M.A Part I Geography session (2019-2020)

## Paper- I Module 1 GEOTECTONICS AND GEOMORPHOLOGY

#### Answer any one question from each module (10 Marks)

#### **Unit-I**

1. Explain the concept of Equilibrium in Geomorphology. Discuss Dynamic Equilibriumtheory as proposed by Gilbert and assess its significance. Define Disequilibrium.

2+7+1=10

**2.** Explain the principles of relative dating. What is C-14 dating and Potassium-ArgonDating? 6+4=10

#### **Unit-II**

- 3. Enlist the cross- sectional parameters for an open stream. What is stream power? How is it measured? 5+3+2=10
- 4. Give the genetic classification of alluvial fans and describe their formation with illustrations. Explain the factors regulating deposition of sediments. 6+4=10

#### **Unit-III**

- 5. What are the characteristics of Aeolian landforms? Distinguish between wind eroded water eroded arid landforms. 4+6=10
- 6. Give the genetic classification of slope. Explain what is 'Pediplanation' as proposed by L.C. King. Describe composite slope form. 4+3+3=10

#### Unit-IV

- 7. Assess the importance of geomorphological knowledge in managing natural hazards. What are the principles of Integrated Coastal Zone Management? 4+6=10
- 8. Discuss the causes of riverbank erosion of river Ganga in the upstream of Farakka Barrage. How can river bank erosion be arrested in this region to mitigate the impacts of floods.

6+4=10

M.A Part I Geography session (2019-2020)

#### Paper- I Module 2 HYDROLOGY

#### Answer any one question from each module (10 Marks)

#### **Unit-I**

- 1. Discuss the physical and chemical properties of water. Describe how water is stored and transported in the global hydrological cycle? 4+6=10
- 2. Compare the characteristics of surface hydrology from ground water hydrology. Describe the factors controlling surface runoff. What is run-off cycle? 3+6+1=10

#### **Unit-II**

- 3. Discuss the precipitation and evapo-transpiration processes of a wetland and arid region. What is artificial rainmaking? 7+3=10
- 4. What are the various techniques and approaches of water management in tropical farmlands? What is rain water harvesting? Discuss the benefits and techniques of rainwaterharvesting. 3+1+6=10

#### **Unit-III**

- 5. What are oceanic sediments? Identify the origins of different types of sediments. Define an "ooze" and discuss the different types of ooze based on their composition. 2+3+5=10
- 6. Classify the ocean basin floor and discuss their characteristics. Briefly describe the topography of the Indian Ocean seafloor. 5+5=10

#### **Unit-IV**

- 7. Account for the reasons of origin of tides. Describe Tides. Explain what are Spring and Neap tides? 2+2+6=10
- 8. Discuss the causes of sea level changes. What are the implications of such changes in future? 3+7=10

M.A Part I Geography session (2019-2020)

#### Paper- II Module 3 CLIMATOLOGY

### Answer any <u>one</u> question from each module (<u>10 Marks</u>) Unit-I

- 1. What is micro climate? What are the factors affecting microclimate? Why is urban climate regraded as a micro climatic region? 2+4+4=10
- 2. What are the factors controlling wind motion? Identify the forces that influence wind speed and wind direction. Define global water balance. 4+4+2=10

#### **Unit-II**

- 3. What do you mean by adiabatic heating and cooling? How is lifting condensation level related to dew point. Why are salt particles in the air considered hygroscopic? 4+3+3=10
- 4. Explain the importance of shifts in the thermal equator. Critically discuss the theories to explain Indian monsoons. What is MONEX? 3+7+1=10

#### **Unit-III**

- 5. How are air masses classified? What is cyclogenesis? Discuss the origin and characteristics of anti-cyclones. 2+2+6=10
- 6. Explain ENSO phenomena with illustrations and examples. What are the causes and consequences of such phenomenon? Describe short time techniques of weather forecasting.

