

Solar Radiation, Heat Balance and Temperature

I. Choose the correct answer

Question 1.

Name the sphere which constitutes the earth.

- (a) atmosphere
- (b) hydrosphere
- (c) organic biosphere
- (d) lithosphere

▼ [Answer](#)

Answer: (a) atmosphere.

Question 2.

Earth receives almost all its energy from the

- (a) sun
- (b) moon
- (c) stars
- (d) none of these

▼ [Answer](#)

Answer: (a) sun.

Question 3.

What is the temperature at the sun's gaseous surface?

- (a) 570 degree Celsius
- (b) 5700 degree Celsius
- (c) 57000 degree Celsius
- (d) 5000 degree Celsius

▼ [Answer](#)

Answer: (b) 5700 degree Celsius.

Question 4.

Bodies radiate energy in which form?

- (a) light
- (b) wave
- (c) particles
- (d) none of these

▼ [Answer](#)

Answer: (b) wave.

Question 5.

Earth in turn radiates the heat back to the atmosphere in long waves called

- (a) terrestrial radiation
- (b) photochemical radiation
- (c) heat radiations
- (d) ultraviolet radiations

▼ [Answer](#)

Answer: (a) terrestrial radiation.

Question 6.

What is the distance between the sun and the earth?

- (a) 152 million km.
- (b) 1520 million km.
- (c) 15200 million km.
- (d) 1500 million km.

▼ [Answer](#)

Answer: (a) 152 million km.

Question 7.

On what day the earth is nearest to the sun?

- (a) 21st June
- (b) 23rd December
- (c) 3rd January
- (d) 21st July

▼ [Answer](#)

Answer: (c) 3rd January.

Question 8.

The dark spots appearing on the sun's surface are called

- (a) Sun spots
- (b) Aurora australis
- (c) Auroralis
- (d) none of these

▼ [Answer](#)

Answer: (a) Sun spots.

Question 9.

What causes the variations in insolation?

- (a) rotation of the earth on its axis
- (b) terrestrial radiations
- (c) atmospheric gases
- (d) none of these

▼ [Answer](#)

Answer: (a) rotation of the earth on its axis.

Question 10.

Which factor determines the angle of inclination of solar rays?

- (a) altitude
- (b) ocean currents
- (c) latitude
- (d) rotation of the earth

▼ [Answer](#)

Answer: (c) latitude.

Question 11.

On what day the sun is overhead at the Tropic of Cancer?

- (a) July 21st
- (b) June 21st
- (c) January 3rd
- (d) March 21st

▼ [Answer](#)

Answer: (b) June 21st.

Question 12.

The angle of inclination of sun's rays at noon at Delhi (28°N):

- (a) 85°
- (b) 47°
- (c) 0°
- (d) 57°

▼ [Answer](#)

Answer: (a) 85° .

Question 13.

The axis of rotation of Earth is inclined about

- (a) $23\frac{1}{2}^{\circ}$
- (b) $66\frac{1}{2}^{\circ}$
- (c) 28°N
- (d) none of these

▼ [Answer](#)

Answer: (b) $66\frac{1}{2}^{\circ}$.

Question 14.

When is North pole inclined $23\frac{1}{2}^{\circ}$ toward the sun?

- (a) 21st March
- (b) 21st June
- (c) 23rd September
- (d) 23rd March

▼ [Answer](#)

Answer: (b) 21st June.

Question 15.

Which processes operate on insolation during the passage through the atmosphere?

- (a) absorption
- (b) scattering
- (c) reflection
- (d) all of these

▼ [Answer](#)

Answer: (d) all of these.

Question 16.

Through which process the colour of the sky seems blue?

- (a) absorption
- (b) reflection
- (c) scattering
- (d) none of these

▼ [Answer](#)

Answer: (c) scattering.

Question 17.

The combined reflection from the earth's surface and clouds is known as

- (a) insolation
- (b) reflection
- (c) albedo
- (d) aurora Australis

▼ [Answer](#)

Answer: (c) albedo.

Question 18.

The heat transfer by contact is termed as

- (a) conduction
- (b) convection
- (c) radiation
- (d) none of these

▼ [Answer](#)

Answer: (a) conduction.

Question 19.

The earth transmits the heat by

- (a) conduction
- (b) convection
- (c) radiation
- (d) all of these

▼ [Answer](#)

Answer: (d) all of these.

Question 20.

By which process the earth's surface is heated?

- (a) convection
- (b) conduction
- (c) radiation
- (d) none of these

▼ [Answer](#)

Answer: (b) conduction.

Question 21.

How much solar radiation is received at the top of the atmosphere?

- (a) 100 units
- (b) 110 units
- (c) 47 units
- (d) 53 units

▼ [Answer](#)

Answer: (a) 100 units.

Question 22.

Which factor controls the temperature distribution?

- (a) latitude
- (b) altitude
- (c) ocean current
- (d) all of these

▼ [Answer](#)

Answer: (d) All of these.

Question 23.

What is normal lapse rate?

- (a) 6.5°C per km.
- (b) 65°C per km.

- (c) 5.6°C per km.
- (d) 6.6°C per km.

▼ [Answer](#)

Answer: (a) 6.5°C per km.

Question 24.

What least range of temperature is found between 20°S and 15°N?

- (a) 3°C
- (b) 5°C
- (c) 20°C
- (d) 10°C

▼ [Answer](#)

Answer: (a) 3°C.

Question 25.

The sun has how many shapes?

- (a) Four
- (b) Three
- (c) Two
- (d) Five

▼ [Answer](#)

Answer: (b) Three.

II. Fill up the blanks with suitable words

Question 1.

Sun is the ultimate source of energy for the planet

▼ [Answer](#)

Answer: earth

Question 2.

On January 3rd, the earth is nearest to sun, 147 million km. This position is called

▼ [Answer](#)

Answer: perihelion.

Question 3.

The and of insolation day during a day in a season and in a year.

▼ [Answer](#)

Answer: amount, intensity

Question 4.

The determines the angle of inclination of solar rays.

▼ [Answer](#)

Answer: latitude

Question 5.

When sun is overhead at noon over the equator these days are called

▼ [Answer](#)

Answer: equinoxes.

Question 6.

The the duration of daylight the will be the insolation.

▼ [Answer](#)

Answer: longer, larger

Question 7.

The clouds part of

▼ [Answer](#)

Answer: reflect, radiations

Question 8.

The earth transmits the heat through,,

▼ [Answer](#)

Answer: conduction, convection, radiation

Question 9.

The atmosphere is largely to short wave solar radiation.

▼ [Answer](#)

Answer: transparent

Question 10.

The air and water vapour carries the heat through the process of

▼ [Answer](#)

Answer: upward, convection
