

- ❖ Candidate should choose the name of the centre where he/she desires to appear in the examination. No change in the choice of examination centre will be entertained. The Bank, however, reserves the right to add or delete any centre and allot the candidate to any centre other than the one he/she has opted for.
- ❖ **Pre- Examination Training:** Bank will arrange pre-examination training in **online mode** for SC/ST/OBC/Religious Minority Community candidates in consonance with the guidelines issued by Government of India. Link for attending online Pre-Examination Training will be hosted on Bank's website for eligible candidates.

❖ **Pattern for Online Written Examination:**

Test		No. of Questions	Marks	Time
General Aptitude *	Test of Reasoning	15	15 *	45 min
	Quantitative Aptitude	15	15 *	
	English Language	20	20 *	
Professional Knowledge	General IT Knowledge	60	100	75 min

* Qualifying in nature and marks scored will not be reckoned for arriving at the Merit.

Note: There will be no negative marks for wrong answers in Online Written Examination.

- ❖ Except Professional Knowledge (PK) paper, other papers will be qualifying in nature. Candidates must score minimum qualifying marks in these papers. The minimum qualifying marks will be decided by the Bank or may be waived at the discretion of the Bank.
- ❖ To be eligible for being shortlisted for the Interaction, the candidates have to score equal to or above the cut off marks as decided by the Bank for the Professional Knowledge (PK) paper, besides scoring minimum qualifying marks in other papers.
- ❖ Selection in Online Written Examination will be made from the Top ranked candidates in descending order of Merit, in each category. In case more than one candidate score the cut-off marks (common marks at cut-off point), such candidate will be ranked according to their age in descending order in Merit list.
- ❖ **Interaction:** Category-wise adequate number of candidates as decided by the Bank will be called for Interaction based on the performance in Online Written Test. Interaction will carry 25 marks. The qualifying marks in Interaction will be as decided by the Bank.
- ❖ **Weightage Pattern:** Written Test – 70%, Interview – 30%. Final Merit list would be prepared based on normalization of marks scored in Online Written Test and Interaction with 70:30 weightage respectively.
- ❖ **Tentative pattern / syllabus for online written exam for Professional Knowledge paper:**
(Note: Pattern / Syllabus mentioned is indicative / illustrative only. Bank at its sole discretion may make any amendment / modification in the Pattern and/or Syllabus any time as per requirement)

SL	Subject	Number of Question	Total Marks
i.	Software Development	20	33
ii.	Infra Support	20	33
iii.	Networking	10	17
iv.	Cloud Operations	10	17
Total		60	100

- I. **WAIT LIST:** Wait list will be maintained post-wise and category-wise for all posts. Candidates will be released from this waitlist against non-joining, resignation, or termination due to unsatisfactory performance/breach of conduct rules, subject to the candidates securing minimum qualifying marks as may be stipulated by the Bank for selection. This wait list will be valid for a period of one year from the date of declaration of final result or till the date of issuance of a fresh advertisement for the vacancy for the same post, whichever is earlier

Indicative Syllabus

(Syllabus mentioned below is only indicative and not exhaustive. Syllabus prescribed is for candidates' reference purpose only. Online Examination may contain questions beyond the purview of the syllabus as deemed fit)

1. Software Development:

- **Data-Structures and Algorithms:**
 - o Questions based on Arrays, Linked List, Stacks, Queues, Binary Tree, Binary Search Tree, Heaps, Hashing and Recursion.
 - o Searching and Sorting Algorithms along with their Space-Time Complexities
- **Object Oriented Programming Concepts:** Abstraction, Association, Encapsulation, Composition, Polymorphism, Aggregation, Inheritance, Message Passing
- **Web/Application Development:**
 - o HTML5/CSS and Javascript
 - o HTTP/HTTPS, AJAX and REST APIs (get, post, put, delete).
 - o Cookies
 - o Version control systems like Git for source code management.

- **Software Engineering:**
 - o Software Development Lifecycle Phases (Requirement analysis, In-depth planning, Product design, Coding, Testing, Deployment, Post-production maintenance)
 - o Basic Software Testing Concepts (Black Box Testing, White Box Testing, Unit/Integration/Regression Testing, and UAT).
 - o Design Patterns and SOLID principles.
- **Databases:**
 - o **Basic Database Concepts:** Relational DBMS, ER Diagram, Transactions (ACID Properties), Keys (Primary, Foreign, Candidate, Alternate etc.), Indexes, Normalization and Joins.
- **Basic questions based on different types of web application attacks like:** Cross-Site Scripting (XSS), Cross-Site Request Forgery (CSRF), Injection Attacks, DDoS (Distributed Denial-of-Service), Brute Force Attack etc.
 - o Tree Traversal strategies like Breadth and Depth First Search
 - o Questions based on Data Structures with code snippets
 - o Digital Signatures use case and importance
 - o Public-Private Key Encryption Symmetric and Asymmetric Keys
 - o Digital Signatures use case and importance
 - o Public-Private Key Encryption
 - o OWASP 10 Web-Security Risks
 - o Database related question based on:
 - DDL, DML and TCL commands
 - Basic of SQL Functions
 - Views, Triggers and Cursors
 - o Monolith vs Microservice architecture.

2. Infra Support

- Basics of Operating Systems:
 - o System calls, processes, threads, inter-process communication, concurrency and synchronization. Deadlock. Memory management and virtual memory.
 - o CPU scheduling Algorithms (FCFS, SJF, SRTF, Round Robin etc.).
 - o Types of memories: cache, main memory and secondary storage.
 - o Concept of Paging and Page Replacement Algorithms: (FIFO, Optimal page replacement, LRU etc.)
 - o I/O Scheduling algorithms (FCFS, SSTF, SCAN, LOOK, CSCAN, CLOOK etc.)
- Basics of virtual machines, storage solutions, and networking components.
- Infra related concepts like processors, Clock Cycle, Cache Memory, HDD, SSD etc.
- Backup and Recovery practices
- Best practices pertaining to security and compliance controls.
- Windows and Unix/Linux computing environments.

3. Networking

- Types of Networks (LAN, WAN, MAN etc)
- Network Topologies (Ring , Mesh, Bus, Star, etc)
- Network Devices (Hub, Bridge, Routers, Gateway, etc)
- OSI Data Model, TCP/IP Model
- Subnets and Supernets
- UDP, TCP, sockets and ports.
- IPv4 vs IPv6
- Classless inter-domain routing.
- IP support protocols (ARP, DHCP, ICMP), Network Address Translation (NAT)
- Application layer protocols: DNS, SMTP, HTTP, FTP, etc.
- Internet Application Protocols (FTP, Telnet, SMTP, SNMP, POP3 etc).
- **Different types of Network Security Protections:**
 - o Firewall, Access Control, Remote Access VPN
 - o Types of Firewall
 - o Access Control

4. Cloud

- Cloud Computing
- Characteristics of Cloud computing
- Types of Cloud Services (SAAS, PAAS, IAAS)
- Public vs Private Cloud
- Virtualization
- Distributed Parallel vs Cloud Computing
- Containerization
- Types of Virtualization
 - o Server-based vs Hypervisor-based virtualization
 - o Type 1 vs Type 2 virtualization
 - o Full vs Para virtualization
- Virtual Machines vs Containers
- Continuous Integration and Continuous Delivery (CI/CD)