

ANNOUNCEMENT OF THE RECRUITMENT PROCESS OF THE ASSISTANT“ A”(FARM/ LABORATORY / REPRO-PHOTO/ LIBRARY) AGAINST RECRUITMENT ADVERTISEMENT NO. REC-6/2021-3, KOL DATED: 30/06/2021

Selection will be based on Computer Based Test (Multiple Choice Question -MCQ Type) & Skill Test. For dates of the tests & general guidelines, please visit the institute websites.

The selection process will be carried out through two stages i.e. **Stage-1:** A Computer Based Test (Multiple Choice Question -MCQ Type) and **Stage 2:** A Skill Test as described below.

STAGE-1: A COMPUTER-BASED TEST (MULTIPLE CHOICE QUESTION -MCQ TYPE)

For the posts of **Assistant 'A' (Lab/Lib/Repro-Photo/Farm)** there will 50 MCQ (Section-A =20 questions & Section-B = 30 questions). A candidate will score 4 marks for each correctly answered question, 0 marks for each unattempted question and 1 mark will be deducted for each incorrect answer. The CBT will be of 120 minutes duration. Note that the maximum marks that a candidate can score are 80 in Section A and 120 in Section B.

Section A	Number of MCQ	Maximum Marks
Logical Reasoning, General Awareness, Quantitative Aptitude, English Comprehension	20	80
Section B Domain Areas Related to Farm/ Laboratory/ Repro-Photo/ Library	30	120
Total	50	200

Based on the Computer Based Test (MCQ type), candidates will be shortlisted for the **Skill Test**. The shortlisting criteria are narrated below.

- The cutoff marks for qualifying the Computer Based Test (MCQ type) for all categories of posts will be 30% for General (UR), 27% (OBC) and 25% for Scheduled Castes(SC), Scheduled Tribes (ST) & Persons with Benchmark Disabilities (PwBD).
- A candidate needs to score at least the qualifying marks in order to be considered (qualified) for getting shortlisted for the skill test. The qualified candidates will be ranked based on their total scores in all sections of the CBT.
- The number of candidates to be shortlisted and called for the skill test is the minimum of the following two numbers: (i) the number of qualified candidates, and (ii) five times the number of vacant posts under respective specialization and social category mentioned in the advertisement.

STAGE 2: A SKILL TEST (OFFLINE)

Skill Test (qualifying in nature) on Library/ Repro-Photo/ Laboratory Work/ Laboratory Management/ Computer Work/ Farm Related Work will be conducted for the shortlisted candidates of Stage-1.

- Total Marks of the skill test will be 100.
- The minimum qualifying marks for the Skill Test for all categories of posts will be 50% of the total marks (OBC - 47%, SC/ST/PwBD – 45%).

Candidate(s) in the top rank(s) in the above online test, shortlisted for the skill test, and qualified in the skill test will be selected for appointment, subject to satisfying all the criteria mentioned in the advertisement, to fill up the vacant post(s) mentioned against respective specialization and category.

The tie-breaking for the preparation of Final Merit List of the candidates securing same marks in the CBT for the recruitment in all categories of posts against Advertisement No. REC-6/2021-3, KOL dated 30/06/2021, will be decided in the following order:

(a) *Date of Birth (Candidate whose age is more will be ranked higher)*. If the date of birth is also the same, then; (b) *Alphabetical order of the first letter of the first name of the candidate as recorded in his / her matriculation or equivalent certificate*.

GENERAL INFORMATION:

Any subsequent amendments/modifications, syllabus outline, sample questions and the important dates on this recruitment will be notified in <https://www.isical.ac.in/jobs>. Candidates are advised to visit the website regularly.

The selected candidates will be governed by the rules and regulations of the Institute as amended from time to time.

Original testimonials of the candidates, called for the skilled test, will be verified on the day of the skill test.

If any information furnished by a candidate is found false at any stage of recruitment, her/his candidature will be canceled.

INDICATIVE SYLLABUS FOR COMPUTER-BASED TEST (MCQ TYPE)

PART -A

General Intelligence: The test will include questions on Semantic Analogy, Symbolic operations, Symbolic/Number Analogy, Trends, Figural Analogy, Space Orientation, Semantic Classification, Venn Diagrams, Symbolic/Number Classification, Punched hole/ pattern folding& unfolding, Semantic Series, Figural Pattern–folding and completion, Number Series, Embedded figures, FiguralSeries, CriticalThinking, Word Building, Coding and de-coding.

English Language: Spot the Error, Fill in the Blanks, Synonyms/ Homonyms, Antonyms, Spellings/ Detecting misspelled words, Idioms & Phrases, One-word substitution, Improvement of Sentences, Active/ Passive Voice of Verbs, Conversion between Direct/ Indirect narration, Shufflingof Sentenceparts, Shuffling of Sentences in a passage, Fill in the blanks, Comprehension Passage.

