1)

Who is called as the father of geography?
(a)Eratosthenes
(b)Herodotus
(c)Edwin Hubble
(d)Hoyle

1) a

1)

With reference to earth, consider the following statements:

- 1. The latitudinal circles of the earth are parallel to each other.
- 2. The longitude lines are perpendicular to the latitudes.
- 3. Parallels of latitudes are imaginary lines connecting places with the same latitude.

Which of the above statements is/are correct?

- (a)1 and 2 only
- (b)1 and 3 only
- (c)2 and 3 only
- (d)1, 2 and 3

2)

With reference to Longitudes and Latitudes, consider the following statements:

- 1. Distance between two longitudes always remains constant.
- 2 The length of Longitudes starts decreasing from 23* North and South of the Equator towards the poles.
- 3. Latitudes are parallel to the equator.

Which of the statements given above is/are correct?

- (a)1 only.
- (b)1 and 3 only
- (c)3 only.
- (d)1, 2 and 3.

3)

Consider the following statements:

- 1. All the Longitudes are part of the Great Circle.
- 2. The Equator is the only latitude that is a Great Circle.

Which of the statements given above is/are correct?

- (a)Only 1
- (b)Only 2
- (c)Both 1 & 2
- (d)Neither 1 nor 2

4)

Consider the following statements about the revolution of the Earth around the Sun

- 1) Perihelion is observed on the 4th of July.
- 2) Aphelion is observed on January 3rd.

Which of the statements given above is/are incorrect?

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)Neither 1 nor 2

5)

With reference to the period of rotation of the earth, consider the following statements:

1. The time taken by the earth to rotate on its own axis so that the sun appears in the same position in the sky is known as a sidereal day

2. The time taken by the earth to rotate on its own axis so that the distant star appears in the same position in the sky is known as a solar day Which of the above statement(s) is/are correct? (a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2 6) Which of the following can be stated as evidence of Earth"s sphericity? 1. Observing Lunar Eclipse 2. Observing Sunrise and Sunset 3. Observing other planetary bodies 4. Observing horizons Choose the correct answer from the codes given below: (a)1, 2, and 4 only (b)1. 3. and 4 only (c)1, 2, ,3 and 4 (d)2, 3, and 4 only 7) With reference to the speed of the earth, consider the following statements: 1. The linear speed of rotation of the earth is the maximum at the equator. 2. The linear speed decreases towards the poles to zero. 3. Satellites are launched closer to the equator so that the earth's rotation provides an initial thrust required for the launching. Which of the above statements is/are correct? (a)1 and 2 only (b)2 and 3 only (c)3 only (d)1, 2 and 3. 8) Consider the following statements with respect to the shape of the earth: 1. This shape of the earth is called a Geoid or Oblate Spheroid 2. The Geoid shape was first proposed by Newton Which of the statements given above is/are correct? (a)1 Only (b)2 Only (c)Both 1 and 2 (d)None of the Above 9) Write short notes on (150 words /10 marks): 1. Great Circle. 2. Sidereal Day.

Briefly explain the revolution and rotation of the earth?(150 words/10 marks)

Answers 1) d 2) c 3) c 4) c 5) d 6) c 7) d 8) c

1)

Consider the following statements:

- 1. When the sun is vertically overhead in the tropics of cancer, the southern hemisphere will experience the
- 2. When the sun is vertically overhead at the tropic of Capricorn, the northern hemisphere will experience the shortest night.

Which of the above statements is/are correct?

(a)Only 1

(b)Only 2

(c)Both 1 and 2

(d)Neither 1 nor 2

2)

The term "Equinox" refers to:

- 1. The period when Sun is perpendicular to the equator.
- 2. The period when Sun is vertically overhead at the equator.
- 3. The period when Sun is vertically overhead in the tropics.
- 4. The period when all parts of the globe experience equal days and nights.

Select the answer using the codes given below.

(a)1 and 4 only

(b)2 and 4 only

(c)1, 2 and 4 only

(d)1, 3 and 4 only

3)

Which of the following factors are responsible for the change in seasons on earth?

- 1. Rotation of the Earth on its own axis.
- 2. Revolution of the Earth in its orbit around the Sun.
- 3. Earth's tilted axis.

Select the correct answer using the codes given below:

(a)1, 2 and 3

(b)3 only.

(c)1 and 3 only

(d) 2 and 3 only.

4)

With reference to the rotation and revolution of the Earth which of the following is/are correct?

- During the summer solstice (21st of June) Northern hemisphere is tilted away from the Sun.
 On the Equator length of day and night remain approximately the same throughout the year.
 On an equinox, day and night are of approximately equal duration.

Select the correct answer using the code given below.

(a)1, and 2 only

(b)2 and 3 only

(c)1,and 3 only

(d)1,2, and 3

 The time along a particular longitude always remains the same. Russia has the highest number of time zones. India has 5 time zones. Which of the statement/s given above is/are correct? (a)1 only (b)2 only (c)1 and 2 only (d)2 and 3 only.
6)
Consider the following statements about seasonality: 1. If there was no tilt of the Earth, there would have been no seasonality experienced on Earth 2. Perihelion and Aphelion are related to the distance of the sun from the earth Which of the statements given above is/are correct? (a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2
7)
Which country has maximum number of time zones? (a)USA (b)Russia (c)France (d)China
8)
Consider the following statements with reference to time zones: 1) Entire globe is divided into 24 time zones. 2) From the Greenwich meridian, the time increases towards the west and decreases towards the east. Which of the above statements is/are incorrect? (a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2
9)
Write short notes (75 Words each/10 Marks) 1. Polar day and polar night. 2. Solstice and Equinox.
10)
Discuss the factors responsible for different seasons on the earth with the help of diagrammatic representation. (150 words / 10 marks)

Consider the following statements.

- 1) a
- 2) c

- 3) a 4) b 5) a 6) c 7) c 8) b

1)

Consider the following statements:

- 1. Stars become white dwarfs after they have exhausted their nuclear fuel.
- 2. Only the hot core of the star settles down to become a white dwarf.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

2)

With reference to the sequence of formation of the star which of the following is correct?

- i. Nebula.
- ii. Protostar.
- iii. Red Gaint.
- iv. White Dwarf.

Select the correct chronological order using the code given below:

(a)i-ii-iii-iv

(b)ii-i-iii-iv

(c)ii-i-iv-iii

(d)i-ii-iv-iii

3)

Supernova explosion happens after formation of?

- (a)Red super giant
- (b)Black hole
- (c)White dwarf
- (d)Stellar nebula

4)

With respect to Blackhole, consider the following statement:

- 1. A black hole is formed by lighter stars whereas bigger stars lead to supernova.
- 2. The boundary of a black hole is called the event horizon.
- 3. The centre of a black hole is characterized by the presence of a Singularity.
- 4. Collision of two black holes leads to the generation of gravitational waves.

Which of the above statements is/are INCORRECT?

(a)1 only

(b)2, 3 and 4 only

(c)2 and 3 only

(d)All of the above

5)

International Date Line refers to which of the following longitudes?

(a)0 degree

(b)90 degree

(c)180 degree

(d)360 degree

6)

Consider the following statements regarding daylight saving time:

- 1. It is the practice of shifting time by 1 hour ahead by forwarding the time in the clock during winter.
- 2. This practice is prevalent in temperate regions.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

7)

Which of the statements regarding Pulsating theory of the origin of the universe is/are correct?

- 1. It was proposed by Fred Hoyle.
- 2. As per the theory Universe expands and contracts alternatively.

Select the correct answer using the codes given below:

(a)1 only

(b)2 only

(c)1 and 2.both.

(d)Neither 1 Nor 2.

8)

Which of the following is proposed under the Steady state theory of origin of universe?

- (a) The universe expands because of explosion and contracts because of gravitational pull.
- (b)13.7 billion years ago, the Universe was an extremely compact, dense, and hot singularity.
- (c) The universe is always expanding but maintaining a constant average density.
- (d)All of the above

9)

Explain lifecycle of stars and related formations. [150 words]

10)

Write short notes on the followings: (10 Marks/ 150 Words)

- 1. International Date Line(IDL)
- 2. Daylight Saving Time(DST).

- 1) c
- 2) a
- 3) a

- 4) a 5) c 6) b 7) b 8) c

1)

Consider the following statements:

- 1. Astronomical unit is the distance between earth and moon.
- 2. Light year is a unit of time.

