



## RSSB COMPUTER INSTRUCTOR 2026 EXAM SYLLABUS

◆ परीक्षा की मुख्य योजना (Exam Scheme Overview): \* कुल अंक (Total Marks): 200 अंक (दो अलग-अलग पेपर्स में विभाजित). \* पेपर का वितरण: Paper-I (100 अंक) और Paper-II (100 अंक) । \* परीक्षा का स्तर: Senior Computer Instructor एवं Basic Computer Instructor ।



### सामान्य नियम व मार्किंग स्कीम (दोनों पदों के लिए समान)

विवरण	नियम व शर्तें
प्रश्नों के प्रकार	वस्तुनिष्ठ / बहुविकल्पीय (Multiple Choice Questions)
कुल प्रश्न	प्रत्येक पेपर में 100 प्रश्न
समय अवधि	प्रत्येक पेपर के लिए 2.00 घंटे
नकारात्मक अंकन (Negative Marking)	प्रत्येक गलत उत्तर के लिए 1/3 अंक की कटौती होगी
न्यूनतम क्वालीफाइंग मार्क्स	40% (SC/ST उम्मीदवारों के लिए 5% की छूट यानी 35%)



### PAPER - I : सामान्य ज्ञान एवं एबिलिटी (Common for Both Posts)

#### 1. राजस्थान का सामान्य ज्ञान (Rajasthan GK & Science)

- कला एवं संस्कृति (Art & Culture)
- इतिहास (History)
- भूगोल (Geography)
- सामान्य विज्ञान (General Science)
- समसामयिक मामले (Current Affairs of Rajasthan)

#### 2. सामान्य मानसिक योग्यता (General Ability)

- A. तार्किक क्षमता और विश्लेषणात्मक योग्यता (Logical Reasoning and Analytical Ability)
- B. निर्णय लेना और समस्या समाधान (Decision Making and Problem Solving)
- C. सामान्य मानसिक योग्यता (General Mental Ability)
- D. बुनियादी संख्यात्मकता (Basic Numeracy) – संख्याएं, उनके संबंध, परिमाण का क्रम आदि (कक्षा X स्तर)
- E. डेटा व्याख्या (Data Interpretation) – चार्ट, ग्राफ, टेबल, डेटा पर्याप्तता आदि (कक्षा X स्तर)



### PAPER - II : तकनीकी विषय (Technical Subjects)

नीचे दोनों पदों (Senior और Basic) के तकनीकी विषयों का तुलनात्मक और विस्तृत विवरण दिया गया है:



#### 1. Senior Computer Instructor (वरिष्ठ कंप्यूटर अनुदेशक)


- (i) Pedagogy
- (ii) Mental Ability: Decision making and Problem solving, Data Interpretation, Data Sufficiency, Logical Reasoning and Analytical Ability, Major developments in the field of Information Technology.

- **(iii) Fundamentals of Computer:** Number system, arithmetic operations, introduction to various categories of computer language, functional details of Input and Output devices.
  - **(iv) Programming Fundamentals:** C, C++, Java, DotNet, Artificial Intelligence (AI), Machine learning, Python and Block Chain, programming, data types (Built in and user defined), Scope of variables, precedence of operators, control flow, functions, arrays pointers, structures and unions, enumerated data-types and file handling, command line arguments.
  - **(v) Object Oriented Programming using C++ and JAVA:** Objects and classes, Inheritance, polymorphism, event and exceptions handling, files and streams.
  - **(vi) Data structures and Algorithms:** Abstract data types, Arrays as data structures, linked list v/s array for storage, stack and stack operations, queues, binary trees, binary search trees, graphs and their representations, sorting and searching, symbol table.
  - **(vii) Algorithms:** Tree traversals, Branch and bound and greedy methods, complexity of algorithms.
  - **(viii) Digital Logic Systems:** Boolean expressions, K-maps, TTL and CMOS logic families, combinational logic design using half/full adders, Subtractors, and multiplexer, synchronous sequential system design.
  - **(ix) Computer Organization and Architecture:** Von-Neumann architecture of computers, Registers and micro operations, control logic, processor addressing and bus organization. Processor input/output and DMA. Memory organization and cache coherence.
  - **(x) Operating Systems:** CPU scheduling, Deadlocks, Memory management, file systems, disk scheduling. Concept of Client server architecture in distributed environment and RPC. Process, threads and their synchronization. Real Time OS: clock synchronization and task scheduling. System initialization, booting and handling user accounts. Backup and restore, Bourne shell programming for Linux.
  - **(xi) Database Management System:** E-R models, Relational algebra, calculus and databases, Integrity constraints, triggers, normalization, and indexing. Transaction processing, concurrency control and Relational Database Management System (RDBMS).
  - **(xii) Software Engineering:** Phases of System Development Life Cycle. System modeling. Software requirement specifications and DFDs. Introduction to software testing, software project management.
  - **(xiii) Data and computer networks:** Evolution of Networking, Data Communication terminologies, Transmission media, Network devices. TCP/IP & OSI/ISO reference models, functions of different layers, characteristics of physical media, multiplexing in physical layer, medium access protocols, introduction to 802.3, 802.4, 802.5, 802.11 LAN technologies, IP protocol including routing and congestion control, TCP and UDP, DNS.
  - **(xiv) Network Security:** Groups, rings and fields in finite space, Euler and Fermat's theorem, primality testing, security services and mechanisms, symmetric and asymmetric encryption including DES, AES, IDEA, RSA algorithms, key management in symmetric and asymmetric encryption, message authentication and hashing, email security, viruses and trusted systems, Networking (LAN&WAN), Security, Ethical Hacking.
  - **(xv) Basics of communication:** Channel capacity, attenuation, communication impairments, propagation of EM waves through free space (excluding free space models). PCM and delta modulation, WDM, brief introduction to GSM and CDMA based communication systems.
  - **(xvi) Web Development:** HTML/DHTML, Web Page Authoring Using HTML, Document Object Model Concept and Importance of Document Object Model, Dynamic HTML document and Document Object Model. Introduction to Cascading Style Sheet (CSS), Extensible Markup Language (XML), Basic of PHP and Java Script.
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## 2. Basic Computer Instructor (बेसिक कंप्यूटर अनुदेशक)

