

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**BSc DEGREE EXAMINATION MAY 2026
(Sixth Semester)**

Branch – COMPUTER TECHNOLOGY

MAJOR ELECTIVE COURSE - II - BLOCK CHAIN TECHNOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which type of Blockchain allows anyone to participate? (i) Private Blockchain (ii) Consortium Blockchain (iii) Public Blockchain (iv) Hybrid Blockchain	K1	CO1
	2	Contrast Full ecosystem decentralization refers (i) Centralized application management (ii) Decentralization of data, control, and applications (iii) Storing data in private servers (iv) Centralized digital currency	K2	CO1
2	3	Which of the following is an alternative cryptocurrency? (i) Litecoin (ii) Google Pay (iii) PayPal (iv) Visa	K1	CO2
	4	Relate Bitcoin scalability problem (i) Transaction Speed Limitation (ii) Storage Capacity (iii) Mining Hardware (iv) Wallet Security	K2	CO2
3	5	Which component executes smart contracts in Ethereum? (i) Ethereum Virtual Machine (ii) HTTP Server (iii) Cloud Storage (iv) Firewall	K1	CO3
	6	Infer Transaction fees in Ethereum are measured (i) Dollar (ii) Gas (iii) Token (iv) Byte	K2	CO3
4	7	Which language is used to design Web page structure? (i) Java (ii) HTML (iii) Python (iv) SQL	K1	CO4
	8	Relate Hyperledger reference architecture provides (i) Centralized Database (ii) Framework for Blockchain Development (iii) Operating System Design (iv) Network Routing	K2	CO4
5	9	Recall the Quorum is mainly developed for (i) Public Cryptocurrency (ii) Enterprise Blockchain Solutions (iii) Gaming Platforms (iv) Web Browsers	K1	CO5
	10	Rephrase Blockchain research mainly focuses on improving (i) Security and performance (ii) Social networking (iii) Gaming features (iv) Operating systems	K2	CO5

Cont...

SECTION - B (35 Marks)Answer **ALL** questions**ALL** questions carry **EQUAL** Marks

(5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Explain the history of Blockchain technology.	K2	CO1
		(OR)		
	11.b.	Describe the origin and working principles of Bitcoin.	K3	
2	12.a.	Explain the concept and definition of Bitcoin.	K2	CO2
		(OR)		
	12.b.	Construct the working of Bitcoin transactions with suitable example.	K3	
3	13.a.	Illustrate the role of Ethereum Virtual Machine (EVM) in executing smart contracts.	K3	CO3
		(OR)		
	13.b.	Classify Ethereum programming languages and runtime byte code.	K4	
4	14.a.	Explain the role of HTML and JavaScript in Web3 front-end development.	K2	CO4
		(OR)		
	14.b.	Describe the advantages of Web3 over traditional web technologies.	K4	
5	15.a.	Compare Ripple and Stellar blockchain platforms.	K4	CO5
		(OR)		
	15.b.	Analyze the importance of consensus mechanisms in blockchain platforms.	K4	

SECTION -C (30 Marks)Answer **ANY THREE** questions**ALL** questions carry **EQUAL** Marks

(3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Explain the complete working process of Blockchain with neat diagram.	K2	CO1
2	17	Analyze the role of digital keys, addresses, and wallets in cryptocurrency transactions.	K4	CO2
3	18	Discuss Ethereum programming languages, runtime byte code, and fee schedules with suitable examples.	K4	CO3
4	19	Explain the importance of HTML and JavaScript in developing decentralized applications.	K3	CO4
5	20	Explain scalability issues in blockchain and evaluate the solutions proposed by researchers.	K5	CO5

Z-Z-Z

END