📘 RGPV IoT Unit–03 PYQ Analysis

🔥 Last 3 Years Previous Year Question Analysis (2023–2025)

📌 Unit–03 Topics Covered

- Basics of IoT Networking
- IoT Components
- Functional Components of IoT
- IoT SOA (Service Oriented Architecture)
- IoT Challenges
- 6LoWPAN
- IEEE 802.15.4
- ZigBee and its types
- RFID Features & Working Principle
- NFC
- Bluetooth
- WSN (Wireless Sensor Network)
- MQTT / CoAP related networking

📅 RGPV JUNE 2025 PAPER ANALYSIS

✅ Questions Asked from Unit–03

⭐ 7-Mark Questions

1. Explain ZigBee architecture and applications.

🔥 VERY HIGH PROBABILITY

➡ ZigBee repeatedly asked topic hai.

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2. Explain RFID working principle and applications.

🔥 MOST REPEATED QUESTION

➡ Direct theory + working question.

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3. Explain Bluetooth technology in IoT.

⭐ Important short note.

📅 RGPV DECEMBER 2024 PAPER ANALYSIS

✅ Questions Asked from Unit–03

⭐ 7-Mark Questions

1. Explain IEEE 802.15.4 standard.

🔥 HIGHLY IMPORTANT

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2. Explain WSN architecture and applications.

🔥 VERY HIGH PROBABILITY

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3. Differentiate between Bluetooth and ZigBee.

🔥 Important comparison question.

📅 RGPV MAY 2024 PAPER ANALYSIS

✅ Questions Asked from Unit–03

⭐ 7-Mark Questions

1. Explain 6LoWPAN with architecture.

🔥 VERY IMPORTANT

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2. Explain NFC and its applications.

⭐ Frequently repeated short note.

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3. Explain IoT challenges.

🔥 IMPORTANT THEORY QUESTION

📅 RGPV MAY 2023 PAPER ANALYSIS

✅ Questions Asked from Unit–03

⭐ 14-Mark Question

1. Explain RFID system and working principle with diagram.

🔥 MOST IMPORTANT LONG QUESTION

⭐ 7-Mark Questions

2. Explain Wireless Sensor Network.

🔥 VERY HIGH PROBABILITY

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3. Explain service-oriented architecture in IoT.

⭐ Medium-high importance.

📅 RGPV CS-803(C) MAY 2023 PAPER ANALYSIS

✅ Questions Asked from Unit–03

⭐ 7-Mark Questions

1. Explain ZigBee device types and topology.

🔥 MOST REPEATED

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2. Explain MQTT protocol in IoT.

🔥 Important networking protocol question.

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3. Explain IoT networking challenges.

⭐ Frequently asked theory.

🔥 MOST REPEATED QUESTIONS (2023–2025)

Topic	Repetition
ZigBee	⭐⭐⭐⭐⭐
RFID Working Principle	⭐⭐⭐⭐⭐
WSN	⭐⭐⭐⭐⭐
IEEE 802.15.4	⭐⭐⭐⭐
6LoWPAN	⭐⭐⭐⭐
IoT Challenges	⭐⭐⭐⭐
Bluetooth	⭐⭐⭐
NFC	⭐⭐⭐
MQTT / CoAP	⭐⭐⭐⭐
SOA	⭐⭐⭐

🎯 PYQ-BASED EXPECTED QUESTIONS

⭐ VERY HIGH PROBABILITY QUESTIONS

🔥 Most Expected 7-Mark Questions

1. Explain ZigBee architecture and types.
2. Explain RFID working principle and applications.
3. Explain Wireless Sensor Network (WSN).
4. Explain IEEE 802.15.4 standard.
5. Explain 6LoWPAN.

⭐ HIGH PROBABILITY QUESTIONS

1. Explain MQTT protocol in IoT.

2. Explain CoAP protocol.
3. Explain IoT challenges.
4. Differentiate between Bluetooth and ZigBee.
5. Explain NFC and applications.

⭐ MEDIUM PROBABILITY QUESTIONS

1. Explain SOA in IoT.
2. Explain IoT functional components.
3. Explain basics of IoT networking.

📌 UNIT–03 EXAM TREND ANALYSIS

RGPV Mostly Focuses On:

✅ Networking protocols
✅ ZigBee architecture
✅ RFID working diagrams
✅ WSN applications
✅ IoT challenges
✅ Protocol comparisons
✅ Short notes on NFC/Bluetooth

🔥 MOST SCORING TOPICS

If Time is Very Less → Prepare These First

Priority	Topic
1	ZigBee

Priority	Topic
2	RFID
3	WSN
4	IEEE 802.15.4
5	6LoWPAN
6	MQTT/CoAP
7	IoT Challenges
8	NFC + Bluetooth

⚡ ONE-NIGHT REVISION NOTES

Topic	Quick Revision
ZigBee	Low-power mesh protocol
RFID	Radio-based identification
WSN	Wireless sensor network
IEEE 802.15.4	Low-rate wireless standard
6LoWPAN	IPv6 for low-power devices
Bluetooth	Short-range wireless
NFC	Contactless communication
MQTT	Publish-subscribe protocol
CoAP	Request-response protocol

🧠 MEMORY TRICKS

ZigBee Devices

👉 “CRE”

- C = Coordinator
- R = Router

- E = End Device

RFID Components

👉 “TRD”

- T = Tag
- R = Reader
- D = Database

IoT Challenges

👉 “SPCID”

- S = Security
- P = Privacy
- C = Connectivity
- I = Interoperability
- D = Data Management

Networking Technologies

👉 “ZRBNC”

- Z = ZigBee
- R = RFID
- B = Bluetooth
- N = NFC
- C = CoAP

🚀 TOPPER ANSWER WRITING TIPS

For 7 Marks

Always write:

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Definition
↓
Diagram
↓
Working
↓
Advantages
↓
Applications
↓
Conclusion
```

For Protocol Comparison Questions

Make proper table:

Basis	ZigBee	Bluetooth

➡ Comparison table se examiner impress hota hai.

Must Draw These Diagrams

✅ ZigBee Architecture
✅ RFID Working Principle
✅ WSN Architecture
✅ MQTT Publish-Subscribe Model
✅ 6LoWPAN Architecture
✅ NFC Communication

🎯 FINAL PREDICTION FOR NEXT EXAM

MOST EXPECTED LONG QUESTION

⭐ “Explain RFID working principle and applications with neat diagram.”

MOST EXPECTED THEORY QUESTION

⭐ “Explain ZigBee architecture and device types.”

MOST EXPECTED NETWORKING QUESTION

⭐ “Explain 6LoWPAN and IEEE 802.15.4.”

MOST EXPECTED SHORT NOTE

⭐ “Bluetooth”

⭐ “NFC”

⭐ “MQTT Protocol”