Chapter-5

AI ethics(Answer key)

A. <u>MULTIPLE CHOICE QUESTIONS</u>

1) Which one of the following is not an AI ethical concern for human?

   b) TIME CONSUMTION

2) Which of the following is an advantage of artificial intelligence?

   d) work tirelessly

3) Which one of the following options is not suitable for AI machines in healthcare

   b) replacing doctors

4) AI bias is also referred as:

   c) machine learning bias

5) AI access can be used for:

   d) all of the above

B. FILL IN THE BLANKS

a. <u>Ethics</u> can be defined as the study of values, generating moral values for good and bad, right, and wrong.

b. Knowledge-based approach works best for <u>Expert</u> systems.

c. Data-based AI is best suited with <u>pattern, speech</u> and <u>image</u> recognitions.

d. AI <u>bias</u> is a phenomenon that occurs when an algorithm produces discriminatory result.

e. AI access can be defined as a mission where information can be made <u>universally</u> accessible to all.

f. The impact of AI on SDG's is to develop responsible <u>citizenship</u> skill as a global concern.

C. MATCH THE FOLLOWING	
Pros of AI	viii)bulk of data with ease, work tirelessly

Lot-enabled bands	vi)detects problem in early stages
AI in healthcare	v)helps physicians in diagnosis
Cons of AI	i) increase in unemployment
Lacks emotions	vii) AI Machines
Data-based AI	iii)pattern, image and speech recognition
Knowledge-based approach	ii)expert system
Study of values	iv)ethics

III) Name any scientific researches where ethics play a major role.

Ans. Almost in all scientific researches, ethics play an important role. For e.g., nuclear weapons. It is a powerful technology that has greater power to destroy humanity. Whether the technology should be used for rockets or in nuclear bombs, that is an ethical issue.

IV) unscramble the following letters to form a word:

a) CHEIST- ethics

b) CEOOHLGNTY- technology

V) Write any two advantages and disadvantages of Artificial Intelligence.

Ans. Two advantages of artificial intelligence

a) able to solve problems effectively and easily.

b) Able to handle bulk of information in one go.

Two disadvantages of artificial intelligence

a. AI machines are expensive.

b. It can create unemployment issue.

VI) Give any two areas of applications of Artificial Intelligence.

Ans). Two areas of application of artificial intelligence are:

1)health care

2)security services

VII) Write any two examples of how Artificial Intelligence in healthcare is helpful.

Ans.) AI machine can be used to read the CT scans faster than humans.

The IoT-enabled bands help in detecting the problems at early stages.

VIII) Write any two advantages of using artificial intelligence in healthcare.

Ans). Two advantages of using artificial intelligence in Health care:

1) There is no time bound for AI machines.

2) AI can help in maintaining clinical records electronically.

IX) Write any two ethical concerns of using Artificial Intelligence.

Ans.) Two ethical concerns of using Artificial intelligence:

1) AI Bias or Machine learning bias

2) AI Privacy

X) Give any two examples about how artificial intelligence is helping in assisting humans in their day-to-day life.

Ans.) Two examples of how Artificial Intelligence is helping in assisting humans in their day-to-day life:

1) AI inclusion suggests making researches, tools, systems and scientific developments available to solve the problems of the world. AI can equip NGOs and organizations with better tools to stand against human trafficking. Using predictive analytics, it targets both the supply and demand underpinning human trafficking.

2) AI technology can be used to help people so that it is socially beneficial, fair, accountable, and works for everyone while solving humanitarian and environmental issues. AI technologies like machine vision can quickly analyse images of roads damaged or destroyed by an event, making way for a faster and safer response.

XI) Define the following terms:

a) AI bias: It is a phenomenon that occurs when an algorithm produces result that are discriminatory due to the built-in-biases created by the programmer.

b) AI access can be defined as a mission where the world's information can be organized and made available to all.

c) AI privacy is defined as one's ability to control how our digital data is being stored, modified, and exchanged between different parties.