Quantitative Aptitude: Arithmetic: Number Systems: Computation of Whole Number, Decimal and Fractions, Relationship between numbers Fundamental arithmetical operations: Percentages, Ratio and Proportion, Square roots, Averages, Interest (Simple and compound), Profit and Loss, Discount, Time and distance, Time and work. Algebra: Basic algebra identities of School Algebra and Elementary surds (simple problems) and Graphs of Linear Equations. Geometry: Familiarity with elementary geometric figures and facts etc.

General Awareness: Questions are designed to test the candidate’s general awareness of the environment around him and its application to society. Questions are also designed to test knowledge of current events and such matters of everyday observation and experience in their scientific aspect as may be expected of an educated person. The test will also include questions relating to India especially pertaining to History, Culture, Geography, Economic Scene, General policy and scientific research.

PART B

(Broadly based on 10+2 Syllabus)

INDICATIVE SYLLABUS FOR ASSISTANT -A (LABORATORY / FARM)

Mathematics:

Sets, Relations and Functions, Algebra, Coordinate Geometry; Calculus, Mathematical Reasoning; Statistics and Probability, Vectors and Three - Dimensional Geometry, Linear Programming.

Physics:

Physical World and Measurement; Kinematics; Laws of Motion; Work, Energy and Power; Motion of System of Particles and Rigid Body; Gravitation; Thermodynamics; Behaviour of Perfect Gases and Kinetic Theory of Gases; Oscillations and Waves; Electrostatics; Current Electricity; Magnetic Effects of Current and Magnetism; Electromagnetic Induction and Alternating Currents; Electromagnetic Waves; Optics; Atoms and Nuclei; Electronic Devices.

Biology:

Diversity of Living organisms, Structural Organization in Plants and Animals; Cell-Structure and Functions; Plan Physiology; Human Physiology; Reproduction; Genetics and Evolution; Biology and Human Welfare; Biotechnology and its Applications; Ecology and Environment.

Chemistry:

Some Basic Concepts of Chemistry; Structure of Atom; Classification of Elements and Periodicity in Properties; Chemical Bonding and Molecular Structure; States of Matter: Gases and Liquids; Chemical Thermodynamics; Equilibrium; Redox Reactions; Hydrogen; s -Block Elements; Some p -Block Elements; Organic Chemistry: Some Basic Principles and Techniques; Hydrocarbons; Environmental Chemistry; Electrochemistry; Chemical Kinetics; Surface Chemistry; General Principles and Processes of Isolation of Elements; p -Block Elements; d -and f -Block Elements; Alcohols, Phenols and Ethers; Aldehydes, Ketones and Carboxylic Acids; Amines; Biomolecules; Polymers; Chemistry in Everyday Life.

Bio-Chemistry:

Biotechnology: An overview; Molecules of Life; Genetics and Molecular Biology; Cells and Organisms; Protein and Gene Manipulation; Cell Culture and Genetic Manipulation.

Contemporary India:

Physical Features of India: Major Physiographic Divisions; Understand the major landform features and the underlying geological structure; their association with various rocks and minerals as well as nature of soil types; Minerals and Energy Resources: What is a mineral? Mode of occurrence of Minerals; Ferrons and Non-Ferrons Minerals Non-Metallic Minerals; Rock Minerals; Conservation of Minerals; Energy Resources; Conventional and Non-Conventional; Conservation of Energy Resources; Identify different types of minerals and energy resources and places of their availability.

Computer:

The basic concept of hardware and software: Computer Generations, Functions of Computer, Block Diagram of a Computer System, Input Devices, Output Devices, CPU, Memory, Types of Software (system and application software), Interface.

INDICATIVE SYLLABUS FOR ASSISTANT – A (LIBRARY)

(Broadly based on Certificate Course on LIS)

Library Organisation and Management:

Library – Definition, Scope and Functions, History and Development of Libraries, Five Laws of Library Science; Types of Libraries – Public, Academic and Special, Library Movement in India, Library Legislation in India, Library Cooperation and Extension Services, Components of Library – Acquisition, Technical, Circulation Sections; Preservation and Maintenance and Stock Verification of Books; Book Selection – Principles and Tools; Library Building and Furniture, Library Rules, Library Committee, Annual Report.

Information Sources and Services:

Information: Scope, Purpose and Characteristics, Information Sources and their Types- Primary Sources, Secondary Sources, Tertiary Sources; Information Services: Need, Purpose and Types, Reference Service, Document Delivery Service (DDS); Users: Their Information Needs, Awareness Service, User Orientation.

