

# परमाणु ऊर्जा शिक्षण संस्था Atomic Energy Education Society कार्यपत्रक / Worksheet (2025-26)

		ह/ Month: AUGUSTअक/Marks: 40
दिया गया पाठ्यक्रम/Portio	n covered Chap 2- Understan	ding the weather
विद्यार्थी का नाम/Name of		
अनुक्रमांक /Roll No	कक्षा/अनुभाग Class /Sec.:	दिनांक /Date:

#### **General Instructions:**

- 1. This question paper comprises of 6 sections A, B, C, D, E& F
- 2. Section A contains 10 MCQs of 1 mark each.
- 3. Section B contains 2 Very Short Answer questions of 2 marks each.
- 4. Section C contains 2 Short Answer questions of 3marks each.
- 5. Section D contains 2 Long Answer questions of 5marks each.
- 6. Section E contains 2 Case-based questions with 3 sub-parts each of 1 mark each.
- 7. Section F contains map work of 4 marks.

# **SECTION A - MULTIPLE CHOICE QUESTIONS (1×10=10 Marks)**

## **Choose the correct option:**

- 1. The layer of the Earth's atmosphere where all weather phenomena take place is called:
  - a) Stratosphere
  - b) Troposphere
  - c) Mesosphere
  - d) Thermosphere
- 2. The India Meteorological Department was established in:
  - a) 1857
  - b) 1875
  - c) 1885
  - d) 1900
- 3. The normal atmospheric pressure at sea coast is around:
  - a) 1000 mb
  - b) 1013 mb
  - c) 1020 mb
  - d) 1050 mb
- 4. An instrument used to measure rainfall is called:
  - a) Barometer

- b) Anemometer
- c) Rain gauge
- d) Hygrometer
- 5. Which of the following indicates a depression or low-pressure system?
  - a) Pressure above 1020 mb
  - b) Pressure below 1000 mb
  - c) Pressure exactly 1013 mb
  - d) Pressure above 1013 mb
- 6. The motto of India Meteorological Department "ādityātjāyatevriṣhti" means:
  - a) From rain comes sun
  - b) From sun arises rain
  - c) Rain brings prosperity
  - d) Sun causes drought
- 7. Relative humidity of 100% indicates:
  - a) No water vapour in air
  - b) Air saturated with water vapour
  - c) Moderate humidity
  - d) Low humidity
- 8. Wind moves from areas of:
  - a) Low pressure to high pressure
  - b) High pressure to low pressure
  - c) Equal pressure zones
  - d) None of the above
- 9. The troposphere is thicker at:
  - a) The poles
  - b) The tropical zone
  - c) Mountain regions
  - d) Desert areas
- 10. AWS stands for:
  - a) Automatic Weather System
  - b) Advanced Weather Station
  - c) Automated Weather Station
  - d) All Weather System

## **SECTION B - VERY SHORT ANSWER QUESTIONS (2×2=4 Marks)**

- 11. Define weather and mention any two elements of weather. (2 marks)
- 12. Why do people feel breathless at high altitudes? Explain with reference to atmospheric pressure. (2 marks)

## **SECTION C - SHORT ANSWER QUESTIONS (2×3=6 Marks)**

- 13. Explain how traditional methods were used to predict weather. Give any three examples from the textbook. (3marks)
- 14. Distinguish between maximum temperature and minimum temperature. How is mean daily temperature calculated? (3 marks)

# **SECTION D - LONG ANSWER QUESTIONS (2×5=10 Marks)**

15.Describe the five elements of weather in detail. How does each element affect our daily lives? (5 marks)

16. Why is weather forecasting important in modern times? Discuss at least four situations where accurate weather predictions are helpful. (5 marks)

## **SECTION E - CASE-BASED QUESTIONS (3×2=6 Marks)**

## Q17. Case Study 1TechStart Innovation Hub

TechStart is a small technology company that specializes in developing mobile applications for local businesses. Founded three years ago by two college friends, the company has grown from 2 employees to 15 employees. Recently, they secured a major contract with a retail chain to develop a customer loyalty app, which could potentially triple their revenue. However, the project requires expertise in artificial intelligence and machine learning, areas where the current team has limited experience. The founders are considering whether to hire new specialized staff, outsource the AI components, or decline the project.

### **Questions:**

- 1. Identify ONE advantage of hiring new specialized staff for this project. (1 mark)
- 2. What is ONE risk TechStart faces if they accept this major contract? (1 mark)
- 3. State ONE factor the founders should consider when making their decision. (1 mark)

### Q18. Case 2: Green Valley Organic Farm

Green Valley Organic Farm is a family-owned business that has been operating for 20 years, selling organic vegetables directly to consumers through farmers' markets. Due to increasing demand for organic produce and the rise of online shopping, the farm's owners are considering expanding their business by launching an e-commerce website and offering home delivery services. However, this expansion would require significant investment in technology, packaging materials, and delivery vehicles. The farm currently has limited cash reserves and would need to secure a business loan.

#### **Questions:**

- 1. Give ONE benefit of expanding into e-commerce for Green Valley Organic Farm. (1 mark)
- 2. Identify ONE challenge the farm might face when implementing home delivery services. (1 mark)
- 3. Name ONE source of information the owners should research before making this decision. (1

#### **SECTION - F**

- Q19. Locate the following places on the outline map of India.
  - A. Region of alpine climate
  - B. Places having moderate climate

- C. Kochi
- D. Ladakh