

**📘 Geoffrey Hinton – Modern AI Father**

**AI & Robotics – First Session Notes**

**1. Geoffrey Hinton – Godfather of AI**

* Geoffrey Hinton is known as the **“Godfather of AI.”**
* He received the **Nobel Prize in Physics (2024)** from the Royal Swedish Academy.
* His main contribution: **Neural Networks & Deep Learning.**

**2. Artificial Intelligence (AI)**

* **Definition:** The ability of a machine or computer to **think and learn like a human.**
* AI learns from **data** and improves over time without explicit programming.
* **Example:** Teaching a child to recognize cats, dogs, or birds → similarly, AI learns patterns.

**3. Neural Networks**

* **Neural Network:** A machine learning **model** that mimics the human brain.
* Works by **connecting nodes (artificial neurons)** similar to biological neurons.
* Uses these connections to **identify, decide, and predict.**

**4. Biological Neural Network**

* **Neurons:** Billions of nerve cells in the brain.
* **Dendrites:** Receive signals from other neurons.
* **Axons:** Transmit signals to other neurons or muscles.
* **Synapse:** Junction between axon of one neuron and dendrite of another.
* Function: Process and send **electrochemical signals.**

**5. Core AI Concepts**

* **Data → Information** (raw facts → useful meaning)
* **Model → Representation** (system showing how things work)
* **Train → Learning** (model improves by studying data)
* **Test → Evaluation** (checking model performance)

**6. Robotics & AI**

* Robotics integrates **AI** to make machines **intelligent**.
* Robots can **sense, learn, and act** in real-world environments.
* Applications: **Industry, Healthcare, Education, Daily Life.**
* Data → **Information**
* Model → **Representation**
* Train → **Learning**
* Test → **Evaluation**

**🔹 MCQs with Correct Answer Highlighted**

**1. AI refers to the ability of a computer to:**  
a) Store data only  
b) Perform only calculations  
**c) Think and learn like a human**  
d) Replace all humans

**2. Raw facts, numbers, or details we collect are called:**  
a) Model  
**b) Data**  
c) Train  
d) Test

**3. Which term represents a system that shows how something works?**  
a) Data  
**b) Model**  
c) Learning  
d) Testing

**4. The process where a model studies data to improve itself is called:**  
a) Evaluation  
**b) Training**  
c) Representation  
d) Information

**5. The step where we check how well the model has learned is called:**  
a) Training  
b) Learning  
**c) Testing**  
d) Representation

**6. Which of the following best describes Artificial Intelligence?**  
a) Machines storing data  
**b) Machines that learn and improve like humans**  
c) Machines with large memory  
d) Machines only doing math

**7. When AI learns from given data and predicts results, the process is called:**  
a) Testing  
**b) Learning**  
c) Modeling  
d) Evaluation

**8. AI systems get better at tasks without:**  
a) Any input  
**b) Being explicitly programmed for every situation**  
c) Using data  
d) Human supervision

**9. Example of AI learning is:**  
a) A calculator solving equations  
**b) A child recognizing animals after practice**  
c) A book storing information  
d) A clock telling time

**10. Data after processing and understanding becomes:**  
a) Model  
b) Training  
**c) Information**  
d) Evaluation

**WORDS MEANING**

 **Geoffrey Hinton**  → Godfather

 **Award** → Nobel

 **Neural Network** → Model

 **Biological Network**  → Neurons

 **Dendrites**  → Receive

 **Axons** → Transmit

 **Synapse** → Junction

 **AI** → Intelligence

 **Data**  → Information

 **Test** → Evaluation

**ONE WORD ANSWER**

**Q1. Who is called the Godfather of AI?**  
**A1. Hinton**

**Q2. Which prize did Geoffrey Hinton receive in 2024?**  
**A2. Nobel**

**Q3. What is a neural network in AI?**  
**A3. Model**

**Q4. What are billions of interconnected nerve cells in the brain called?**  
**A4. Neurons**

**Q5. Which part of a neuron receives messages?**  
**A5. Dendrites**

**Q6. Which part of a neuron transmits signals?**  
**A6. Axons**

**Q7. What is the junction between two neurons called?**  
**A7. Synapse**

**Q8. AI stands for Artificial \_\_\_\_\_\_\_?**  
**A8. Intelligence**

**Q9. Raw facts and numbers are called?**  
**A9. Data**

**Q10. Data after processing becomes?**  
**A10. Information**

**Q11. The process where a model studies data is called?**  
**A11. Training**

**Q12. Checking how well the model has learned is called?**  
**A12. Testing**

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**A12. Testing**

Would you like me to expand this into a **full question bank (20–25 one-word Q/As)** covering every slide of your PPT?

**You said:**

GIVE ME NMORE QUESTION ANSWER ONE WORD

**ChatGPT said:**

Perfect 👍 I’ll extend the list and give you **more one-word Q&A** from your PPT **“Geoffrey Hinton Modern AI Father (Robotics) for Beginner’s”**.

**🔹 One-Word Question–Answer Set**

**Q1. Who is called the Godfather of AI?**  
**A1. Hinton**

**Q2. Which award did Geoffrey Hinton win in 2024?**  
**A2. Nobel**

**Q3. Nobel Prize was awarded in which subject?**  
**A3. Physics**

**Q4. A neural network in AI is also known as?**  
**A4. Model**

**Q5. A biological neural network is made of billions of?**  
**A5. Neurons**

**Q6. Which part of neuron receives messages?**  
**A6. Dendrites**

**Q7. Which part of neuron transmits signals?**  
**A7. Axons**

**Q8. Junction between neurons is called?**  
**A8. Synapse**

**Q9. AI stands for Artificial \_\_\_\_\_\_?**  
**A9. Intelligence**

**Q10. Raw facts and numbers are called?**  
**A10. Data**

**Q11. Data after processing becomes?**  
**A11. Information**

**Q12. A system that shows how something works is called?**  
**A12. Representation**

**Q13. The process of model studying data is called?**  
**A13. Training**

**Q14. Checking how well the model has learned is called?**  
**A14. Testing**

**Q15. Who is known as the Father of Robotics?**  
**A15. Hinton**

**Q16. The Nobel Prize is awarded by which academy?**  
**A16. Swedish**

**Q17. AI improves over time by learning from?**  
**A17. Data**

**Q18. Biological neurons send messages through?**  
**A18. Signals**

**Q19. Which word describes computer ability to think and learn?**  
**A19. Intelligence**