

SEMESTER V
MAJOR COURSE – MJ 9
STRATIGRAPHY

Full Marks: 75	Time: 3 Hours
SET – I	Theory Paper

Instructions:

- Group A is compulsory.
- Question No. 1 contains five objective/MCQ questions of 1 mark each.
- Question No. 2 and Question No. 3 are single questions of 5 marks each.
- In Group B, answer any **four** questions out of six. Each question carries 15 marks.
- All questions are based on the prescribed syllabus of Major Course MJ 9 – Stratigraphy.

GROUP – A

Q.1. Choose the correct answer. (5 × 1 = 5)

1. The principle stating that in an undisturbed sequence, older beds lie below younger beds is called:
A) Faunal succession B) Superposition C) Cross-cutting D) Uniformitarianism
2. Lithostratigraphy primarily deals with the classification of strata on the basis of:
A) Fossil content B) Rock characteristics C) Absolute age D) Magnetic polarity
3. G.S.S.P. stands for:
A) Global Stratigraphic Standard Point B) Global Stratotype Section and Point C) Geological Sequence Standard Position D) Global Sedimentary Section Point
4. Walther's Law of Facies relates vertical facies succession to:
A) Lateral facies changes B) Radiometric dating C) Magnetic anomalies D) Fossil extinction only
5. The Gondwana Supergroup of India is especially important for its association with:
A) Coal deposits B) Gold only C) Petroleum reefs only D) Coral limestone

Q.2. (5 Marks) Explain lithostratigraphy, biostratigraphy and chronostratigraphy and distinguish between them.

Q.3. (5 Marks) What is the G.S.S.P.? Explain its significance in the establishment of international stratigraphic boundaries.

GROUP – B

Answer any four questions. (4 × 15 = 60)

Q.4. (15 Marks) Discuss the fundamental principles of stratigraphy. Explain the concepts of superposition, original horizontality, lateral continuity, faunal succession and uniformitarianism.

Q.5. (15 Marks) Explain the International Stratigraphic Code, stratigraphic nomenclature and stratotypes. Discuss the importance of G.S.S.P. in global correlation.

Q.6. (15 Marks) Describe the physiographic and tectonic subdivisions of India. Discuss the Indian Shield and explain the principles of stratigraphic analysis and paleogeographic reconstruction.

Q.7. (15 Marks) Give an account of the Precambrian stratigraphy of India with special reference to the Singhbhum and Dharwar regions. Add an account of the Vindhyan and Cuddapah basins.

Q.8. (15 Marks) Discuss the Phanerozoic stratigraphy of India with reference to the Gondwana basins, Triassic succession of Spiti, Jurassic succession of Kutch and Cretaceous succession of the Cauvery basin.

Q.9. (15 Marks) Describe the Cenozoic stratigraphy of India with reference to the Siwalik succession and Assam basins. Discuss the stratigraphy and hydrocarbon potential of the Krishna-Godavari and Bombay

offshore basins.