

Test-2: Climatology and Oceanography (Examrace IAS Mains Geography Optional- Test Series 2024)

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Instructions

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Process

1. Join our test series now (any number of tests) by paying online. You will receive an enrollment number.
2. You can **either**:
 - a. Attempt the questions using pdf provided: Download and print the test.
 - b. Write the answers on clean sheets of paper: Mention your name, enrollment number, and phone number on a separate cover sheet.
3. **Enter the enrollment number on top of the test.**
4. Finish the tests properly keeping time.
5. **It is strongly recommended that full-length mock-test (13 and 14) be completed on the same day, one in morning session and one in the evening session with break of no more than 3 hours in between.**
6. Make note of the questions you were able to complete in the allotted time. If a question was partly completed, draw a line at that location.
7. Subsequently go on to complete the remaining questions.
8. We will provide you feedback on all 5 questions (giving you full benefit of test series), however marks will be given based on portion completed in allotted time.
9. Send the completed test by email. Clearly scan and send the completed test to contactus@doorsteptutor.com.
10. Fully evaluated copy along with answer/approach analysis will be send back to your email (within 15 days of receipt).
11. Improvement call: Dr. Manishika Jain will provide personalized feedback and areas of improvement.



Questions

1 (a) Describe the basic mechanism of heat transfer. which of this mechanism is the least important meteorologically and why? (20 marks)









(b) "The monsoon over- ride the expected pattern of the primary wind system"- Explain. (15 marks)







(c) Discuss in detail the polar front theory of origin of the temperate cyclone. (15 marks)







2(a) "Influence of relief in the predominant factor for causing orographic rainfall." Discuss this statement by citing example from India? (20 marks)









(b) What is the difference between Thornthwaite climatic classification and Koppen climatic classification? Why potential evapotranspiration is important in Thornthwaite's modified climatic system? (15 marks)







(c) Write a detail on MONEX. Critically describe the classical theory of origin of monsoon and its effect on Indian sub-continent. (15 marks)







3(a) “Cooling of large masses of humid air is essential to produce rainfall”. Elaborate the statement by citing suitable examples. (20 marks)









(b) Some of the pressure belt is not due to temperature difference but are caused by dynamic force. name this zone and explain their origin. (15 marks)







(c) Explain the heat budget and latitudinal heat balance of the Earth with suitable diagram. (15 marks)







4(a) Describe Sustainable urban climatology with special reference to India. Write down the impact of urban heat island in metropolitan cities of India. (20 marks)









(b) Discuss the current of Indian Ocean and discuss the impact of monsoon on them illustrate your answer with map of winter and summer condition. (15 marks)







(c) How are the coastal and estuarine ocean and their ecosystems influenced by the global hydrologic cycle, land use, and upwelling from the deep ocean? (15 marks)







5(a) What challenges does the inevitability of sea level rise present to coastal communities and how can communities adapt? How will changes in the ocean and cryosphere affect meeting the Sustainable Development Goals (SDGs)? (20 marks)









(b) Explain how the salinity of ocean water affects its density? Discuss systematically the major submarine feature gives specific example from all this three major ocean. (15 marks)







(c) What do you mean by Phytoplankton? How different will marine food webs be at mid-century? In the next 100 years. (15 marks)





