NATIONAL REMOTE SENSING CENTRE
ADVERTISEMENT NO.NRSC/RMT/1/2018 DATED 17.01.2018
Name of the Post: Scientific Assistant
Post No. : 12

SYLLABUS – WRITTEN TEST

Type of Examination	:	Objective Type (Multiple Choice Questions)
No. of Questions	:	75 Questions
Apportionment of marks	:	Each Question carries one mark.
Duration of Examination	:	02 Hours

Written Test will broadly comprise of the following topics as covered in B.Sc. Curriculum.

Mathematics

1. Real Analysis
2. Elementary Number Theory
3. Groups and Rings
4. Linear Algebra
5. Ordinary and Partial Differential Equations
6. Vector Calculus
7. Solid Geometry

Statistics

1. Probability
2. Distribution Theory
3. Estimation
4. Testing of Hypotheses
5. Non-Parametric Tests
6. Multivariate Tests
7. Sampling Techniques
8. Linear models and analysis of experimental designs
9. Optimization Techniques

Computer Science

1. Mathematical Foundations
2. Computer Organization
3. Programming: Programming in C, Object oriented programming concepts including classes, Polymorphism, Inheritance, and Programming in C++, Java and Python.
4. Data Structures
5. Design and Analysis of Algorithms: Algorithm complexity, Algorithms Design Techniques – Divide and Conquer, Greedy Method, Dynamic Programming, Backtracking, Branch and Bound, NP-Hard and NP-Complete Problems.
6. Principles of Programming Languages: BNF, Variables, Data Types, Control Structures, Scope and Extent, Data Abstraction, Concurrency concepts, Exception Handling, Functional Programming, and Logic Programming.
7. Compiler Design
8. Operating Systems
9. Database Management Systems
10. Computer Graphics
11. Computer Networks
12. Software Engineering
13. Object oriented Analysis and Design
14. Network Security
15. Distributed Operating Systems