

KOTHARI INTERNATIONAL SCHOOL, NOIDA
ANNUAL EXAMINATION, SESSION: 2024-25
GRADE: 9 SUBJECT: ARTIFICIAL INTELLIGENCE (417)
SET A

DAY & DATE: WEDNESDAY- FEBRUARY 12, 2025

MAXIMUM MARKS: 50

NAME: _____

TIME ALLOTTED: 2 HOURS

ROLL NO: _____

GENERAL INSTRUCTIONS:

- i). This question paper consists of 21 questions in two sections: Section A and Section B*
- ii). Section A has objective type questions, whereas Section B contains Subjective type questions.*
- iii). All questions of a particular section must be attempted in the correct order.*

SECTION – A

1. Answer any 4 out of the 6 questions.

- i.** Which of the following methods are used to receive information from the sender through a letter? **(1)**

 - (a) Listening
 - (b) Speaking
 - (c) Reading
 - (d) Writing
- ii.** Which of the following is an example of time management? **(1)**

 - (a) Procrastinating on tasks
 - (b) Prioritizing important work over distractions
 - (c) Overloading yourself with too many tasks
 - (d) Avoiding deadlines
- iii.** Which of the following is NOT an example of ICT? **(1)**

 - a) Email
 - b) Word Processing Software
 - c) Books
 - d) Video Conferencing
- iv.** Which of the following is NOT a characteristic of an entrepreneur? **(1)**

 - a) Risk-taking ability
 - b) Creativity
 - c) Lack of confidence
 - d) Problem-solving skills

- v. What is self-motivation? (1)
a) Waiting for others to encourage you
b) Giving up when faced with difficulties
c) Taking initiative to achieve your goals
d) Blaming others for failures
- vi. Which of the following is an example of a green skill? (1)
a) Recycling waste materials
b) Ignoring pollution problems
c) Deforestation for industrial use
d) Using single-use plastics

2. Answer any 5 out of the 6 questions.

- i. Who coined the term Artificial Intelligence? (1)
- ii. Which of the following elements is not a part of sustainable development? (1)
(a) Society
(b) Environment
(c) Ecology
(d) EcoSystem
- iii. Among the following, Which AI related career demands strong mathematical skills? (1)
(a) Data Scientist
(b) Machine Learning Engineer
(c) Data operators
(d) BI Developer
- iv. The term _____ refers to a system of principles and rules of conduct that govern an individual's acceptable behaviour and actions. (1)
- v. According to SDG1 eradicating poverty across the world has an interlinked relationship with SDG2, SDG3 and _____. (1)
- vi. The name of the programming language that was developed by John McCarthy was _____. (1)

3. Answer any 5 out of the 6 questions.

- i. Which of the following stages is used by the programmers to write about the nature and boundaries of a problem? (1)
(a) Data Acquisition
(b) Problem Scoping
(c) Data Exploration
(d) Data Validation

- ii. The structure of decision tree is _____ (1)
(a) Linear
(b) Non-Linear
(c) rigid
(d) Symmetrical
- iii. _____ is one of the great applications of machine learning. (1)
(a) Driverless cars
(b) Chatbots
(c) Expert system
(d) Product recommendation engine
- iv. The 4 Ws of the 4W problem canvas are: (1)
a) Who, What, Where and Why
b) Who, What, When and Why
c) Who, What, Where and When
d) Who, Where, When and Why
- v. Which of the following is not a method to collect data? (1)
(a) Surveys
(b) Web Scrapping
(c) Sensors
(d) Archives
- vi. Identify the correct representations in a system map (1)
(a) Circles -> elements; arrowed lines -> relationship
(b) Squares -> elements ; dotted lines -> relationship
(c) Circles -> elements ; dotted lines -> relationship
(d) Squares -> elements ; arrowed lines -> relationship

4. Answer any 5 out of the 6 questions.

- i. Name the technology that uses electromagnetic field to automatically identify and track tags attached to objects? (1)
(a) RFID
(b) RDIF
(c) FIDR
(d) FDIR
- ii. Which of the following W of 4Ws canvas problems helps in analyzing the affected people directly or indirectly? (1)
(a) who
(b) what
(c) where
(d) why

- iii. In a system map, if someone depicts an arrow line from A to B with a + sign it means that (1)
(a) There exists a direct relation between A and B
(b) There exists an inverse relation between A and B
(c) There exists a bidirectional relation
(d) There is no relation between A and B
- iv. Cultivating Data Literacy means: (1)
(a) Utilize vocabulary and analytical skills
(b) Acquire, develop, and improve data literacy skills
(c) Develop skills in statistical methodologies
(d) Develop skills in Math
- v. What are the basic building blocks of qualitative data? (1)
(a) Individuals
(b) Units
(c) Categories
(d) Measurements
- vi. Which among these is not a type of data interpretation? (1)
(a) Textual
(b) Tabular
(c) Graphical
(d) Raw data

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

- i. _____ is the practice of protecting digital information from unauthorized access, corruption, or theft throughout its entire lifecycle. (1)
(a) data security
(b) data literacy
(c) data privacy
(d) data acquisition
- ii. _____ relates to the manipulation of data to produce meaningful insights. (1)
(a) Data Processing
(b) Data Interpretation
(c) Data Analysis
(d) Data Presentation
- iii. Find the missing pattern from the following (1)
2, 4, 6, 8, 10, 12, ?
- iv. What is the probability of getting head when you toss a coin once? (1)
(a) 0.75
(b) 1
(c) 0
(d) 0.5

- v. A die is rolled. What is the probability of rolling a number greater than 4? (1)
(a) $1/2$
(b) $1/3$
(c) $2/3$
(d) $1/6$
- vi Which of the following is NOT a strong password practice? (1)
(a) Using a combination of uppercase, lowercase, numbers, and special characters
(b) Using your birthdate as your password
(c) Using a long password
(d) Regularly changing your password

Section – B
Answer any 3 out of the 5 questions.

6. Name two advantages of oral communication? (2)
7. Define self-management? (2)
8. Define operating system? Name two operating systems? (2)
9. Mention two qualities of successful entrepreneur? (2)
10. Mention three steps to build self-confidence? (2)

Answer any 4 out of the given 6 questions.

- 11 Define problem scoping? (2)
- 12 Differentiate between weak AI and strong AI? (2)
- 13 What is data literacy? (2)
- 14 What is probability? (2)
- 15 Mention few examples of how generative AI is used in various fields? (2)
- 16 Differentiate between data processing and data interpretation? (2)

Answer any 3 out of the 5 given questions.

- 17 What is the significance of AI project cycle? Also explain in detail about how Data Acquisition is different from data exploration? (4)

- | | | |
|----|--|-----|
| 18 | Mention four do's and don'ts's for cyber security? | (4) |
| 19 | Differentiate between Artificial Intelligence, Machine Learning and Deep Learning? | (4) |
| 20 | How is maths used in AI? | (4) |
| 21 | What are the limitations of using generative AI? | (4) |