

RAJASTHAN STAFF SELECTION BOARD (RSSB)

Computer Instructor

Senior (SCI) & Basic (BCI) – Recruitment 2026

COMPLETE SYLLABUS & EXAM PATTERN

Advt. No. 07/2026 | Total Posts: 3,951 | Exam Date: 22 August 2026

SENIOR COMPUTER INSTRUCTOR (SCI)

Vacancies: **322 Posts**

Pay Level 10 (₹33,800–₹1,07,000)

BASIC COMPUTER INSTRUCTOR (BCI)

Vacancies: **3,629 Posts**

Pay Level 8 (₹25,500–₹81,100)

Organisation	Rajasthan Staff Selection Board (RSSB), Jaipur
Department	Secondary Education Dept. & Sanskrit Education Dept., Rajasthan
Exam Mode	Offline – OMR Based Objective (MCQ)
Negative Marking	1/3 mark deducted per wrong answer
Apply Online	25 May 2026 – 23 June 2026 (via SSO Portal)
Written Exam	22 August 2026 (Combined for SCI & BCI)
Official Website	rssb.rajasthan.gov.in sso.rajasthan.gov.in

This document provides the complete, in-depth syllabus and exam pattern for both Senior Computer Instructor (SCI) and Basic Computer Instructor (BCI) posts under RSSB Recruitment 2026 (Advt. No. 07/2026). Covers exam pattern, Paper I (GK & Reasoning), Paper II (Technical/Computer), eligibility, selection process, official links, and preparation strategy.

Source: Official RSSB Notification No. 07/2026 | Compiled May 2026

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1. EXAM OVERVIEW & RECRUITMENT HIGHLIGHTS

Conducting Body	Rajasthan Staff Selection Board (RSSB), Jaipur
Advertisement No.	07/2026 Ref: P.14(169)RSSB/Arthna/School Shiksha/Computer Anudeshak/Bharti/2025
Post Names	Senior Computer Instructor (SCI) & Basic Computer Instructor (BCI)
Departments	Secondary Education Department & Sanskrit Education Department, Rajasthan
Total Vacancies	3,951 Posts (SCI: 322 BCI: 3,629)
Application Period	25 May 2026 to 23 June 2026 (via SSO Portal)
Exam Date	22 August 2026 (Combined Written Exam – SCI & BCI)
Exam Mode	Offline – OMR Sheet Based, Objective MCQ
Question Type	Multiple Choice Questions (MCQs) – 4 options
Language of Exam	Hindi and English (Bilingual)
Negative Marking	1/3 mark deducted per wrong answer
Minimum Age	18 Years (as on 01 January 2027)
Maximum Age	40 Years (as on 01 January 2027)
Application Mode	Online via SSO Portal – sso.rajasthan.gov.in
Official Website	rssb.rajasthan.gov.in / rsmssb.rajasthan.gov.in

2. VACANCY BREAKUP (Post & Department-wise)

Post	Department	Non-Scheduled Area	Scheduled Area	Total
Senior Computer Instructor (SCI)	Secondary Education	278	44	322
Basic Computer Instructor (BCI)	Secondary Education	3,063	473	3,536
Basic Computer Instructor (BCI)	Sanskrit Education	83	10	93
GRAND TOTAL		3,424	527	3,951

3. ELIGIBILITY CRITERIA

3.1 Educational Qualification

Post	Required Qualification (Any One)
Senior Computer Instructor (SCI)	<ul style="list-style-type: none"> • M.E. / M.Tech. in CS / IT / ECE / EE / EEE / ETE / EIE • M.Sc. (Computer Science / IT) • MCA (Master of Computer Applications) • DOEACC / NIELIT 'B' Level or 'C' Level Certificate • Any equivalent or higher qualification recognised by Govt. of Rajasthan + Working knowledge of Hindi (Devanagari script) + Knowledge of Rajasthani culture
Basic Computer Instructor (BCI)	<ul style="list-style-type: none"> • B.E. / B.Tech. in CS / IT / ECE / EE / EEE / EIC / TIE • B.Sc. (Computer Science / IT) • BCA (Bachelor of Computer Applications) • Graduate + PGDCA (Post Graduate Diploma in Computer Applications, min. 1 year) • Graduate + DOEACC / NIELIT 'A' Level Certificate • Any equivalent or higher qualification recognised by Govt. of Rajasthan + Working knowledge of Hindi (Devanagari script) + Knowledge of Rajasthani culture

