NOTE: Attempt any FOUR questions. All questions carry equal marks.

Q.1. What is Demographic Transition? Discuss various stages in Demographic Transition.

Q.2. Discuss the travels of Ibn-e-Batuta in the context of Geography.

Q.3. Discuss Global Warming in the context of Climate Change.

Q.4. What is the role of Geographical Techniques in the development of Geography subject?

Q.5. Discuss the contributions of Friedrich Ratzel in Human Geography.

Q.6. Elaborate the difference between Environmental Determinism and Possibilism.

Q.7. Discuss the types of Human Migration with valid examples.

NOTE: Attempt any FOUR questions. All questions carry equal marks.

Q.1.   Define Enviornmental Geography and discuss its scope and applications.

Q.2.   Describe the salient features of Tropical Rain Forest.

Q.3.   Describe distribution of Coal in World.

Q.4.   Discuss impact of Noise pollution on human health. Suggest measures to reduce noice pollution.

Q.5.   Describe the Salient features of Tundra Biome.

Q.6.   Discuss the impact of rapid population growth on environment in developing countries particularly Pakistan.

Q.7.   Write short note on any TWO of the followings:

   i)   Hydrologic Cycle
   ii)   Sources of Water Pollutants
   iii)   Impact of Covid-19 on environment

NOTE: Attempt any FOUR questions. All questions carry equal marks.

Q1. Discuss the nature and scope of Geomorphology. 20

Q2. Define Weathering and give a brief account of various types of weathering. 20

Q3. Write a comprehensive note on Landform Models and discuss any one in detail. 20

Q4. Define Quantitative Geomorphology and give a detailed account of any one method of geomorphological investigation. 20

Q5. Elaborate the role of RS and GIS in the development of field of Geomorphology. 20

Q6. Define Fluvial Cycle and describe the various landforms produced by it. 20

Q7. Write short notes on any Two of the followings: 10+10

a) Data Acquisition

b) Morphometric Analysis

c) Sand dunes

Note: *Attempt any FOUR questions taking THREE questions from Section-A and only ONE question from Section-B. All questions carry equal marks.*

Section A

Q.1. What is electromagnetic radiation? Discuss the energy balance of the earth surface and identify the energy that the surface receives and loses. (20)

Q.2. Identify the major causes of global wind generation and explain planetary wind system. (20)

Q.3. Write a detailed essay on structure and composition of atmosphere by drawing a suitable diagram. (20)

Q.4. Describe the conditions necessary for the formation of an Air Mass? Discuss the formation and stages of development and decay of Fronts. (20)

Q.5. What is atmospheric humidity? Identify various methods to measure humidity in the air. (20)

OR

Is there a "Climate Change" taking place in the world? Describe the various theories of climate change.

Section B

Q.6. What are marine sediments and in what ways are they classified? List the types of sediments and explain the origin of each. (20)

Q.7. Discuss the factors that generate oceanic currents. Describe the currents of the North Atlantic Ocean. (20)

NOTE: Attempt any FOUR questions. All questions carry equal marks.

Q1. Briefly describe the various steps involved in preparation of a research report.

Q2. (a) Describe the various components of Time Series. Write the methods to analyze the Secular Trend.

(b) Find the Secular Trend for the following data using the method of least square.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
No. of poultry shops	7	12	16	14	22	24	28	32	35	40

Q3. Write the methods to compute Range, Mean Deviation and Variance for grouped Data. Find the standard deviation for the data given below.

Income per week	1000-2000	2000-3000	3000-4000	4000-5000	5000-6000	6000-7000	7000-8000
No. of Earners	20	30	40	10	15	20	5

Q4. Define Research and its basic types. What are the salient features of a scientific research?

Q5. Differentiate between Correlation & Regression. Calculate the Spearman's Rank Correlation Coefficient for the following variables

Altitude (m) X	Rainfall (mm) Y	Altitude (m) X	Rainfall (mm) Y
110	60	270	250
170	70	120	60
90	60	230	150
220	160	250	160
280	250	320	360
600	400	410	320

Q6.   Write an essay on Sampling Techniques in Geography

Q7.   Write short notes on any two of the following:

(i)   Role of Statistical Models in Geography
(ii)   Importance of Literature Review in Research
(iii)   Measures of Central Tendency
(iv)   Types of Variables