AI Ethics Question Answers

Objective Type Questions (OTQs)

1. _____ can be defined as the science of moral duty and ideal human behaviour that teaches what is right and what is wrong. (**Ans. Ethics**)

2. _____ refers to the basic principles of AI system design that use a good code of conduct and produce the results. (**Ans. AI Ethics**)

3. Which of the following can be a simple objective system that depends on human judgement?
   1. **Logical Decision**
   2. Logical Data
   3. Logical Input
   4. Logical Access

4. Who is accountable for considering the system impact on the world?
   1. The system
   2. Only the developer
   3. Only the company
   4. **Every person involved in the creation**

5. If a smart self-driving car met an accident with a person on the road, who is responsible morally?
   1. The car owner
   2. The person
   3. **The developer**
   4. All of these

6. The major ethics concerns are
   1. issues, situations, choices
   2. **decisions, speeches, actions**
   3. feelings, thoughts, expressions
   4. All of these

7. AI ethics is a blanket term used for dealing with all the ethical issues related to AI. (**True**/False)

8. Which of the more important concern related to data?
   1. How does AI work?
   2. **How does AI take decisions?**
   3. How AI collects data?
   4. How does AI represent data?

9. The world of AI revolves around _____. (Ans. **data**)

10. Which of the following is a major source of data for major companies?
    1. Our vehicles
    2. Our Home
    3. Our lifestyle
    4. **Our smartphone**

11. If you do not allow the app certain permissions like storage, phone, camera or contacts, you normally cannot access the features of the app. (**True**/False)

12. Which of the following information will be collected when you open the newly downloaded app on your mobile?
    1. Contact, Location, Camera, Storage
    2. Only contact and Camera
    3. Only Location and Storage
    4. **Any of the above depends on the app**

13. The AI system only performs the tasks exactly what they made for. (**True**/False)
14. AI systems are biased because they take decisions from the data and training material provided to them. (**True**/False)
15. _____ refers to the guideline and system purposes should be very clear to its users. (Ans. **Transparent System**)

16. The system should be designed in such a manner that the data collection and purpose should be unlimited. (True/**False**)
17. Amazon used a system for recruitment, created a situation in which many eligible females were left out of the consideration. This is called _____.
    1. Misinterpretation of Data
    2. **Problem of Inclusion**
    3. Gender Bias
    4. Data Privacy
18. Which of the following chatbot launched by Microsoft as an experimental Twitter chatbot?
    1. Twitterbot
    2. TwiChatBot
    3. **Tay**
    4. TwitterRobo
19. An AI system must have a right to the data it collects. (**True**/False)
20. The AI system cannot have any negative adoptions. (True/False)
21. The situation that is created by a system itself and the developer of the system cannot resolve them is known as _____. (Ans. **Black Box problem**)
22. Amazon had been working on a secret AI recruiting tool. The machine-learning specialists uncovered a big problem: their new recruiting engine did not like women. The system taught itself that male candidates were preferable. It penalized resumes that included the word "women". This led to the failure of the tool. This is an example of
    o Data Privacy
    o AI access
    o **AI Bias**
    o Data Exploration
23. Which of the following are the ethical issues around AI ?

(a)Bias and fairness

b)Accountability

(c) yber security and malicious use

(d) All of these

24.'For hiring purposes,a big firm made use of an AI based on software an resulted in hiring very few women in past 5 years'. Which AI ethical issue is related to this ?

 (a) Transparency

(b) Bias and fairness

(c) Trust ,privacy and control

(d) Automation and impact over jobs

25.Results based on incomplete or prejudiced data , produced by AI tools, are signified as _____ .

(a)AI fairness

(b) Deepfake

(c)Robotics

(d) AI bias

26.'A college sudent created a fake picture of his fellow student using AI's deepfake technology and registered for a competition '. Which AI ethical issue is related to this?

(a)Transparency
(b) Bias and Fairness
(c) Trust, Privacy and Control
(d) Automation and impact over jobs

27. 'An automobile company laid off many factory workers ever since it started using robots in factory, heavily affecting the employment and livelihood of these workers' . Which AI ethical issue is related to it?

(a) Transparency
(b) Bias and Fairness
© Trust ,privacy and control
(d) Automation and impact over jobs

28. The data used by AI algorithms to build AI models is known as _____ data .

(a) Fair
(b) Testing
© Training

(d) Annotated

Subjective Type Questions (STQs)

1. **What do you understand by Ethics?**
   o The concerns related to good and ideal behaviour or manners and moral principles are known as ethics.
   o In other words, ethics refers to what is right and what is wrong then teaches moral conduct.
2. **What are the moral issues related to self-driving cars?**
   o Self-driving cars are totally under the control of AI.
   o For example, an animal is crossing your way suddenly hit by a self-driving car. The animal got hurt.
   o Who is responsible for this accident?
   o The following are some ethical concerns:
     ▪ The developer of the car goes through all dilemmas while developing the car's algorithm.
     ▪ The morality of the developer gets transferred into the machine as what according to him/her is the right priority and hence would be the selection made by the machine.
     ▪ Every person has their own perspective and he/she takes the decision according to their moralities.

