

## SCHEME & SYLLABUS OF EXAMINATION OF PART-I FOR POST NO. 2

### PROGRAMMER

| Part   | Section     | Subject/Syllabus   | No. of questions | Maximum Marks | Qualifying Marks |
|--------|-------------|--|------------------|---------------|------------------|
|        |             |  | <b>60</b>        | <b>180</b>    | <b>72</b>        |
| Part-I | Section 'A' | Reasoning/Quantitative Aptitude  | 20               | 60            |                  |
|        | Section 'B' | <ul style="list-style-type: none"><li>• <b>General Knowledge &amp; General Knowledge of Rajasthan:</b><ol style="list-style-type: none"><li>1. Events of State, National and International importance</li><li>2. Geography and Natural Resources of India and Rajasthan</li><li>3. Agricultural, Social and economic development of India Rajasthan</li><li>4. Indian Medieval History, Indian struggle for Independence,, and History of Rajasthan</li><li>5. Culture and heritage of India and Rajasthan</li></ol></li><br/><li>• <b>General Science:</b><ol style="list-style-type: none"><li>1. Elements, Mixtures and Compounds</li><li>2. Physical and Chemical Changes; Oxidation and</li></ol></li></ul> | 30               | 90            |                  |

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|--|--|---|--|--|--|
|  |  | <p>Reduction: Catalysis</p> <ol style="list-style-type: none"> <li>3. Metals and Non Metals</li> <li>4. Acids, bases and Salts</li> <li>5. Reflection of light and its laws, lenses, human eye, defects of vision and its correction</li> <li>6. Electric current, Electric potential, Ohms law , electric cell and Electric motor</li> <li>7. Human Brain, hormones, human diseases and cure</li> <li>8. Economic importance of animals and plants</li> <li>9. Biomass, sources of energy, ecosystem, Mendel's Law of inheritance, chromosomes</li> <li>10. Human blood groups, blood transfusion, Deficiency diseases and cure</li> </ol> <ul style="list-style-type: none"> <li>• <b>Basic Computer Skills:</b> <ol style="list-style-type: none"> <li>1. Introduction to Computers</li> <li>2. Computer Systems</li> <li>3. Uses of Computers</li> <li>4. Introduction to the Internet &amp; Search Engines, Internet Applications</li> <li>5. Operating system,</li> <li>6. MS Word Advance</li> <li>7. Database Management System</li> <li>8. MS Excel Advance</li> <li>9. MS Power Point Basics</li> <li>10. Microsoft Outlook-Basics</li> </ol> </li> </ul> |  |  |  |
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|  | Section 'C' | <p><b>Language Comprehension</b></p> <ul style="list-style-type: none"> <li>• <b>Hindi</b> <ol style="list-style-type: none"> <li>1. शब्द रचना: संधि एवं संधि विच्छेद, समास, उपसर्ग, प्रत्यय</li> <li>2. शब्द प्रकार: तत्सम, तत्भव, अर्धतत्सम, देशज, विदेशी, संज्ञा, सर्वनाम, विशेषण, क्रिया, अव्यय</li> <li>3. शब्द ज्ञान: पर्यायवाची, विलोम, शब्द युग्मों का अर्थभेद, वाक्यांश के लिए सार्थक शब्द, संश्रुततभिन्नार्थक शब्द, समानार्थी शब्द, उपयुक्त शब्द चयन, संबंधवाची शब्दावली</li> <li>4. शब्द शुद्धि</li> <li>5. व्याकरणिक कोटियाँ: परसर्ग, लिंग, वचन, पुरुष, काल, वृत्ति, पक्ष, वाच्य</li> <li>6. वाक्य रचना</li> <li>7. वाक्य शुद्धि</li> <li>8. विराम चिन्हों का प्रयोग</li> <li>9. मुहावरे/ लोककित्या</li> <li>10. पारिभाषिक शब्दावली: प्रशासनिक/ विविध</li> </ol> </li> <li>• <b>English</b> <ol style="list-style-type: none"> <li>1. Use of articles and determiners</li> <li>2. Tenses/ sequence of tenses</li> <li>3. Active and passive voice</li> <li>4. Direct and Indirect Narration</li> <li>5. Use of Prepositions</li> </ol> </li> </ul> | 10 | 30 |  |
|--|-------------|--|----|----|--|

