PG Even Semester Exam, May 2025

Earth Science

2nd Semester

COURSE NO. ESIDC-554

[Meteorology and Oceanography]

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer five questions, taking one from each Unit

UNIT-I

1. Write an explanatory note on cloud and its classification with neat sketches. 14
2. Write short note on the following: 7+7=14
   a. Atmospheric stability and its types
   b. Process and types of precipitation

UNIT-II

3. Discuss in detail Air Masses and their classification. Also write an explanatory note on front and its types. 7+7=14

4. Write short note on the following: 5+4+5=14
   a. Koppen's climatic classification
   b. Cyclone and anticyclone
   c. Global wind patterns

UNIT-III

5. Describe the physical and chemical properties of sea water and their spatial variations. Add a note on the processes controlling composition of seawater. 9+5=14

6. Write short note on the following: 6+4+4=14
   a. Salinity of seawater and its latitudinal variations.
   b. Thermohaline circulation
   c. Submarine canyons

UNIT-IV

7. a. Define the following. 2x4=8
      i. Orbital wave
      ii. wave period
      iii. wave frequency
      iv. wave celerity
   b. Describe the different types of waves on the basis of geomorphic significance. 6

8. Write an explanatory note on.: 7x2=14
   i. How tide is formed.
   ii. Processes affecting tide propagation

UNIT-V

9. What is Monsoon? What are Southwest and Northeast monsoon in Indian subcontinent? Explain the mechanisms of formation of Indian Monsoon. 2+4+8=14

10. Write short note on the following with suitable diagram: 5+5+4=14
    a. Atlantic Water masses
    b. T-S diagram
    c. Walker circulation

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