3.2 Age Limit (as on 01 January 2027)

Category	Age Limit
General / Unreserved (Male)	18 – 40 years
OBC (Non-Creamy Layer)	18 – 43 years (+3 yrs relaxation)
SC / ST (Rajasthan Domicile)	18 – 45 years (+5 yrs relaxation)
PwBD (Persons with Disabilities)	18 – 50 years (+10 yrs relaxation)
Widows / Divorcees (Rajasthan)	No upper age limit (as per Rajasthan Govt. rules)
Ex-Servicemen	As per Rajasthan Govt. Ex-Serviceman policy

4. SELECTION PROCESS

Stage	Process	Details	Nature
Stage 1	Written Examination	Objective MCQ – OMR based Two Papers	Merit-based
Stage 2	Document Verification	Original certificates verification	Qualifying
Stage 3	Medical Examination	Standard fitness as per Rajasthan Govt. norms	Qualifying

NOTE: Selection is based on merit in the Written Examination only. No interview or practical test. Candidates must qualify all stages to be appointed.

5. EXAM PATTERN – SENIOR COMPUTER INSTRUCTOR (SCI)

The SCI written exam consists of two papers conducted on the same day. Both papers are OMR-based and objective type (MCQ). Negative marking applies.

Paper	Subject	Questions	Marks	Duration
Paper I	General Knowledge & Awareness	100	100	2 Hours
Paper II	Computer Subject (Technical)	100	100	2 Hours
TOTAL		200	200	4 Hours

Marking Criteria	Marks
Correct Answer	+1 mark
Wrong Answer	-1/3 mark (Negative Marking)
Unattempted	0 mark
Question Type	Objective MCQ – 4 options each
Paper Language	Hindi & English (Bilingual)
Exam Mode	Offline – OMR Sheet

6. EXAM PATTERN – BASIC COMPUTER INSTRUCTOR (BCI)

The BCI written exam follows the same two-paper format as SCI with identical marking scheme.

Paper	Subject	Questions	Marks	Duration
Paper I	General Knowledge & Reasoning	100	100	2 Hours
Paper II	Computer Subject (Technical)	100	100	2 Hours
TOTAL		200	200	4 Hours

SCI vs BCI KEY DIFFERENCE: Paper I (GK/Reasoning) is identical for both posts. Paper II (Technical) differs — SCI has advanced/PG-level computer topics, while BCI covers UG-level computer science topics. Candidates must attempt the paper corresponding to the post they have applied for.

7. PAPER I – GENERAL KNOWLEDGE & REASONING SYLLABUS (Common for SCI & BCI)

Paper I is IDENTICAL for both SCI and BCI posts — 100 questions, 100 marks, 2 hours. It covers Rajasthan GK, Indian GK, Current Affairs, Mental Ability, and Reasoning.

7.1 Rajasthan General Knowledge (Highest Weightage)

History of Rajasthan:

Important battles & wars in Rajasthan history; Major dynasties – Mewar, Marwar, Amber/Jaipur; Freedom struggle in Rajasthan; Integration of Rajasthan; Famous rulers – Maharana Pratap, Prithviraj Chauhan, Man Singh I; Historical monuments – Chittorgarh, Amber, Hawa Mahal

Art, Culture & Heritage:

Folk dances of Rajasthan – Ghoomar, Kalbelia, Chari, Terah Taali; Folk music & instruments; Famous fairs & festivals – Pushkar, Teej, Gangaur, Urs; Handicrafts – Blue pottery, Bandhej, Leheriya; Paintings – Bundi, Kota, Kishangarh, Mewar schools; Languages & dialects; Major temples

Geography of Rajasthan:

Physical divisions – Thar Desert, Aravalli Range, Eastern Plains; Rivers – Chambal, Luni, Banas, Ghaggar; Soils & crops; Climate – dry, semi-arid; Wildlife sanctuaries – Ranthambore, Sariska, Keoladeo; Minerals – marble, granite, zinc, copper; Districts, divisions & boundaries

Economy of Rajasthan:

Agriculture – major crops (bajra, wheat, mustard); Industries – cement, textile, handicraft; Tourism – major destinations; Major irrigation projects; RIICO & industrial policies; Important dams – Bisalpur, Jawahar Sagar; Rajasthan Budget highlights

Polity & Administration:

Rajasthan Panchayati Raj Act; State legislature & Governor; Important govt. schemes – Mukhyamantri Chiranjeevi, Jan Aadhaar, Palanhar; State commissions; Lok Ayukta

Current Affairs (Rajasthan):

Recent appointments in Rajasthan; State awards & honours; New schemes & policies; Sports achievements by Rajasthan athletes; Infrastructure & development projects

