ALIGARH MUSLIM UNIVERSITY, ALIGARH

Scheme of Exam for Direct Recruitment for the post of Primary Teachers in AMU Schools

The Written test is of 120 marks (120 objective type multiple choice questions) carrying 01 mark for each question. The duration of written test will be 120 minutes without any time limit for each part individually.

Section Name – Nature of Questions

Part I- Proficiency in Languages   **(12 marks)**

   A. General English (06 questions)
   B. General Hindi (06 questions)

Part II- General Awareness, Reasoning & Proficiency in Computers   **(18 marks)**

   1. General Awareness & Current Affairs and Aligarh movement (10 questions)
   2. Reasoning Ability (04 questions)
   3. Computer Literacy (04 questions)

Part III- Perspectives on Education and Leadership (25 questions)   **(25 marks)**

   (a) Understanding the Learner (05 questions)
   (b) Understanding Teaching Learning (05 questions)
   (c) Creating Conducive Learning Environment (05 questions)
   (d) School Organization and Leadership (05 question)
   (e) Perspectives in Education (05 questions)

Part IV-Subject-specific Syllabus   **(65 marks)**

Professional Competency Test:

The Professional Competency Test is of 70 marks (Demo Teaching 70 Marks).

Note: The Weightage of Written Test & Demo Teaching in drawing the Final Merit list will be 30:70 respectively.

Syllabus of Exam for Direct Recruitment of PRTs in AMU Schools

Part I - Proficiency in Languages   **(12 marks)**

(a) General English

Reading comprehension, word power, Grammar & usage

(b) General Hindi

पठन कौशल शब्द सामर्थ्य, व्याकरण एवं प्रयुक्ति

Part II — General awareness, Reasoning & Proficiency in Computers   **(18 marks)**

(a) General Awareness& Current Affairs and Aligarh movement
(b) Reasoning Ability
(c) Computer Literacy

Part III - Perspectives on Education and Leadership   **(25 marks)**

(a) Understanding the Learner

- Concept of growth, maturation and development, principles and debates of development, development tasks and challenges
- Domains of Development: Physical, Cognitive, Socio-emotional, Moral etc., deviations in development and its implications.
- Understanding Adolescence: Needs, challenges and implications for designing institutional support.
- Role of Primary and Secondary Socialization agencies. Ensuring Home school continuity.

(b) Understanding Teaching Learning

- Theoretical perspectives on Learning -Behaviorism, Cognitivism and Constructivism with special reference to their implications for:
    - The role of teacher
    - The role of learner
    - Nature of teacher-student relationship
    - Choice of teaching methods
    - Classroom environment
    - Understanding of discipline, power etc.
    - Factors affecting learning and their implications for:
    - Designing classroom instructions,
    - Planning student activities and,
    - Creating learning spaces in school.
    - Planning and Organization of Teaching-Learning
    - Concept of Syllabus and Curriculum, Overt and Hidden Curriculum
    - Foundational Literacy and Numeracy, Early Childhood Care and Education
    - Competency based Education, Experiential learning, etc.
    - Instructional Plans: -Year Plan, Unit Plan, Lesson Plan
    - Instructional material and resources

- Information and Communication Technology(ICT) for teaching-learning
- Assessment of learning, for learning and as learning: Meaning, purpose and considerations in planning each.
- Enhancing Teaching Learning processes: Classroom Observation and Feedback, Reflections and Dialogues as a means of constructivist teaching

(c) Creating Conducive Learning Environment

- The concepts of Diversity, disability and Inclusion, implications of disability as social construct, types of disabilities-their identification and interventions.
- Concept of School Mental Health, addressing the curative, preventive and promotive dimensions of mental health for all students and staff. Provisioning for guidance and counselling.
- Developing School and community as a learning resource.

(d) School Organization and Leadership

- Leader as reflective practitioner, team builder, initiator, coach and mentor.
- Perspectives on School Leadership: instructional, distributed and transformative
- Vision building, goal setting and creating a School development Plan
- Using School Processes and forums for strengthening teaching learning-Annual Calendar. time-tabling, parent teacher forums, school assembly, teacher development forums. Using achievement data for improving teaching-learning, School Self Assessment and Improvement.
- Creating partnerships with community, industry and other neighbouring schools and Higher Education Institutes-forming learning communities.

(e) Perspectives in Education

- Role of school in achieving aims of education.
- NEP-2020: Early Childhood Care and Education: The Foundation of Learning: Foundational Literacy and Numeracy: Curriculum and Pedagogy in Schools Holistic & Integrated Learning: Equitable and Inclusive Education: Learning for All: Competency based learning and Education.
- Guiding Principles for Child Rights, Protecting and provisioning for rights of children to safe and secure school environment, Right of Children to free and Compulsory Education Act, 2009,
- Historically studying the National Policies in education with special reference to school education.
- School Curriculum Principles: Perspective. Learning and Knowledge, Curricular Areas, School Stages-Pedagogy & Assessment.

