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AR-2017

B.Sc (AG)

4th SEMESTER REGULAR EXAMINATION-NOV-2019

AG-247

INTRODUCTORY AGRO METEOROLOGY AND CLIMATE CHANGE

Time : 2 Hours

Maximum : 50 Marks

(Answer all questions of Section – A)

SECTION – A

Q1. Fill up the blanks with appropriate word (s): 10x0.5=5

- a) Solar radiation takes around ----- time to reach the earth surface from the photosphere of sun
- b) ----- is said to be most predominant gas in the earth’s atmosphere
- c) Thunderstorm is mostly associated with ----- type clouds
- d) -----type of plant (C3/C4/CAM) is photo synthetically more efficient under certain concentration of carbon dioxide
- e) ----- type of cloud is formed with gradual lifting of airmass
- f) ----- gas is said to be the most variable gas in the atmosphere
- g) The value of solar constant is around ----- Langley/min
- h) The highest concentration of ozone is observed in ----- layer of atmosphere
- i) The leeward side of mountain barrier in the direction of rainfall is known as -----
- area
- j) The average extension of troposphere in the earth’s atmosphere is about ----- km

Q2. Define or explain the following 5x1=5

- i. Green house effect
- ii. Homosphere
- iii. Mixing ratio
- iv. CCN
- v. Doldrum

Q3. Match the column A with appropriate options in column B 10x0.5= 5

Column A	Column B
i Convection	i Deflection of wind
ii Luke Howard	ii Equator
iii Ramdas	iii Cirrus cloud
iv Blaney Criddle method	iv 50° S latitude
v Coriolis force	v ET



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|------|---------------------------|------|---------------------------|
| vi | Tioserrene De Bort | vi | Cumulonimbus cloud |
| vii | Rain forming cloud | vii | Father of Agrometeorology |
| viii | ITCZ | viii | Transfer of heat |
| ix | Whispy and feathery cloud | ix | Troposphere |
| x | Furious fifties | x | Classification of cloud |

Q4. Write TRUE or FALSE against the following statements 10 x 0.5 = 5

- a) Rain drops less than 0.5 mm diameter is known as drizzle
- b) A system of wind blowing spirally inward towards a low pressure is called anticyclone
- c) The radiation received by the earth surface and reemitted in the shortwave radiation
- d) Lines joining the equal rainfall is known as isohyet
- e) Increase in temperature decreases relative humidity
- f) Normal onset of monsoon in India is first week of July
- g) Change of state from liquid to vapour is known as sublimation
- h) The water which comes back to the earth surface in different forms is called as rainfall
- i) The protective shield in the atmosphere that filters the ultraviolet radiation from sun is the stratosphere
- j) The sky of moon looks red

SECTION – B (Short answer questions)

(Attempt **any five** questions. Each question carries equal marks) [5 x 6 = 30]

- Q5. What is cloud seeding or artificial rain making? How they are helpful in negotiating the aberrant weather condition?
- Q6. What is cloud and how they are formed? Briefly discuss the classification of cloud.
- Q7. What do you mean by Indian monsoon? Briefly discuss the mechanism of development of monsoon.
- Q8. What is climate change? Briefly discuss the impact of climate change on agriculture
- Q9. Give the skeletal diagram of
- i. Energy/heat budget of earth atmospheric system
 - ii. Global pressure belts and planetary circulation of wind
- Q10. Briefly discuss the different types of weather hazards. What are different types of drought and flood?