

1. AI Terminologies



- A. 1. b) 2. c) 3. a) 4. a) 5. c)
- B. 1. Intelligence 2. Patterns 3. Chatbots 4. Training
5. Vocabulary
- C. 1. F 2. T 3. F 4. T 5. T
- D. 1. Voice Assistants 2. Algorithm 3. Output 4. Machine Learning
5. Decision making
- E. 1. Artificial Intelligence (AI) is the ability of machines or computers to perform tasks that would normally require human intelligence.

2.	Human Intelligence	Machine Intelligence
	Humans make decisions based on a mix of logic, emotions, past experiences.	Machines use data and algorithms to make decisions.
	For example, when deciding what to wear, a human thinks about emotions, weather etc.	For example, A self-driving car uses sensors and data to make decisions.

3. Neural Networks are a type of machine learning inspired by how the human brain works. They are made up of layers of neurons that process information.
4. AI uses data (images, text, number or sounds) just like we learn by observing things around us, AI also learns from examples. The more relevant and clear the data is, the better AI can understand the problem.
5. Training is the process where an AI system is taught using large amounts of data. During this, the system is exposed to examples that help it understand patterns and make decisions.

THINK & APPLY

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2. Good Data and Bad Data



- A. 1. b) 2. b) 3. c) 4. b) 5. c)
- B. 1. Data 2. Sensor 3. Unstructured 4. Database 5. Accurate
- C. 1. T 2. F 3. T 4. F 5. T
- D. 1. thermometer sensor 2. Sorting 3. Digital footprint 4. Consistency 5. Filtering
- E. 1. A database is like a large, well-organised digital cupboard. Instead of paper files and folders, it keeps information in electronic tables.
2. Good data is data that we can trust. It is accurate, complete, consistent and relevant to the problem being studied.
3. Sorting means putting data in a particular order. For example, you can sort a list of names from A to Z or sort a list of marks from highest to lowest.
4. Some examples of database in daily life are listed below:
- A school library database that stores the name, author and availability of every book in the collection.
 - A hospital database that keeps a record of every patient's medical history, medicines and test results.
 - An app like BookMyShow that tracks which cinema seats have been booked and which are still available.
5. Good data must possess several key qualities:
- **Accurate:** The data must show the truth. It should be correct and not contain any errors.
 - **Complete:** No important information should be missing. All details are needed for a full picture.
 - **Consistent:** The same kind of information must always be recorded in the same way. This makes it easier to understand and compare.
 - **Relevant:** The data must be connected to the question or problem being studied. If it doesn't help answer the question, it's not useful.

THINK & APPLY

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3. Algorithmic Thinking



- A. 1. c) 2. b) 3. a) 4. d) 5. c)
- B. 1. Sequence 2. instructions 3. algorithm 4. Repetition
5. Traffic lights
- C. 1. F 2. F 3. T 4. T 5. T
- D. 1. Library 2. Debugging 3. Sequence 4. Logical thinking
5. Repetition
- E. 1. Testing means checking that the algorithm works correctly with different situations and giving the expected result.
2. Logical thinking is when you make decisions based on facts and rules, not feelings or guesses.
3. Bugs happen for many reasons. Here are the most common ones:
- A step is missing from the algorithm.
 - Steps are written in the wrong order.
 - A decision has the wrong condition (e.g., YES and NO are swapped).
 - The instructions are not clear.
4. Every good algorithm follows these rules:
- It has a definite beginning and a definite end.
 - Steps are written in a clear and simple order.
 - Each step is easy to understand.
- It produces the correct result every time it is followed.
5. Here is a simple three-step method for debugging any algorithm:
1. READ: Read every step carefully, as if you are a robot following instructions for the first time.
 2. TRACE: Follow the steps on paper and write down what would happen at each stage.
 3. FIX: Once you find the mistake, correct it and test the algorithm again.

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4. Digital Responsibility



- A. 1. b) 2. a) 3. c) 4. b) 5. d)
- B. 1. Cloud service 2. Support 3. Fake news 4. 30 minutes 5. Balance
- C. 1. T 2. T 3. F 4. F 5. T
- D. 1. Please 2. 2FA 3. Apology 4. Adult 5. Personal
- E. 1. The two ways to treat others kindly while communicating online are:
- **Be Kind:** Treat others online as you would in person. If you wouldn't say something face-to-face, don't say it online. Online communication can be tricky because we can't hear tone of voice or see facial expressions. Always be respectful, as words can hurt even if unintentional.
 - **Stay Safe:** Be careful about what personal information you share. Never share your full name, home address, phone number, school details or passwords. Use privacy settings on websites to protect your details. Always ask a trusted adult before sharing any personal information online.
2. Your digital identity is how you are represented online, created by the things you share, your profile details and your online activity. In today's digital world, managing your online identity is very important. Everything you do on the internet contributes to how others see you, and even how you see yourself.
3. Antivirus software helps protect your device from viruses and malware. Antivirus software scans files and programmes to detect and remove viruses. It should be updated regularly to protect the device from new threats.
4. Respectful communication means talking to others in a way that shows kindness and understanding. This is just as important online as it is in person.
5. Fake news often has dramatic headlines, misleading images or clickbait content designed to get attention. Be critical of sources that use extreme language or aim to provoke strong emotions.

THINK & APPLY

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