Which of the following statements is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

2)

Consider the statements regarding our Solar System-:

- Pluto is the largest planet revolving around the Sun.
 Every planet except Venus rotates from West to East just like Earth on its own axis.
 It is a nuclear fusion that takes place within the Sun which releases huge heat energy.

Choose the correct statements from the following code.

- (a)1 and 2 only.
- (b)1 and 3 only.
- (c)2 and 3 only.
- (d)3 only.

3)

The term 'Goldilocks Zone' is often seen in the news in the context of

- (a) The limits of habitable zone above the surface of the Earth
- (b)Regions inside the Earth-like planets in outer space
- (c)Search for the Earth-like planets in outer space
- (d)Search for meteorites containing precious metals

4)

Arrange the following in their increasing distance from the Sun:

- 1. Venus
- 2. Earth
- 3. Jupiter
- 4. Mercury
- 5. Uranus

Select the correct answer from the codes given below:

- (a)4-1-2-3-5
- (b)2-1-3-4-5
- (c)4-1-2-5-3
- (d)4-3-1-4-5

5)

Consider the following:

- 1. Jupiter
- Venus
 Neptune
 Saturn

5. Mars Which of the planets given above are the gaseous planets? (a)1, 3 and 4 only (b)1,2 and 3 only (c)1, 4 and 5 only (d)2, 3 and 5 only 6)

With regard to the Nebular Hypothesis of the origin of the earth and other planets, consider the following statements:

- 1. It was one of the earlier and more popular hypotheses explaining the origin of the earth.
- The hypothesis was given by Chamberlin–Moulton.
 The hypothesis considered that the planets were formed out of a cloud of material associated with a

Which of the statements given above is/are correct?

(a)1 and 2 Only

(b)2 and 3 Only

(c)1 and 3 only.

(d)1,2 and 3

7)

Consider the following statements regarding the gaseous hypothesis:

- 1. It was proposed by Immanuel Kant.
- 2. As per this hypothesis, the primordial matter was supernaturally created and was in a calm and cool state.

Which of the statements given above is/are Incorrect?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

8)

Write a brief note on the following theories regarding the origin of the solar system: (150 words/10 marks)

- a. Evolutionary theories
- b. Catastrophic theories

9)

Write short notes on: (150 words/10 marks)

- a. Why doesn"t Polaris move?
- b. The structure of Sun

- 1) d
- 2) d
- 3) c 4) a 5) a 6) c 7) d

1)

With reference to Lunar Eclipse, consider the following statements:

- 1. This can occur when the sun, Earth, and moon are perfectly lined up.
- 2. A total lunar eclipse has the direct sunlight completely blocked by the earth"s shadow.
- 3. A lunar eclipse may be viewed from anywhere on the night side of the Earth.

Which of the statements given above is/are correct?

(a)1 only

(b)1 and 3 only

(c)2 and 3 only

(d)1, 2 and 3

2)

With reference to Solar Eclipse, consider the following statements:

- 1. A Total eclipse occurs when the Moon completely obscures the intensely bright light of the Sun.
- 2. During a partial solar eclipse, the moon covers the Sun's disk completely.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)None of the above

3)

Consider the following statements:

- 1. The supermoon is when the moon is at the position of apogee.
- 2. Blue Moon is the second Full moon of the month.

Select the correct statement:

(a)Only 1

(b)Only 2

(c)Both 1 and 2

(d)Neither 1 nor 2

4)

Which of the statements given below is/are correct?

- 1. A meteor is any solid debris originating from asteroids, comets, or other celestial objects and floats through interplanetary space.
- 2. A meteoroid is a streak of light that appears in the sky when a meteoroid enters the atmosphere at about 200 km at high speed and burns up because of friction.
- 3. In some cases, the meteoroid does not burn up completely and makes its way to the Earth's surface. The surviving chunk is called a meteorite.

Select the correct answer from the codes given below:

(a)1 and 2 only

(b)2 and 3 only

(c)3 only

(d)1,2 and 3

5)

Which of the planets has retrograde rotation?

- (a)Mars and Earth
- (b) Venus and Uranus
- (c)Mercury and Venus
- (d)Jupiter and Saturn

6)

Match the following-

Planet Moon

1. Mars A. Ganymede
2. Jupiter B. Phobos
3. Saturn C. Titan
Choose the correct code from below

(a)1-B, 2-A, 3-C (b)1-C, 2-B, 3-A (c)1-B, 2-C, 3-A (d)1-C, 2-A, 3-B

7)

With reference to Comet, consider the following statements:

- 1. Its tail is always pointed towards the sun while it revolves around the Sun.
- 2. It revolves around the Sun.
- 3. The Comets can intersect the orbit of the planets.

Which of the above statement(s) is/are correct?

- (a)1 and 3 only
- (b)2 only
- (c)2 and 3 only
- (d)1, 2, and 3

8)

Which of the following statements is/are correct with regard to differences between the solar eclipse and the lunar eclipse?

- 1. A solar eclipse happens during the full moon day while a lunar eclipse on the other hand happens during the new moon day.
- A solar eclipse happens for a shorter duration while a lunar eclipse on the other hand happens for a longer duration.
- 3. Unlike a lunar eclipse, a solar eclipse is not safe to watch with direct eyes.

Select the correct answer from the options given below:

- (a)1 only
- (b)1 and 2 only
- (c)2 and 3 only
- (d)1 and 3 only

9)

Define the following terms: (50 words each/10 marks)

- a) Dwarf Planets
- b) Asteroid
- c)Goldilocks zone

Write a short note on(50 words each/10 marks):
1. Super Moon.
2. Blue Moon.
3. Blood Moon.

- 1) d
- 2) a
- 3) b 4) c 5) b
- 6) a 7) c 8) c

1)

Which of the following is/are the direct sources to find the earth's interior?

- 1. Mining
- 2. Drilling
- Volcanic eruption
 Gravitational field

Select the correct answer using the codes given below:

(a)1,and 2 only

(b)1, 2 and 3 only

(c)3 and 4 only

(d)2 and 4 only

2)

Which of the following statements is/are correct concerning the evolution of Earth?

- 1. The earth gets evolved from a hot and barren object to a solid object through a gradual process of cooling and density differentiation.
- 2. Its first atmosphere was lost due to the lightweight of gasses and because of solar winds.
- 3. In the Second Stage of the formation of the atmosphere due to degassing, the atmosphere largely contained water vapor, carbon dioxide, and methane.

Select the correct answer from the codes given below:

(a)1 and 2 only

(b)1, 2 and 3.

(c)2 and 3 only

(d)1 only.

3)

Consider the following statements regarding the formation of the second atmosphere of the earth

- 1. It was formed due to the process of Degassing.
- 2. It was very rich in Oxygen.

Which of the above-given statement/s is/are correct?

(a)1 only

(b)2 only

(c)Both 1 & 2

(d)Neither 1 nor 2

4)

Consider the following statements:

- 1. Human beings appeared on the planet earth in the middle of the Holocene phase.
- 2. The maximum evolution of human beings happened in the Pleistocene epoch.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

5)

What do you understand by Geomorphology?

(a)It is the study of the physical features of the earth and the process in which those featured are formed.(b)It is the study of rocks, and of the way they are formed.(c)It is the study of solar system.(d)None of the above.
6)
Which of the following gases mainly constituted the first/early thin atmosphere of the earth? 1. Hydrogen. 2. Helium. 3. Nitrogen. 4. Oxygen. Select the correct answer from the codes given below: (a)1 and 3 only. (b)2 and 3 only (c)1 and 2 only. (d)1,2 and 3.
 Consider the following statements regarding the evolution of the earth: Between 3000-2500 million years ago, blue-green algae emerged in ocean water which started to release oxygen through the process of photosynthesis. By 2000 million years ago ocean was saturated with oxygen and oxygen started flooding the atmosphere and a new atmosphere emerged. The oceans were completely formed around 4000 million years ago. Select the correct answer from the options given below: and 2 only. and 3 only. and 3 only. and 3 only.
8) Briefly explain the important events related to evolution of earth with the help of geological time scale. (150 words/10 Marks)
9) Write a short note on(75 words each/10 marks): 1. Phanerozoic eon. 2. Holocene epoch.

- 1) b
- 2) b

- 3) a 4) d 5) a 6) c 7) d

1)

Which of the following is direct sources of information to study the interior of Earth?