7.2 India General Knowledge

Topic	Key Areas
Indian History	Ancient, medieval & modern history; Freedom struggle; Major events; Important personalities
Indian Geography	Physiographic divisions; Rivers & dams; Climate; Natural resources; States & capitals
Indian Polity	Constitution – Fundamental Rights, DPSPs; Parliament; President & PM; Judiciary; Amendments
Indian Economy	Budget basics; GDP, inflation; Five-year plans; RBI & banking; Poverty alleviation schemes
Science & Tech	Space missions – ISRO; Defence tech; Recent inventions; National awards in science

Environment	Climate change; Wildlife protection acts; National parks; Pollution control; Green energy
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7.3 Current Affairs (National & International)

- Major national & international events (last 12 months)
- Important appointments & resignations – Governors, CJI, heads of bodies
- Sports – recent championships, Olympics, World Cups, Rajasthan athletes
- Awards & honours – Bharat Ratna, Padma, National Awards, Nobel Prize
- Science & Technology – ISRO missions, AI developments, new policies
- Government schemes – PM schemes, Rajasthan schemes
- Books & authors; Important national/international days
- Summit meetings; G20; Climate conferences; UN resolutions

7.4 Mental Ability & Logical Reasoning

Topic	Sub-topics / Description
Number & Letter Series	Completing patterns; Finding missing terms; Number sequences
Analogy	Semantic, symbolic & figural analogies; Relationship-based
Classification (Odd-One-Out)	Word, number, figure-based; Conceptual odd-one-out
Coding – Decoding	Letter coding; Number coding; Symbol coding; Substitution
Blood Relations	Family tree; Coded family relations
Direction & Distance	Direction sense; Distance calculations; Map-based reasoning
Logical Reasoning	Syllogism; Statement-Conclusion; Statement-Assumption; Inference
Data Interpretation	Tables; Bar graphs; Pie charts; Line graphs; Mixed graphs
Data Sufficiency	Two-statement sufficiency; Determining data adequacy
Decision Making	Problem-solving scenarios; Situational judgement
Arithmetic Reasoning	Age problems; Profit-loss; Speed-distance; Calendar; Clock
IT Developments (Reasoning)	Major recent developments in Information Technology; AI & ML basics

8. PAPER II – SENIOR COMPUTER INSTRUCTOR (SCI) TECHNICAL SYLLABUS

Paper II for SCI covers PG-level / advanced Computer Science topics. 100 questions | 100 marks | 2 hours. Topics include advanced algorithms, system design, network security, digital logic, and research-level concepts.

1. Pedagogy (Teaching Methodology)

- Principles of teaching computer science in secondary schools
- Lesson planning & instructional design for IT subjects
- ICT in education – smart class, e-learning, LMS
- Assessment & evaluation techniques in computer education
- Child psychology & learner-centered approaches
- Bloom's Taxonomy in CS education

2. Mental Ability & IT Awareness

- Decision making & problem solving
- Data interpretation, data sufficiency
- Logical reasoning & analytical ability
- Major developments in Information Technology – AI, IoT, Cloud

3. Fundamentals of Computer

- Number systems – Binary, Octal, Decimal, Hexadecimal; conversions; BCD, ASCII, Unicode
- Arithmetic operations – addition, subtraction (2's complement), multiplication
- Computer generations (1st to 5th); Classification of computers
- Functional details of Input & Output devices – keyboard, mouse, scanner, printer, monitor
- Memory hierarchy – registers, cache, RAM, ROM, secondary storage
- Data representation – signed/unsigned integers, floating point (IEEE 754)

4. Programming Fundamentals

- C language – data types, operators, control flow, functions, arrays, pointers, structures, unions, file handling, command-line arguments
- C++ – classes & objects, constructors & destructors, operator overloading
- Java – OOP concepts, packages, interfaces, exception handling, multithreading, collections
- Python – syntax, data types, list/dict/tuple, comprehensions, file I/O, libraries (NumPy basics)
- .NET framework – basics, CLR, C# syntax
- Artificial Intelligence (AI) – search algorithms (BFS, DFS, A*), knowledge representation
- Machine Learning – supervised vs unsupervised; regression, classification basics; scikit-learn
- Blockchain – distributed ledger, consensus mechanisms, smart contracts, cryptocurrency basics
- Scope of variables, precedence of operators, recursion

5. Object-Oriented Programming (C++ & Java)

- Objects & classes; encapsulation & data hiding
- Inheritance – single, multiple, multilevel, hierarchical, hybrid
- Polymorphism – compile-time (overloading) & runtime (overriding); virtual functions
- Abstract classes & interfaces
- Event handling in Java (AWT, Swing); Exception handling – try/catch/finally/throws
- File I/O in C++ & Java; Streams

