

Name:

Enrolment No:



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**Online End Semester Examination, Dec 2020**

**Course: Engineering Geology**  
**Program: B Tech Civil Engineering**  
**Course Code: CIVL 2014**

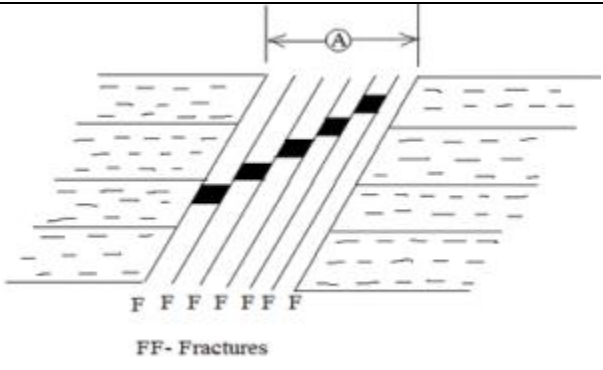
**Semester: III**  
**Time: 03 Hours**  
**Max. Marks: 100**

**Instructions: Attempt all the questions**

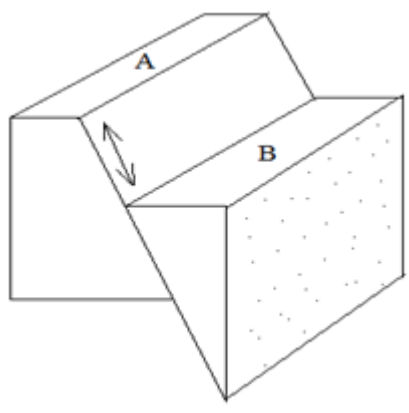
**SECTION A (6 x 5 = 30 marks)**

- 1. Each Question carries 5 marks**
- 2. Instruction: Complete the statement/Select the correct answer(s)**
- 3. Choose the best possible answer in case of MCQ**
- 4. Also explain your answer in 1-2 line(s)**

S. No.		Marks	CO
Q1	If it is 10.00 am IST, then what would be the local time at Shillong on 92° E Longitude? a) 9.38 am b) 10.38 am c) 10.22 am d) 9.22 am	5	CO1
Q2	Which of the following about weathering is not true? a) It is a natural process b) Mechanical disintegration is involved c) Chemical decomposition is involved d) It is a rapid process	5	CO2
Q3	A coal seam is exposed on a horizontal ground. If it is 30° towards West. Its width of outcrop on a level ground is 360 m. What is its true thickness? a) 120 m b) 150 m c) 160 m d) 180 m	5	CO2
Q4	Identify the feature labelled as "A" in the given figure: a) Shear zones b) Fracture zone c) Fault zone d) A-zone	5	CO2



Q5 Identify the type of slip from the figure below:



5 CO2

Q6 The factor not affecting metamorphism is \_\_\_\_\_  
 a) Wind conditions  
 b) Temperature  
 c) Pressure  
 d) Chemically active fluids

5 CO1

**SECTION B (10 x 5 = 50 marks)**

- 1. Each Question carries 10 marks
- 2. Instruction: Write Short/brief notes

Q7 Identify the physical feature given below and give complete classification covering the other types as well.

10 CO2



Q8	Running water is by far the most dominating geomorphic agent in shaping the earth's surface in humid as well as in arid climates. Explain.	10	CO1
Q9	What are the geological considerations in the selection of a dam site?	10	CO4
Q10	A soil deposit has three layers having the same thickness but the permeability of the layers are in the ratio of 1:3:9 from top to bottom. What is the ratio of average permeability in the horizontal direction to that in the vertical direction?	10	CO3
Q11	With reference to plate tectonics, explain the phenomenon of earthquake. Also draw the required diagram explaining Japan earthquake.	10	CO3
<b>SECTION-C (20 x 1 = 20 marks)</b>			
<b>1. Each Question carries 20 marks</b> <b>2. Instruction: Write long answer.</b>			
Q12	As a Civil Engineer, you are going to build residential township, what are the various geological considerations (in terms of Engineering Properties) which are required to be taken? Also utilize your concepts of groundwater learnt in this course to evaluate a potent water supply source for the township.	10+10	CO4