- (a)Seismic activity
- (b)Gravitation
- (c)Deep Ocean Drilling
- (d)Magnetic Field

2)

Consider the following statements:

- 1. Oceanic crust is made up of granitic rock.
- 2. Continental crust is basaltic in nature and is heavier than Oceanic crust.

Which of the statements given above is/are correct?

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)Neither 1 nor 2

3)

Consider the following pairs:

Layers also considered

1. Crust (Continental) SiMa 2. Mantle SiAl 3. Core NiFe

Which of the pairs given above is/are correctly matched?

- (a)1 only
- (b)1 and 2 only
- (c)2 and 3 only
- (d)3 only

4)

Consider the following statements:

- (1) Lithosphere is made up of crust as well as upper mantle.
- (2) Lithosphere is thickest below the continents and thinnest at the mid-ocean ridges.

Which of the statements given above is/are correct?

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)Neither 1 nor 2

5)

With reference to the interior of Earth, consider the following statements:

- 1. The crust is separated from the mantle by the Moho discontinuity.
- 2. The asthenosphere is in a pure liquid state.

Which of the statements given above is/are correct?

- (a)1 only
- (b)2 only
- (c)Both 1 and 2

6)

Which of the following is/are correct with reference to igneous rocks?

- (a) They are formed due to cooling and solidification of magma.
- (b) They are the primary rocks.
- (c)Basalt is an example of extrusive igneous rock.
- (d)All of the above

7)

Which of the following are indirect methods to understand the interior of the Earth?

- 1. Meteorites
- 2.Gravitation
- 3. Magnetic field

Select the correct answer using the code given below.

- (a)1, 2 and 3
- (b)2 and 3
- (c)1 and 4
- (d)1, and 2

8)

With reference to Sedimentary rocks, consider the following statements:

- 1. This rock is formed by weathering, deposition, and subsequent cementation.
- Sedimentary rocks contain different layers.
 Sedimentary rocks also contain various fossil evidence.

Which of the statements given above is/are correct?

- (a)1 and 2 only
- (b)2 and 3 only
- (c)1 and 3 only
- (d)1, 2 and 3.

9)

Which of the following statements are correct regarding Extrusive Rocks?

- 1. They are formed from the cooling of Magma below the surface.
- 2. Faster cooling results in a Glassy texture and lower strength.
- 3. Examples of Extrusive Rocks are Basalt and Andesite

Select the correct answer from the codes given below:

- (a)Only 1 and 2
- (b) None of the above
- (c)Only 2 and 3
- (d)All the above

10)

Explain about Extrusive and Intrusive rocks. (150 words / 10 marks)

11)

Discuss the physical division of the interior of the earth. (150 words/10 marks)

- 1) c 2) d 3) d 4) c 5) a 6) d 7) a 8) d 9) c

1)

Consider the following statements regarding rocks:

- 1. Metaphoric rocks are formed due to the direct solidification of magma.
- 2. Igneous rocks are formed due to changes in temperature and pressure.
- 3. Gneiss is a type of metamorphic rock.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b)3 only

(c)2 and 3 only

(d)1, 2 and 3 only

2)

Consider the following pairs of igneous/sedimentary rocks and metamorphic rocks:

 Granite – Gneiss
 Limestone – Marble 3. Clay – Quartz 4. Sandstone – Schist

Which of the above are correctly matched examples of metamorphosis?

(a)1 and 2 only

(b)3 and 4 only

(c)2, 3 and 4 only.

(d)1, 2 and 4 only.

3)

Consider the following statements:

- A metamorphic rock is a result of a transformation of a pre-existing rock.
 The original rock is subjected to very high boot card. The original rock is subjected to very high heat and pressure, which cause obvious physical and/or chemical changes.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)1 and 2 only

(d)None of the above

4)

Geomorphic process include

1. Exogenic Process

2. Endogenic Process

Which of the above statements is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

5)

Consider the following statements

1. Diastrophic forces are slow and continuous.

2. Catastrophic forces are sudden and discontinuous. Which of the statement(s) given above is/are correct? (a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2
6)
With respect to the geomorphic forces, which of the following statements is/are correct? 1. Glaciers, wind, water, and ocean waves are forms of exogenic forces. 2. Exogenic movements are the earth"s movement caused due to various forces from inside the earth"s surface. Select the correct answer from the codes given below: (a) 1 only (b) 2 only (c) Both 1 and 2. (d) Neither 1 nor 2.
7)
Which of the following conditions indicate the impact of global warming? Select the correct answer from the codes given below: 1. Melting of Glaciers 2. Rise in the sea level 3. Change in weather conditions 4. Arctic Amplification Codes: (a) 1 and 2 (b) 1, 2, and 3 only (c) 2, 3, and 4 only (d) All of the above
8)
Consider the following statements: 1. The Atlantic Ocean is the youngest ocean of all oceans. 2. The Indian Ocean is the only ocean named after a country. 3. International Hydrographic Organization recently declared the southern ocean as the 5th ocean. Select the correct statement: (a) 1 only (b) 1 and 2 only (c) 1 and 3 only (d) 1, 2 and 3.
9)
Discuss about the types of Geomorphic processes.(150 words/10marks)

- Write short notes on the following: a. Rock cycle b. Metamorphic rocks (150 words/10 marks)

- 1) b

- 2) a 3) c 4) c 5) c
- 6) a 7) d 8) d

1)

With reference to Continental Drift Theory (CDT), consider the following statements:

- 1. Tidal force was responsible for the movement of Laurasia and Gondwanaland"s landmass.
- 2. CDT considers the movement of continents in various directions.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

2)

Who among the following propounded Continental Drift Theory?

(a)Fredwine and Mathews

(b)Arthur Holmes

(c)Harry Hess

(d)Alfred Wegner

3)

With reference to Continental drift theory, consider the following statements:

- The big landmass was called Panthalassa which was covered by one big ocean called Pangaea.
 Tethys divided the Panthalassa into two huge landmasses.
 Around 20 million years ago, Arabia got separated from Africa and merged into Asia.

Which of the statements given above is/are correct?

(a)1 and 3 only

(b)3 only

(c)1 and 2 only

(d)1, 2 and 3.

4)

With reference to Mountains, consider the following statements:

- 1. Fold Mountains are formed due to episodes of orogeny since the formation of Earth.
- 2. All the Fold Mountains are the youngest mountains on the earth.
- The Rockies and Andes are continental marginal Block mountains.

Which of the statements given above is/are correct?

(a)1 and 3 only

(b)1 only

(c)2 and 3 only

(d)1, 2 and 3

5)

Consider the following statements

- 1. Epeirogenic forces are mountain building forces
- 2. Orogenic forces are tangential forces
- 3. Epirogenic forces are radial forces
- 4. Orogenic forces are continent building forces

Choose the correct code -

(a)1,2 only

```
(b)2, 3 only
(c)1, 2, 4 only
(d)2, 3, 4 only
```

6)

Consider the following statements with respect to the types of Folds

- 1. The overturned fold is one in which one limb of the fold is thrust upon another fold due to intense tensional forces.
- Nappes are formed due to an increase in the continued compressive force one limb of the recumbent fold slides forward and overrides the other fold.

Which of the above statement(s) is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

7)

Consider the following statements with respect to faults

- 1. Normal faults occur due to the compressional forces and resulted in the movement of one block in an upward direction with respect to the other block.
- 2. A reverse fault occurs due to the tensional forces and results in the movement of one block in a downward direction with respect to the other block.
- In a transform fault, both the blocks move across each other involving no vertical movement with only lateral movement.

Which of the above statements is/are correct?

(a)1 and 2 only

(b)3 only

(c)1 and 3 only

(d)2 an 3 only

8)

With reference to the difference between fold and fault, consider the following statements:

- The folds are formed when the dominant force is compressive force whereas faults can occur either due to tensional or compressional forces.
- 2. The up-folded and down-folded rock strata are known as anticlines and synclines whereas the trough-like depression in a fault is called Graben and the upthrown block is called Horst.
- Upwarping and down warping are the features that occurred in folds whereas cracks, fractures, and ruptures are the features of faults.

Which of the following statements is/are correct?

(a)1 only

(b)2 and 3 only

(c)1 and 3 only

(d)All of the above

9)

Eustatic movements are related to?

(a) Worldwide movement of sea level resulting from changes in the total volume of liquid seawater or capacity of ocean basins.

- (b) Movement of galaciers in northern Hemisphere.
- (c)Movement of earth"s outer core.
- (d)None of the above.