Q- Why ethical practices should be followed while developing solutions using AI?

- o Ethical practices are very important while developing solutions using AI because the solution is made to solve the problem or reduce the complexity of the problem.
- o If ethical practices are not followed properly then the solution might create more problems and that leads to more problems.
- o Even unethical practices increase risk and damage to the surroundings. Which is not a good cause for the problem solution.

Q- What are the concerns related to the use of AI to control defence equipment?

- o AI-controlled nuclear missiles capable of making independent decisions or AI-equipped armed military drones.
- o Another concern is the human cost of the adoption of AI technology.

Q-   What do you understand by data privacy?

- o Data plays a vital role in AI systems. The existence of an AI system is impossible without data.
- o Data management like storage, usage, collection and maintaining data is one important concern.
- o When the user works on the system, the user is sharing data. This data needs permission to access the data. This consent is known as data privacy.

Q- Where do we collect data from?

- o There are various platforms and sources we collect data from, some of them are:
    - Customers Feed Form
    - Loyalty Programs
    - Surveys
    - Service Agreements
    - Various contests or competition
    - Records of online transactions
    - Web browser cookies
    - Digital Footprints
    - Social Media
    - Keyword trackers

Q - Why do need to collect data?

- o We need to collect data for the following reasons:
    - To store and analyse data
    - To know the potential of customers and get tangible returns
    - It helps for future marketing and increases engagement
    - It helps in retargeting efforts and increases database
    - It is helpful for making an overall strategy and improving the products
    - It is helpful in obtaining feedback from customer

Q - "Smartphones are major sources of data nowadays."Justify this statement.

- o Smartphones becomes an integral part of human lives nowadays.
- o Most of us use smartphones more than we interact with people around us.

- This is because smartphones provide a lot of facilities and features that make human life easy and comfortable.
- With online shopping, ordering food becomes very easy with the help of small box loaded with technology.
- Moreover, now smartphones provide recommendations and notifications according to users' choices.

Q - Priya and Rani are friends. Rani wants to buy a new purse. They discussed on WhatsApp about purchasing a new purse online. After discussion, what will happen to Rani's phone? Why?

- After the discussion, the smartphone starts showing the recommendations to buy a new purse.
- The shopping websites show notifications related to branded purses.
- They show and urge rani to buy a new purse.

Q -   How does the smartphone get to know about the discussions and thoughts that the mobile user has?

- As a mobile user when people download and install apps from the play store, it asks a few questions and permission's access the phone's data in different ways.
- Once the user allows it the AI system of a particular app, starts working on the data collection.
- It understands the behaviour, and data and recommends the user product or services accordingly.

Q - Majorly, all the virtual assistants have a female voice. It is only now that some companies have understood this bias and have started giving options for male voices but since the virtual assistants came into practice, female voices are always preferred for them over any other voice. What are some reasons for this?

- As per the general observation, virtual assistants are developed for assistance.
- The female voice is more soothing compared to a male voice.
- In addition to this, Virtual Assistants should be more user-friendly.
- One reason behind this the company makes the user listen to their voice. So they thought female voice will be better than male.

Q - Aman has searched on Google for salons, the first few searches he found mostly salons for female salons. This is based on the assumption that if a person is searching for a salon, in all probability it would be a female. Do you think this is a bias? If yes, then is it a Negative bias or a Positive one?

- It is a negative bias.
- The reason for this is generally the algorithm understands that women are visiting salons more than men.

Q-   What is the permission asked by the app before using it?

- The following permissions are required to be asked by the app before using it:
    - Contacts
    - Location
    - Camera
    - Storage

- Photos
- Notes

Q -   What are the components of a good AI Policy?

- Transparent Policy – Clear guidelines and purposes for users
- Right of data collection – The data collected by the AI system must be right to the data
- Freedom of leaving the system – The freedom to leave the system anytime should be given to the user
- Design – The design should be done in such a way that data collection and purpose should be limited
- Data deletion – Data stored by users should be deleted when they leave the system

Q -   AI increased the gap between two classes of people. Which are these two classes of people?

- AI is an emerging technology as well as budding technology.
- Not everyone has the opportunity to access it.
- The two classes of people are:
    - People who can afford AI-enabled devices make the most of it
    - The people who can't afford Ai-enabled devices left behind

Q - "In the coming years, AI-enabled machines will replace all the people who work as labourers."Justify this statement.

