

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

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). Out of the given (5 + 16 =) 21 questions, a candidate has to answer (5 + 10 =) 15 questions in the allotted (maximum) time of 3 hours.*
- iv). 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.** How do you receive information on phone? **(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 an input device? **(1)**

 - (a) Printer
 - (b) Monitor
 - (c) Keyboard
 - (d) Speaker
- 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. 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
- vi. Which of these practices can reduce the carbon footprint? (1)
(a) Using public transportation
(b) Burning fossil fuels
(c) Overusing natural resources
(d) Cutting down forests

2. Answer any 5 out of the 6 questions.

- i. What is the name of the robot news anchor in Japan? (1)
- ii. Which of the following elements is not a part of sustainable development? (1)
(a) Society
(b) Environment
(c) Ecology
(d) EcoSystem
- iii. Face recognition is an example of _____ domain of AI. (1)
- 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. Name the virtual assistant made by Amazon (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. Statement 1: Where block helps you to focus on the context/situation/location of the problem. (1)
Statement 2: What block helps you need to determine the nature of the problem.
(a) Statement1 is correct and Statement2 is incorrect
(b) Statement2 is correct and Statement1 is incorrect
(c) Both Statement1 and Statement 2 are incorrect
(d) Both Statement1 and Statement 2 are correct
- 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 talks about context/ situation of the problem? (1)
(a) who
(b) where

- (c) what
- (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. Quantitative data is numerical in nature. (1)
- a. True
 - b. False
- v. What are the basic building blocks of qualitative data? (1)
- (a) Individuals
 - (b) Units
 - (c) Categories
 - (d) Measurements
- vi. A Bar Graph is an example of? (1)
- a. Textual
 - b. Tabular
 - c. Graphical
 - d. None of the above

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. With one throw of a six sided dice , what is the probability of getting an even number? (1)
(a) 1/5
(b) 2/5
(c) 5/6
(d) 1/2
- 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 disadvantages of written communication? (2)
7. Define self-management? (2)
8. Define bandwidth? (2)
9. Mention two characteristics of entrepreneurship? (2)
10. Mention three steps to build self-confidence? (2)

Answer any 4 out of the given 6 questions.

- 11 Define data visualization? Name any two graphs used for data visualization? (2)
- 12 Explain about two limitations of using 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.

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| 17 | Explain about Rule based approach in AI systems? | (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) |