

B.SC IIIIRD YEAR GEOLOGY – 2011-12

Scheme of examination, Maximum marks assigned to the paper and Internal assessment

V- SEMESTER

		Max. Marks	Theory	I. A.
Paper-501	Structural	50	45	05
Paper-502	Economic Geology, Indian Minerals & Environmental Geology	50	45	05
Paper-503	Practical & Field Work	50	---	---

VI- SEMESTER

		Max. Marks	Theory	I. A.
Paper-601	Stratigraphy	50	45	
Paper-602	Economic Geology, Indian Minerals & Environmental Geology	50	45	05
Paper-603	Practical and Field Work	50	---	---

B.SC. IIIRD YEAR – GEOLOGY
Vth – Semester
Paper- 501 – Structural Geology

THEORY

Max. Marks : 50
Time : 3 hrs

Note :- In all eight questions will be set by the examiner. The student will attempt any five questions, selecting at least one question from each unit.

UNIT – I

Study of outcrop, Identification of Bedding, effect of topography, Dip & Strike, outlier and inlier:

Unconformity : Types, significance and recognition in field.

UNIT – II

Folds : Morphology, classification, mechanics and causes of folding.

UNIT – III

Faults : Parts, geometric and genetic classification, Effect of faulting on outcrop.

Recognition of faults in field.

UNIT – IV

Joints : Geometrical and Genetic classification, mechanism of jointing, geological significance of joints.

Elementary ideas about foliation and lineation.

B.SC. IIIIRD YEAR – GEOLOGY
Vth-Semester

Paper-502-Economic Geology, Indian Mineral & Environmental Geology

Max. Marks : 50

Time : 3 hrs.

Note:- In all eight questions will be set by the examiner. The students will attempt any five questions, selecting at least one question from each unit.

UNIT – I

Factors controlling mineral availability, distribution of mineral deposits in space & time – Metallogenetic Epochs & provinces, Tenor, ore, gangue mineral, syngenetic and epigenetic deposits.

Principles of Mineral Economics : Strategic, critical & essential minerals.

UNIT – II

Classification and origin of deposits.

Processes of formation of ore deposits : Magmatic concentration and contact metasomatism.

UNIT – III

Processes of formation ore deposits:

Hydrothermal – filling and replacement, sedimentation, evaporation of brines and metamorphism.

UNIT – IV

Processes of formation of ores deposits: Weathering products and residual deposits, Mechanical concentration-placer deposits, oxidation and supergene sulphide enrichment deposits.

B.SC. IIIIRD YEAR – GEOLOGY
VIth-Semester

Paper-601-Stratigraphy

THEORY

Max. Marks : 50

Time : 3 hrs.

Note:- In all eight questions will be set by the examiner. The students will attempt any five questions, selecting at least one question from each unit.

UNIT – 1

Principles of stratigraphy, geological time-scale, lithostratigraphic chronostratigraphic and biostratigraphic units, stratigraphic correlation.

UNIT – II

Classification, geographic distribution, lithological characteristics and economic importance of Archaean system, Dharwar system. Aravalli system and Cuddapah system of rocks.

UNIT – III

Classification, geological distribution, lithological characteristics, fossil contents and economic importance of Kurnool system, Delhi system and Vindhyan system of rocks.

UNIT – IV

Classification, geological distribution, lithological characteristics, fossil contents and economic importance of the Mesozoic group. The Gondwana system. The Tertiary group. The Siwalik system and the Deccan traps etc.

B.SC. IIIIRD YEAR – GEOLOGY
VIth-Semester

Paper-602-Economic Geology, Indian Mineral & Environmental Geology

Max. Marks : 50

Time : 3 hrs.

Note:- In all eight questions will be set by the examiner. The students will attempt any five questions, selecting at least one question from each unit.

UNIT – I

Geological setting, mineralogical characteristics and Indian distribution of important ore deposits like iron, manganese, gold and aluminium.

UNIT – II

Geological setting, mineralogical characteristics and Indian distribution of important ore deposits like copper, lead & zinc, chromite, uranium and beach sand deposits.

UNIT – III

Geological setting, mineralogical characteristics and Indian distribution of important non-metallic mineral deposits and non-metals related to the Refractory, Fertilizer and Cement Industries.

UNIT – IV

Geological setting and Indian distribution of important coal and lignite deposits of India.

Elementary ideas about oil fields of India.

Environmental implication of exploitation of mineral resources.

PRACTICAL AND FIELD WORK

Max. Marks : 50
Time : 3 hrs.

Practical Paper-503

Exercises on structural geology problems.

Drawing and the interpretation of profile section across the geological maps.

Geological field training.

PRACTICALS AND FIELD WORK

Max. Marks : 50
Time : 3 hrs.

Practical Paper-603

Study of physical properties of important rock forming and oreforming minerals.

Preparation of maps showing distribution of important economic minerals in India.

Geological Field training