10)

Differentiate between Epeirogenic Forces and Orogenic Forces ? (150 words/ 10 marks)

11)

Write short notes on - (150 words / 10 Marks)

- 1. Faults
- 2. Isostasy
- 3. Eustatic Movements

- 1) c
- 2) d
- 3) b 4) b
- 5) b
- 6) b
- 7) b
- 8) d
- 9) a

1)

With reference to Tectonic Plate, consider the following statements:

- 1. These plates float on top of the hotter and more fluid asthenosphere.
- 2. A North American plate is a Major plate.
- 3. The Eurasian Plate is a minor plate.

Which of the statements given above is/are correct?

(a)1 only

(b)1 and 2 only

(c)2 and 3 only

(d)1, 2 and 3

2)

Where is the Nazca plate located?

- (a)Between Central America and Pacific plate
- (b)Northward of India-Australia-New Zealand Plate
- (c)Between South America and Pacific Plate
- (d)Between Asiatic and Pacific Plate

3)

Consider the following statements about the mid-oceanic ridge:

- The oldest rocks are found near the mid-oceanic ridge
 New rocks are found near the trenches.

Which one of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)None of the above

4)

Which of the following pairs is/are correctly matched?

- 1. Continental drift- Harry Hess
- Seafloor spreading- A. Wegner
 Plate JT Wilson

Select the correct answer from the codes given below:

(a)3 only

(b)2 only

(c)1 and 3 only

(d)1 and 2 only

5)

With reference to Plate tectonics theory, consider the following statements.

- 1. There are seven major and seven minor lithospheric plates.
- 2. Pacific plate is the largest among all the major plates.

Which of the above statements is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2
6)
Which of the following statements is/are correct regarding the term "Plate"? 1. The term was coined by Morgan, Mckenzie, and Parker. 2. Plates are the broad, rigid segments of the Lithosphere which includes the crust and the rigid upper part of the upper mantle. Select the correct answer using the codes given below: (a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2
Find the correct statement with respect to "Sea Floor Spreading" 1. The concept was given by Harry Hess. 2. The young rocks take birth at ridges and push the older ones towards the continent. 3. Oceanic crust reveals that they are much younger than continental areas. 4. The seafloor acts as a conveyor belt. (a)1 and 4 only (b)1,2 and 3 only (c)2 and 4 only (d)All the statements are correct.
8)

Briefly explain the different types of Divergent plate movements with examples.(150 words/10marks)

9)

Explain the theory of sea floor spreading. (150 words/10 marks)

- 1) b
- 2) c 3) d

- 4) a 5) b 6) b 7) d

1)

Consider the following statements:

- 1. Seafloor spreading is a phenomenon that occurs at convergent plate boundaries.
- 2. A convergent plate boundary is formed when two tectonic plates move apart from each other.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

2)

Which plate is the principal cause of the Andes Mountains?

- (a)The Nazca Plate
- (b)The Arabian Plate
- (c)The North American Plate
- (d) The Caribbean Plate

3)

Which of the following statements is/are incorrect?

- Convergent plate boundaries are constructive plate boundaries.
 Divergent plate boundaries generally lead to the destruction of plates.
 Divergent plate boundaries are only formed in the oceans.

Select the correct answer using the codes given below.

- (a)1 and 2 only
- (b)2 and 3 only
- (c)1, 2, and 3
- (d)None of the above.

4)

Which of the following are formed as a result of Convergent plates?

- 1. The Aleutian Islands
- The Himalayas
 The Philippines
 Red sea

Select the correct answer using the codes given below:

- (a)1 and 4 only
- (b)1, 2, and 3 only
- (c)2 and 3 only
- (d)1, 2, 3 and 4

5)

Consider the following statements:

- 1. Benioff zone is a zone of seismicity corresponding with the downward movement of a slab in a subduction zone.
- 2. Subduction zones are not associated with any kind of earthquake.

Which of the statements given above is/are correct?
(a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2
6)
Consider the following statement Regarding Transform plate Boundaries 1. Transform Plate Boundaries are locations where two plates slide past one another. 2. The fracture zone that forms a transform plate boundary is known as a transform fault. 3. Most transform faults are found in the ocean basin and connect offsets in the mid-ocean ridges. Choose the correct option- (a) 2 and 3 only (b) 1 and 3 only (c) 1, 2 and 3 only (d) 1 and 2 only
7)
Consider the following statements with regard to oceanic trenches: 1. They are the deepest points of the oceans. 2. They are present at convergent plate boundaries. 3. They form due to the subduction of tectonic plates. Which of the statement(s) given above is/are correct? (a)1, 2 and 3 (b)1 and 3 only (c)1 and 2 only (d)None of these
8)
Explain the Oceanic-Oceanic convergent plate boundary. Also, give the landforms associated with it. (150 words)
9)
Explain in detail the various features of conservative plate bounadry with example?(150 words/10 marks)

- 1) d
- 2) a
- 3) c 4) b 5) a 6) c

- 7) a

1)

Consider the following statements:

- 1. Oceanic crust is made up of granitic rock.
- 2. Continental crust is basaltic in nature and is heavier than Oceanic crust.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

2)

With reference to Magma, consider the following statements:

- 1. Basalt Magma has Low fluidity.
- 2. Granitic magma has high fluidity
- 3. The Andesitic Magma has a medium fluidity.

Which of the statements given above is/are correct?

(a)3 only

(b)1 and 2 only

(c)2 and 3 only

(d)1, 2 and 3.

3)

Which of the following can cause the movement of tectonic plates?

- 1. Rising convectional current below the lithosphere.
- Tidal forces
 Ridge push
 Slab pull

Select the correct answer using the code given below the list.

(a)1, 3, and 4 only

(b)2, 3, and 4 only

(c)1 and 2 only

(d)1, 2, 3, and 4

4)

Which of the following statements are correct?

- 1) Magma which rises from a mantle plume is basaltic.
- 2) The Hawaiian Islands are shield volcanoes.

Select the correct answer using the code given below:

(a)1 only

(b)2 only

(c)Neither 1 and 2

(d)Both 1 and 2

5)

Consider the following statements about 'Ring of Fire':

 It is also known as the circum-Pacific belt of volcanoes It is an active seismic zone It is a zone of divergent plate margin Select the correct answer using the code given below: (a)1 only (b)1 and 2 only (c)2 and 3 only (d)1, 2 and 3
6)
With reference to Convectional Current Theory, consider the following statements: 1. Arthur Holmes in the 1930s discussed the possibility of convection currents operating in the mantle portion. 2. These currents are generated due to radioactive elements causing thermal differences in the mantle portion. Which of the statements given above is/are correct? (a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2
7)
Consider the following statement regarding Mantle plumes: 1. It involves jet-like plumes of low-density magma material from the core-mantle boundary. 2. The heat from the plume causes rocks in the lower lithosphere to melt. Choose the correct option from below: (a)1 only (b)2 only (c)1 and 2 Both. (d)None of the above
8)
What type of landform is formed by a mantle plume hot spot? (a)Rift Valley (b)Island Chains (c)Mountain (d)Fault
9)
Differentiate between the characteristics and features of Granitic magma and Basaltic magma. [150 words/10 marks]
10)
Write a short note on:(150 words/10 marks) 1 Mantle plume. 2. Volcanism.

- 1) d
- 2) a

- 3) a 4) d 5) b 6) c 7) c 8) b

1)

Consider the following statements with regard to the phenomenon of Aurora:

- Auroras are produced in the upper atmosphere when the magnetosphere is sufficiently disturbed by solar winds.
- 2. They are more prominent over the equator as opposed to the poles.
- 3. The phenomenon in Southern Hemisphere is referred to as Aurora Borealis.

Which of the statements given above is/are correct?

(a)Only 1

(b)Only 1 and 2

(c)All of the above

(d)1 and 3

2)

The Hawaiian volcanoes are the most famous examples of?

(a)Shield Volcano

(b) Ash Cynder Volcano

(c)Composite Volcano

(d)Parasite Volcano

3)

Which of the following statements is/are correct?

- 1. Hot Springs and Geysers are forms of intrusive volcanic landforms.
- 2. Hot springs are water sinks deep enough beneath the surface to be heated by a hot spot or a magma chamber.
- 3. Geysers are hot water and superheated steam which is ejected intermittently at regular intervals.

Select the correct answer using the codes given below:

(a)1 and 2 only

(b)2 and 3 only

(c)1 and 3 only

(d)All of the above

4)

Consider the following statements

- 1. A crater is a depression on top of a volcanic mountain.
- 2. Broken crater due to high-intensity eruption is called a caldera.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

5)

Which of the following can be the consequences if the earth stops rotating?