- **(i) Pedagogy**
- **(ii) Mental Ability:** Decision making and Problem solving, Data Interpretation, Data Sufficiency, Logical Reasoning and Analytical Ability, Major developments in the field of Information Technology.
- **(iii) Fundamentals of Computer:** Overview of the Computer System including input-output devices, pointing devices, and scanner. Representation of Data (Digital versus Analog, Number System Decimal, Binary & Hexadecimal), Introduction to Data Processing, Concepts of files and its types.
- **(iv) Data Processing:** Word Processing (MS-Word), Spread Sheet Software (MS Excel), Presentation Software (MS Power Point), DBMS Software (MS-Access).
- **(v) Programming Fundamentals:** Introduction to C, C + +, Java, DotNet, Artificial Intelligence (AI), Machine learning, Python and Block Chain, Principles and Programming Techniques, Introduction of Object Oriented Programming (OOPs) concepts, Introduction to “Integrated Development Environment” and its advantages.
- **(vi) Data structures and Algorithms:** Algorithms for Problem Solving, Abstract data types, Arrays as data structures, linked list v/s array for storage, stack and stack operations, queues, binary trees, binary search trees, graphs and their representations, sorting and searching, symbol table. Data structure using C & C++.
- **(vii) Computer Organization and Operation System:** Basic Structure of Computers, Computer Arithmetic Operations, Central Processing Unit and Instructions, Memory Organization, I/O Organization, Operating Systems Overview, Process Management, Finding and processing files.
- **(viii) Communication and Network Concepts:** Introduction to Computer Networks, Introduction: Networks layers/Models, Networking Devices, Fundamentals of Mobile Communication.
- **(ix) Network Security:** Protecting Computer Systems from viruses & malicious attacks, Introduction to Firewalls and its utility, Backup & Restoring data, Networking (LAN & WAN), Security, Ethical Hacking.
- **(x) Database Management System:** An Overview of the Database Management, Architecture of Database System, Relational Database Management System (RDBMS), Database Design, Manipulating Data, NoSQL Database Technologies, Selecting Right Database.
- **(xi) System Analysis and Design:** Introduction, Requirement Gathering and Feasibility Analysis, Structured Analysis, Structured Design, Object-Oriented Modelling Using UML, Testing, System Implementation and Maintenance, Other Software Development Approaches.
- **(xii) Internet of things and its application:** Introduction of Internet Technology and Protocol, LAN, MAN, WAN, Search Services/Engines, Introduction to online & offline messaging, World Wide Web Browsers, Web publishing, Basic knowledge HTML, XML and Scripts, Creation & maintenance of Websites, HTML interactivity Tools, Multimedia and Graphics, Voice Mail and Video Conferencing, Introduction to e-Commerce.

## OMR शीट भरने के लिए विशेष निर्देश (5-विकल्प नियम)

 **ध्यान दें (Crucial Rule):** परीक्षा में किसी भी प्रश्न को खाली छोड़ना भारी पड़ सकता है। बोर्ड द्वारा अब 5 विकल्पों (A, B, C, D, E) का नियम लागू किया गया है।

- **नीला बॉल पेन अनिवार्य:** सही उत्तर दर्शाने हेतु केवल **नीले बॉल पेन (BLUE BALL POINT PEN)** से ही गोला गहरा करना होगा।
- **E विकल्प का उपयोग:** यदि आप किसी प्रश्न को हल नहीं कर रहे हैं (Unattempted), तो आपको **पाँचवाँ विकल्प 'E'** गहरा करना अनिवार्य है।

- **गलत भरने पर पेनल्टी:** यदि पाँचों विकल्पों में से कोई भी गोला गहरा नहीं किया जाता है, तो उस प्रश्न के लिए 1/3 अंक काटे जाएंगे ।
- **10 मिनट अतिरिक्त समय:** परीक्षा खत्म होने के बाद केवल 'E' गोला भरने के लिए 10 मिनट का अतिरिक्त समय दिया जाएगा ।
- **सीधे अयोग्य (Disqualification) होने का नियम:** यदि किसी अभ्यर्थी ने 10% से अधिक प्रश्नों में पाँचों गोलों में से किसी को भी नहीं भरा, तो उसे सीधे अयोग्य (Disqualified) घोषित कर दिया जाएगा ।