1. **Which of the following is a relevant concept in Data Science?**

- [ ] Physics
- [ ] History
- [ ] Business
- [ ] Geography

<i> Correct: Business<i>

2. **What are the needed skills in data science?**

- [ ] Business understanding, Statistics knowledge, Analytics expertise
- [ ] Language proficiency, Art skills, Programming knowledge
- [ ] Music skills, Sports knowledge, Dance expertise
- [ ] Cooking skills, Fashion sense, Music knowledge

<i> Correct: Business understanding, Statistics knowledge, Analytics expertise<i>

3. **What is the difference between Artificial intelligence (AI) and Machine learning (ML)?**

- [ ] AI focuses on using machines to perform tasks based on algorithms, while ML focuses on extracting valuable information from text.
- [ ] AI is a more general concept that consists of the use of machines to perform tasks based on algorithms, while ML is a part of AI that focuses on the ability of machines to learn from past data and correct themselves.
- [ ] AI and ML are the same concepts and can be used interchangeably.
- [ ] AI is used for speech recognition and ML is used for computer vision.

<i> Correct: AI is a more general concept that consists of the use of machines to perform tasks based on algorithms, while ML is a part of AI that focuses on the ability of machines to learn from past data and correct themselves.<i>

4. **What is NLP?**

- [ ] A field of AI that trains machines to identify and classify objects in digital images.
- [ ] The recognition and translation of spoken language into text by computers.
- [ ] The process of extracting valuable information from audio files.
- [ ] Natural Language Processing - used to extract valuable information from text for sentiment analysis, recommendation systems, chatbots, speech recognition, and text summarization.

<i> Correct: Natural Language Processing - used to extract valuable information from text for sentiment analysis, recommendation systems, chatbots, speech recognition, and text summarization.<i>

5. **What is ETL?**

- [ ] Extract Transform Load - the process of transforming data from different sources.
- [ ] Extract Transform Load - the process of exchanging data with partners for mutual benefits.
- [ ] Extract Transform Load - the process of pulling data from different sources, applying transformations, and storing the transformed information.
- [ ] Extract Transform Load - the process of keeping data private for internal operations.

<i> Correct: Extract Transform Load - the process of pulling data from different sources, applying transformations, and storing the transformed information.<i>

6. **Why is data science important?**

- [ ] To increase costs and time.
- [ ] To reduce costs and time, support decisions, and differentiate from competitors.
- [ ] To create new products and innovations without considering market demand.
- [ ] To decrease precision and real-time value.

<i> Correct: To reduce costs and time, support decisions, and differentiate from competitors.<i>

7. How can data strategies transform data into potential value?

- [ ] By keeping data private, selling data as a product, trading data, and making data open.
- [ ] By only keeping data private and not sharing it with others.
- [ ] By selling data as a product and not making it open and free.
- [ ] By only making data open and free without leveraging it for internal operations.

<i> Correct: By keeping data private, selling data as a product, trading data, and making data open.<i>

8. What are the steps in the data science process?

- [ ] Business problem, data acquisition, data fusion, and data modeling.
- [ ] Data preparation, exploratory analysis, and data visualization.
- [ ] Business problem, data acquisition, data preparation, data fusion, data cleaning, exploratory analysis, data modeling, data visualization and communication, and deploy.
- [ ] Business problem, data acquisition, data preparation, data visualization, and deploy.

<i> Correct: Business problem, data acquisition, data preparation, data fusion, data cleaning, exploratory analysis, data modeling, data visualization and communication, and deploy.<i>

9. What is the difference between data privacy and data security?

- [ ] Data privacy refers to protecting data from external attackers, while data security refers to governing how data is collected, used, shared, and stored.
- [ ] Data privacy refers to governing how data is collected, used, shared, and stored, while data security refers to protecting data from external attackers.
- [ ] Data privacy and data security are the same concepts and can be used interchangeably.
- [ ] Data privacy refers to sharing data with other parties, while data security refers to using the minimum amount of data for the job.

<i> Correct: Data privacy refers to governing how data is collected, used, shared, and stored, while data security refers to protecting data from external attackers.<i>

10. What is supervised learning in machine learning?

- [ ] The main purpose is to predict or classify future data based on past data.
- [ ] The model learns from data that does not include desired outputs and detects anomalies.
- [ ] It is intermediate between supervised and unsupervised learning and mixes both models.
- [ ] Labelled input/output pairs are not needed and the algorithm focuses on maximizing reward in a particular situation.

<i> Correct: The main purpose is to predict or classify future data based on past data.<i>