

Name:
Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2022

Course: Weather Forecasting
Program Name: B.Sc. (H) Physics, Int B.Sc & M.Sc (Physics)
Course Code: PHYS 2021

Semester: III
Duration: 3 hrs.
Max. Marks: 100

Instructions: Answers should be brief and concise

SECTION A (20 marks)
All questions in section A are compulsory

S. No.		Marks	CO
Q 1	Define cyclones and anti-cyclones.	4	CO1
Q2	Describe atmospheric pressure. What is the unit of atmospheric pressure?	4	CO1
Q3	Summarize the difference between Gust and Squall.	4	CO2
Q4	Categorize the satellites on the basis of their position with respect to the earth's location.	4	CO4
Q 5	Discuss the relation of ozone depletion with health effects.	4	CO3

SECTION B (40 marks)
Question 9 consists of an internal choice

Q 6	Describe the main four components of the environment and write the main composition of the atmosphere along with its mole fraction distribution.	10	CO1
Q 7	What do you mean by temperature sensors? Describe the different types of temperature sensors.	10	CO1
Q 8	Classify the different types of winds as Geostrophic, Gradient, and Frictional Layer winds.	10	CO2
Q 9	a) Explain the term Jet streams and discuss the different types of Jet Streams. Or b) Explain the term thunderstorm and discuss types of thunderstorms based on their formation.	10	CO3

SECTION-C (40 marks)
(Q10 is compulsory. Attempt any set of Q11 & 12)

Q 10	a) Discuss in detail the methods and criteria followed for developing weather stations. b) Analyse and explain the different types of Weather Maps and their importance in daily life.	10 10	CO4 CO4
Q 11	a) What do you mean by Global warming? Write its outcomes. b) What do you mean by aerosols? Explain different types of Aerosols and discuss their effects on various entities	10 10	CO2 CO2
Q 12	<p style="text-align: center;">Or</p> a) What do you mean by air pollution? Illustrate the different effects of five criteria pollutants. b) What do you mean by the greenhouse effect. Illustrate the different reasons behind it.	10 10	CO2 CO2