KATHMANDU UNIVERSITY
End Semester Examination
September 2024

Marks Scored:

Level : B.E.
Year : I

Course : MNEG 101
Semester : II

Exam Roll No. :

Time: 30 mins.

F. M. : 10

Registration No.:

Date 09 SEP 2024

SECTION "A"
[20Q. × 0.5 = 10 marks]

Choose and encircle the most appropriate answer. Symbols have their usual meanings.

1. Which fundamental concept explains the movement of Earth's lithospheric plates?
   a. Continental Drift
   b. Plate Tectonics
   c. Seafloor Spreading
   d. Isostasy

2. The Himalayan mountain range was primarily formed due to the collision between which two tectonic plates?
   a. African and Eurasian plates
   b. Indian and Eurasian plates
   c. Pacific and North American plates
   d. South American and African plates

3. The present-day northward movement of the Indian plate along the Himalayan front occurs at a rate of:
   a. ~2 cm per year
   b. ~6 cm per year
   c. ~5 m per year
   d. ~5 cm per year

4. Paleontology is related to the study of:
   a. Minerals
   b. Rocks
   c. Stratigraphy
   d. Fossils

5. Neo-tectonics refers to:
   a. The study of ancient tectonic processes
   b. The study of recent or ongoing tectonic activities
   c. The study of volcanic eruptions
   d. The study of glacial movements

6. The Terai region of Nepal is characterized by which of the following geological features?
   a. Alluvial plains
   b. Volcanic plateaus
   c. Glacial valleys
   d. Mountain ridges

7. The Siwalik Group is primarily composed of:
   a. Metamorphic rocks
   b. Sedimentary rocks
   c. Igneous rocks
   d. Volcanic rocks

8. The Churia Group was deposited between:
   a. ~14 Ma and ~1 Ma
   b. ~12 Ma and ~1 Ma
   c. ~10 Ma and ~2 Ma
   d. ~14 Ma and recent

9. A limited area of an exposure where older rocks are surrounded by younger rocks is known as:
   a. Overlap
   b. Offlap
   c. Inlier
   d. Outlier

10. A Graben is best defined as:
   a. Rift trough
   b. Basin
   c. Ramp trough
   d. Ramp and Rift trough

11. The term 'Nappe' refers to:
    a. Thrust fold b. Upfold c. Gravity fold d. Recumbent fold

12. The rocks of the Lesser Himalayan zone are generally considered to be of which age?
    a. Precambrian to Miocene b. Middle Cambrian to Late Proterozoic
    c. Cambrian to Cretaceous-Eocene d. Late Cambrian to early Cenozoic

13. Tectonic windows in the Lesser Himalaya expose which type of rocks?
    a. Crystalline rocks of the Higher Himalaya
    b. Sedimentary sequences of the Tethys Himalaya
    c. Older sedimentary rocks of the Lesser Himalaya
    d. Volcanic rocks of the Siwalik Belt

14. Fossils from Phulchauki and Chandragiri Hills south of Kathmandu provide significant insights into which geological period?
    a. Cambrian b. Ordovician c. Jurassic d. Paleocene

15. Which region in the Lesser Himalaya is known for the presence of Gondwana coal deposits?
    a. Gandaki Region b. Bagmati–Gosainkund Region
    c. Koshi Region d. Arun–Tamar Region

16. The Southern Tibetan Detachment Fault System (STDFS) is a:
    a. South dipping reverse fault b. South dipping normal fault
    c. North dipping normal fault d. North dipping reverse fault

17. The Tibetan Tethys Zone is represented by fossiliferous sedimentary rocks ranging in age from:
    a. Precambrian to Miocene b. Middle Cambrian to Late Proterozoic
    c. Cambrian to Cretaceous-Eocene d. Late Cambrian to early Cenozoic

18. The Tethys Himalaya is most renowned for which type of fossils?
    a. Ammonites b. Trilobites c. Dinosaurs d. Mammals

19. The Main Central Thrust (MCT) separates which two major geological units?
    a. Lesser Himalaya and Higher Himalaya
    b. Higher Himalaya and Tethys Himalaya
    c. Siwalik Belt and Lesser Himalaya
    d. Indo-Gangetic Plain and Lesser Himalaya

20. Micro-seismicity in Nepal is mainly associated with which tectonic feature?
    a. Main Frontal Thrust (MFT)
    b. Main Central Thrust (MCT)
    c. South Tibetan Detachment System (STDS)
    d. Main Boundary Thrust (MBT)