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|--|--|--|--|--|--|
|  |  | 6. Synonyms and antonyms<br>7. Comprehension of passage<br>8. Idioms and Phrases<br>9. Letter writing: Official, Demi-official. Circulars<br>and Notices |  |  |  |
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## POST NO.2. PROGRAMMER

### SCHEME AND SYLLABUS OF EXAMINATION OF PART-II

| <b>Part</b> | <b>Section</b> | <b>Subject/Syllabus</b>   | <b>No. of questions</b> |    | <b>Maximum Marks</b> |     |
|-------------|----------------|---|-------------------------|----|----------------------|-----|
| Part-II     | Section 'A'    | <p><b>Computer Basics:</b></p> <p>Components of a Computer System -CPU, Motherboards, Primary Storage Devices, Secondary Storage Devices, On-Line form Entry, direct data entry, Data base, Types of Computer input/Output, PDA's, computer hardware Basics</p> <p><b>Operating System:</b></p> <p>System Software, Operating System, Operating Systems for Larger Systems, their System Software, General Purpose Software/Utilities, Application Software, All types of Mobile OS</p> <p><b>Data Base Management System &amp; Data Mining:</b></p> <p>Concepts related to Data, Data processing, File organizations, Data Base Management Systems, Types of Database, Database Structures, Data Base Components, Structure of DBMS, RDBMS, Structured Query Language and Other Query Languages, Storage, Documentation and Program Library, Backup, and Recovery, Data Warehouse, Data Mining, data Security, Internet, Data center</p> | 90                      | 40 | 270                  | 120 |

| Part | Section     | Subject/Syllabus  | No. of questions |    | Maximum Marks |     |
|------|-------------|---|------------------|----|---------------|-----|
|      |             | <p><b>Internet &amp; Web Tools:</b></p> <p>Computer Programming Languages (C, Java, PHP, Dot net, Python, Java Script, SQL, HTML, VB Net), HTTP, Internet. Electronic Data Interchange (EDI), Electronic Fund Transfer (EFT), Types of Electronics payments, Risks and Security Considerations, &amp; Commerce, E-Commerce</p>  |                  |    |               |     |
|      | Section 'B' | <p><b>Operation &amp; Maintenance of RDBMS:</b></p> <p>Installing Oracle Database Software, My SQL, MS SQL, DB 2, MS Access, Creating an Oracle Database, my SQL, MS SQL, DB 2, MS Access, Managing the Oracle Instance, Managing Database Storage Structures, Administering User Security, Managing Schema Objects, Managing Undo Data, Configure undo retention, Implementing Oracle, PL-SQL, MySQL, MS SQL, DB 2, MS Access Database Security Configuring Network Environment, Performing Database Recovery and Flashbacks, Configuring Recovery Manager, Monitoring and Managing Storage, Database Environment, Database development base, Database analysis, Enhanced ER model and business rules, Database Design, Database implementation, client server database environment, internet database environment, data ware housing, Advanced DBMS</p> |                  | 50 |               | 150 |

| Part | Section | Subject/Syllabus  | No. of questions |  | Maximum Marks |  |
|------|---------|---|------------------|--|---------------|--|
|      |         | <p><b>Programming Language &amp; Practical Implementation:</b></p> <p>Programming Languages, Programming Process, Analysis-Flowcharts, Program Flowcharts-Data Sources, Algorithms, Flowcharting, Dry Run and Debugging the Program, SQL statements and the extraction of data from the source database, online Google and Excel sheets development, Static and Dynamic Website development, PPT/Excel/Word advance uses, concept of AI and machine learning, Programming languages-Python programming, control structure, exception handling, Web technologies, software Engineering, system design &amp; analysis, digital logic, JAVA programming, OS, computer architecture, analysis and design of algorithm, cloud computing, C language program and its various functions, pointers.</p> |                  |  |               |  |

**Note :** Only those candidates, who have qualified the written examination, will be called for Proficiency test.

The number of candidates called for Proficiency Test would be three/five times the number of vacancies advertised for the post but in the said range although candidates who secure the same percentage of marks shall be included.

| Proficiency Test | Subject                                | Duration | Maximum Marks | Qualifying Marks |
|------------------|--|----------|---------------|------------------|
|                  | As per syllabus of written examination | 3 Hours  | 100           | 40               |