45073

M.Sc. DEGREE EXAMINATION, APRIL 2018.

Physics

FOURTH SEMESTER

Paper III — ATMOSPHERIC PHYSICS

Time : Three hours Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. What is block body radiation?
2. State the Wien's displacement law.
3. Define Rawin Sonde.
4. Significance of Meteorological parameters.
5. Difference between Ozone and PAN Pollutants.
6. What is the effect of aerosols on climate?
7. Write the importance of the Antenna Basics.
8. Write any two applications of FM-CW Radar.

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Mention the different layers of the atmosphere. Explain variation of temperature with height in the atmosphere.

Or

10. Define Green house effect. Explain how energy balance of earth and atmosphere.

11. Explain in ground based climatic station and automatic weather station for the measurement of air humidity, wind speed and rainfall.

Or

12. Write introduction to space borne systems for the measurement of meteorological parameters.

13. What are secondary gaseous pollutant and explain their effects on climate and human health?

Or

14. Discuss about description of different aerosols and what are the source and production mechanism of aerosols.

15. Write the different types of RADAR's and discuss about basic principles of pulsed radar.

Or

16. Explain about the types of Radar scattering theory.