NOTICE

The syllabus for conducting Written Test [Multiple Choice Questions (MCQs)] in subjects viz. Geology and Psychology for the posts of Lecturer (10+2) in School Education Department is notified for the information of the concerned candidates as under:

**SUBJECT: GEOLOGY**

**Structural Geology and Global Tectonics:**

- Concept of stress and strain and their geological significance, Mechanics of folding and buckling, Faults and dynamics of faulting, Planer and linear fabrics in deformed rocks,
- Concept of petrofabrics and symmetry, Interpretation of fabric data on microscopic and mesoscopic scale. Geometrical analysis of simple and complex structures on macroscopic scale. Internal structure of the Earth, Plate tectonics and mountain building. Models of mountain building, Collision tectonics.

**Paleobiology and Stratigraphy:**

**Sedimentology:-**


**Mineralogy and Geochemistry:-**


**Igneous and Metamorphic Petrology:-**

Magma nature and cooling behavior, volatiles in silicate melts. Classification schemes of igneous rocks; Phase equilibria: Unary, binary and ternary systems. Genesis and tectonic setting of different Magma Types; Application of major and trace elements (including REE) and Sr-,Pb-, and Nd-isotopes studies in deciphering Magma generation, mantle-crust interactions and tectonic environments. Metamorphism and metamorphic processes, Metamorphic differentiation, Metamorphic facies and systematic description of regional and thermal metamorphism of pelitic, basic-ultra-basic and calcareous rocks. Metamorphic reactions and their implications to geothermobarometry. Metasomatism and anataxis; Regional metamorphism and paired metamorphic belts in reference to plate tectonics. P-T-t paths.
Ore, Fuel & Exploration Geology:-

Principal mechanism of formation of the igneous, sedimentary and metamorphic mineral deposits, weathering and placer deposits; Ore deposits and plate tectonics, Mineral economics and national mineral policy in relation to strategic, critical and essential minerals; Ore Microscopy and quantitative methods in ore microscopy; Microchemical studies of ore minerals, Fluid inclusions in ore.

Origin and occurrence of petroleum, Migration and accumulation of petroleum, Reservoir rocks and traps. Petroliferous basins of India. Rank and grade of coal; Origin of kerogen and coal. Geological and geographical distribution of coal deposits in India with emphasis on Gondwana coal fields. Atomic minerals and mode of occurrence of atomic minerals in nature. Atomic minerals as source of energy and productive atomic mineral geological horizons in India.

Principles and methodology of geological prospecting for economic minerals and rocks, sampling methods, reserve estimation, grade and tonnage calculation of the deposits. Mining methods. Concept of geochemical dispersion and pathfinder elements, geochemical sampling and geochemical field techniques. Principle, procedure, equipments used and applicability of gravimetric, Magnetic, electrical, seismic and radiometric geophysical methods, Aeria geophysical surveys.

Tectonic Geomorphology:-

Geomorphological cycle, Soils and classification of soils, Morphometric analysis of drainage basins, Relationship of morphometric parameters with discharge and sediment yield characters of basins, Morphometric evolution of western Himalayas, Tectonic Geomorphology, Energetics, Active Tectonics & Models of landscape development; Controversies in tectonic geomorphology. Geomorphic Markers. Landform dating techniques, Geomorphic Expression of Faults; Palaeoseismology and field techniques in paleoseismology, Direct and indirect observations of paleoseismic displacements, Paleoseismic landforms, Use of liquefaction induced features and landslides for paleoseismic analysis. Quaternary cycles of climate change and their effect on landforms. Geomorphic sub-divisions of Indian subcontinent and their geomorphic features and evolution with special reference to Himalayas. Landslides, Settlement and subsidence, slope modification and reinforcement, instruments for monitoring slope movements.

