in _____

a) Innovation b) Data Analytics c) Financial Planning d) Operational Efficiency

v. Name the function that displays the data type of the variable.

a. data( ) b. type( ) c. datatype( ) d. int( )

vi. In Artificial Intelligence, NLP stands for:

a) Natural Language Programming b) Natural Language Processing

c) Neural Learning Processing d) Network Language Protocol

<u>SECTION B: SUBJECTIVE TYPE QUESTIONS</u>

Answer <u>ANY 3</u> out of the given 5 questions on Employability Skills. (2 x 3 = 6)

Answer each question in 20 – 30 words.

Q6. What is word processor? Write two examples.

Q7. What do mean by self-management?

Q8. Write 7Cs of effective communication. (Any four)

Q9. What do mean by Goal setting?

Q10. Write down the different types of verbal communication with examples of each.

Answer <u>ANY 4</u> out of the given 6 questions in 20 – 30 words each. (2 x 4 = 8)

Q11. Write any two benefits and limitation of AI.

Q12. Name some common job roles in the field of artificial intelligence (AI).

Q13. What do you mean by a capstone project? Give some example.

Q14. What is SDG? Write any two SDG name

Q15. Explain 5W1H method.

Q16. List two popular AI tools and programming languages used by AI professionals.

Answer <u>ANY 3</u> out of the given 5 questions in 50– 80 words each. (4 x 3 = 12)

Q17. Define machine learning and explain different types of machine learning.

Q18. Explain briefly the different stages of Design thinking with diagram

Q19. Write down the steps of Problem decomposition

Q20. Explain Empathy Map with diagram

Q21. Define Ideation stage. Explain all technique of ideation.