Unit-1 MCQS (MARKS:10)

1. The study of living organisms with the environment is known as _____
   a) Ecosystem
   b) Environment
   c) Community
   d) Ecology
   View Answer

Answer: d
Explanation: Ecology is the study of the relationship between living organisms and the environment. It also deals with the interaction of living organisms with each other.
2. The collection of the same species within an area is called a population.
a) True
b) False
View Answer
Answer: a
Explanation: Population is the collection of individuals which belongs to the same species in a given region. The group of populations is called communities.
3. Which of the following describe the study of group of the population?
a) Synecology
b) Autecology
c) Biomes
d) Community
View Answer

Answer: a
Explanation: Synecology is the study of the group of population, while Autecology is the study of the individual or single species under certain environmental condition.
4. What is the climate pattern in areas of limited size or immediate surroundings of plant and animal?
a) Mixed climate
b) Macroclimate
c) Microclimate
d) Segmented climate
View Answer

Answer: c
Explanation: Microclimate refers to the climatic condition of the immediate surroundings of plant and animals while Macroclimate is the climatic pattern over a large area or on local, global, and regional level.
5. Which of the following climatic zone lies around 40°- 60° latitude?
a) Tropical
b) Subtropical
c) Arctic
d) Temperate
View Answer

Answer: d
Explanation: Climatic zones are defined on the basis of variation in mean temperature along the latitude like tropical, subtropical, arctic, and temperate.
6. A relatively dense layer of band which is found in the thermosphere is known as?
a) Troposphere
b) Mesosphere
c) Stratosphere
d) Ionosphere
View Answer

Answer: d
Explanation: Thermosphere extends 1000 km above the earth's crust. Ionosphere is a dense band of charged particles, specifically found in the thermosphere.

7. Which of the following parameter of light is NOT required by plants to grow?
a) Wavelength of light
b) Intensity of light
c) Duration of light
d) Color of light
View Answer

Answer: d
Explanation: Light affects the process of growth in the plant like photosynthesis and reproduction. Wavelength and intensity of light play a major role in flower induction, plant movement, and seed germination and duration of light regulates flowering and fruiting.
8. What is pedology?
a) Study of the effect of light on plant growth
b) Study of leaves
c) Study of climate
d) Study of soil
View Answer

Answer: d
Explanation: Soil is the uppermost layer of the earth. The study of soil has been divided into two types, i.e., pedology and edaphology. Edaphology deals with the effect of soil on other living organisms.
9. Name the term which is used for the water present in the soil that can be utilized by the plants.
a) Chresard
b) Humus
c) Gravitational water
d) Capillary water
View Answer

Answer: a
Explanation: Chresard is the term given to the available water in the soil, which can be utilized by the plants. Water is basically present in the thin and narrow capillaries formed from the soil.
10. Name the type of water stored in the soil in the form of hydrated oxides of iron, silicon, and aluminium?
a) Gravitational water
b) Capillary water
c) Hygroscopic water
d) Chemically bound water
View Answer

Answer: d
Explanation: Chemically bound water is not available for the plants as it is present in the form of hydrated oxides of iron, silicon, and aluminium.
11. Vegetation of tropical deciduous forest falls under which of the following categories?
a) Mesotherm
b) Megatherm
c) Microtherm
d) Hekistotherm
View Answer

Answer: a
Explanation: On the basis of temperature range, the world's vegetation has been divided into megatherm, mesotherm, microtherm, and hekistotherm. Vegetation under mesotherm experiences high and low temperature alternatively and found in a tropical deciduous forest.
This set of Environmental Science Multiple Choice Questions & Answers (MCQs) focuses on "Atmosphere".

1. At what concentration (in ppm), is nitrogen present in the atmosphere?
a) 780,840
b) 390,420
c) 78,084

d) 900,000
View Answer

Answer: a
Explanation: Nitrogen constitutes 78% of the atmosphere. So 78% of one million = 780,840 ppm – is the concentration of nitrogen gas in the atmosphere.
2. In the lower layers of atmosphere, what range of wavelengths of light is predominant?
a) Less than 100 nm
b) Greater than 300 nm
c) Between 100-300 nm
d) All wavelengths are equally present
View Answer

