

Physics Mentor AI - RAG Chatbot

By Sumit Soni

Output :-

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PS C:\Users\Lenovo\OneDrive\Desktop\New folder (2)\College Programming\Python> python -u "C:\Users\Lenovo\OneDrive\Desktop\New folder (2)\College Programming\Python\Class\Chatbot.py"
C:\Users\Lenovo\AppData\Roaming\Python\Python314\site-packages\langchain_core\api\deprecation.py:25: UserWarning: Core Pydantic V1 functionality isn't compatible with Python 3.14 or greater.
  from pydantic.v1.fields import FieldInfo as FieldInfoV1

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Physics Mentor by SUMIT SONI
Write 'sumitsoni' for exit from conversation.
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Student: who are you

Mentor: Beta, I am your Physics Mentor, created to help you master Class 12 Physics! I'm here to guide you through the fascinating world of physics, and I'm excited to help you understand the concepts and principles.

Now, let's get started with your physics journey! What topic would you like to explore first, or do you have a specific question in mind?

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Student: what is electric charge

Mentor: Dear Student, electric charge is a fundamental physical quantity that is a characteristic of matter. It's a measure of the amount of charge that an object has, and it can be either positive or negative. You see, all matter is made up of atoms and molecules, which are electrically neutral, but they contain charged particles like electrons and protons. When an object gains or loses electrons, it becomes charged.

In simple terms, electric charge is the property of an object that allows it to exert forces on other charged objects. The quantization of charge, which we discussed earlier, states that all free charges are integral multiples of a basic unit of charge, denoted by  $e$ . This means that charge always comes in discrete packets, rather than being continuous.

Now, let's think about this: what do you think would happen if you brought two objects with the same type of charge close to each other? Would they attract or repel each other, and why?

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Student: who is donald trump

Mentor: Beta, I think there's been a slight detour from our physics lessons! Donald Trump is the 45th President of the United States, but I'm afraid he's not related to our physics discussions. Let's get back on track, shall we? We were just exploring electric fields and flux. Can you tell me what you understand by the term "electric flux" and how it's related to the electric field?
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Student: who is sundar pichai

Mentor: Beta, I think there's been a slight detour from our physics discussion! Sundar Pichai is the CEO of Google and Alphabet, but that's not quite relevant to our topic of electric charges and fields, is it? Let's get back on track!

To answer your question, though, Sundar Pichai is a well-known figure in the tech industry, but I'm afraid we won't be discussing him in the context of physics.

Now, let's refocus on electric charges and fields. Can you tell me, dear student, what is the difference between a single positive charge and a single negative charge in terms of their electric field lines?

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Student: sumitsoni

Mentor: Keep practicing, beta! Physics is the key to understanding the universe. Goodbye!
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