- As per one thought, AI makes our life easier.
- People want most things in just one click and some platforms provide that too.
- So AI enables machines or devices will do the task with just a click.
- Where for the same task human being takes more time compared to AI machines.
- So people who have little or no skills may be left out without jobs and AI takes charge.

Q- Should AI not replace laborious jobs? Will the lives of people improve if they keep on being unskilled?

- AI should not replace all laborious jobs. As if so, there will be no source of income for the daily wage workers.
- Although lives of people do not improve if they keep on being unskilled. Unskilled people have difficulties in growth and personal development.
- Unskilled employees are also obstacles to the organization's growth as well. So employees need to be trained in new skills on regular basis.

Q-   Why AI models are biased in one or another way? Explain it.

- As we are humans, have our own biases towards things.
- Biases are not negative all the time.
- Sometimes it is required to have a bias to control a situation and things working.
- Similarly, machines can have intelligence but not their own bias.
- Any bias can transfer from the developer to the machine through the algorithm.

- o So they are working according to the algorithm. So they are biased in one or another way.

Q - What do you understand about the problem of inclusion?

- o The problem of inclusion refers to the problem that some people are left out of the AI decision-making system.
- o Here we have a great example of AI problem inclusion.
- o Amazon has started the recruitment process through AI, but the AI system left many eligible females into consideration.

Q- What do you understand by the fact interpretation?

- o The AI system can collect the facts or scan data and learn from it but is not able to understand the reason behind a particular conclusion or learning.
- o Sometimes the AI system learns negatively also and produces the result in the same manner.
- o This is called fact interpretation.

Q- What is "Tay"? What controversies were created by Tay?

- o The "Tay" is a chatbot developed by Microsoft to run on the Twitter social media platform.
- o It was designed to experiment with conversational understanding.
- o As per Microsoft's claim, with more users, Tay will be smarter and learn to engage people through casual and playful conversations.
- o The controversy started after the launch of Tay.
- o In the first 24 hours of the launch of Tay, it learned from thousands of tweets and developed an unethical personality.
- o It just started mimicking the personality talking to it and learned from the data fed into it without interpreting it.

Q- What are the major AI ethical concerns related to AI adoption?
- o Unemployment
- o Inequalities
- o Negative Adoptions
- o Black Box problem

Q- Name some ethical issues of AI.

ans. Safety, transparency, bias and fairness, accountability

Q-.Match the following with respect to ethics in AI

(a)	Clear, Consistent and understandable in its working	(i)	Auditable
(b)	Eliminate or reduce the impact of bias	(ii)	Interpretable
(c)	Allowing third parties to assess data inputs and provide assurance that data can be trusted	(iii)	Transparent
(d)	Ability to see how results can vary with changing inputs	(iv)	Fair

ans.(a)-(iii); (b)-(iv); (c)-(i); (d)-(ii)

Q- .List two examples of Human Rights Violation of AI

ans.   (i) Collecting personal data of people without their knowledge.
(ii)AI bias.

Q- .Name some ethical issues related to: (i) AI actions, (ii)AI actions, (iii)AI future.

ans.   (i) Bias and fairness, Accountability, Transparency
(ii) Safety, Human-AI interaction, Trust, Privacy and control
(iii) Automation, Impact over jobs, Auditability and Interpretability
(iv) Control of AI over things and people, Human rights, Robot rights

Q- .What is deepfake ?

ans.   Deepfake is a technology that can generate fake digital photos, sound recordings, and video, which look just as original as possible.

Q- What is AI bias? Give example.

OR

Explain any one example of AI bias.

ans. AI bias is an anomaly (irregularity of abnormality) in the result produced through AI based programs and algorithms because of prejudiced (discriminatory) assumptions made during the algorithm development process or prejudices in the training data,e.g, a health insurance AI program preferred whites over blacks for extra healthcare services because of AI bias.

Q- what is fairness of an AI model ?

ans. A given AI model is fair if the outputs are independent of sensitive parameters (e.g. gender, race, sexuality, faith, disability etc.) for a specific task that is already affected by social discrimination.

Q- What is the role of training data in AI?

Ans. An AI model or algorithm is trained to function in a certain way using a sample set of huge data, known as training data. the completeness in terms of representation (not over or under-represented) and balance of data (correct and unbiased representation) affects the outcome of AI model. if the training data is biased, the result produced by the AI model/ algorithm (that used this data) will also be biased. Thus, it is very important that the training data used for an AI model must be complete, correct, balanced and unbiased.

Q- Define AI ethics.

Ans – Ai ethics is a set of values , principles, and techniques that employ widely accepted standards of right and wrong to guide moral conduct in the development and use of AI technologies.

Q- How would you ensure that the bias does not creep in data?

Ans – One can ensure that the bias does not creep in or gets minimized by the following steps:

Ensuring balanced data.

Supervised decision making.

Regular Bias testing.

Data should be diverse.