- Templates in C++; Generics in Java

6. Data Structures & Algorithms

- Abstract data types (ADT); Array as a data structure – 1D, 2D
- Linked list – singly, doubly, circular; vs arrays for storage
- Stack – push, pop, peek; applications – expression evaluation, parenthesis matching
- Queue – linear, circular, priority queue; Deque
- Binary Trees – traversal (In/Pre/Post-order), height, complete vs full
- Binary Search Trees (BST) – insertion, deletion, searching, balancing (AVL basics)
- Heaps – max-heap, min-heap; Heap sort; Priority queues
- Graphs – adjacency matrix/list; BFS, DFS; Shortest path (Dijkstra, Bellman-Ford); MST (Kruskal, Prim)
- Symbol table; Hashing – hash functions, collision resolution
- Sorting – Bubble, Selection, Insertion, Merge, Quick, Heap sort; Analysis
- Searching – Linear, Binary, Interpolation search

7. Algorithms – Advanced

- Algorithm analysis – Time & Space complexity; Big O, Omega, Theta notation
- Tree traversals – in-order, pre-order, post-order (iterative & recursive)
- Branch and Bound – 0/1 Knapsack, TSP
- Greedy methods – Activity selection, Huffman coding, Fractional Knapsack
- Dynamic Programming – Matrix chain multiplication, LCS, Fibonacci
- Divide & Conquer – Merge sort, Quick sort, Binary search, Strassen's matrix
- Backtracking – N-Queens, Graph coloring, Subset sum
- Complexity classes – P, NP, NP-Complete, NP-Hard

8. Digital Logic Systems

- Boolean algebra – laws, theorems, De Morgan's theorem; Boolean expressions
- Karnaugh Maps (K-Maps) – 2, 3, 4 variable simplification
- Logic families – TTL and CMOS characteristics, fan-in, fan-out
- Combinational circuits – half adder, full adder, subtractors, multiplexer (MUX), demultiplexer, encoder, decoder
- Synchronous sequential circuits – SR, JK, D, T flip-flops; Registers; Counters
- Finite State Machines (FSM) – Mealy & Moore models

9. Computer Organization & Architecture

- Von Neumann architecture; Instruction cycle – fetch, decode, execute
- Registers – MAR, MBR, PC, IR, AC; Micro-operations
- Control unit – hardwired vs microprogrammed
- ALU design; Adder circuits; Multiplier
- Processor addressing modes; Bus organization – data, address, control bus
- I/O techniques – programmed I/O, interrupt-driven, DMA
- Memory organization – RAM, ROM; Cache memory – types, mapping (direct, set-associative, fully associative)
- Cache coherence; Virtual memory; Paging & segmentation
- RISC vs CISC; Pipelining – stages, hazards
- Parallel processing – SIMD, MIMD; Multi-core basics

10. Operating Systems

- Process – states, PCB, context switching; Threads & multithreading
- Process synchronization – critical section, semaphores, monitors, mutex
- CPU scheduling – FCFS, SJF, Round Robin, Priority, MLFQ; Performance criteria

- Deadlocks – conditions, detection, prevention, avoidance (Banker's algorithm), recovery
- Memory management – contiguous allocation, paging, segmentation, virtual memory
- Page replacement algorithms – FIFO, Optimal, LRU, Clock
- File systems – FAT, NTFS, ext4; Directory structures; File permissions
- Disk scheduling – FCFS, SSTF, SCAN, C-SCAN, LOOK
- Distributed OS concepts – Client-Server architecture; RPC

11. Real-Time OS & Linux Administration

- Real-Time Operating Systems – hard & soft real-time; clock synchronization
- Task scheduling in RTOS – Rate Monotonic, Earliest Deadline First
- System initialization & boot process – BIOS, UEFI, bootloader
- Linux commands – ls, cd, cp, mv, rm, grep, awk, sed, chmod, chown
- User account management; Groups in Linux
- Bourne Shell (sh) / Bash scripting – variables, loops, conditionals, functions
- Backup & restore – tar, rsync; Cron jobs; Process management (ps, kill, top)
- Package management – apt, yum; System logs

12. Database Management Systems (DBMS)

- E-R model – entities, attributes, relationships, weak entities, ISA hierarchy
- Relational model – tuples, attributes, domains; Keys – primary, foreign, candidate, super
- Relational algebra – Select (σ), Project (π), Join (\bowtie), Cartesian product, Union, Intersection, Difference
- Relational calculus – Tuple RC, Domain RC
- SQL – DDL (CREATE, ALTER, DROP), DML (SELECT, INSERT, UPDATE, DELETE), DCL, TCL
- Joins – INNER, LEFT, RIGHT, FULL OUTER, CROSS, SELF join
- Integrity constraints – NOT NULL, UNIQUE, CHECK, PRIMARY KEY, FOREIGN KEY
- Triggers, views, stored procedures
- Normalization – 1NF, 2NF, 3NF, BCNF, 4NF, 5NF; Functional dependencies
- Indexing – B-tree, B+ tree, hashing
- Transaction processing – ACID properties; Transaction states
- Concurrency control – Lock-based (2PL), Timestamp, MVCC; Deadlock in DBMS
- RDBMS systems – MySQL, Oracle, PostgreSQL basics

