

**BACHELOR OF SCIENCE EXAMINATION, 2019**

(2nd Year, 2nd Semester)

**GEOLOGICAL SCIENCES**

**Phanerozoic Stratigraphy of India and Tectonics**

**Paper : CORE : 10**

Time : Two hours

Full Marks : 50

Use separate Answer Script for each part.

**PART - I (25 marks)**

Answer *q.no. 1* and any *four* from the rest.

1. Match the following fossils with age 5

Fossils	Age
Gondwanasaurus bijoriensis	Late Permian
Joannites thanamensis	Up Triassic
Spiriferina obtusa	Lr. Jurassic
Hipparion theobaldi	Pliocene
Guembelina cretacea	Lower Paleocene

2. 'Cambrian sea shows evidences of bathymetric variations across the Spiti-Kashmir-Salt Range stretch' – discuss. 5
3. Briefly illustrate direct as well as indirect evidences of the Permian regression in extrapeninsular pIndia. 5

(Turn Over)

(2)

4. Describe the paleoenvironment of deposition across extrapeninsular India during Jurassic Period. 5
5. Comment on 'Triassic aridity' from the sedimentary successions of Peninsular India. 5
6. Briefly describe the sedimentation history of Assam Basin.
7. Write a note on permo-Triassic boundary within Gondwana Supergroup. 5
8. Briefly describe the stratigraphic succession of Jaisalmer Basin. 5
9. Write a note on the Deccan Volcanic Province. 5

**PART - II (25 marks)**

Answer any *five* questions.

10. Answer any *five* questions :

(a) Discuss the behavior of natural remanent magnetizations (NRMs) for igneous and metamorphic rocks. 5

(3)

- (b) Explain the internal structure of the Earth with the help of velocity of seismic waves. 5
- (c) How will you select the heating steps for different magnetic minerals during thermal cleaning ? What is PCA ? 5
- (d) Discuss the principal character of different convergent plate boundaries. 5
- (e) What is triple junction ? Why is R-R-R triple junction always stable ?
- (f) Write short notes (any *two*) : 2.5x2=5
  - (i) Characteristics Remanence (ChRM)
  - (ii) Body Waves
  - (iii) Euler Pole
  - (iv) APW Path
- (g) Discuss the characters of different types of seismic waves. What is epicenter ? 5
- (h) What is continental drift ? How will you identify different magnetic vectors present in the rocks from orthogonal plots ? 5