

# **UNIT-2 PYQ ANALYSIS (Blockchain Technology)**

I analyzed the uploaded RGPV Blockchain Technology PYQ papers and extracted all questions related to **UNIT-2**.

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## **UNIT-2 SYLLABUS TOPICS**

- ✓ Bitcoin Transaction Processing
  - ✓ Bitcoin P2P Network
  - ✓ Mining
  - ✓ Double Spending
  - ✓ Consensus
  - ✓ Proof of Work (PoW)
  - ✓ Mining Difficulty
  - ✓ Mining Pool
  - ✓ PoS vs PoW
  - ✓ Block Propagation
  - ✓ Bitcoin Script
  - ✓ Proof of Burn
  - ✓ Proof of Elapsed Time
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## **MAY 2023 PAPER — UNIT 2**

### **QUESTIONS**

**1** **What is Bitcoin P2P Network and how transactions are processed?**

## Related Topics

- ✓ Bitcoin P2P Network
- ✓ Bitcoin Transaction Processing

## Importance

- 🔥 Very Important
  - ★ Repeated Topic
- 

## 2 What is Double Spending problem and how is it prevented in Blockchain?

### Related Topics

- ✓ Double Spending
- ✓ Consensus
- ✓ Bitcoin Security

### Importance


- 🔥 Very Important
  - ★ Frequently Asked
- 

## 3 Define Consensus. Explain Distributed Consensus in open environment.

### Related Topics

- ✓ Consensus
- ✓ Distributed Consensus

### Importance

 Extremely Important

 Repeated PYQ

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## **4 Explain Proof of Work consensus mechanism.**

### **Related Topics**

✓ PoW

✓ Mining

### **Importance**

 Very Important

 Highly Repeated

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## **5 Explain life cycle of Bitcoin Miner.**

### **Related Topics**

✓ Mining

✓ Miner Activities

### **Importance**

 High Probability

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## **6 Explain Mining Difficulty adjustment in Bitcoin.**

### **Related Topics**

✓ Mining Difficulty

### **Importance**

 High Probability

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## **7 Differentiate PoW and PoS.**

### **Related Topics**

✓ PoW vs PoS

### **Importance**

 Very Important

 Common Comparison Question

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## **JUNE 2025 PAPER — UNIT 2**

## **QUESTIONS**

### **1 Describe working with Consensus in Bitcoin Network.**

### **Related Topics**

✓ Consensus

✓ Bitcoin Consensus

✓ PoW

### **Importance**

 Extremely Important


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### **2 Explain Block Mining including different types of Mining.**

## Related Topics

- ✓ Mining
- ✓ Types of Mining

## Importance

 Very Important

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## **3 Explain Proof of Elapsed Time Consensus Algorithm.**

## Related Topics

- ✓ Proof of Elapsed Time (PoET)

## Importance

 Medium to High Probability

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## **4 Explain Bitcoin Script — Smart Contract Language of Bitcoin.**

## Related Topics

- ✓ Bitcoin Script

## Importance

 Medium Probability

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## **5 Explain Block Propagation and Block Relay.**

## Related Topics

✓ Block Propagation

### **Importance**

🔥 High Probability

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## **6 Explain Mining Pool and its advantages.**

### **Related Topics**

✓ Mining Pool

### **Importance**

🔥 High Probability

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## **7 Explain attacks on Proof of Work and Monopoly problem.**

### **Related Topics**

✓ PoW Attacks

✓ Monopoly Problem

### **Importance**

🔥 High Probability

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## **MOST REPEATED UNIT-2**

## **QUESTIONS**

Question	Frequency	Probability
Consensus in Bitcoin	Multiple Times	🔥🔥🔥
Proof of Work	Multiple Times	🔥🔥🔥
Bitcoin Transaction Processing	Repeated	🔥🔥🔥
Mining	Repeated	🔥🔥🔥
Double Spending	Repeated	🔥🔥🔥
PoW vs PoS	Repeated	🔥🔥
Mining Difficulty	Asked	🔥🔥
Mining Pool	Asked	🔥🔥
Block Propagation	Asked	🔥🔥
Bitcoin Script	Asked	🔥
PoET	Asked	🔥