Part IV-Subject-specific Syllabus   **(65 marks)**

Note The Weightage of Written Test & Demo Teaching in drawing the Final Merit list will be 30:70 respectively.

Syllabus for PRT Computer

IT Fundamentals:

Evolution of computers; Basics of computer system and its operation: Functional Components and their inter-connections; concept of Booting. Software Concepts: Types of Software - System Software, Utility Software and Application Software; System Software: Operating System, Compiler, Interpreter and Assembler; Utility Software: Anti-Virus, File Management tools, Compression tools and Disk Management tools Application software: Office Tools - Word Processor, Presentation Tool, Spreadsheet Package, Image, Audio & Video editing Software, PDF Tools, Video Conferencing Tools etc, Cyber Ethics: Netiquettes, Software licences, Open Source Software Movement, Intellectual property rights, plagiarism and digital property rights, Freedom of Information and the digital divide, Privacy, fraud and secure data transmission, Cyber-crime, Cyber safety, E-waste management, Indian Information Technology Act (IT Act)

IT Applications:

Impact of ICT on Society: Social and Economic benefits, e-Governance: Definition, Benefits to citizens, e-Governance websites and their salient features; Societal impacts; e-Governance challenges. e-Business: Definition, Benefits to customers and business, e-Business websites and their salient features including e-payments, Societal impacts; e-Business challenges. e-Learning: Definition; Benefits to students (Learners), teachers (Trainers) and school (Institution) Management; e-Learning websites and their salient features, Societal impacts; e-Learning Challenges

Computer Organization:

Introduction to Digital Computer, hardware, software, input device, output device, CPU, Memory: primary, secondary & cache, units of memory (Bit, Byte, KB, MB, GB, TB, PB), Number System: Binary, Octal, Decimal and Hexadecimal number system; conversion between number systems, Encoding schemes: ASCII, ISCII and UNICODE (UTF8, UTF32), Boolean logic: NOT, AND, OR, NAND, NOR, XOR, truth table, De Morgan's laws and logic circuits

Computer Networks and Data Communication:

Evolution of networking, Introduction to computer networks, Types of computer network, Network topologies, Network Protocol: HTTP, FTP, PPP, SMTP, TCP/IP, POP3, HTTPS, TELNET, VoIP etc, Internet, Intranet, Extranet, Internet Services, Introduction to WWW, domain names, URL, website, web browser, web servers, web hosting, chat, email, video conferencing, e-Banking,, e-Shopping, e-Reservation, social networking etc. Network devices: Modem, Ethernet card, RJ45, Repeater, Hub, Switch, Router, Gateway, WIFI card, Fundamentals of Data Communication: concept of communication, components of data communication, measuring capacity of communication media (bandwidth, data transfer rate), IP addressing, Switching techniques :Circuit switching, Packet switching, Transmission Media: Wired Media; Twisted wire-pair, Co-axial Cable, Fiber optics; Wireless media; Infrared, Radio and Microwave Transmission; Satellite Communication, Network Security, Information Security and Web Security, Firewalls.

Database Management System:

Database Systems Concepts & Architecture, Data Models, Relational data model: relation, attribute, tuple, domain, degree, cardinality, keys (candidate key, primary key, alternate key, foreign key etc.), SQL: DDL,DML, DCL, Data Types & Operators, Constraints and Aggregate functions.

Web Development:

HTML, Basic Tags of HTML, Creating Links, Tables, Form Tags, Embeding Image, audio and video in a HTML page, Cascading Style Sheets (CSS), Extensible Markup Language (XML)

Computational Thinking and Programming:

Introduction to problem solving: Steps for problem solving, analysing the problem, developing an algorithm, coding, testing and debugging. Representation of algorithms using flow chart and pseudo code, decomposition,

Python programming:

Introduction to python programming, features, Execution modes, Character sets, Tokens, Environment Setup, Basic Syntax, Comments and Documentation, Variables, Data Types, Type Conversion, Operators, Expressions, Statement, Decision Making, Loops, Numbers, Strings, Lists, Tuples, Dictionary, Date & Time, Functions, Files I/0, Exceptions, Modules, Database Access

Suggested Reference Books/Materials:

1. Computer Applications - A Textbook for Class IX by Sumita Arora,Dhanpat Rai & Co. publication.

2. Information and Computer Technology Class IX, published by The Secretary, Central Board of Secondary Education Shiksha Kendra 2, Community Centre, Preet Vihar, Delhi-110092

3. Computer Applications - A Textbook for Class X by Sumita Arora,Dhanpat Rai & Co. publication.

4. Information and Computer Technology Class X, published by The Secretary, Central Board of Secondary Education Shiksha Kendra 2, Community Centre, Preet Vihar, Delhi-110092

5. Computer Science - A Textbook for Class XI, by NCERT.

6. Computer Science with python - A Textbook for Class XI, by Sumita Arora, Dhanpat Rai & Co. publication.

7. Computer Science - A Textbook for Class XII, by NCERT.

8. Computer Science with python - A Textbook for Class XII, by Sumita Arora Dhanpat Rai & Co. publication.