

Scheme of PST for recruitment to the posts of **Junior Scientist** in the WBGS
under the Department of Higher Education, Science & Technology And
Biotechnology, Government of West Bengal

Commission's Advt. No. : 9 (2A) / 2018

Duration: 1 Hour 30 Minutes

No. of questions: 100 (MCQ type) each carrying 1 marks.

Full Marks: 100

1/3 marks will be deducted for each wrong answer

Syllabus for screening test for recruitment to the post of Junior Scientist:-

The question paper for above test will contain 100 multiple choice questions, containing 20 questions from each of the following sections & each question being of 1 mark. All the questions have to be attempted.

i) Civil Engineering: Weathering and its role on formation of soils, Index properties of soils, Classification of soils as per I.S. classification system, Compaction and standard Proctor's test, Field Compaction methods, Shear strength of soils, effective stress analysis, Function of soil as highway subgrade material, Soil stabilization, road aggregates and requirements of a good road aggregates, testing of road aggregates, bituminous materials and testing of such materials. Types of irrigation, duty of water, quality of irrigation water, effective rainfall run off, hydrograph, average rainfall over a catchment, components of canal irrigation system.

ii) Agriculture and Soil Science: Crop inventory, aereage estimation ,cropping system analysis, production estimation, Agricultural drought assessment, agro-meteorological applications, soils and land degradation , Soil mapping, soil resources studies, Soil-moisture studies, Crop suitability studies, Land irrigability assessment.

iii) Geology: Lithological mapping using remote sensing, Structural mapping, Mineral and petroleum exploration, Geo-environmental studies, Geo-engineering studies.

iv) Geography: Geomorphology, Urban and regional planning, Environmental geography, Cartography, Land use/land cover, Settlement geography, regional geography with special reference to India.

v) Remote Sensing and Geographical Information System: Principles of remote sensing with aerial photography and photogrammetry, principles of geographical information system with WEBGIS, basis of global positioning system, Indian remote sensing missions, principles of image processing cartography - basic and digital, Digital image processing, Applications in geoinformatics, Spatial database analysis and modelling.