



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 5th Semester Examination, 2022

CC12-GEOLOGY

ENGINEERING GEOLOGY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

1. Answer any **five** from the following questions: 1×5 = 5
- Instruction:** For the first four questions fill in the blanks with appropriate word(s) and last two questions choose the appropriate option.
- (a) Minor fractures in a rock are called as _____.
- (b) The total displacement of the block due to fault is known as _____.
- (c) In the Seismic Map of India Siliguri lies in Zone _____.
- (d) Inner Core is Solid because _____ waves don't pass through it.
- (e) Define Angle of Repose.
- (f) Differentiate between Seepage and Leakage.
- (g) What is the term that refers a continuous belt or zone of rocks that has suffered complex deformations through geological ages?
- (A) Plateau
(B) Mountain
(C) Valleys
(D) Lakes
- (h) In order to construct a tunnel which among the following is the most suitable site
- (A) Anticline
(B) Syncline
(C) Fault line
(D) Joint plane
2. Answer any **three** from the following questions: 5×3 = 15
- (a) Discuss about different practices done in Hill areas, to control landslide.
- (b) What is weathering? Discuss in brief the role of different agents of weathering.
- (c) Discuss in brief about natural threats in coastal regions.

- (d) Differentiate between Horst and Graben.
- (e) What is epicentre? Describe a procedure for determination of epicentre of an earthquake.
- (f) Describe slope failure mechanism.

3. Answer any *two* from the following questions: 10×2 = 20

- (a) What are the purposes of constructing a tunnel? Discuss the engineering considerations which favour the stability, economy and safety of a tunnel.
- (b) How Dams and Reservoirs related to one another? How geological investigations are done for a reservoir?
- (c) Write long notes on the following (any *two*)
 - (i) RIS
 - (ii) Grouting
 - (iii) Field Log.
- (d) Write short notes on the following (any *two*)
 - (i) Choice of material for construction
 - (ii) Mitigation programmes in India, in order to reduce hazards caused by an Earthquake
 - (iii) Mass Wasting.

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