4+4+2=10

#### **Unit-IV**

- 7. Divide the world into various Bio-Climatic regions and briefly describe the characteristics of any two regions. Define Agro-climatology. 8+2=10
- 8. Explain the long term and short term climatic changes. Outline the basis of Koppen's climatic classification system. 6+4=10

M.A Part I Geography session (2019-2020)

# Paper- II Module 4 SOIL AND BIO GEOGRAPHY Answer any one question from each module (10 Marks)

#### Unit-I

- 1. Why do you consider soil to be a component of the Biosphere? Compare the concept of land and soil. Why is soil taxonomy also known as  $7^{th}$  Approximation? 2+4+4=10
- 2. What are the processes that leads to soil degradation? Explain the consequences of soil degradation and propose the various measures to conserve soil. 3+3+4=10

#### Unit-II

- 3. Define Plant Ecology. Explain the various plant habitat factors. Briefly describe any three theories for climax vegetation. 1+4+5=10
- 4. What is Social Forestry? Discuss the characteristics of Social Forestry. How does it differ from Participatory management of Forests? 2+3+5=10

#### Unit-III

- 5. Explain the origin of Neo species. Discuss the key concepts of natural selection as propounded by Darwin. 5+5=10
- 6. Account for the principles of Animal Ecology. Elaborate on the progress of wildlife management in India. Identify the factors responsible for animal migration. 2+4+4=10

#### **Unit-IV**

- 7. Describe the structure and functions of a forest ecosystem. What are Ecosystem models? 7+3=10
- 8. Explain population dynamics of organism. Discuss the problem of their abundance and extinction. 4+6=10

#### M.A Part I Geography session (2019-2020) Paper - 3

#### **MODULE 5**

#### PHIYLOSOPHY OF GEOGRAPHY

#### Answer any <u>one</u> question from each module (<u>10 Marks</u>)

#### Unit I

- Q1. Discuss the place of geography in the classification of knowledge. Explain the changing pradigms from the ancient days to emergence of scientific geography.

  4+6=10
- Q2. Describe the emergence of Anthropo-geography. Assess the impact of world war in the development of geography.

  6+4=10

#### **Unit II**

- Q3. Why is Geography considered as a Social Science? Explain the indicators reflecting variation of gender differences over the world. What is Gender Gap?

  2+6+2=10
- Q4. What is Welfare Geography? How is welfare of a society measured? Explain the relevance of Welfare Geography in recent times. 2+4+4=10

#### **Unit III**

- Q5. Explain the dichotomies between Physical and Human Geography. Elucidate the development of determinism during the 19<sup>th</sup> and 20<sup>th</sup> century. 4+6=10
- Q6Briefly enumerate the contribution of Vidal de la Blache in the development of Possibilism?

  What do you mean by landscape Morphology?

  6+4=10

- Q7. Discuss the contributions of W. Bunge and D Harvey in developing Radical Geography. How is Feminism developed from Radical Geography?

  7+3=10
- Q8. Elucidate the development of Post Modernism. Identify the contributors of Post Modernism highlighting their contributions. 6+4=10

M.A Part I Geography session (2019-2020)

#### Paper - 3

#### **MODULE 6**

#### ECONOMIC GEOGRAPHY

#### Answer any one question from each module (10 Marks)

#### Unit I

- Q1. Explain the concept of Resource as put forward by Zimmerman. Classify resources according to its renewability. 6+4=10
- Q2 Define Human resource. Why is human resource development important for the economic development of the world? Identify the functions of Human resource. 2+2+6=10

#### Unit II

- Q3. Explain the role of technological advancement in changing agricultural productivity over the world. Discuss the success and failure of White Revolution in India. 5+5=10
- Q4. Give a critical estimate of Von Thunen's Model of agricultural systems of the world. Explain on what factors does the landuse classification of Whittlesy depends upon. 6+4=10

#### **Unit III**

- Q5. What are Petrochemical Hubs? What are the major products of petrochemical industries? Describe the growth and distribution of Petrochemical industry in India? 2+3+5=10
- Q6. What are the constraints to Industrial growth? Discuss the recent Industrial Policy of India and examine its success and failures. 4+6=10

