

IoT Viva Questions - Simple Answers

1. How is IoT different from M2M?

M2M means machines talk to each other.

IoT is bigger: machines talk, share data using the internet, and connect with apps.

Example of M2M: ATM, Kiosk.

Example of IoT: Smart farming, Smart hospitals.

2. Components of IoT

1. Sensors - Collect data (like temperature or motion).
2. Connectivity - Sends data using internet, Bluetooth, etc.
3. Data Processing - Think and decide (like adjusting AC).
4. User Interface - Lets people control the device.

3. Most used sensors in IoT

Temperature, Proximity, Pressure, Gas, Smoke, IR, and Ultrasonic sensors.

4. What is Arduino?

Arduino is a small computer that can control lights, fans, etc., based on your code.

5. Arduino Programming Language

Uses Arduino code. Also supports Python and Scratch.

6. Few Pins on Arduino Uno

Digital Pins (2-13), Analog Pins (A0-A5), TX/RX Pins, Power and Ground pins.

PWM Pins: 3, 5, 6, 9, 10, 11.

7. What is an Actuator?

It moves or acts. Example: motor, robotic arm.

8. PIR vs Ultrasonic sensor

PIR: Detects heat (like from people).

Ultrasonic: Uses sound to detect distance or presence.

9. Application of PIR sensor

Used in lifts and auto lights.

10. Applications of Ultrasonic sensor

Used in smart dustbins, cars, and liquid tanks.

11. What is LDR?

Light sensor that changes with brightness.

12. What is DHT11?

Sensor that tells temperature and humidity.

13. What is 6LoWPAN?

A low-power network using IPv6 addresses.

14. What is WSN?

Wireless Sensor Network - devices talk without wires.

15. What is Zigbee?

Low-power wireless network for home and health devices.

16. What is BLE?

Bluetooth Low Energy - saves power, used in smartwatches.

17. What is CoAP?

A light web protocol used in IoT for small devices.

18. Challenges in IoT

Big problems: Power use and Security.

19. What is Internet of Everything?

People, data, and devices all connected smartly.

20. What is RFID?

Uses radio waves to identify and track items.

21. What is Wearable Technology?

Gadgets worn on body like smartwatches or fitness bands.