

Total No. of Questions: 6

Total No. of Printed Pages:2



Faculty of Agriculture
End Sem Examination May-2024
AG3CO33

Introductory Agro-Meteorology & Climate Change

Programme: B.Sc. (Hons.) Branch/Specialisation: Agriculture

Duration: 3 Hrs.

Maximum Marks: 50

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

- Q.1 i. Greek word "Meteoro" means- **1**
(a) Science (b) Atmosphere
(c) Climate (d) Weather
- ii. Clouds found in which type of layer- **1**
(a) Troposphere (b) Stratosphere
(c) Mesosphere (d) Thermosphere
- iii. The percentage of reflected radiation to the incident radiation- **1**
(a) Heat (b) Albedo
(c) Temperature (d) Photomorphogenesis
- iv. Nitrogen percentage found in our atmosphere- **1**
(a) 0.93 (b) 0.03 (c) 20.95 (d) 78.08
- v. What is expressed as grams of water vapour per cubic meter or cubic feet? **1**
(a) Specific humidity (b) Absolute humidity
(c) Relative Humidity (d) All of these
- vi. The drops of water having diameter less than 0.5 mm small is called- **1**
(a) Drizzle (b) Dew (c) Hail (d) Snow
- vii. Southwest monsoon period is from- **1**
(a) October to December (b) June to September
(c) December to March (d) February to April
- viii. What equipment used for measuring wind direction? **1**
(a) Aleurometer (b) Anemometer
(c) Wind vane (d) Wind velocity

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- ix. The medium range forecasting generally represents how many days? **1**
(a) 01-02 days (b) 02-05 days
(c) 03-10 days (d) 10days – 01months
- x. Which gas is responsible for global warming? **1**
(a) Carbon dioxide (b) Nitrous oxide
(c) Methane (d) All of these
- Q.2 i. The word meteorology is derived from which language? **1**
ii. Discuss about weather. **2**
iii. Write about vertical layers of atmosphere. **5**
OR iv. Write importance of agriculture meteorology. **5**
- Q.3 i. What is temperature? **1**
ii. Write definitions of conduction, convection and radiation. **3**
iii. Define lapse rate and albedo. **4**
OR iv. Write about any four factors affecting air temperature. **4**
- Q.4 i. What is dew point temperature? **2**
ii. Write about absolute humidity, relative humidity and specific humidity. **6**
OR iii. What is cloud? Write types of clouds. **6**
- Q.5 i. What is heat wave? **2**
ii. What is cyclone? **2**
iii. Define drought and flood. **4**
OR iv. Write importance of India monsoon. **4**
- Q.6 Attempt any two:
i. Define climate change and write factors affecting of climate change. **4**
ii. Write short note on weather forecasting. **4**
iii. What is global warming? Write cause of global warming. **4**

Marking Scheme
AG3CO33 Introductory Agro-meteorology & Climate Change

| | | | | |
|-----|-------|---|----------|----------|
| Q.1 | i. | Greek word “Meteoro” means | | 1 |
| | | (b) Atmosphere | | |
| | ii. | Clouds found in which type of layer- | | 1 |
| | | (a) Troposphere | | |
| | iii. | The percentage of reflected radiation to the incident radiation. | | 1 |
| | | (b) Albedo | | |
| | iv. | Nitrogen percentage found in our atmosphere | | 1 |
| | | (d) 78.08 | | |
| | v. | What is expressed as grams of water vapour per cubic meter or cubic feet. | | 1 |
| | | (b) Absolute humidity | | |
| Q.2 | vi. | The drops of water having diameter less than 0.5 mm small is called | | 1 |
| | | (a) Drizzle | | |
| | vii. | South West Monsoon period is from | | 1 |
| | | (b) June to September | | |
| | viii. | What equipment used for measuring wind direction – | | 1 |
| | | (c) Wind vane | | |
| | ix. | The medium range forecasting generally represents how many days- | | 1 |
| | | (c) 03-10 days | | |
| | x. | Which gas responsible for global warming | | 1 |
| | | (d) All of these | | |
| Q.2 | i. | The word meteorology is derived from which language? | | 1 |
| | | Language | -1 mark | |
| | ii. | Define about Weather | -2 marks | 2 |
| | iii. | Write about Vertical Layers of Atmosphere. | | 5 |
| OR | | Five layers – 1mark each (1*5) | -5 marks | |
| | iv. | Write importance of Agriculture meteorology. | | 5 |
| Q.3 | i. | What is temperature? | | 1 |
| | | Definition | -1 mark | |
| | ii. | Write definitions of Conduction, Convection and Radiation | | 3 |
| | | Conduction | -1 mark | |
| | | Convection | -1 mark | |
| | | Radiation | -1 mark | |
| | iii. | Define Lapse rate and albedo. | | 4 |
| | | Lapse rate | -2 marks | |
| | | Albedo | -2 marks | |

| | | | | |
|-----|------|---|-----------|----------|
| OR | iv. | Write about factors affecting air temperature (any four) | | 4 |
| | | Explain each 1 mark (1*4) | - 4 marks | |
| Q.4 | i. | What is Dew Point temperature? | | 2 |
| | | Dew Point temperature | - 2 marks | |
| | ii. | Write about Absolute humidity, Relative humidity and Specific Humidity. | | 6 |
| | | Absolute humidity | - 2 marks | |
| OR | | Relative humidity | - 2 marks | |
| | | Specific humidity | - 2 marks | |
| | iii. | What is cloud? And also write types of clouds | | 6 |
| | | Definition of cloud | - 1 mark | |
| | | Explain Four type of clouds 1.25 marks each (1.25*4) | - 5 marks | |
| | | | | |
| Q.5 | i. | What is heat wave? | | 2 |
| | ii. | What is Cyclone? | | 2 |
| | iii. | Define Drought and Flood. | | 4 |
| | | Drought | - 2 marks | |
| OR | | Flood | - 2 marks | |
| | iv. | Write importance of India monsoon. | | 4 |
| | | Each point 0.5 marks (0.5*8) | - 4 marks | |
| | | | | |
| Q.6 | | Attempt any two: | | |
| | i. | Define climate change and write factors affecting of climate change | | 4 |
| | | Climate change | - 1 mark | |
| | | Factors affecting | - 3 marks | |
| | ii. | What is Weather forecasting? | | 4 |
| | | Weather forecasting | -1 mark | |
| | | Types of forecasting each 01 marks | - 3 marks | |
| | iii. | What is Global warming? And also write cause of Global warming | | 4 |
| | | Global warming | -1 mark | |
| | | cause of Global warming | - 3 marks | |

Answer of MSQ

- Q.1
- i. Greek word “Meteoro” means-
(b) Atmosphere
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(d) 78.08
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 - x. Which gas responsible for global warming.
(d) All of these