

1. Which of the following processes describes deep learning?

- ☐ Uses a set of predefined rules to make decisions based on input data.
- ☐ Relies on manual feature extraction to improve model performance.
- ☒ Involves training algorithms with large amounts of data to identify patterns and make predictions.
- ☐ Involves analyzing historical data to interpret and extract the desired results.

✔ **Correct**

Deep learning involves training algorithms with large amounts of data to identify patterns and make predictions.

2. How does AI predict consumer behavior for personalized marketing?

- ☐ By analyzing social media trends alone.
- ☐ By conducting surveys with consumers.
- ☒ By using historical purchase data and browsing behavior.
- ☐ By reviewing consumer feedback answers manually.

✔ **Correct**

AI predicts consumer behavior using historical purchase data and browsing behavior for personalized marketing.

3. Select the correct statement from the following options.

- ☐ Data scientists use AI tools to create high-quality content.
- ☒ NLP engineers create AI systems that process human language.
- ☐ Marketers design and maintain AI systems.
- ☐ AI engineers analyze huge datasets using advanced mathematics, statistics, and data visualization tools.

✔ **Correct**

NLP engineers create AI systems that process human language. They possess expertise in machine learning, neural networks, and programming languages like Python and Java.

4. Which of the following ethical considerations ensures that the decision-making processes of AI systems are clear and understandable to users?

- ☒ Transparency and accountability
- ☐ Data privacy and security
- ☐ Autonomous systems and human oversight
- ☐ Access and equity

✓ **Correct**

Transparency and accountability ensure that the workings of AI systems are understandable and that creators are responsible for the outcomes.

5. A content creator team uses AI tools to generate articles and social media posts.

Recently, a team member noticed some of the AI-generated content included inaccurate and fabricated details. The team is concerned about the integrity of the content. What steps would be better for the team to take to mitigate the risk of AI hallucinations in the generated content?

- ☐ Reduce the use of AI tools altogether.
- ☒ Validate and fact-check the AI-generated content before publishing.
- ☐ Ignore the issue and hope that readers will not notice the inaccuracies.
- ☐ Rely on the AI tool's output and publish the content.

✓ **Correct**

Validating and fact-checking the AI-generated content is essential to ensure the accuracy of the information.

6. Which of the following is a complex and evolving issue related to AI-generated content?

- ☐ Increasing AI processing speed
- ☐ Ensuring AI systems are user-friendly
- ☒ Clarifying intellectual property rights
- ☐ Reducing the cost of AI systems

✓ **Correct**

Intellectual property rights related to AI-generated content are indeed a complex and evolving issue.

7. What are the core elements of cognitive computing?

- ☐ Automation, analytics, and optimization
- ☐ Programming, debugging, and reasoning
- ☒ Perception, learning, and reasoning
- ☐ Data mining, visualization, and storage

✔ **Correct**

The core elements of cognitive computing are perception, learning, and reasoning.

8. Why might supervised learning become more precise with the provision of more labeled samples?

- ☐ It eliminates the need for any predefined algorithms.
- ☐ It uses statistical methods to analyze the increasing amount of data.
- ☐ It creates new rules based on each new sample provided.
- ☒ It improves the model's ability to learn and recognize patterns from the data.

✔ **Correct**

The more labeled samples provided, the better the model can learn and recognize patterns, increasing precision.

9. Which of the following key characteristics of a convolutional neural network (CNN) makes it suitable for image recognition tasks?

- ☐ The ability to handle sequential data
- ☐ The multiple hidden layers for hierarchical feature learning
- ☐ The use of backpropagation for error correction
- ☒ The use of convolutional layers to learn spatial hierarchies

✔ **Correct**

CNNs use convolutional layers to automatically and adaptively learn spatial hierarchies from input images.

10. How are AI-powered robots transforming the manufacturing industry?

- ☒ By increasing efficiency, reducing downtime, and improving product quality
- ☐ By creating new and unpredictable challenges in production processes
- ☐ By focusing on administrative tasks rather than production
- ☐ By replacing all human workers on the assembly line

✔ **Correct**

AI-powered robots enhance efficiency, reduce downtime, and improve the quality of products in manufacturing.