Answer: b
Explanation: In the lower layers of atmosphere, light of wavelengths greater than 300nm are present and it is because of this reason, there is generally no ozone formation at the ground level.
3. What does the ratio of the mass of water vapour to mass of air indicate?
a) Absolute humidity
b) Specific humidity
c) Relative humidity
d) Approximate humidity
View Answer

Answer: b
Explanation: Specific humidity is the mass of water vapour per unit mass of air mixture.
4. What is the region of mild and irregular wind in the equatorial region known as?
a) Trade winds
b) Westerlies
c) Doldrums
d) Easterlies
View Answer

Answer: c
Explanation: Doldrums are the irregular winds and their exact location is hard to analyse. Ships in the region of doldrums might restrict its movement due to a lack of proper wind.
5. “Roaring forties” is the term used to describe which of the following winds?
a) East-to-west air winds in the southern hemisphere
b) West-to east air winds in the northern hemisphere
c) East-to-west air winds in the northern hemisphere
d) West-to-east air winds in the southern hemisphere
View Answer

Answer: d
Explanation: Roaring forties found in the southern hemisphere are strong westerly winds caused by air displaced from the equator to the South Pole and aid yachtsmen in on competitions and voyages.
6. Match the following.

A. Hurricane	1.Indian Ocean and South Pacific
B. Typhoon	2.Low level air circulation
C. Cyclone	3.Northeastern Pacific and Atlantic
D. Tropical Cyclone	4.Northwestern Pacific

a) A-1; B-3; C-2; D-4
b) A-3; B-4; C-1; D-2
c) A-2; B-3; C-4; D-1
d) A-3; B-2; C-1; D-4
View Answer

Answer: b
Explanation: Hurricane, typhoon, cyclone are all used to categorise the same type of storm but

differ based on their locations across the world. Tropical cyclone is a low level closed air circulation which is classified as a hurricane/typhoon/cyclone if wind speed exceeds 120km/hr.
7. Which of the following statements is true?
a) Troposphere is equally thick across different parts of the world
b) Troposphere contains the ozone layer
c) Troposphere is thinner at the equator than at the poles
d) Troposphere is thicker at the equator than at the poles
View Answer

Answer: d
Explanation: Troposphere is nearly 16-17km thick at the equator and thins down to approximately 8km at the poles.
8. The temperature decreases with altitude in the stratosphere layer.
a) True
b) False
View Answer

Answer: b
Explanation: Temperature slightly increases with altitude in the stratosphere due to absorption of UV radiations from the sun, by the ozone layer present in the stratosphere.
9. Which of the following indicates the correct order of the principal layers of the earth's atmosphere from top to bottom?
a) Troposphere – Stratosphere – Mesosphere – Thermosphere – Exosphere
b) Thermosphere – Stratosphere – Troposphere – Mesosphere – Exosphere
c) Exosphere – Thermosphere – Mesosphere – Stratosphere – Troposphere
d) Exosphere – Mesosphere – Thermosphere – Stratosphere – Troposphere
View Answer

Answer: c
Explanation: Exosphere is the outermost layer of the atmosphere followed by mesosphere, thermosphere, stratosphere and troposphere.
10. Which layer of the atmosphere is responsible for aurora formation?
a) Ozone layer
b) Stratosphere
c) Exosphere
d) thermosphere
View Answer

Answer: d
Explanation: Ionosphere is a secondary layer of the atmosphere which extends through mesosphere, thermosphere and exosphere during day time and is responsible for aurora – natural light display in the sky in high altitude region.
11. Which of the following mentioned layers is NOT a homosphere?
a) Exosphere
b) Troposphere
c) Ionosphere
d) Mesosphere
View Answer

Answer: a
Explanation: Homospheric layers of atmosphere include layers where chemical composition is independent of molecular weight of gases due to mixing by turbulence. Hence the lower layers such as troposphere, ionosphere and mesosphere are homospheres.
12. Turbopause is highest layer of the homosphere.
a) True
b) False
View Answer

Answer: a
Explanation: Turbopause marks the height at which homogenous layer, the homosphere ends. Below the turbopause, turbulent mixing of air dominates.