- 1. There will be no distribution of temperature across the earth.
- 2. The earth"s magnetic field will stop.
- 3. Earth will be strongly affected by solar flares.

Choose the correct answer from the codes given below:

- (a)1 and 2 only
- (b)1 and 3 only
- (c)2 and 3 only
- (d)1,2 and 3

6)

Consider the following pairs:

Formation Characteristic

Laccoliths: Small dome-shaped structures.
 Pacoliths: Saucer-shaped structure.
 Sill: Near horizontal bodies.

4. Lapolith: A wavy mass of intrusive rocks.

Choose the correct option from the below:

(a)Only 1 is correct

(b)Only 2 pairs are correct (c)Only 3 pairs are correct (d)All the pairs are correct

7)

Consider the following statements;

- 1. They are formed by the accumulation of viscous magma around the vent,
- 2. They are majorly found in the regions of subduction zones and formed by andesitic magma, which is viscous in nature.
- 3. They are steeper in slope formed by multiple layers of magma accumulation,
- 4. Mount Fuji is an example of this type of volcano,

Which of the following type of volcano is described in the above-mentioned points?

- (a)Strato Volcano
- (b)Shield Volcano
- (c)Ash Cinder cone
- (d)None of the above

8)

Consider the following pairs;

- 1. Mount Etna Italy
- 2. Taal Volcano Indonesia
- 3. Ojas del Salado South America
- 4. Mount Merapi Indonesia

Choose the correct code from below-

- (a)only 1 is correctly mateched
- (b)Only 2 pairs are correctly matched
- (c)Only 3 pairs are correctly matched
- (d)All of them are correctly matched

9)

Explain the concept of Paleomagnetism, Polar wandering and magnetic reversal. (150 words, 10 marks)

10)

Discuss the concept of geomagnetism and also highlight words/10 marks)	the causes that make earth to behave as magnet . (150
,	

- 1) a
- 2) a
- 3) b 4) c 5) d 6) b

- 7) a 8) c

1)

Consider the following statements:

- 1. Velocity of the body waves does not change while they travel inside the earth.
- 2. P-waves are longitudinal waves.
- 3. S-waves are transverse waves.

Which of the statements given above is/are correct?

(a)1 only

(b)2 and 3 only

(c)1 and 3 only

(d)1, 2 and 3 only

2)

With reference to body waves, consider the following statements:

- The velocity of P- the wave is greater than S-wave.
 S-waves travel through the core of the earth.
 P waves do not deflect while travelling through the core of the earth.

Which of the statements given above is/are correct?

(a)1 only

(b)1 and 3 only

(c)2 and 3 only

(d)1, 2 and 3

3)

With reference to earthquakes, consider the following statements:

- The magnitude scale is known as the Mercalli scale.
- The magnitude is expressed in absolute numbers of 1-12.
 A seismograph is used to record earthquake waves.

Which of the statements given above is/are correct?

(a)1 only

(b)2 and 3 only

(c)3 only

(d)1, 2 and 3

4)

Which of the following are earthquake-prone regions?

- 1. Alpine-Himalayan belt
- 2. East African rift valley system.
- 3. The rim of the Pacific Ocean.

Select the correct answer using the code given below:

(a)1 only

(b)1 and 3

(c)2 and 3.

(d)1, 2 and 3

5)

Which of the following can result from earthquakes?

1. Landslides

- 2. Plate movements
- 3. Volcanic eruption.
- 4. Cyclones.

Select the correct answer using the code given below.

- (a)1 and 2 only
- (b)2 and 4only
- (c)1 and 4 only
- (d)1, 2 and 3 only

6)

Tsunamis can be caused by which of the following?

- 1. Earthquake
- 2. Landslide
- 3. Volcanic eruption
- 4. Meteorites.

Select the correct answer using the code given below.

- (a)1 only
- (b)1 and 3 only
- (c)3 and 4 only
- (d)1, 2, 3 and 4

7)

Which of the statement given below is not correct?

- (a) The extent of shadow zone of S-waves is larger than P-waves.
- (b)Since P-waves cannot travel through liquid, they do not pass through the liquid outer core.
- (c) The direction of vibrations of S-waves is perpendicular to the wave direction in the vertical plane.
- (d)By the observing the changes in speed and direction of P- and S-waves, different layers in the interior of the Earth can be identified.

8)

Consider the following statements regarding the Shadow zone:

- 1. Shadow Zone is an area of no propagation of the wave.
- 2. The Shadow zone of the S wave is 103 degrees to 143 degrees.

Which of the statements given above is/are correct?

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)Neither 1 nor 2

9)

Write short notes:(150 words/10 marks)

- a. Body waves
- b. Tsunami

- Write short notes:(150 words/10 marks)
 a. Causes of Earthquakes
 b. Different scales used for measuring Earthquakes.

- 1) b
- 2) a

- 3) c 4) d 5) d 6) d
- 7) b 8) a

1)

With reference to Weathering, consider the following statements:

- 1. Rocks of different compositions weather at different rates.
- 2. Increasing organic activity increases the rate of weathering.
- 3. Weathering is an in-situ process and does not involve the transportation of degraded rock materials.

Which of the statements given above is/are correct?

(a)1 only

(b)2 and 3 only

(c)1 and 2 only

(d)1, 2 and 3

2)

Which of the following are factors affecting weathering?

- 2. The rock structure.
- 3. Organisms.
- 4. Water.
- 5. Temperature.

Select the correct answer using the codes given below.

(a)1 only

(b)1,2 and 3 only

(c)1,4 and 5 only

(d)1, 2,3,4 and 5

3)

Consider the following statements:

- Exfoliation is a form of chemical weathering.
 The rate of chemical weathering is greatly accelerated by the presence of warm temperatures and moisture

Which of the statements given above is/are not correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

4)

Which of the following is/are processes of chemical weathering?

- 1) Hydration
- 2) Solution
- 3) Thawing
- 4) Oxidation

Select the correct answer using the code given below:

(a)3 only

(b)2 and 4

(c)1,2 and 4

(d)All of the above

Which of the following sentence is corrrect regarding **Plucking**: (a)It involves erosion at the ice-rock interface with the removal of only small parts of the parent rock.

(b)Formation of heap of sand due to blowing of winds

(c) The glaciers freezes the joints and bed off the underlying rocks, tears out large resistant rocks

(d)None of the above

6)

Consider the following statements with respect to the mass movements and mass wasting:

- Mass wasting is the removal of weathered material from the upper steeper slopes and not focusing much on removal from gentler slopes
- 2. Mass movement on the other hand is a comprehensive process focusing on the removal of the whole slope from the upper parts up to the lower parts

Which of the statements given above is/are correct?

(a)1 Only

(b)2 Only

(c)Both 1 and 2

(d)None of the Above

7)

Choose the correct option from the following statements:

- 1. Abrasion: Wearing away surfaces by mechanical processes like rubbing, scratching, polishing, etc.
- 2. Attrition: It involves the reduction in the size of fragments by friction and impact during transportation. It breaks down the load into finer sediments.
- 3. Deflation: removal of soil or cohesive sediment due to wind shear.

(a)Only 1 pair is correct

(b)Only 2 pairs are correct

(c)All the pairs are correct

(d)None of the above

8)

Write short notes on (75 words each)

- 1. Deflation in erosion
- 2. Abrasion Vs Attrition

9)

What is the difference between Weathering, Erosion and denudation? (150 words/10 Marks)

- 1) d
- 2) d
- 3) a 4) c 5) c 6) c 7) c

1)

Mass movement is the movement of surface material caused by gravity. Which of the following comes under the phenomena of mass movement?

- Soil creep
 Weathering
 Landslide

Select the correct answer from the codes given below:

- (a)1 and 2 only
- (b)1 and 3 only
- (c)2 and 3 only
- (d)1, 2 and 3

2)

Which of the following processes come under Slow Movement?

- 1. Creep
- 2. Earth Flow
- 3. Mud Flow
- 4. Solifluction

Select the correct answer from the code given below:

- (a)1 and 3 only
- (b)1 and 4 only
- (c)2, 3, and 4 only
- (d)1, 3 and 4 only

3)

Which of the following are associated with coastal erosion?

- 1. Corrasion
- 2. Attrition
- 3. Hydraulic action

Select the correct answer using the code given below.

