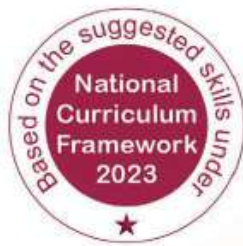




# Code AI Plus

**Windows 10 with Office 2019**

*Also compatible with Office 2016*



## Answer Key

## TRIAL TRIVIA

Identify the following goals and write their names:

- Goal 1 No Poverty
- Goal 5 Gender Equality
- Goal 10 Reduced inequalities
- Goal 15 Life on Land

## SELF-EVALUATION

**A. Tick (✓) the correct answer.**

- (c) Political      2. (c) 2015      3. (b) Goal 3      4. (a) GIGO
- (a) Technical

**B. Write 'T' for True and 'F' for False statements.**

- True      2. False      3. True      4. True
- False

**C. Fill in the blanks.**

- Pillars of sustainability      2. Satellite imagery
- Education      4. Optimize
- Dark skinned

**D. Write full form of the following.**

- SDG: Sustainable Development Goals

2. GIGO: Garbage In, Garbage Out

**E. Answer the following questions.**

1. People, profit, and planet are the pillars of sustainability.
2. The main issues covered under the United Nations General Assembly in 2015 are-
  - a. Eradicate poverty across the world.
  - b. Improve quality education and promote lifelong learning opportunities for all.
  - c. Promoting practices for better consumption and production of resources.
3. The problem of inclusion is found in most of AI systems, showing signs of systematic racism and bias. This happens because the data used for training are already tainted with existing societal biases. For example, facial recognition technology is not so accurate to recognize dark-skinned faces.

**F. Application-based Question.**

SDG Goal 4 Quality Education

**ACTIVITY -WHAT AI CAN DO?**

The names of some important AI-enabled systems are given below. With the help of the Internet, search one advantage and one ethical concern related to these systems.

1. Biometric System:

Advantage: It provides enhanced security.

Ethical Concern: Collecting and storing biometric data raises concerns about the potential misuse or unauthorized access to sensitive personal information.

2. Smart Thermostat:

Advantage: Energy Efficiency: It helps to reduce energy consumption, lower utility bills, and contribute to environmental

sustainability.

Ethical Concern: The collection of personal data by smart thermostats raises privacy concerns.

### 3. Smart Security System:

Advantage: Smart security systems provide real-time monitoring and alerts, enhancing home or business safety.

Ethical Concern: The use of cameras and sensors in smart security systems raises concerns about privacy invasion.

### 4. Clinical Trial Matching:

Advantage: Clinical trial matching enhances patient outcomes by efficiently connecting eligible individuals with appropriate trials.

Ethical Concern: Ethical concerns arise around informed consent and patient autonomy.

PMP

## Chapter – 10[AI for Sustainable Development Goals]

### Worksheet – 1

#### **Q1. Put your knowledge to the test by choosing the right option:**

1. What are the three pillars of sustainable development?
  - a. Political, Economic, Social
  - b. Economic, Environmental, Social
  - c. Cultural, Environmental, Technological
  - d. Industrial, Agricultural, Educational
2. Which organization formulated the Sustainable Development Goals (SDGs)?
  - a. World Bank
  - b. United Nations
  - c. International Monetary Fund
  - d. Greenpeace
3. Goal 7 of the SDGs focuses on:
  - a. Gender Equality
  - b. Clean Water and Sanitation
  - c. Affordable and Clean Energy
  - d. Quality Education
4. How is AI used in achieving SDG 1 (No Poverty)?
  - a. Monitoring climate change
  - b. Identifying poverty-stricken areas through satellite images
  - c. Promoting renewable energy use
  - d. Enhancing healthcare facilities
5. The principle "Garbage In, Garbage Out" in AI implies:
  - a. AI systems only produce garbage output
  - b. The accuracy of AI output depends on the quality of input data
  - c. AI systems eliminate garbage data
  - d. AI systems create biased results intentionally

#### **Q2. Write 'T' for true and 'F' for false statements:**

1. Sustainable Development Goals (SDGs) were formulated in 2020.
2. AI technology has the potential to help in reducing energy consumption and promoting clean, affordable energy.
3. Goal 3 of the SDGs focuses on ensuring sustainable consumption and production patterns of resources.
4. The principle "Garbage In, Garbage Out" implies that AI systems are flawless in their decision-making.
5. The lack of diversity in the data used to train AI systems can lead to racial bias, especially in technologies like facial recognition.

### Q3. Fill in the blanks:

1. Sustainable development seeks to balance economic growth, care for the environment, and \_\_\_\_\_ well-being.
2. AI technology helps in achieving SDG 14 by predicting the spread of invasive species, locating marine litter, and monitoring \_\_\_\_\_.
3. The three pillars of sustainable development are often informally referred to as people, profit, and \_\_\_\_\_.
4. One of the ethical concerns of AI is the problem of \_\_\_\_\_ in data collection, leading to biased decision-making.
5. Amazon faced issues with gender discrimination in its AI recruitment system due to biased data reflecting the company's hiring patterns over the past \_\_\_\_\_ years.

**Chapter – 10[AI for Sustainable Development Goals]**

**Worksheet – 2**

**Q1. Answer the following questions:**

1. What are the Sustainable Development Goals (SDGs)?

.....

2. What is the role of AI in achieving the SDGs?

.....

3. How does AI technology contribute to addressing the issue of poverty (SDG1)?

.....

4. Describe one application of AI in achieving SDG14 (Life Below Water)

.....

5. Explain the problem of inclusion in AI systems with a specific

example?

.....

**Q2. Application Based Questions.**

1. Discuss the role of AI in ensuring sustainable consumption and production patterns (SDG 12).

.....

2. Explain the purpose of the "AI for Oceans" application in the context of achieving SDG 14.

.....

## Worksheet – 01

**Q1. Put your knowledge to the test by choosing the right option:**

1. b            2. b            3. c            4. b            5. b

**Q2. Write 'T' for True and 'F' for false statements.**

1. F            2. T            3. F            4. F            5. T

**Q3. Fill in the blanks:**

1. Social        2. Oceans    3. planet    4. bias        5. 10

## Worksheet – 02

**Q1. Answer the Following Questions:**

1. The development that satisfies the needs of the present generation without compromising the capacity of future generations, guaranteeing the balance between economic growth, care for the environment and social well-being.
2. It is stated by various researchers that AI technology has enough potential to help in lifting people out of poverty, reducing energy consumption and promoting clean, affordable energy.
3. AI technology is helping a lot in achieving the first goal of sustainable development because poverty-stricken areas can be easily captured or identified through satellite images.
4. One significant application of AI in achieving SDG 14 (Life Below Water) is monitoring and protecting marine biodiversity.

5. The problem of inclusion is found in most of AI systems, showing signs of systematic racism and bias. This happens because the data used for training are already tainted with existing societal biases. For example, **facial recognition** technology is not so accurate to recognize **dark-skinned faces**.

## **Q2. Application-based Questions.**

1. Ensure sustainable consumption and production patterns of resources.
2. Ensure sustainable use and conservation of the oceans, seas and marine resources to combat the adverse effects of overfishing.