13. Software Engineering

- Software Development Life Cycle (SDLC) – phases & models
- Process models – Waterfall, Spiral, Agile (Scrum, Kanban), RAD, Incremental
- System modelling – Use Case diagrams, Class diagrams, Sequence diagrams (UML)
- Software Requirement Specification (SRS) – functional & non-functional requirements
- Data Flow Diagrams (DFDs) – levels, symbols
- Software design – cohesion, coupling, modularity; Design patterns
- Software testing – unit, integration, system, acceptance testing; Black-box & White-box
- Test coverage; Bug life cycle; Test cases & test plans
- Software project management – effort estimation (COCOMO), scheduling (Gantt charts), risk
- Software quality – CMM/CMML; ISO 9001; Six Sigma basics
- Software maintenance – types of maintenance

14. Data & Computer Networks

- Evolution of networking; OSI/ISO reference model – 7 layers, functions, protocols at each layer
- TCP/IP model – 4 layers; comparison with OSI

- Physical layer – transmission media (twisted pair, coaxial, fiber optic, wireless); characteristics
- Multiplexing – FDM, TDM, WDM, OFDM; Modulation – AM, FM, PM
- Data link layer – framing, error detection (CRC, parity), error correction (Hamming); flow control (sliding window)
- Medium Access Control (MAC) – CSMA/CD, CSMA/CA, Token Ring, Token Bus
- LAN technologies – IEEE 802.3 (Ethernet), 802.4 (Token Bus), 802.5 (Token Ring), 802.11 (Wi-Fi)
- Network layer – IP protocol (IPv4, IPv6); Routing algorithms (Dijkstra, Bellman-Ford); congestion control
- Subnetting & CIDR; NAT; ARP, RARP
- Transport layer – TCP (connection-oriented, 3-way handshake, flow control) vs UDP (connectionless)
- Application layer – DNS, HTTP/HTTPS, FTP, SMTP, POP3, IMAP, DHCP, SNMP
- Network devices – hub, switch, router, bridge, gateway, access point

15. Network Security

- Mathematical foundations – groups, rings, fields; Euler's theorem; Fermat's little theorem; primality testing
- Security services & mechanisms – confidentiality, integrity, authentication, non-repudiation
- Symmetric encryption – DES (56-bit key, 16 rounds), Triple-DES, AES (128/192/256-bit, Rijndael), IDEA
- Asymmetric encryption – RSA algorithm (key generation, encryption, decryption); Diffie-Hellman key exchange
- Key management – symmetric (KDC) & asymmetric (PKI, digital certificates)
- Message authentication – MAC; Hashing algorithms – MD5, SHA-1, SHA-256
- Digital signatures – creation & verification; DSA
- Email security – PGP, S/MIME; SSL/TLS protocol
- Viruses, worms, Trojans, ransomware, spyware, adware; Trusted systems
- Firewalls – packet filtering, stateful inspection, application proxy; IDS & IPS
- LAN & WAN security; VPN; Ethical hacking – phases, tools (Nmap, Metasploit basics)

16. Basics of Communication Systems

- Channel capacity – Nyquist & Shannon-Hartley theorem; Bandwidth; SNR
- Attenuation, distortion & noise; Communication impairments
- Propagation of EM waves – ground wave, sky wave, space wave (free space excluded from derivations)
- PCM – sampling (Nyquist), quantization, encoding; Delta modulation
- WDM – Dense WDM, Coarse WDM; optical communication basics
- GSM architecture – MS, BSS, NSS, OSS; channels in GSM
- CDMA – spread spectrum, chip rate, WCDMA basics
- Modulation types – ASK, FSK, PSK, QAM

17. Web Development

- HTML – tags, forms, tables, frames, attributes; HTML5 new elements (canvas, video, audio)
- DHTML – Dynamic HTML; Web page authoring
- Document Object Model (DOM) – structure, traversal, manipulation
- CSS – selectors, properties, box model, positioning, flexbox, grid, responsive design
- Cascading Style Sheets (CSS3) – animations, transitions, media queries
- XML – syntax, DTD, XML Schema, XPath, XSLT
- JavaScript – variables, functions, events, DOM manipulation, AJAX, JSON
- PHP – syntax, variables, arrays, functions, forms, sessions, cookies, MySQL connectivity
- Web frameworks – basics of React/Angular/Node.js (concept level)
- Web security – XSS, SQL injection, CSRF; HTTPS; Cookies & sessions

9. PAPER II – BASIC COMPUTER INSTRUCTOR (BCI) TECHNICAL SYLLABUS

Paper II for BCI covers UG-level Computer Science topics. 100 questions | 100 marks | 2 hours. Topics include fundamentals, OS, networking, DBMS, web technology, and teaching methodology.