- (a)1 only
- (b)2 and 3 only
- (c)1 and 3 only
- (d)1, 2 and 3

4)

With reference to Karst topography consider the following statements:

- Stalagmites are sharp slender downward growing pinnacles that hang from the cave roofs.
 Stalactites are calcium deposited from the cave roof growing upward.

Which of the statements given above is/are correct?

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)Neither 1 nor 2

Consider the following statements with reference to Erosion:

- 1. Abrasion is the disintegration of rocks by bedload
- 2. Abrasion smoothens the bed of the river.
- 3. Hydraulic Action is breaking of rocks by virtue of mechanical energy of water.

Select the correct answer from the code mentioned below:

- (a)1 only
- (b)1 and 2 only
- (c)2 and 3 only
- (d)1,2 and 3

6)

Assertion (A): A Karst topography is characterized by the formation of stalactites and stalagmites.

Reason (R): Solution is a dominant process in the development of landforms in the Karst Region.

Choose the correct code from below

- (a)Both A and R are true and R is correct explaination of A
- (b)Both A and R are true but R is not the correct explaination of A
- (c)A is true but R is false
- (d)A is false but R is true

7)

Consider the following with respect to the types of Mass Movements:

- 1. Creep is the movement of weathered material which is not saturated by water
- 2. Rock glacier creep is rock pieces mixed with glacier
- 3. Talus creep are the smaller chips of rocks

Which of the statements given above is/are correct?

- (a)1 and 2 Only
- (b)2 and 3 Only
- (c)1 and 3 Only
- (d)All of the Above

8)

Consider the following with respect to the types of Mass Movements:

- Earthflow happens on slopes having weathered soil saturated with water but loosely held by vegetation
- 2. Mudflow happens in regions which are devoid of vegetation cover
- 3. Debris Avalance is the movement of material like an avalanche

Which of the statements given above is/are correct?

- (a)1 and 2 Only
- (b)2 and 3 Only
- (c)1 and 3 Only
- (d)All of the Above

9)

What do you understand by meandering of a river? Explain how an Ox-Bow Lake is formed? (150 words / 10 marks)

Write short notes on (75 words each) i. Canyons ii. Rapids

11)

Write short notes on (75 words each) 1.Solution vs Hydraulic action 2. Abrasion Vs Attrition

- 1) b
- 2) b

- 3) d 4) d 5) d 6) b
- 7) d 8) d

1)

Consider the following statements:

- 1. Glaciation forms by burial and metamorphism of snow.
- 2. Moraine is a glacial erosional feature.
- 3. Medial moraine forms when two lateral moraines merge.

Which of the statements given above is/are correct?

(a)1 only

(b)1 and 3 only

(c)2 only

(d)1, 2 and 3

2)

Consider the following statements

- Dust particles are concentrated only in the lower atmosphere
 Dust particles are in higher concentrations in subtropical and temperate regions due to the prevalence of dry winds.
- 3. Dust particles help water vapour in cloud formation.

Which of the above statements is/are correct?

(a)Only 1 and 2

(b)Only 2 and 3 (c)Only 1 and 3

(d)All of the above

3)

Which of the following is/are depositional features of a river in the mature stage?

- Flood Plain
 Lagoon
 Gorge

Select the correct answer using the codes given below:

(a)1 only

(b)1 and 3 only

(c)1 and 2 only

(d)All of the above

4)

Which of the following is/are not marine depositional landforms?

- 1. Lagoon
- Spit and Bar
 Cirque
 Tambola

Select the correct answer using the codes given below:

(a)1,2 and 3

(b)3 only

(c)4 only

(d)1,2 and 4

Consider the following with regards to sand dune:

- 1. Crescent-shaped dunes are called barchans.
- 2. Seif has only one wing or limb.
- 3. Longitudinal dunes form when the supply of sand is poor and wind direction is constant.

Which of the above statements is/are incorrect?

(a)1 and 2 only

(b)3 only

(c)1,2 and 3

(d)None

6)

Consider the following Pairs-

Landforms Types

1. Outwash Plains : Coastal Landforms 2. Cirque : Glacial Landform 3. Playas : Desert Landform

Which of the pairs given above is/are correctly matched?

(a)1 only

(b)2 and 3 only

(c)1 and 3 only

(d)1, 2, and 3

7)

Zeugen, Yardang, Inselberg are landforms associated with which of the following topography?

- (a)Riverine
- (b)Karst
- (c)Marine
- (d)Desert

8)

Consider the following statements with respect to the Depositional Landforms:

- 1. Drumlins are ridges made of sands and gravels, deposited by glacial meltwater flowing through tunnels within and underneath glaciers
- 2. Eskers are oval-shaped hills largely composed of glacial till.

Which of the statements given above is/are correct?

- (a)1 Only
- (b)2 Only
- (c)Both 1 and 2
- (d)None of the Above

9)

Explain the different erosional and depositional landforms formed by Grounwater ,Glaciers and Winds. (150 words/10 Marks)

10)

Write a short note on the following (150 words/10 Marks)

- 1. Composition of earth"s atmosphere
- 2. Difference between weather and climate.

- 1) b
- 2) b
- 3) a 4) b 5) d
- 6) b
- 7) d 8) d

1)

With reference to the Vertical variation of temperature, consider the following statements -

- 1. In the troposphere, the temperature decreases with altitude.
- 2. In the stratosphere, the temperature increases with height.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

2)

Which of the following factors causes variation in insolation?

- Length of the day.
 Transparency of the atmosphere.
 Latitude.

Select the correct answer using the codes given below:

(a)1 and 2 only

(b)2 and 3 only

(c)1 and 3 only

(d)All of the above

3)

Jet aircraft fly very easily and smoothly in the lower stratosphere. What could be the appropriate explanation? (UPSC 2011)

- (1) There are no clouds or water vapour in the lower stratosphere
- (2) There are no vertical winds in the lower stratosphere

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

4)

With reference to the layers of atmosphere consider the following statements:

- 1. Tropopause is the zone of transition between the troposphere and mesosphere.
- 2. All climatic and weather phenomena are found in the troposphere.
- 3. In the stratosphere temperature increases with height.

Which of the statements given above is/are **not correct**?

(a)1 only

(b)2 and 3 only

(c)1 and 3 only

(d)1, 2 and 3

5)

Consider the following pairs:

1) Ionosphere Aids Radio Communication 2) Stratosphere Comprises of the Ozone Layer 3) Mesosphere Records the Coldest temperature in the Atmosphere Which of the pairs given above is/are correctly matched? (a)1, and 2 only (b)1, and 3 only (c)2, and 3 only (d)1, 2, and 3 6) A layer in the Earth's atmosphere called lonosphere facilitates radio communication. Why? 1) The presence of ozone causes the reflection of radio waves to Earth. 2) Radio waves have a very long wavelength. Which of the statements given above is/are correct? (a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2 7) According to chemical compostion atmosphere is divided into 1.Homosphere 2.Hetrosphere Choose the correct option (a)1 only (b)2 only (c)1 and 2 only (d)none of the above 8) Consider the following statements about Homosphere: 1. It extends up to 80km from the surface of the earth. 2. In the homosphere, the heavier gases settle at the lower portion. Which of the statements given above is/are correct? (a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2 9) Write short notes on the following: (75 words each) 1. Normal lapse rate in troposphere. 2. Ionosphere 10)

Explain the different factors affecting the insolation on the earth's surface. (150 words/10 marks)

- 1) c
- 2) d
- 3) c 4) a 5) d 6) d

- 7) c 8) a

1)

Arrange the following items according to their decreasing albedo potential.

- 1. Fresh Snow
- 2. Sand
- 3. Ocean Ice
- 4. Green Forests

Select the correct answer using the code given below:

- (a)1-3-4-2
- (b)1-3-2-4
- (c)3-1-4-2
- (d)3-1-2-4

2)

Which of the following statements are not correct regarding the heat balance of the earth?

- (a) The convective transfer of energy is confined only to the troposphere.
- (b) The amount of heat received in the form of insolation is more than the amount lost by the earth.
- (c)Solar radiation received is absorbed, reflected or scattered while passing through the atmosphere.
- (d)Albedo is a characteristic of the surfaces which reflect solar radiation.

3)

Consider the following statements with regards to the behaviour of Isotherms in the Northern Hemisphere:

- 1. As we move from the continent to the ocean in the summer season the isotherms bend towards the pole.
- 2. As we move from the ocean to the continent in the winter season the isotherms bend towards the pole. Select the correct answer using the codes given below.
- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)None of the above

4)

The annual range of temperature in the interior of the continents is high as compared to coastal areas. What is/are the reason/s?

