

PARUL UNIVERSITY
COLLEGE OF AGRICULTURE
B.Sc.(Hons.) Agriculture, Winter 2019 - 20 Examination

Semester: 4

Date: 09/12/2019

Subject Code: 20101254

Time: 02:00 pm to 04:30 pm

Subject Name: Introductory Agro-Meteorology and Climate Change

Total Marks: 50

Instructions

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Do as Directed.**A. Fill in the blanks. (Each of 0.50 marks)****(05)**

1. Autumnal Equinox occurs on _____ day.
2. Atmosphere contains _____ % CO₂.
3. The earth is surrounded by a mixture of gases known as _____.
4. Atmospheric pressure is measured by an instrument called _____.
5. Meteorology is Greek word "Meteors" means '_____', "logos" means '_____'.
_____.
6. Solid phase of earth is called as _____.
7. Earth completes one rotation in _____ time.
8. The average height of troposphere is about _____ km above the mean sea level.
9. The word "tropa" means '_____', "sphere" means '_____'.
_____.
10. _____ colour of soil absorb more radiation than other types.

B. Multiple choice type questions. (Each of 0.50 mark)**(10)**

1. The shape of earth is.....

a) Circular	b) Hyperbolic
c) Elliptical	d) Parabolic
2. The natural source of water is.....

a) River	b) Rainfall
c) Canals	d) Lake
3. The lowest layer of the atmosphere is.....

a) Troposphere	b) Mesosphere
c) Stratosphere	d) Thermosphere
4. Vertical flow of air is called.....

a) Current	b) Convection
c) Wind	d) Advection
5. Medium range forecast is valid for.....

a) 1-3 days	b) 6-12 days
c) 3-7 days	d) 1-6 Hours
6. The average physical state of the atmosphere is known as.....

a) Weather	b) Environment
c) Climate	d) None of these
7. World Meteorological Day is celebrated on -----

a) 23 rd March	b) 31 st December
c) 22 nd April	d) 1 st January
8. Places situated on the ----- side of a mountain get more rainfall.

a) Leeward	b) Windward
c) A and B both	d) backward
9. ----- radiation is emitted from sun whereas ----- radiation is reflected from surface.

a) Short wave & long wave	b) long wave & Short wave
c) Short wave & Short wave	d) long wave & long wave
10. Meteorology word is derived from ----- language.

a) Greek	b) Arabic
c) Latin	d) English
11. Evaporation is measured by -----.

- a) Open pan evaporimeter
c) Hygrometer
- b) Hydrometer
d) Perimeter
12. The movement of earth around the sun is known as -----.
- a) Revolution
c) Resolution
- b) Rotation
d) A and B both
13. The winds that blow from 30° N to the equator in NE direction in the Northern Hemisphere and from 30°S to the equator in SE direction in the southern Hemisphere, these wind is known as -----.
- a) Trade
c) A and B both
- b) Tropical
d) Westerlies
14. Albedo of Rice (flooded) field is -----.
- a) 12
c) 10-12
- b) 12-20
d) 20-25
15. The value of Dry adiabatic lapse rate is -----.
- a) 6.5
c) 4.0
- b) 9.8
d) A and B both
16. If the Actual / Prevailing lapse rate is -----than dry adiabatic lapse rate, the atmosphere is said to be unstable
- a) Higher
c) Equal
- b) Lower
d) None of the above
17. The Secretariat, headquartered of WMO is located in -----.
- a) Geneva
c) Rome
- b) Beijing
d) New Delhi
18. ----- is range of visible radiation.
- a) 0.0 to 0.3 μm
c) 0.7 to 0.9 μm
- b) 0.4 to 0.7 μm
d) 0.9 to 4.0 μm
19. The size of raindrops is ----- in diameter.
- a) 0.0 mm to 0.5 mm
c) 4.0 mm to 5.0 mm
- b) 0.5 mm to 4.0 mm
d) 5.0 mm to 6.0 mm
20. The deposition of water vapour in the form of tiny droplets on the colder bodies at earth's surface is known as -----.
- a) Frost
c) Fog
- b) dew
d) Smog

B. Define the following. (Any five)

(05)

1. Hydrology
2. Meteorology
3. Climate
4. Weather
5. Perihelion
6. Lapse rate
7. Isotherm
8. Wind

C. Answer the following. (Any five)

(05)

1. Give full form of WMO.
2. Where is IMD located?
3. Enlist elements of weather.
4. Enlist characters of atmosphere.
5. Why stratosphere is known as “seat of photochemical reactions”?
6. What is primary circulation?
7. Which instrument is used to measure total solar radiation?
8. Give the formula for energy balance.

Q.3 Write short notes. (Any five)

(10)

1. Differentiate: Sea breeze Vs. Land breeze
2. Differentiate: Cyclone Vs. Anticyclone
3. Describe composition of atmosphere.
4. Write causes of climate change.
5. Explain radiation balance equation.
6. Describe troposphere.

Q.4 Attempt any Three/Long Questions/Example

(15)

1. Explain different forces which control air motion.

2. Enlist impact of climate change.
3. Differentiate: Climate Vs. Weather
4. Explain different forms of condensation.
5. Explain types of wind.