1. Pedagogy (Teaching Methodology)

- ICT in Education – smart class, e-learning platforms, LMS
- Lesson planning for computer science subjects
- Teaching aids – projectors, interactive whiteboards, simulators
- Classroom management & student assessment
- Child development & learner-centered teaching approach
- Inclusive education & addressing learning difficulties in CS
- E-learning tools – Google Classroom, Moodle, Khan Academy

2. Mental Ability & IT Awareness

- Decision making & problem solving – algorithmic thinking
- Data interpretation – tables, graphs, charts
- Data sufficiency problems
- Logical reasoning & analytical ability
- Major developments in Information Technology – AI, IoT, Cloud Computing, 5G

3. Fundamentals of Computer

- Overview of computers – definition, characteristics, limitations
- Computer generations (1st to 5th); Types – supercomputer, mainframe, mini, micro
- Input devices – keyboard, mouse, touchpad, scanner, webcam, microphone
- Output devices – monitor (LCD, LED, OLED), printer (inkjet, laser, 3D), plotter, speaker
- Memory – Primary (RAM, ROM, PROM, EPROM, EEPROM), Secondary (HDD, SSD, USB, CD/DVD)
- Hardware & software – system software vs application software
- Number systems – Binary, Octal, Decimal, Hexadecimal; conversions between systems
- Data representation – BCD, ASCII, Unicode; 1's & 2's complement

4. Operating System

- Basics of OS – definition, functions, types (batch, interactive, real-time, distributed, embedded)
- Process – creation, states (new, ready, running, waiting, terminated); PCB
- Process management – context switching, process scheduling
- CPU scheduling algorithms – FCFS, SJF, Round Robin, Priority; Gantt charts
- Memory management – fixed & variable partitioning; paging; segmentation
- Virtual memory – demand paging; page faults; page replacement (FIFO, LRU, Optimal)
- Deadlock – conditions, prevention, avoidance (Banker's algorithm)
- File system – types, directory structure, file permissions; FAT, NTFS, ext
- Disk scheduling – FCFS, SSTF, SCAN, C-SCAN
- Multithreading & synchronization – semaphores, mutex, monitors

5. Programming Concepts

- Algorithm & flowchart – problem-solving steps; standard flowchart symbols
- C programming – data types (int, float, char, double), operators, control structures (if-else, switch, loops)

- Functions in C – declaration, definition, calling; recursion; scope & lifetime of variables
- Arrays – 1D, 2D; strings & string functions
- Pointers – pointer arithmetic, pointer to array, pointer to function
- Structures & unions in C
- File handling in C – fopen, fclose, fread, fwrite, fprintf, fscanf
- C++ – classes & objects, constructors, destructors
- OOP concepts – Encapsulation, Inheritance, Polymorphism, Abstraction
- Operator overloading; Friend functions; Virtual functions in C++

6. Data Structures

- Introduction – types of data structures (linear vs non-linear)
- Arrays – operations (insertion, deletion, traversal); 2D arrays
- Stack – implementation (array & linked list), push/pop operations; applications (infix to postfix, bracket matching)
- Queue – linear, circular queue; enqueue/dequeue; Priority queue
- Linked List – singly, doubly, circular; insertion, deletion, traversal; comparison with arrays
- Trees – terminology (root, leaf, height, degree); binary tree; binary tree traversals (in-order, pre-order, post-order)
- Binary Search Tree (BST) – search, insert, delete operations
- Graphs – directed vs undirected; representation (matrix & list); BFS & DFS traversals
- Searching – Linear search, Binary search; Complexity analysis
- Sorting – Bubble, Selection, Insertion, Merge sort, Quick sort; Comparison of sorting algorithms
- Recursion – base case, recursive case; Tower of Hanoi; Fibonacci

