

<b>Name:</b>	
<b>Enrolment No:</b>	

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, December 2021**

**Course: Weather Forecasting**  
**Program Name: B.Sc. (H) Physics**  
**Course Code: PHYS 2021**

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

**Instructions:**

Write all the answers in A4 sheet

**SECTION A (20 marks)**  
**All question of section A are compulsory**

S. No.		Marks	CO
Q 1	Discuss and draw the trend of temperature and pressure variation with altitude?	4	CO1
Q2	What do you mean by permanent and variable gases in the atmosphere?	4	CO1
Q3	Write the name of instruments used to measure the wind speed, wind direction, Humidity and rainfall?	4	CO2
Q4	Explain the importance of Weather prediction.	4	CO4
Q 5	What are the different categories of weather forecasting?	4	CO4

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

Q 6	Draw the structure of the atmosphere that represent the different layers of atmosphere and explain the significance of each layer.	10	CO1
Q 7	What do you mean by atmospheric pressure? What are different phenomenon/pattern form due to change in atmospheric Pressure?	10	CO1
Q 8	What do you mean by jet streams? Explain the different types of Jet Streams.	10	CO3

Q 9	<p>Discuss in details about the phenomenon behind the colour of sky and clouds.</p> <p style="text-align: center;"><b>OR</b></p> <p>Define mean Humidity, Relative humidity, Humidity mixing Ratio, Dew point temperature?</p>	<b>10</b>	<b>CO2</b>
<p><b>SECTION-C (40 marks)</b>  <b>(Q10 is compulsory. Attempt any set of Q11 &amp; 12)</b></p>			
Q 10	<p>a) What do you mean by a weather map? Explain different types of Weather Maps.</p> <p>a) What are Satellites? Discuss in details about the Geo Stationary and Polar operational environmental Satellite</p>	<b>10</b>	<b>CO4</b>
Q 11	<p>a) What do you mean by Climate and Climate change? Discuss different types of Climate.</p> <p>b) Define Acid Rain? What causes the acid rain? What are the short and long term effects of acid rains?</p> <p style="text-align: center;"><b>Or</b></p>	<b>10</b>	<b>CO3</b>
Q 12	<p>a) What do you mean by Air masses? How do air masses form? Explain their types.</p> <p>b) Explain the term thunderstorm. Write various type of thunderstorms based on their formation.</p>	<b>10</b>	<b>CO3</b>