

PG (CBCS) EVEN SEMESTER EXAMINATION, 2023

PHYSICS

2nd Semester

Course No. : PHYCC - 204 A

(Our Atmosphere)

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. (a) Discuss the composition of atmosphere in details. 5
- (b) How temperature varies as we go up from the surface of the earth? Explain with a schematic diagram. 5
- (c) Discuss the application of Schwarzschild Equation in remote sensing. 4
2. (a) Explain the radiation budget of earth with appropriate diagram. 10

(Turn Over)

(2)

(b) Derive Schwarzschild Equation. 4

UNIT - II

3. (a) Explain the formation of thunder clouds. 5

(b) Classify cloud types. 9

4. Discuss the genesis of cyclones. What is the difference in cyclone and anti-cyclone formation?
10+4 = 14

UNIT - III

5. With a neat diagram, describe the major circulation cells in Earth's atmosphere. Explain geostrophic flow.
10+4 = 14

6. Discuss the formation of Indian Monsoon . Explain the role of at least 3 parameters affecting it. How does Indian economy depends on monsoon?
5+6+3 = 14

UNIT - IV

7. Explain the formation of weather fronts . Classify the fronts. 6+8 = 14

8. Write a note on floods and flash floods in India.
14

(3)

UNIT - V

9. What is the proportion of Greenhouse gases in the atmosphere of earth? Explain their role in global warming. Discuss the contribution of humankind in increasing the amount of greenhouse gases in the atmosphere. 2+ 7+5 = 14

10. Write a note on Climate change, adaption and mitigation. 14