7. Database Management System (DBMS)

- DBMS concepts – advantages over file system; Data independence; Schema & instances
- Data models – hierarchical, network, relational, object-oriented
- Entity-Relationship (E-R) model – entities, attributes, relationships; E-R diagram symbols
- Relational database – tables, tuples, attributes; Keys – primary, foreign, candidate
- SQL – SELECT (WHERE, GROUP BY, HAVING, ORDER BY); Joins (INNER, LEFT, RIGHT, FULL);
- SQL – DDL (CREATE TABLE, ALTER, DROP); DML (INSERT, UPDATE, DELETE); Aggregate functions
- Normalization – 1NF, 2NF, 3NF, BCNF; functional dependencies; removing anomalies
- Transactions – ACID properties (Atomicity, Consistency, Isolation, Durability)
- Transaction states – active, partially committed, committed, failed, aborted
- Concurrency – problems (lost update, dirty read, unrepeatable read); lock-based protocol
- RDBMS – MySQL commands; Basic Oracle/PostgreSQL concepts

8. Computer Networks

- Types of networks – LAN, MAN, WAN, PAN; topologies – bus, star, ring, mesh, hybrid
- OSI Reference Model – 7 layers (Physical, Data Link, Network, Transport, Session, Presentation, Application)
- TCP/IP Model – 4 layers; comparison with OSI model
- Physical layer – transmission media; bandwidth; data rate
- Data link layer – error detection (CRC, parity); MAC addresses; Ethernet frames
- Network devices – hub (physical), switch (data link), router (network), bridge, gateway
- Network layer – IPv4 addressing, subnetting, CIDR; IPv6 basics; ARP, RARP
- Transport layer – TCP (reliable, connection-oriented); UDP (unreliable, connectionless); ports
- Application layer – HTTP/HTTPS, FTP, SMTP, POP3, IMAP, DNS, DHCP, Telnet, SSH
- Internet & Intranet – World Wide Web, email, browser, ISP
- Wireless networks – Wi-Fi (802.11 a/b/g/n/ac); Bluetooth; 3G/4G/5G basics
- Network security basics – firewall, antivirus, VPN, SSL/TLS

9. Web Technology

- HTML – document structure, tags (headings, paragraphs, lists, tables, forms, frames, links, images)
- HTML5 – new semantic elements (header, footer, nav, article, section, canvas, video, audio)
- CSS – syntax, selectors, properties (color, font, background, border, margin, padding)
- CSS Box Model; positioning (static, relative, absolute, fixed); Flexbox & Grid basics
- JavaScript – variables (var/let/const), data types, operators, conditionals, loops, functions
- JavaScript – arrays, objects, string methods, DOM manipulation, event listeners
- Web browsers – rendering engines; HTTP request/response cycle
- Web servers – Apache, Nginx basics; client-server architecture
- Internet applications – email, video conferencing, e-commerce, online banking, social media
- URL structure; IP vs domain name; DNS resolution

10. Cyber Security & IT Ethics

- Cyber crimes – hacking, phishing, identity theft, cyberstalking, online fraud
- Malware types – virus, worm, Trojan horse, spyware, adware, ransomware, rootkit
- Virus detection & removal; antivirus software; Firewalls – packet filtering, proxy
- Encryption – symmetric vs asymmetric; public key infrastructure (PKI)
- Decryption; Hashing – MD5, SHA; Digital signatures
- IT Act 2000 (India) – key sections; cyber offences & punishments
- Online safety – strong passwords, two-factor authentication, safe browsing
- Social engineering attacks; Phishing awareness
- Ethical issues in IT – privacy, intellectual property, software piracy, plagiarism
- Digital rights management (DRM); Data protection laws

11. Office Automation Tools

- MS Word – creating & formatting documents; tables; mail merge; headers & footers; track changes
- MS Excel – worksheets; formulas & functions (SUM, AVERAGE, VLOOKUP, IF, COUNT); charts; pivot tables; sorting & filtering
- MS PowerPoint – creating presentations; slide layouts; animations; transitions; inserting media
- MS Access – tables, queries, forms, reports; basic database operations
- Open Office / Libre Office – Writer, Calc, Impress (equivalents to MS Office)
- Google Workspace – Docs, Sheets, Slides, Drive (cloud-based collaboration)
- Email clients – Gmail, Outlook; calendar; contacts

10. APPLICATION FEE & PROCESS

Category	Application Fee
General / OBC (Creamy Layer) / EWS	■600
OBC Non-Creamy Layer (Rajasthan)	■400
SC / ST (Rajasthan Domicile)	■400
PwBD (Persons with Benchmark Disability)	■400
OTR (One-Time Registration) Fee	■50 (if not already registered)

- Visit SSO Portal: sso.rajasthan.gov.in and log in with your SSO ID
- Complete **OTR (One-Time Registration)** using Aadhaar or Jan Aadhaar (if not done)
- Pay OTR fee of ■50 (if not already a registered OTR candidate)
- Click on 'Recruitment Portal' (RSSB/RSMSSB) and select Computer Instructor 2026
- Fill in personal, educational, and other required details
- Upload photograph (JPEG, 50KB max) and signature
- Pay the application fee online (debit/credit card, net banking, UPI)
- Submit form and download the confirmation receipt for records