Library Classification:

Basics of Classification, Library Classification – Need and Purpose, Notation – Need and Types, Fundamental Categories, Common Isolates, Call number, Dewey Decimal Classification, Colon Classification

Library Cataloguing:

Basics of Cataloguing, Library Catalogue – Need, Purpose and Functions, Physical Forms of Catalogue, Inner Forms of Catalogue, Cooperative Cataloguing, Centralized Cataloguing and Union Catalogue

ICT in Libraries:

Digital Literacy: Computer Basics, Office Tools; Library Automation: Automated House-Keeping Operations, Basics of Library Automation Packages; Internet Tools and Services: Internet Basics. Web Tools, Web-based Services; Digital Library- Overview, Components of Digital Library, Digitization, Open Access and Digital Rights/Access Management, Digital Library: Services, Preservation, Standards, IPR and Legal Issues, Digital Library Practice- Basics of Open Source Digital Library Software

INDICATIVE SYLLABUS FOR ASSISTANT – A (REPRO-PHOTO)

Basics of Reproduction of documents & manuscripts, microfilming, automated information storage, retrieval and dissemination, Copying, Records Management, Conservation, Reprography and Information Sciences

Basics of Computers, Computer Generations, Functions of Computer, Block Diagram of a Computer System, Input Devices, Output Devices, CPU, Memory, Types of Software (system and application software), Interface. MS Office Tools, Internet Basics, Web-page design; DTP, Graphic Design, CorelDraw, Photoshop, Illustrator, Acrobat reader, Audio-Video Editing,

Basics of Photography, History and Evolution of Photography, Aesthetics of Photography, Theory of Composition, Importance of Light in Photography, Importance of Shades and Shadows, Digital / Still Photography, Handling of DSLR Camera, Copying, Basics of Photo Editing, Enhancing Photographs, Organizing the Picture, Printing,

SAMPLE QUESTIONS

PART-A (Common for All)

1. The relation between "Pen" and "Paper" is the same as that between "Brush" and
 - (a) Paint
 - (b) Canvas
 - (c) Photo
 - (d) Colour
2. Spider : Insect : : Crocodile : ?
 - (a) Reptile
 - (b) Mammal
 - (c) Frog
 - (d) Carnivore
3. The Kalinga war was fought in which year of Ashoka reign?
 - (a) 261 BCE
 - (b) 361 BCE
 - (c) 461 BCE
 - (d) None of the above
4. In a certain code language, 'REPAIR' is written as 'BJSSFQ'. How will 'SYSTEM' be written in the same language?
 - (a) TZTUFN
 - (b) SDLRXX
 - (c) RXRSDL
 - (d) UFNTZT
5. How many distinct scalene triangles with integral sides are possible whose perimeter is less than 15 units?
 - (a) 5
 - (b) 4
 - (c) 6
 - (d) 7

PART-B

ASSISTANT -A (LABORATORY / FARM)

1. Which of the following is not an I/O device?
 - a. Scanner
 - b. Printer
 - c. ROM
 - d. Keyboard

2. Choose the correct statement
 - (a) A body can be accelerated by frictional force
 - (b) There can be zero friction
 - (c) Kinetic friction is greater than rolling friction
 - (d) Frictional force and area of contact between the two surfaces are proportional

3. The correct sequence of taxonomic categories is:
 - (a) Species -> genus -> order -> phylum
 - (b) Species -> order -> genus-> kingdom
 - (c) Genus -> species -> order -> kingdom
 - (d) None of these

4. Which is the highest peak in the Eastern Ghats?
 - (a) Anai Mudi
 - (b) Doda Betta
 - (c) Jindhagada
 - (d) Mahendragiri

5. The molecule having one unpaired electron is
 - (a) NO
 - (b) CO
 - (c) CN^-
 - (d) O_2

ASSISTANT – A (LIBRARY)

1. PageRank is an algorithm used in:
 - a) Google
 - b) Yahoo
 - c) Facebook
 - d) Tweeter

2. Mendeley is a tool for:
 - a) Reference management
 - b) Knowledge management
 - c) Content management
 - d) Database management

3. Which MARC field denotes the access and location of e-resources:

- (a) 020
- (b) 260
- (c) 440
- (d) 856

4. IRINS is an initiative of:

- a) IFLA
- b) OCLC
- c) NISCAIR
- d) INFLIBNET

5. ISBN of a book published in 2012 has _____ digits.

- a) 9
- b) 11
- c) 13
- d) 15

ASSISTANT – A (REPRO-PHOTO)

1. To join two lengths/or bits of motion film we need

- (a) Adhesive
- (b) Cello tape
- (c) Feviquick
- (d) Splicer

2. Which of the choices below are pertinent to the scanning process in the video system

- (a) Progressive and Interlaced
- (b) Flatbed Scanning and Handheld scanning
- (c) Does not require beam
- (d) All of the above are false

3. Which of these below is an image editing software

- (a) Impress
- (b) Illustrator
- (c) PageMaker
- (d) Photoshop

4. Which of these is a type of reprographic equipment?

- (e) Offset Lithographic machine
- (f) Stencil duplicator
- (g) Copier machine
- (h) All of the above

5. VGA resolution is

- (a) 640X480 pixels
- (b) 1920X1080 pixels
- (c) 1024X960 pixels
- (d) 720X576 pixels