

B.Sc. 3rd Semester (Honours) Examination, 2019 (CBCS)

Subject : Physics

Paper : SEC-I

(Weather Forecasting)

Time: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

Group-A

1. Answer *any five* of the following questions: 2×5=10
- (a) Mention the usefulness of Ozone Layer of the atmosphere.
 - (b) Mention the instruments used to determine
 - (i) the velocity of wind and
 - (ii) the direction of wind
 - (c) Explain why the sun appears red when it is near the horizon.
 - (d) What is albedo?
 - (e) Write down the effects of increase in atmospheric temperature on Dew Point and Relative Humidity.
 - (f) Distinguish between condensation and precipitation.
 - (g) What is acid rain?
 - (h) Give the full form of WHO and ITCZ.

Group-B

Answer *any two* of the following questions: 5×2=10

2. What is inversion of temperature in connection with the vertical distribution of atmospheric temperature? 2+3=5
Explain the inversion of temperature due to the radiation from earth's surface.
3. What are Doldrums and Horse latitude? What do you mean by Anti-trade wind? (2+2)+1=5
4. Briefly explain the formation of Dew and Fog. Write down the characteristics of Cumulo Nimbus. (1½+1½)+2=5
5. Differentiate between Tornado and Hurricane.

Group-C

Answer any two of the following questions:

10×2=20

6. Briefly discuss four major causes responsible for long-term and short-term climate changes of our planet.

Discuss how the change in sea level indicates the global climate change.

(4+4)+2=10

7. (a) What is greenhouse effect?

(b) Mention the names of major greenhouse gases.

(c) State the effect for the increase of the greenhouse gases.

(d) Discuss how the greenhouse effect can be controlled.

2+2+3+3=10

8. (a) What is Synoptic chart?

(b) Write short note on

(i) Short range forecasting and

(ii) Long range forecasting

(c) Mention the names of two artificial satellites used for weather forecasting in India.

3+(2½+2½)+2=10

9. Mention the names of the atmospheric layers dividend on the basis of variation of temperature. Discuss the extent, composition and characteristics of each layers.

2+8=10
