



# St. Francis' High School, Peshawar

## Homework

Class: 5

Subject: Computer Science

### Chapter 1:

### “Introduction to AI And its Applications”

#### Q1. Choose the correct option.

a. The two main types of Machine Learning are \_\_\_\_\_.

1. Good and Bad Learning
2. Fast and Slow Machine Learning
3. **Supervised and Unsupervised Learning**
4. Simple and Complex Machine Learning

b. One of the purposes of AI in healthcare is to \_\_\_\_\_.

1. Replace doctors
2. **Assist doctors in making accurate diagnoses**
3. Complicate medical records
4. Instantly cure diseases

c. Recognize the type of machine learning described as ‘the computer groups things by itself without guidance’.

1. Supervised Machine Learning
2. **Unsupervised Machine Learning**
3. Quick Learning
4. Slow Learning

d. AI in transportation makes roads safer by:

1. Making cars drive very fast
2. **Reducing traffic jams and preventing accidents**
3. Increasing road traffic
4. Making people drive slower

e. AI should handle its mistakes by:

1. Ignoring them
2. Blaming others
3. **Learning from them and improve**
4. Repeating the same mistakes

f. AI should protect people’s privacy by:

1. Sharing user information with everyone
2. **Keeping user information safe**
3. Ignoring privacy
4. Gathering user information

#### Q2. Questions/ Answers.

Q1. What is the key difference between machine learning and human learning?

Ans.

<b>Machine Learning</b>	<b>Human Learning</b>
<b><u>Learning:</u></b>	
AI learns by looking at lots of data and finds patterns.	Humans learn by watching, doing things, and using past experiences.
<b><u>New Information:</u></b>	
AI is fast but can get confused with new things.	Humans are good at handling new things and surprises.
<b><u>Feelings:</u></b>	
AI doesn't have feelings or emotions.	Humans make choices based on feelings.
<b><u>Memory &amp; Speed:</u></b>	
Quick learning and never forget what it has learnt.	Need more time to learn and forgets what has been learnt easily.

Q2. What are the key stages involved in training an AI Bot?

Ans. 1. Select a course (what a Bot should do).

2. Begin training by collecting information.

3. Teaching the Bot by using the collected data.

4. Testing the Bot.

5. Reflecting on the training (whether it needs more training or not).

Q3. List popular software tools for training machine learning models.

Ans. 1. Scratch

2. Kodable

3. Code.org

4. Blockly

5. Tynker

Q4. How AI is beneficial in the field of healthcare? Provide one example.

Ans. AI can process large amount of patients' data, including medical records and images. It assists doctors in making accurate diagnoses i.e. detecting disease like cancer via X-rays or MRI.

Q5. What are the two main types of machine learning?

Ans. The two Main types of Machine learning are;

- **Supervised machine learning:** Where the computer learns with guidance from a supervisor.
- **Unsupervised machine learning:** Where the computer learns on its own without any guidance.

Q6. How can AI help students in education?

Ans. AI can help students learn by providing personalized lessons, interactive exercises, and real-time feedback. This helps students learn more effectively at their own pace.

Q7. List a few areas where AI can be seen around us.

1. Voice Assistants
2. Search Engines
3. YouTube
4. Self-driving Vehicles
5. Healthcare
6. Education