11. OFFICIAL LINKS & PDF RESOURCES

Resource	URL / Link
Official RSSB Website	https://rspb.rajasthan.gov.in
RSMSSB Official Portal	https://rsmssb.rajasthan.gov.in
SSO Portal (Apply Online)	https://sso.rajasthan.gov.in
Official Notification PDF (Advt. 07/2026)	https://rspb.rajasthan.gov.in (Latest Notifications section)
Recruitment Portal – Rajasthan	https://recruitment.rajasthan.gov.in
Jan Aadhaar Portal	https://janaadhaar.rajasthan.gov.in
Notification (via Adda247)	https://www.adda247.com/exams/rajasthan/rspb-computer-instructor-recruitment-2026/
BCI Syllabus PDF (TeacherExams)	http://teacherexams.in/wp-content/uploads/2026/01/BCI-Syllabus-2026.pdf
Sarkari Result – RSSB CI 2026	https://www.sarkariresult.com/rpsc/rspb-computer-instructor-07-2026/

IMPORTANT: Always download and verify the official notification PDF from rspb.rajasthan.gov.in before applying. Third-party links may not always reflect the latest updates.

12. PREPARATION STRATEGY & IMPORTANT BOOKS

Preparation Strategy

- **Understand the difference SCI vs BCI:** If applying for SCI, focus on advanced topics — network security (RSA, AES), advanced algorithms (Branch & Bound, complexity theory), digital logic, and architecture. BCI requires solid fundamentals.
- **Paper I First (GK + Reasoning):** Rajasthan GK carries the highest weightage. Study Rajasthan history, art, culture, geography thoroughly. Daily current affairs practice is essential.
- **Paper II Strategy:** Start with topics having the highest question density — OS, DBMS, Networks, and Programming for BCI. For SCI, add Security, Algorithms, and Architecture.
- **DBMS and Networking are critical:** These two subjects consistently have high representation in computer instructor exams. Master SQL queries, normalization, TCP/IP, and OSI model thoroughly.
- **Programming Practice:** Write and understand code in C/C++ and Java. Focus on OOP concepts, pointers, and recursion. For SCI, add Python and AI/ML basics.
- **Negative Marking Caution:** Avoid random guessing. Attempt questions only when you can eliminate at least 2 options. Unattempted is better than wrong.
- **Mock Tests:** Attempt full-length mock tests (200 Qs in 4 hours) regularly from 1 month before the exam. Analyze mistakes and improve weak areas.
- **Time Allocation:** Paper II – Computer Subject (50%), Rajasthan GK (25%), India GK (15%), Reasoning (10%).
- **Revision Schedule:** Revise each topic at least 3 times. Last 15 days – only revision and mock tests.

Recommended Books & Resources

Subject	Book / Resource	Author / Publisher
Rajasthan GK	Rajasthan Adhyayan (■■■■■■■■■■ ■■■■■■■■)	L.R. Bhanu / Vivek Publishers
Rajasthan GK	Rajasthan GK (English)	Arihant Publications
India GK	Lucent's General Knowledge	Lucent Publications
Current Affairs	Monthly Current Affairs (Rajasthan)	Vision IAS / PW / Adda247
Reasoning	A Modern Approach to Verbal & Non-Verbal Reasoning	R.S. Aggarwal
Computer Fundamentals	Computer Fundamentals	P.K. Sinha – BPB
Operating Systems	Operating System Concepts (Dinosaur Book)	Silberschatz / Galvin
DBMS	Database System Concepts	Silberschatz / Korth
Computer Networks	Computer Networks	Andrew Tanenbaum
Network Security	Cryptography and Network Security	William Stallings
Data Structures	Data Structures Using C	Reema Thareja / Yashavant Kanetkar
Algorithms	Introduction to Algorithms (CLRS)	Cormen / Leiserson / Rivest
Software Engineering	Software Engineering	Roger Pressman / Ian Sommerville
Web Development	Complete Reference – HTML & CSS	Thomas Powell
Previous Year Papers	RSMSSB Computer Instructor Previous Papers	Arihant / Kiran Publications

Subject	Book / Resource	Author / Publisher
Online Practice	Testbook / Adda247 / Class24 / PW App	Online platforms

Official Websites to bookmark: rssb.rajasthan.gov.in | rsmssb.rajasthan.gov.in | sso.rajasthan.gov.in. Always check the official notification for the most accurate syllabus & exam schedule updates.

Best of luck for your RSSB Computer Instructor 2026 Examination! Consistent practice, thorough revision of Rajasthan GK, and strong Computer Science fundamentals are your keys to success in this recruitment.