KATHMANDU UNIVERSITY
End Semester Examination
February/March, 2018

Marks Scored:

Level : B. Sc.
Year : III

Course : ENVS 332
Semester: I

Exam Roll No.:

Time: 30 mins.

F. M. : 20

Registration No.:

Date : MAR 13 2018

SECTION "A"
[20 Q.×0.5=10 marks]

Mark "√" in the appropriate box.

1. The general idea of large scale continental displacements was first described by Frank B Taylor in 1908.
   [ ] Plate tectonics [ ] Pangea
   [ ] Mountain building [ ] Continental Drift

2. Most ---------- are caused by the sudden slip along geologic faults.
   [ ] Earthquake [ ] Landslide [ ] Flood [ ] Volcanic eruptions

3. The study of landforms and surface processes.
   [ ] Petrology [ ] Geomorphology [ ] Hydrology [ ] Sedimentology

4. ---------- are very large intrusive bodies, usually so large that there bottoms are rarely exposed.
   [ ] Batholiths [ ] Dykes [ ] Mantle [ ] Crust

5. The boundary between two plates can be a divergent boundary, a convergent boundary or a ---------- boundary.
   [ ] transfer [ ] transform [ ] transformation [ ] transit

6. Braided channels occur when the sediments load is transported by a -------- and is greater than the carrying capacity of stream
   [ ] stream [ ] wind [ ] volcano [ ] wave

7. Ripple marks are found in bedding plane of --------- water deposition.
   [ ] shallow [ ] deep [ ] huge [ ] dirty

8. It is a just relative motion between two fractured blocks.
   [ ] Joint [ ] Fault [ ] Bedding plane [ ] Fold

9. The rapid movement of large blocks of detached bedrock sliding more or less as a unit.
   [ ] Mudflow [ ] Soil fall [ ] Rock slide [ ] Mudslide

10. -------- is the northern continuation of the Gangatic Plain in Nepal and its elevation rages from 70m to 200 m above the sea level.
    [ ] Lesser Himalaya [ ] Higher Himalaya
    [ ] Sub Himalaya [ ] Terai

11. Big earthquakes maybe displace the ground several meters in a few seconds, but only about every ----------
[ ] 1000 Years [ ] 500 Years [ ] 100 Years [ ] 1500 Years

12. Absolute dating (isotopic, tree rings, etc.) is -------- number of years since the rock was formed
[ ] virtual [ ] actual [ ] relative [ ] cumulative

13. In a sequence of undisturbed layered rocks, the oldest rocks are on the bottom.
[ ] Principle of superposition [ ] Principle of superstation
[ ] Principle of superimpose [ ] Principle of superior

14. A measure of the variation in the range of grain sizes in a rock or sediment
[ ] Scouting [ ] Sorting [ ] Screening [ ] Shorting

15. To change from one form to another
[ ] Saltation [ ] Metamorphism [ ] Sublimation [ ] Dissertations

16. ---------- are geologic structures caused by deformation.
[ ] Volcanoes [ ] Folds and faults
[ ] Aquifers [ ] Sinkholes

17. Action of coinciding and oppositely directed forces acting parallel to each other across a surface
[ ] Shear [ ] Shore [ ] Share [ ] Slide

18. The Himalayan range consists of the sediments of the ---------- Sea and the Indian Shield, which was faulted and folded into the elevated young peaks.
[ ] Indian [ ] Black [ ] Arabian [ ] Tethys

19. Sediment (typically sand) transported by intermittent jumps - a transitional state between bedload and suspended load.
[ ] Sedimentation [ ] Saltation [ ] Suspension [ ] Traction

20. The elevation at which a stream ends by entering a large standing body of water, such as a lake or ocean
[ ] Best level [ ] Stream level [ ] Level base [ ] Base level

SECTION "B"

[20 Q.×0.5=10 marks]

II. Mark "T" for true and "F" for false

1. GPS indicates that some parts presently rising at 10 mm/year. Everest 1-3 mm/year [ ]

2. "Creep is the forward rotation out of the slope of mass of soil or rock about a point or axis below the centre of gravity of the displaced mass. [ ]

3. Composite Volcano: Relatively large: ~10-15 km wide. [ ]

4. Chemical weathering stability is generally the normal to Bowen's reaction series. [ ]

5. Geysers are formed where a complicated plumbing system allows steam pressure to be built up, causing intermittent eruptions. [ ]

6. Crustal abundance of gold (percent by weight) is 0.0000002. [ ]

7. Hurricane is the very large amount water that has overflowed from a river onto a previously dry area along river side. [ ]

8. Normal faults are caused by tensional stress. [ ]

9. Lithosphere can be considered as the crust and upper part of the core which is considered to be elastically rigid. [ ]

10. Mantle is almost 200km thick and comprises about 83% of the Earth's volume. [ ]

11. Earthquake energy travels in the form of waves. [ ]

12. According to the theory of plate tectonics Earth's surface can be divided into about twenty large and small plates. [ ]

13. Marble is a Metamorphosed granite [ ]

14. Sandstones are sedimentary rocks. [ ]

15. The appearance of the broken surface of a mineral in a direction that parallel to cleavage is generally expressed by the term fracture. [ ]

16. Stock is massive, discordant intrusive body covering less than 100 km2 [ ]

17. Rocks remain essentially liquid during metamorphism. [ ]

18. Dome is a sequence of folded rocks in which all the beds dip away from a central point. [ ]

19. The Himalayan Mountains are still rising at the rate of 10 cm per year and being horizontally compressed at the rate of 2 to 3 cm per year. [ ]

20. Down-lift can also result in the entrenchment of meandering streams, forming "incised meanders" [ ]

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SECTION "C"

[3Q.×7=21 marks]

Answer any *THREE* questions

1. What is landslide? What are the main steps that we can take to prevent landslides?
2. What is an Earthquake? Discuss the importance of seismic waves and interior of the Earth.
3. What are the major type of plate boundaries? Describe briefly.
4. What is an aquifer? Describe on different types of aquifer and their functions. Point-out the contamination sources.

SECTION "D"

5. Write note on (any *FOUR*) [4 Q.×4=16 marks]
   a. Sedimentary rocks
   b. Recharge area
   c. Darcy's Law
   d. Tsunami
   e. Process of Volcanic eruption

6. Differentiate between (any *FOUR*) [4 Q.×3=12 marks]
   a. Igneous rock and Metamorphic rock
   b. Debris slide and mudflow
   c. Focus and epicenter
   d. Shield volcanoes and Volcanic domes
   e. Normal fault and Blind fault

7. Discuss in the following terms (Any *THREE*) [3 Q.×2=6 marks]
   a. Geothermal energy
   b. Turbulent Flow
   c. Weathering
   d. Artesian well