13. The planetary boundary layer belongs to which of the following atmospheric layers?
a) Exosphere
b) Ionosphere
c) Stratosphere
d) None of the mentioned
View Answer

Answer: d
Explanation: The planetary boundary layer is the lowermost level of the atmosphere and it belongs to the troposphere.
14. What is the atmospheric pressure at sea level?
a) 101325 Pa
b) 14.696 psi
c) 760 Torr
d) All of the mentioned
View Answer

Answer: d
Explanation: As per International Standard Atmosphere, at sea level atmospheric pressure is equal to 101325 Pa which is equal to 14.696 psi and 760 Torr.
15. By international convention, which line marks the outermost boundary of the Earth's atmosphere?
a) Space line
b) Boundary line
c) Karman line
d) Astronaut line
View Answer

Answer: c
Explanation: The Karman line lies at an altitude of 100km, between the atmospheric boundary of the Earth and outer space.

1-The following is (are) abiotic components.

a. Plants
b. Animals
c. Land
d. All of the above

(Ans: c)

2-The following is the solid crust or the hard top layer of the earth.

a. Lithosphere
b. Hydrosphere
c. Atmosphere
d. Biosphere

(Ans: a)

3-An irregular surface with various landforms such as mountains, plateaus, plants, valleys, etc is

a. Hydrosphere
b. Biosphere
c. Lithosphere
d. Atmosphere

(Ans: c)

4-The _____ force of the earth holds the atmosphere around it

a. Magnetic
b. Gravitational
c. Centrifugal
d. All of the above

(Ans: b)

5-There could be an ecosystem of

a. Large rain forest
b. Desert
c. Ocean
d. All of the above

(Ans: d)

6-The following is not a natural ecosystem

a. Pond
b. Desert
c. Aquarium
d. Ocean

(Ans: c)

7-The thickness of crust on the ocean floors is about

a. 5km
b. 15km
c. 25km
d. 35km

(Ans: a)

8-The continental mass is known as

a. sial
b. sima
c. nife

d. sini

(Ans: a)

9-The oceanic crust is called

a. sial

b. sima

c. nife

d. sini

(Ans: b)

10-The innermost layer of the earth is made up of

a. Silicon and Alumina

b. Silicon and Magnesium

c. Silicon and Nickel

d. Nickel and Iron

(Ans: d)

11-The rock formed when molten magma cools

a. Sedimentary rock

b. Igneous rock

c. Metamorphic rock

d. All of the above

(Ans: b)

12-An example of intrusive igneous rock is

a. Granite

b. Basalt

c. Marble

d. All of the above

(Ans: a)

13- Igneous and Sedimentary rocks can change into metamorphic rocks under great ____ and _____ .

a. Heat, pressure

b. Heat, temperature

c. Volume, heat

d. Volume, temperature

(Ans: a)

14-Under great heat and pressure, limestone changes to

a. Granite

b. Slate

c. Marble

d. Basalt

(Ans: c)

15-The process of transformation of the rock from one to another is known as

a. Rock transformation

b. Rock formation

c. Rock cycle

d. Rock recycle

(Ans: c)

1. Today, the world's number one problem is:

(a) Pollution

(b) Population explosion

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(c) Nuclear proliferation

(d) Natural calamities

2. The major cause of global population growth in the 18 and 19 centuries was:

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(a) Decrease in death rates

(b) Decrease in birth rates

(c) Industrial revolution

(d) None of the above

ADVERTISEMENTS:

3. Population explosion has occurred in the last:

(a) 500 years

(b) 300 years

(c) 700 years

(d) 150 years

4. The world has a population of:

(a) 4 billion

(b) 5 billion

(c) 6 billion

(d) 7 billion

5. Study of trends in human population growth and prediction of future growth is called

(a) Demograph

(b) Biography

(c) Kalography

(d) Psychology

6. Which of the following is a problem not associated with population growth?

(a) Increased resource consumption

(b) Environmental pollution

(c) Food and energy storages

(d) None of the above

7. One of the critical mechanism by which the environment controls population of species is:

(a) Spread of disease

(b) Removal of excreta

(c) Check on death rate

(d) Supply of food

8. If the rate of addition of new member's increases with respect to the individual lost of the same population, then the graph obtained has:

(a) Declined growth

(b) Exponential growth

(c) Zero growth

(d) None of the above

9. Doubling time (Td) can be calculated by:

(a) Td = 70 / r

(b) Td = r / 70

(c) Td = 70 × r

(d) Td = 70 + r

10. The number of babies produced per thousand individuals is called:

(a) Natality

(b) Mortality

(c) Immigration

(d) Emigration

11. Population pyramids are useful to:

(a) Express the population growth rates

(b) Express the age-sex distribution

(c) Indicate the birth rates

(d) Indicate the death rates

12. The zero population growth due to equal birth and death rates is called:

(a) Natural increase

(b) Demographic transition

(c) Fertility rate

(d) Replacement level

13. The average life expectancy around the world is currently:

(a) Decreasing

(b) Increasing

(c) Not changing

(d) Stabilizing

14. The force which acts against the achievement of the highest possible level of population growth is known as:

(a) Saturation level

(b) Population pressure

(c) Carrying capacity

(d) Environmental resistance

15. Short-term properties of the atmosphere at a given place and time is referred as:

(a) Climate

(b) Microclimate

(c) Season

(d) Weather

16. Global atmospheric temperatures are likely to be increased due to:

(a) Burning of fossil fuel

(b) Water pollution

(c) Soil erosion

(d) None of the above

17. Global Warming could affect:

(a) Climate

(b) Food production

(c) Melting of glaciers

(d) All of the above

18. Which of the following is not a solution of global warming?

(a) Reducing fossil fuel consumption

(b) Planting more trees

(c) Deforestation

(d) None of the above

19. Greenhouse effect is related to:

(a) Green trees on house

(b) Global warming

(c) Grasslands

(d) Greenry in country

20. Which of the following is not a ‘greenhouse gas’?

(a) Oxygen

(b) Carbon dioxide

(c) Chlorofluorocarbons

(d) Methane

21. Which important greenhouse gas other than methane is being provided from the agricultural fields?

(a) SO

(b) Nitrous oxide

(c) Ammonia

(d) SO

22. Which of the following gases contributes maximum to the ‘Greenhouse effect on earth?

(a) Carbon dioxide

(b) Methane

(c) Chlorofluorocarbons

(d) Freon

23. The greenhouse effect is due to:

(a) Penetrability of low wavelength radiations through O3 layer

(b) Impermeability of long wavelength radiations through CO of the atmosphere

(c) Penetrability of low wavelength radiations through CO

(d) Impermeability of long wavelength radiations through O3 layer

24. The primary cause of acid rain around the world is:

(a) Carbon dioxide

(b) Sulphur dioxide

(c) Carbon monoxide

(d) Ozone

25. Acid rain is caused by increase in the atmospheric concentration of?

(a) Ozone and dust

(b) SO and NO

(c) SO and CO

(d) CO and CO

26. The primary air pollutant responsible for acid rains is:

(a) Carbon dioxide

(b) Sulphur dioxide

(c) Carbon monoxide

(d) Ozone

27. How many times more acidic a rain having pH = 5.6 will be in comparison to a neutral rain having pH 7?

(a) 72 / 5.62 = 1.56

(b) 7 / 5.6 = 1.25

(c) 107 / 105.6 = 20

(d) 5.6 / 7 = 0.8

28. Which of the following statements is incorrect in relation to checking and controlling acid rains?

(a) Catalytic converters are installed in cars

(b) Expensive scrubbers are installed in industries and thermal power stations

(c) Use of petrol cars is promoted by discouraging the use of diesel cars

(d) None of the above

29. Ozone day is observed on:

(a) January 03

(b) March 26

(C) November 10

(d) September 16

30. Ozone layer is present in:

(a) Troposphere

(b) Mesosphere

(c) Stratosphere

(d) Thermosphere

31. Harmful U.V. radiations emanating from the sun are prevented from reaching the Earth by the presence of ozone in the:

(a) Mesosphere

(b) Thermosphere

(c) Stratosphere

(d) Troposphere

32. Ozone layer of upper atmosphere is being destroyed by:

(a) Ozone

(b) PAN

(c) Aldehydes

(d) All of the above

33. Which one of the following gases can deplete the ozone layer in the upper atmosphere?

(a) Methane

(b) Ammonia

(c) Sulphur dioxide

(d) Carbon dioxide

34. Peeling of Ozone umbrella, which protects us from UV rays, is caused by:

(a) CO

(b) PAN

(c) CFCs

(d) Coal burning

35. The ultraviolet radiations in the stratosphere are absorbed by:

(a) Oxygen

(b) Ozone

(c) Sulphur dioxide

(d) Argon

36. Formation of hole in Ozone is maximum over

(a) India

(b) Antarctica

(c) Europe

(d) Africa

37. The ozone hole appears in Antarctica during

(a) Late winter

(b) Peak summer

(c) Early winter

(d) Autumn

38. Increasing skin cancer and high mutation rate are the result of:

(a) Ozone depletion

(b) Acid rain

(c) CO pollution

(d) None of the above

39. Which of the following statements about ozone is true?

(a) Ozone is a major constituent of photochemical smog

(b) Ozone is highly reactive

(c) Ozone protects us from the harmful UV radiation of sun

(d) All of the above

40. Ozone layer thickness is measured in:

(a) Millimeter

(b) Centimeter

(c) Decibels

(d) Dobson units

41. Ozone depletion in the stratosphere will cause:

(a) Forest fires

(b) Increased incidence of skin cancer

(c) Global warming

(d) None of these

42. Nitrogen oxide and hydrocarbons released by automobiles interact to form:

(a) Sulphur dioxide

(b) Carbon monoxide

(c) PAN

(d) Aerosols

43. The first CFC was synthesised in:

(a) 1892

(b) 1920

(c) 1980

(d) 1800

44. This may be use as refrigerator:

(a) CFC

(b) Carbon

(c) Acids

(d) Ozone

45. Chlorofluorocarbon releases a chemical harmful to ozone is:

(a) Chlorine

(b) Fluorine

(c) Sulphur dioxide

(d) Nitrogen peroxide

Answers:

1. (b); 2. (c); 3. (d); 4. (c); 5. (a); 6. (d); 7. (d); 8. (b), 9. (a); 10. (a); 11. (b); 12. (b); 13. (b); 14. (d); 15. (d); 16. (a); 17. (d); 18. (c); 19. (b); 20. (a); 21. (b); 22. (a); 23. (b); 24. (b); 25. (b); 26. (b); 27. (c); 28. (d); 29. (c); 30. (c); 31. (c); 32. (c); 33. (a); 34. (c); 35. (b); 36. (b); 37. (b); 38. (a); 39. (d); 40. (d) 41. (b); 42. (c); 43. (a); 44. (a); 45. (a)

1-The following is made by mixing two fibres.

a. Polycot
b. Polywool
c. Terrycot
d. All of the above

(Ans:d)

2-Which of the following is thermosetting plastic?

a. Polythene
b. PVC
c. Melamine
d. Nylon

(Ans:c)

3-Which of the following is thermoplastic?

a. Bakelite

b. PVC

c. Melamine

d. Silicone

(Ans:c)

4-4R principle consist of

a. Reduce – Reuse – Recycle – Recover

b. Refuse – Reuse – Recycle – Recover

c. Reduce – Reuse – Recycle – Remix

d. Reduce – Reuse – Recycle – Reproduce

(Ans:a)

5-The property of metals by which they can be beaten into thin sheets is called

a. Malleability

b. Ductility

c. Sonorously

d. None of the above

(Ans:a)

6-The property of metals by which they can be drawn into wires is called

a. Malleability

b. Ductility

c. Sonorously

d. None of the above

(Ans:b)

7-Which of the following is non metal?

a. Sodium

b. Phosphorous

c. Magnesium

d. Calcium

(Ans:b)

8-When a copper vessel is exposed to moist air for long, it acquires a dull _____ coating.

a. Black

b. Green

c. Brown

d. White

(Ans:b)

9-Sodium is stored in

a. Diesel

b. Petrol

c. Kerosene

d. All of the above

(Ans:c)

10-Phosphorous is stored in

a. Water

b. Petrol

c. Diesel

d. Kerosene

(Ans:a)

11-The slow process of conversion of dead vegetation into coal is called

a. Carbonisation

b. Carnation

c. Carbonation

d. Carburetion

(Ans:a)

12-Which of the following is known as "Black gold"?

a. Coal

b. Coke

c. Petroleum

d. All of the above

(Ans:c)

13-The head of the safety match contains

a. Potassium chlorate
b. Potassium chloride
c. Phosphorous chlorate
d. Phosphorous chloride

(Ans:a)

14-The type of combustion in which a material suddenly bursts into flames, without the application of any apparent cause is called

a. Spontaneous combustion
b. Rapid combustion
c. Explosion
d. None of the above

(Ans:a)

15-The hottest part of a candle flame is

a. Outer zone
b. Middle zone
c. Innermost zone
d. None of the above

(Ans:a)