

ACTIVITY CODE: 1903105021

B. Sc. 6th Semester (Honours) Examination, October 2020

GEOLOGY

Course ID: 62012

Course Code: SHGEL-602C-14(T)

Course Title: Engineering Geology

Time: 1 Hour 15 Minutes

Full Marks: 25

The figures in the right hand side margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer *any five* of the following questions: 1×5 = 5
 - a) What is Creep?
 - b) Mention one major application of Tunnelling Quality Index.
 - c) What do you mean by adits in construction of a tunnel?
 - d) What do you mean by point load strength of a rock?
 - e) What is abutment of a dam?
 - f) Define mass wasting.
 - g) What do you mean by the axis of a tunnel?
 - h) What is the material the core of an earth-fill dam made up of?
 - i) What is the significance for building of buttress dam?
 - j) Which one between gneiss and schist, is the most desirable rock type for a dam site?

 2. Answer *any two* of the following questions: 5×2 = 10
 - a) Describe briefly the process of rock bolting.
 - b) Write a brief note on the purposes of tunneling.
 - c) What is the significance of orientation of joints during tunnel excavation?
 - d) What are the purposes of grouting?
 - e) Briefly mention the methods of geological investigation for an engineering project.

 3. Answer *any one* of the following questions: 10×1=10
 - a) Define the following parts of a dam with necessary sketches:
(i) Heel, (ii) Toe, (iii) Free board, (iv) Galleries, and (v) Spillway 2×5 = 10
 - b) Briefly discuss on the major geological considerations for selection of a dam site.
 - c) Define landslide. What are the different types of landslides? Briefly describe the causes of landslide. 2+2+6 = 10
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