- 1. Thermal difference between land and water
- 2. Variation in altitude between continents and oceans
- 3. Presence of strong winds in the interior
- 4. Heavy rains in the interior as compared to coasts

Select the correct answer using the codes given below.

- (a)1 only
- (b)1 and 2 only
- (c)2 and 3 only
- (d)1, 2, 3 and 4

5)

Which among the following area will experience the maximum diurnal temperature range?

- (a)Sahara Desert
- (b)Antarctica
- (c)Indonesia

6)

Match the following pairs:

Column I Column II

A. Insolation 1.The difference between the mean temperature of the warmest and the coldest months.

B. Albedo 2. The lines join the places of equal temperature.

C.Isotherm 3.The incoming solar radiation.

D. Annual range 4. The percentage of visible light reflected by an object.

Code: A B C D: (a)3-4-2-1 (b)4-3-1-2

(c)1-2-3-4 (d)4-3-2-1

7)

Which of following pair/s is/are matched correctly?

ContinentsHighest Point1. AsiaMt. Everest2. AfricaMt. Kilimanjaro3. EuropeMt. ElbrusSelect the correct code from the following.

(a)1 and 2 only (b)2 and 3 only (c)1 and 3 only (d)1, 2 and 3

8)

Which of the following countries are correctly matched with the regions mentioned?

- 1. Asia Pacific Philippines
- 2. West Asia Syria
- 3. Eastern Europe Hungary

Select the correct answer using the codes given below:

- (a)1 and 2 only
- (b)2 and 3 only
- (c)3 and 4 only
- (d)1, 2 and 3

9)

Which of the following factors affect the temperature of a particular area?

- 1. The angle of incidence.
- 2. Distance between the sun and the earth.
- 3. Maritime influence.

Select the correct answer using the codes given below:

- (a)1 and 2 only
- (b)2 and 3 only
- (c)1 and 3 only
- (d)1,2 and 3

10)

Which of the following factors affects the temperature of a place

- 1. The tilt of the earth
- 2. The angle of incidence of Suns rays
- 3. Cloud cover of the place

Which of the statements given above is/are correct

- (b)2 and 3 only
- (c)1 and 2 only
- (d)1,2 and 3

11)

Consider the following statements with respect to Heat Budget:

- 1. The gains and losses in heat by way of incoming solar radiation and outgoing terrestrial radiation are called the Heat Budget.
- 2. This is necessary in order to maintain the uniform temperature of the earth.
- 3. In the case of it being not balanced, the earth would face global warming.

Which of the above statements is/are correct?

- (a)1, 2, and 3
- (b)1 and 2 only
- (c)1 only
- (d)None of the above

12)

With reference to Asia, consider the following statements:

- The Ural Mountains are considered the border between Asia and Europe.
 Asia does not share any land boundary with the continent of Oceania.
 Asia is connected to Africa through the Sinai peninsula.

Which of the statements given above is/are correct?

- (a)1 and 3 only.
- (b)2 only.
- (c)2 and 3 only
- (d)1, 2 and 3.

13)

Discuss the factors affecting the distribution of temperature across the globe. (10 marks/150 words)

14)

Write a short note on the following: (10 marks/150 words)

- a. Albedo.
- b. Distribution of temperature.

- 1) b
- 2) b
- 3) d
- 4) a
- 5) a
- 6) a
- 7) d
- 8) d
- 9) d
- 10) d
- 11) a
- 12) a

1)

Which of the following affects atmospheric pressure?

(a)Altitude

(b)Temperature

(c)Earth rotation

(d)All the above

2)

With reference to Atmospheric Pressure, consider the following statements:

- 1. It is the weight of the column of air on the surface of the earth in a given area.
- 2. The distribution of atmospheric pressure is uniform over the earth's surface.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

3)

Consider the following statements:

- 1. Cold air generally sinks and increases pressure
- 2. Air horizontally moves from more air region to less air region.

Which of the statements given above is/are *not* correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

4)

Consider the following statements:

- 1. When Sun shifts towards the Southern hemisphere all the pressure belts shift northward.
- 2. Low temperature at the poles results in contraction and the development of high pressure.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

5)

Consider the following statements:

- Normally temperature decreases with an increase in elevation called the normal Lapse rate
 A long winter night with clear skies and still air can have an Inversion of temperature

Which of the statement/s given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

6)

Which of the following statements is/are correct with regard to the temperature inversion?

- 1) It requires turbulent air, so that there is good vertical mixing at lower levels
- 2) It requires clear skies, which allow the unobstructed escape of radiation.

Choose the correct statements, from the codes given below.

(a)Only 1

(b)Only 2

(c)Both 1 and 2

(d)Neither 1 nor 2

7)

Consider the following statement(s) with respect to the Temperature Inversion:

- 1. It is a special phenomenon when the temperature increase with the increase in height/altitude.
- 2. This is opposite to the normal lapse rate condition.

Which of the statement(s) given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

8)

Consider the following statements with respect to Air Drainage type of Inversion:

- 1. It occurs in the case of mountainous regions.
- 2. The hilltops experience a rapid fall in temperature in the nighttime.
- 3. The colder and denser air of the hillside will start to sink to the valley floor due to gravity.

Which of the statements given above is/are correct?

(a)1 only

(b)1 and 2 only

(c)2 and 3 only

(d)1, 2 and 3

9)

Write short notes on:

- a. Formation of pressure belts
- b. Factors affecting pressure (150 words/10 marks)

- 1) d
- 2) a
- 3) d 4) b 5) c 6) b 7) c 8) d

1)

A missile fired Northward from the equator will seem to be deflected towards which direction as per the result of Coriolis force?

- (a)Too far to North
- (b)Too far to the South
- (c)Toward the West
- (d)Toward the East

2)

With reference to Coriolis force, consider the following statements:

- 1. The deflection due to Coriolis force is equal over all the places from the equator to the pole.
- 2. The Coriolis force will cease to exist if the earth stops rotating about its axis.

Which of the statements given above is/are correct?

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)Neither 1 nor 2

3)

With reference to Geostrophic wind, consider the following statements:

- The Geostrophic wind results from an exact balance between the Coriolis force and the Pressure Gradient force.
- 2. Geostrophic winds exist in those locations where there are no frictional forces.

Which of the statements given above is/are not correct?

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)Neither 1 nor 2

4)

Consider the following statement?

- 1) Coriolis force is zero at poles and maximum at equator.
- 2) Fast-moving objects such as airplanes and rockets are influenced by the Coriolis Effect.

Which of the following statement is correct?

- (a)1 only
- (b)2 only
- (c)Both
- (d)None

5)

Which of the following factors affect the wind movement:

- 1. Pressure gradient force.
- 2. Coriolis force.
- 3. Frictional force

Select the correct answer using the codes given below?

(a)1 and 2 only

```
(b)1, 2, and 3 only
(c)1 and 3 only
(d)1 only
6)
Consider the following statements:
        1. Doldrums are regions around the equator where the winds converge
        2. Horse latitude lies within the doldrums and assists navigation
Which of the above statements is/are correct?
(a)1 only
(b)2 only
(c)1 and 2
(d)None of the above
7)
With reference to Inter-Tropical Convergence Zone (ITCZ), consider the following statements:
1. It is the low-pressure zone at the equator, also called the doldrums.
2. ITCZ remains in the northern hemisphere in the months of July as well as January.
3. The easterlies from either side of the equator converge in the ITCZ.
Select the correct answer from the codes given below:
(a)1, 2 and 3
(b)1 and 2 only
(c)2 and 3 only
(d)1 and 3 only
8)
Consider the following with respect to Atmospheric circulation:
        1. The Hadley cell, the Ferrel cell, and the polar cell exist in both the northern and southern
        2. The Hadley cell is a closed circulation loop that begins at the equator.
Choose the correct statement(s) from the above:
(a)1 only
(b)2 only
(c)Both 1 and 2
(d)Neither 1 nor 2
9)
Consider the following statements regarding the distribution of pressure belts in January:

    The equatorial low-pressure belt extends well into the southern hemisphere.
    The subtropical high-pressure belt of the southern hemisphere is found only over the oceans.

Which of the statement/s given above is/are correct?
(a)1 only.
(b)2 only.
(c)Both 1 and 2.
(d)Neither 1 nor 2.
```

10)

Briefly explain the different driving and steering forces which affects the wind movements. (150 words)

11)

Write short notes on the following: (150 words) a.) Tri cellular meridional circulation b.) Geostrophic winds

- 1) d
- 2) b
- 3) d

- 4) b 5) b 6) a
- 7) d
- 8) c 9) c

1)

With reference to Local Winds, consider the following statements:

- 1. Khamsin is the local wind flowing down the slope of the Rocky mountains
- 2. Blizzard is a violent and extremely warm wind blowing over the Sahara desert
- 3. The anabatic wind is the warm air moving up along the slopes of mountains

Which of the statements given above is/are correct?