Hydrogeology:-


**Remote Sensing and GIS:-**

Concepts of remote sensing, electromagnetic radiations, matter interactions with atmosphere and terrain, reflectance, absorptance and transmittance, spectral reflectance of vegetation, soils, minerals and rocks, scattering processes, basic elements of visual image interpretation, principles of image interpretation, verification and validation of RS data. Picture element and image statistics, pre-processing of satellite data: geometrical corrections of satellite data, image enhancements, types of enhancements, filtering of images, digital image classification: Supervised and unsupervised classifications. Sources of errors and measurement of map accuracy, kappa coefficient. Applications of remote sensing earth sciences, environmental sciences, surveying, hydrological modeling, groundwater prospecting.

Geographic Information System (GIS) Components of GIS, GIS software packages, Concept and types of information, integration of spatial and non-spatial data, raster and vector data models, geospatial analysis for disaster management with case studies on landslides and floods, GIS for environmental applications like lake management and soil mapping.

**Engineering & Environmental Geology:-**

Geological controls on radon emission levels. Radon emission survey. Use of geochemical maps in land use planning.

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**SUBJECT: PSYCHOLOGY**

**Introduction:**
Definition, Goals, Scope and Subject-matter of Psychology, Schools of Psychology, Research methods in psychology.

**Biological Bases of Behavior:**
Structure and functions of Neuron, Communication within and between neurons, Structure and Functions of the Central Nervous System and Peripheral Nervous System, Endocrine System.

**Sensation and Perception:**
The Visual and Auditory system, Attention processes, Nature and Theories of Perception (Bottom Up and Top down), Perceptual Organization, Perceptual Constancy, Depth Perception.

**Learning Memory:**
Theories of Memory- Atkinson and Shiffrin Model of Memory, Craik and Lockhart levels of Processing Model, Tulving Model of Memory, Theories of Forgetting.

**Thinking, Reasoning and Intelligence:**
Nature and Process of Thinking, Concept Formation, Problem Solving, Language and Thought, Divergent and Convergent Thinking, inductive and Deductive Reasoning, Nature of Intelligence
Theories of intelligence-Spearman, Thurstone, Guilford, Cattell, Sternberg, Gardener and Jensen
Measurement of Intelligence, Intelligence and Creativity.

**Personality:**
Theories: Trait and Type Theories, Psychoanalytic Theory, Neo-Freudian, Humanistic And Cognitive Theory, Social learning Theory.
Biological and Socio-Cultural Determinants
Assessment of personality-Psychometric and Projective Tests.

Motivation and Emotion:-

Theories – Psychoanalytic Theory, Drive Theory Need Hierarchy Theory, Incentive Theory, Arousal Theory
Social Motives –Achievement, Affiliation and Power

Abnormal and Clinical psychology:-

Concept of Abnormality, Classification of Maladaptive Behavior, DSM-IV TR and DSM-V Anxiety Disorders Mood Disorders, Schizophrenia, Personality Disorders and Mental Retardation.
Psychotherapies –Psychoanalytical Therapy, Cognitive Behavioral Therapy, Client Centered Therapy, Group and Family Therapy.

Developmental Psychology:-


Social Psychology:-


Organizational Behavior:-

Structure and Functions of Organization, Work Motivation-Theories: Maslow, Herzberg, Alderfer, McGregor, Vroom
Leadership: Theories and Types of Leadership, Communication in Organizations Recruitment, Training and Development, Job Satisfaction.

Health and Positive Psychology:-

Models of Health Psychology: Biomedical Model and Biopsychosocial Model, Health Belief Model of Health Behavior, Cognitive Behavioral, Approaches to Health Behavior Change, Cancer Related Health Behaviors and substance Related

Sd/-
(Shakeel Ul Rehman)
Secretary & Controller of Examinations
No: PSC/DR/Syllabus/2016/
Copy to the:-
1. Director General, Information, J&K Government, Jammu for favour of getting the notice published in atleast two local leading English dailies of Jammu/Srinagar.
3. Deputy Secretary/Under Secretary, J&K Public Service Commission.
4. Private Secretary to Chairman, for information of the Hon’ble Chairman.
5. Private Secretary to Member, ________________ for information of the Hon’ble Member.
6. I/C Website for uploading the notice on website;
7. I/C Camp Office, Srinagar for pasting the notice on the Notice Board.
8. Main file/Programme file.