- Q7. Discuss any two models of Transportation. What are comparative cost advantages? Distinguish inter regional connectivity from intra-regional connectivity. 5+2+3=10
- Q8. Explain the concept of E -Commerce. What are the key trends of India's automobile industries? Distinguish between EEZ and SEZ. 2+4+4=10

M.A Part I Geography session (2019-2020)

#### Paper - 4

#### **MODULE 7**

#### POPULATION GEOGRAPHY

#### Answer any one question from each module (10 Marks)

#### Unit I

- Q1. Define Population Geography. Discuss the scope and content of Population Geography countries. List the importance of studying Population Geography. 2+6+2=10
- Q2. Distinguish between Population Density and Man-Land Ratio. What is age sex pyramid? Identify the causes of high fertility in the developing countries? 4+2+4=10

#### **Unit II**

- Q3 Critically examine the Demographic Transition Theory of Population growth. Assess the position of India in the demographic transition model.

  6+4=10
- Q4. Discuss the theories of Migration.Highlight the recent trends and patterns of Internal Migration in India. 7+3=10

#### **Unit III**

- Q5. Define and classify settlements. What are the causes of origin of rural settlements? Explain the functions of rural settlements. 3+3+4=10
- Q6. Identify the environmental issues in case of rural settlements. Discuss the rural house types in different states of India. 6+4=10

- Q7. Give the census definition of urban settlements. What is urban Morphology? Draw the similarities between Concentric Zone theory and Multiple Nuclei Theory. 2+2+6=10
- Q8. Explain the concept of Urban Sprawl. Discuss the causes and consequences of Urban Sprawl. Give a brief estimate of urban sprawls in India. 4+4+2=10

M.A Part I Geography session (2019-2020)

#### Paper - 4

#### **MODULE 8**

#### SOCIAL AND CULTURAL GEOGRAPHY

#### Answer any one question from each module (10 Marks)

#### Unit I

- Q1. Discuss the concept and attributes of social space. What are the elements of social structures? 6+4=10
- Q2. What is social wellbeing? Explain the advances of social well- being in India. Define Social pathology. 2+6+2=10

#### **Unit II**

Q3. Describe the social structure of India. Distinguish between schedule caste and tribes.

7+3=10

Q4. Discuss the world pattern of religious distribution. Compare the pattern of religious distribution of India with that of the world.

4+6=10

#### **Unit III**

- Q5. What is cultural Diffusion? What are the types of cultural diffusion? Discuss the barriers to cultural diffusion and waves. 3+5+2=10
- Q6. Classify cultural realms of the world. Identify the major cultural hearths of the world? 5+5=10

- Q7. Explain the formation of cultural regions in India. What are the characteristics of Metropolitan Cultures? 4+6=10
- Q8. Define Acculturation. Explain the relation between culture and environment. What is cultural transformation? 2+6+2=10

M.A Part I Geography session (2018-2019)

#### Paper - 5

#### **MODULE 9(Practical)**

#### **Quantitative Techniques**

#### Answer any <u>all</u> questions

Q1 Explain the different scales of measurement. What is Multistage sampling? (5)

Q2. Compute a linear regression equation from the following set of data showing the impact of rainfall on crop yield. Draw a linear regression curve and comment on correlation. (5)

Sl no	Rainfall in cm	Yeild (ton/hectare)
1	12	5.27
2	18	5.68
3	24	6.25
4	30	7.21
5	36	8.02
6	42	8.71
7	48	8.42

#### M.A Part I Geography session (2019-2020) Paper- 5

#### **Module 10 (Practical)**

#### **Map Interpretation and Field Techniques**

#### Answer all questions (10 Marks)

- Draw a long and cross profile of the main river from your Toposheet(measuring not more than 15 cm in length). Interpret it.
- Discuss the characteristics of the AWiFS and WiFS Sensors. What are the principles of preparing classified images?