

कृषि विश्वविद्यालय, जोधपुर

प्रोग्राम सहायक (Programme Assistant - Computer) की भर्ती हेतु परीक्षा की योजना

परीक्षा की योजना :- प्रोग्राम सहायक (कम्प्यूटर) के पदों की भर्ती हेतु एक लिखित परीक्षा आयोजित की जायेगी। लिखित परीक्षा में 100 वस्तुनिष्ठ प्रश्नपत्र (50 प्रश्न भाग-1 एवं 50 प्रश्न भाग-2) पुछे जायेंगे। जिनका स्तर बी.टेक/बी.सी.ए/बी.ई. कम्प्यूटर विज्ञान स्तर का होगा। इस प्रश्नपत्र की अवधि 2 घंटे की होगी। प्रत्येक सही उत्तर के लिये 4 अंक प्रदान किये जायेंगे तथा प्रत्येक गलत उत्तर के लिये 1 अंक काटा जायेगा। इस परीक्षा में प्राप्त अंको के आधार पर प्रत्येक वर्ग में से पांच गुणा अभ्यर्थियों को साक्षात्कार के लिये बुलाया जायेगा। लिखित परीक्षा के अंको का 80 प्रतिशत व साक्षात्कार के अंको का 20 प्रतिशत वेटेज होगा। इन दोनो के प्राप्त अंको के आधार पर वरीयता का निर्धारण होगा।

Syllabus for the written examination of Programme Assistant (Computer)

Max. Marks : 400

Time: 2 Hours

PAPER-I

Reasoning Test , Numerical Analysis & General Knowledge -

Problem solving, Data Interpretation, Data Sufficiency, Logical Reasoning and Analytical Reasoning. General Knowledge and Current Affairs relating to India and Rajasthan.

Data Base Management System -

ER Diagram, data models- Relational and Object oriented databases. Data Base Design: Conceptual data base design, Normalization Primitive and Composite data types, concept of physical and logical databases, data abstraction and data independence, data aggregation and Relational Algebra.

Application Development using SQL: Host Language interface, embedded SQL programming, Stored procedures and triggers and views, constraints assertions.

Internal of RDBMS: Physical data organization in sequential, indexed random and hashed files. Inverted and multilist structures, B trees, B+trees, Query optimization, join algorithm.

Transaction processing, concurrency control and recovery management. Transaction model properties and state serialisability. Lock base protocols, two phase locking.

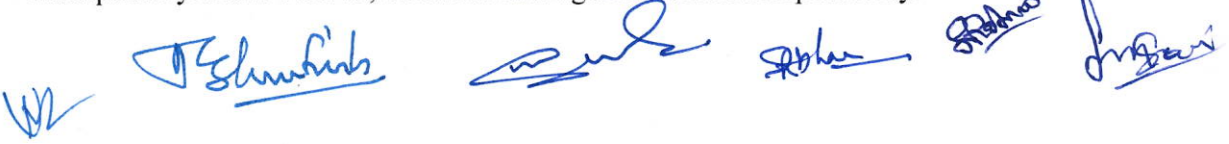
Data Communication and computer networks -

Computer Network Architecture, Circuit switching. Packet and message switching, Network structure. Physical layer, Data link layer, Framing, Retransmission algorithms.

Multiple access and Aloha. CSMA/CD and Ethernet. High speed LANs and topologies. Broadcast routing and spanning trees.

TCP/IP Stack. IP networks and internet. DNS and Firewalls. Intrusion Detection and Prevention.

Transport layer and TCP/IP, Network Management and Interoperability.



PAPER-II

System Analysis and Design

System concept: Definition and characteristics, elements and boundaries, types of system development life cycle, recognition of needs, feasibility study, prototyping, role of system analyst.

System planning and tools like DFD, data dictionary, decision trees, structured analysis and decision tables. IPO charts, structured walkthrough, input output form design, requirement and classification of forms, layout considerations form control, object oriented Design Concepts and methods.

Software Life Cycle, Software Engineering paradigms.

System analysis: Feasibility study requirement analysis, Cost benefit analysis, Planning systems, Analysis tools and techniques.

System Design: design fundamentals, modular design, data and procedural design, object oriented design.

System development: Code documentation, programme design paradigms, Efficiency consideration. Verification, validation and testing: testing methods, formal programme verification, testing strategies.

Software maintenance: Maintenance characteristics, Maintainability, Maintenance tasks and side effects.

Programming concepts

Introduction: Internet, Java as a tool for internet applications, Byte Code and its advantages.

Object Oriented Programming and Design: Review of abstraction, objects and other basics, encapsulation, information hiding, method signature, classes and instances, Polymorphism, Inheritance, exceptions and exception handling with reference to object modeling, Coupling and cohesion in object oriented software. Object oriented design-Process, exploration and analysis.


Java programming basics: Variables and assignments, Input and output, Data types and expressions, Flow of control, Local variables, Overloading parameter passing, this pointer, java object oriented concepts: Use of file for I/O, Formatting output with stream functions, Character I/O, Inheritance, Public and private members, constructors for initializations, Derived classes, flow of control Arrays-programming with arrays, arrays of classes, arrays as function arguments, Strings, Multidimensional arrays, Arrays of strings, vectors Base classes.

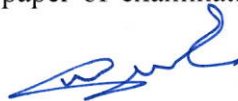
Introduction JSP, RMI, Java applets and servlets.


Introduction to Dot Net framework and visual programming interface.

Note:

- (i) The standard of the paper will be that of a degree examination of a University established by law in India. A brief outline of the scope of each paper is given in this schedule for general guidance of candidates but is not intended to be exhaustive.
- (ii) Questions of question paper of examination shall be of multiple choice type.

 P. Srinivas




29/3/2023

