Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2022

Course: Natural Hazards & Disaster Management Semester: III

Program: B.Sc. H (Chem/Maths/Physics) and Int-B.Sc.-M.Sc.

Course Code: HSFS 2114G

Time : 03 hrs

Max. Marks: 100

Instructions:

1) Mention Roll No. at the top of the question paper.

2) Attempt all the parts of a question at one place only

SECTION A (5Qx4M=20Marks)

S. No.	Question	Marks	CO
Q 1	Discuss the different seismic wave generated during earthquake with help of suitable diagram.	4	CO1
Q 2	How the interaction between the different natural hazard takes place.	4	CO2
Q 3	Classify the different faults with help of line diagram.	4	CO1
Q 4	Enlist type of draught and explain each in brief.	4	CO2
Q 5	Explain the various indicators of landslides phenomenon.	4	CO1
	SECTION B		•
	(4Qx10M=40 Marks)		
Q 6	Discuss the following in brief: a. GIS application in hazard mapping. b. Integrated disaster management	10	CO3
Q 7	Define landslide and illustrate the different Earth movement and each in brief with help of examples.	10	CO1
Q 8	What is draught and discuss the various drought indices with help their formulas.	10	CO2
Q 9	List out the different strategies involved in the disaster management and discuss in brief.	10	СОЗ
	SECTION-C (2Qx20M=40 Marks)		
Q 10	Discuss the hazard mapping techniques in detailed and its framework with help of line diagram with help of case study for flood hazard. OR Discuss the step by step procedure to carryout the hazard mapping using ArcGIS for any disaster with suitable case study.	20	CO4

Based on	the given d	ata, answer	OR the follow	ing questio	ons.			
Year of flood	Area affected by flood (sq km.)	No.of villages affected by flood	No.of people affected by flood	Crop area affected by flood (sq. km.)	Area affected by erosion (sq km)	No. of villag affected b erosion		
1995	311	256	1,81,000	231	NA	NA		
1996	285	198	2,13,214	187	8.09	17		
1997	345	176	2,11,198	324	NA	NA		
1998	467	134	2,41,000	432	NA	NA		
1999	237	234	1,89,000	176	NA	NA		
2000	327	198	1,71,012	276	NA	NA		
2001	457	176	1,90,567	378	NA 17.02	NA		
2002	345	154	2,16,345	278	17.02	7		
2003 2004	456 590	123 264	2,78,916 2,81,987	321 416	NA 22.01	NA 9		
2004	455	243	2,32,456	378	15.01	5		
ii.		ding to data	a, in which	area affecte year did w	et draught	occur?	20	C
ii. iii iv. v.	. Calcu How affect As an	rding to data late the ave many a nur ed? expert of o	a, in which crage area a mber of yea disaster ma		et draught of a flood. d the avera how can yo	ge area	20	C