## **MOST EXPECTED QUESTIONS FOR NEXT EXAM**

### **VERY HIGH PROBABILITY**

- 1. Explain Bitcoin transaction processing with diagram.**
- 2. Explain Proof of Work (PoW).**
- 3. Explain Mining process in Blockchain.**
- 4. Explain Double Spending problem and prevention.**
- 5. Explain Distributed Consensus in Bitcoin.**

**6. Explain Bitcoin P2P Network.**

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 **HIGH PROBABILITY**

**7. Differentiate PoW and PoS.**

**8. Explain Mining Pool.**

**9. Explain Mining Difficulty.**

**10. Explain Block Propagation and Relay.**

**11. Explain attacks on PoW.**

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 **MEDIUM PROBABILITY**

**12. Explain Proof of Burn.**

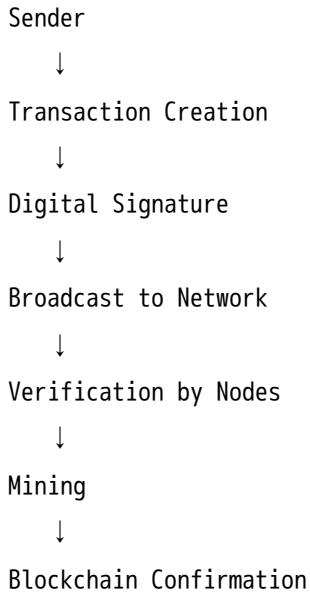
**13. Explain Proof of Elapsed Time.**

**14. Explain Bitcoin Script.**

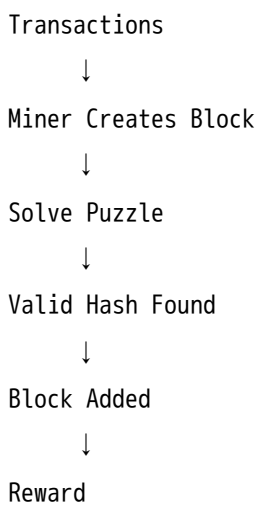
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 **IMPORTANT DIAGRAMS TO  
PRACTICE**

# 1 Bitcoin Transaction Flow



# 2 Proof of Work



### 3 Mining Pool

Miner A ↴  
Miner B |—— Pool Mining → Reward Shared  
Miner C ↵

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### 4 P2P Network

Node A ↔ Node B ↔ Node C  
↓            ↓            ↓  
Node D ↔ Node E ↔ Node F

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### 5 Consensus

Node 1 ↴  
Node 2 |—— Agreement → Valid Block  
Node 3 ↵

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 **ONE-NIGHT UNIT-2 REVISION**

**STRATEGY**



## **FIRST PRIORITY (Must Study)**

- ✓ Bitcoin Transaction Processing
- ✓ Proof of Work
- ✓ Mining
- ✓ Consensus
- ✓ Double Spending

These questions are most repeated in PYQs.

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## **SECOND PRIORITY**

- ✓ Bitcoin P2P Network
  - ✓ Mining Pool
  - ✓ Mining Difficulty
  - ✓ PoW vs PoS
- 



## **LAST PRIORITY**

- ✓ Block Propagation
  - ✓ Bitcoin Script
  - ✓ PoET
  - ✓ Proof of Burn
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## **GOLDEN MEMORY TRICKS**

### **Bitcoin Transaction Flow**

Create → Sign → Broadcast → Verify → Mine → Confirm

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## **Mining Flow**

Collect → Verify → Puzzle → Block → Reward

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## **Consensus Meaning**

Many Nodes + One Decision = Consensus

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## **PoW vs PoS**

PoW = Power of Computer

PoS = Power of Coins

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## **Double Spending**

One Coin → Two Payments = Fraud

Blockchain → Rejects Duplicate

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# FINAL EXAM WRITING STRATEGY

For every answer follow this structure:

Definition

↓

Need

↓

Diagram

↓

Working Steps

↓

Advantages

↓

Disadvantages

↓

Applications

↓

Conclusion

This structure helps:

- ✓ Increase answer length
- ✓ Improve presentation
- ✓ Get better marks in RGPV exams
- ✓ Fill 4–6 pages easily