

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, Dec 2022

Course: Geomorphology
Program: B.Sc. Geology (Hons)
Course Code: PEGS 3027

Semester: V
Time 03 hrs.
Max. Marks: 100

Instructions:

- 1) One question in Sections B and C is having an internal choice.
- 2) Draw figures wherever necessary.

SECTION A

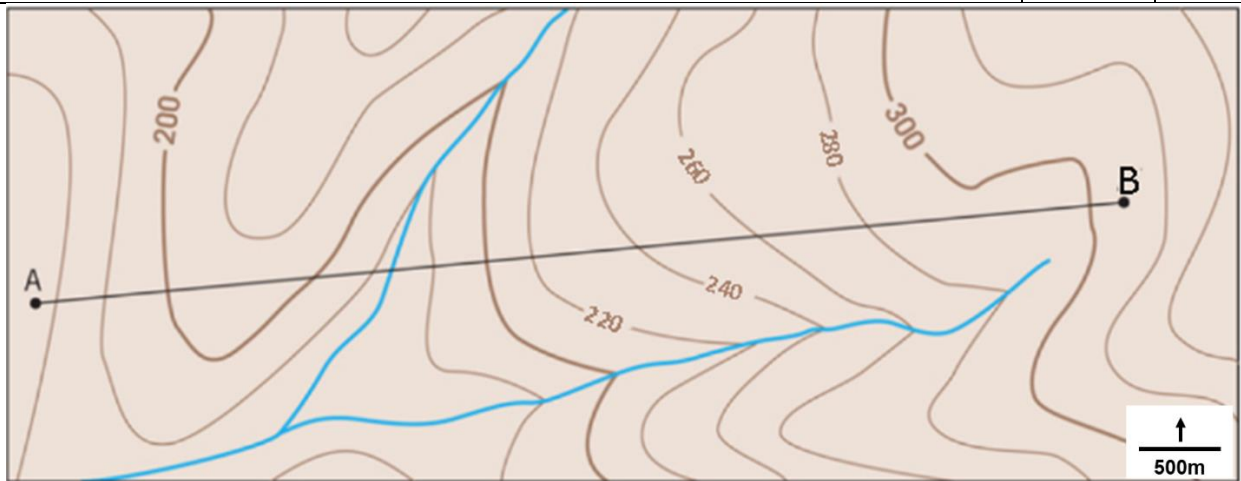
(4Q x 5M = 20 Marks)

SN		Marks	CO
Q1	Describe the spheroidal weathering.	5	CO1
Q2	Distinguish between Million and Quarter degree scale Toposheet used for geological mapping.	5	CO1
Q3	Explain the Degradation and Aggradation.	5	CO2
Q4	Define the river drainage basin and drainage divide	5	CO2

SECTION B
(Mid answer type)

(4Q x 10M = 40 Marks)

Q5	Describe the tools and techniques used for geological/ geomorphological mapping. Explain in detail one sediment dating technique and its relevance in modeling landscape and subsurface geology.	10	CO1
Q6	Explain the process of oxidation and carbonation and how it relates with studies of reservoirs.	10	CO2
Q7	Draw a cross-section profile along line A to B and calculate the gradient.	5+5	CO4



Q8	Draw a flow chart and Illustrate in detail about the geomorphic processes (Endogenic and Exogeneic).	5+5	CO3
	OR		
	Draw and explain three different types of basins formed in the Transform margin settings. Illustrate the corresponding geomorphic feature and variations in dynamic topography. (Draw appropriately labeled diagrams to support your answer).		
SECTION C (2Q x 20M = 40 Marks) (Long answer type)			
Q9	a) Draw a longitudinal cross-section profile of a river and explain the geomorphic landforms developed in three different stages. Draw a perpendicular profile in each young (zone 1) and old stage (zone 3). b) Explain the five distinct types of fluvial landforms using annotated diagrams.	10+10	CO3
Q10	a) Discuss the landforms produced by Aeolian erosion and deposition in arid regions. b) Draw an annotated cross-section of a dune and explain the formation process of five different types of dunes.	10+10	CO4
	OR		
	Explain the followings (use examples and draw annotated diagrams wherever required). 1. Sea stake and Sea caves 2. Ocean floor topography 3. Waning and Waxing slope 4. Stalactite and Stalagmite	4X5= 20	

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