(a)1 only

(b) 2 and 3 only

(c) 3 only

(d)1, 2 and 3

2)

Which of the following is/are correct?

- 1. Valley wind generally leads to rainfall in the upper parts of mountains.
- 2. Valley wind is also called anabatic wind.
- 3. Valley wind is relatively warmer and rises up towards the mountain.

Select the correct answer using the code given below.

(a)2 only

(b)1 and 3 only

(c)All of the above

(d)None of the above

3)

Which of the following are cold winds?

- 1. Harmattan
- Santa Ana
- Santa A
 Mistral
- 4. Bora
- 5. Blizzard

Select the correct answer using the code given below:

(a)2, 3, and 5 only

(b)1, 3, and 4 only

(c)3, 4, and 5 only

(d)All of the above

4)

Consider the following statements:

- The sea breeze flows at night while the land breeze is more prominent during the day.
 Pressure on the land becomes high at night causing the land breeze to flow from land to sea.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)None of the above

5)

Choose the correct sentences-

 In mountainous regions, during the day the slopes get heated up and air moves upslope to fill the resulting gap the air from the valley blows up the valley. The cool air, of the high plateaus and ice fields draining into the valley, is called anabatic wind. (a)1 only (b)2 only (c)Both 1 and 2 (d)None of them
6)
Consider the following statements: 1. During the day the slopes get heated up more than the valleys. Hence, the pressure is low over the slopes while it is comparatively high in the valleys below. Air moves up from the slope and to fill the resulting gap the air from the valley blows up the valley. This wind is known as the valley breeze or anabatic wind. 2. During the night the slopes get cooled and the dense air descends into the valley as the mountain wind. The cool air of the high plateaus and ice fields draining into the valley is called mountain breeze or katabatic wind. Which of the statements given above is/are incorrect? (a)1 Only (b)2 Only (c)Both 1 and 2 (d)Neither 1 nor 2
7)
Consider the following statements with respect to tertiary winds; 1. They are also called local winds and are formed by the heating and cooling of the surface. 2. Land breezes, sea breezes, and mountain and valley winds are some of examples of tertiary winds Which of the statements given above is/are correct? (a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2
0)
8) White a short rate or (450 words (40 reads)
Write a short note on (150 words/10 marks) 1. Land breeze and Sea breeze 2. Anabatic and Katabatic winds.
9)

What do you understand by the local winds? Discuss types of the local winds with some relevant examples.(150 words,10 marks)

- 1) c

- 2) c 3) c 4) b 5) a 6) d 7) c

1)

Consider the following statements:

- 1. Higher the temperature lesser the atmospheric stability.
- 2. The presence of Convection signifies that the atmosphere is stable.
- 3. Relative Humidity is directly proportional to air temperature.

Which of the statements given above is/are correct?

(a)1 only

(b)2 and 3 only

(c)1 and 3 only

(d)1, 2 and 3

2)

Which of the following is/are formed on colder surfaces of the ground?

- 1. Fog
- 2. mist
- dew
 frost

Select the correct code from the options given below.

(a)1, 2 and 3 only

(b)3 and 4 Only

(c)2 and 3 only

(d)2, 3 and 4 only

3)

Consider the following statements:

- 1. The total weight of water vapour per volume of air at definite temperature is called as relative
- 2. There is direct relationship between air temperature and relative humidity.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

4)

Temperature is one of the most important climatic elements in the earth's atmosphere. Which of the following phenomena is/are dependent on the temperature?

- 1. Water vapour in the air
- 2. Stability in the atmosphere
- 3. Humidity
- 4. Cloud formation
- 5. Precipitation

Select the correct answer using the code given below.

- (a)1, 3 and 5 only
- (b)1, 2, 3 and 4 only
- (c)4 and 5 only
- (d)1, 2, 3, 4 and 5

5)

Which of the following differences between mist and fog is correct?

- The mist is denser than fog.
 The visibility in fog is lesser than that in the mist.

Select the correct answer using the codes given below.

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

6)

Consider the following statements about Temperature inversion:

- 1. Inversion can lead to foggy condition
- 2. Cold and long nights are ideal for temperature inversion

Which of the statement(s) given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

7)

With reference to the humidity, consider the following statements:

- 1. The actual amount of water vapour present in the atmosphere is known as specific humidity.
- 2. The percentage of moisture present in the atmosphere as compared to its full capacity at a given temperature is known as relative humidity.
- 3. With the change of air temperature, the capacity to retain moisture remains constant in the air.

Which of the statements given above is/are correct?

(a)1 only

(b)2 and 3 only

(c)1 and 2 only

(d)1, 2 and 3

8)

Consider the following statements:

- 1. Condensation is the conversion of water vapor into liquid form
- 2. The temperature at which condensation takes place is called a dew point

Which of the following statements mentioned above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

9)

Consider the following statements:

- 1. The rate of evaporation is maximum in sub-tropical regions followed by the equatorial regions and minimal in polar regions.
- 2. Evaporation is greater over the ocean than in continents.

Which of the following statements mentioned above is/are correct?

(a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2

10)

What are the factors affecting evaporation? Also, bring out a note on the distribution of evaporation. (10 marks/150 words)

11)

What do you understand by condensation process? Also, briefly discuss the different forms of condensation. (10 marks/150 words)

- 1) a
- 2) b
- 3) d

- 4) d 5) b 6) c 7) c 8) c 9) c

1)

Consider the following about Cloudbursts:

- 1. Cloudbursts are more common in mountain valleys.
- 2. As per IMD, rainfall over 100 centimeters in one hour, over a small area is considered a cloudburst.

Which of the above statements is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

2)

Consider the following statements:

- 1. Cumulonimbus clouds are clouds having an anvil shape.
- 2. Cirrus clouds are high clouds
- 3. Nimbus clouds are also called rain-bearing clouds.
- 4. Low clouds are called stratus clouds.

Which of the statements given above is/are correct?

(a)1 only

(b)1 and 2 only

(c)All of the above

(d)3 and 4 only

3)

With reference to Convectional Rainfall, consider the following statements:

- 1) The air on being heated, becomes light and rises up in convection currents.
- 2) Often it is accompanied by thunder and lightning.
- 3) Convectional rainfall is heavy but of short duration, highly localised.

Which of the statements given above is/are correct?

(a)1 only

(b)2 and 3 only

(c)1 and 2 only

(d)1,2 and 3

4)

Consider the following statements about orographic rainfall:

- 1. When warm and moist air is forced to rise across mountain slopes it cools down causing
- The precipitation typically falls on the top and leeward sides of the mountain.
 By the time the air reaches the windward side it has lost most of its moisture due to the rainfall

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)2 and 3

(d)All the above

5)

Which of the following are incorrectly matched:

1. Mackerel sky - Cirrostratus 2. Halo effect - Cumulonimbus 3. Anvil-shaped - Cumulus (a)Only 1 (b)Both 1 and 2 (c)Both 1 and 3 (d)1,2 and 3 6)

Match the following-

a. black or dark grey 1. Cirrus 2. Cumulus b. cotton wool

c. feathery appearance 3. Stratus

4. Nimbus d. layered

Choose the correct code:

(a)1-c,2-b, 3-d, 4-a

(b)1-d,2-b, 3-a, 4-c

(c)1-d,2-b, 3-a, 4-c

(d)1-b,2-c, 3-a, 4-d

7)

Consider the following statements:

- 1. Tornadoes are violently rotating column of air that extends from thunderstorm to the ground
- 2. It appears like a funnel descending from a cloud
- 3. It is formed when changes in wind speed and direction create a horizontal spinning effect within a storm cell

Which of the statements mentioned above is/are correct?

(a)1 and 2 only

(b)2 only

(c)1, 2 and 3

(d)1 and 3 only

8)

Write short notes on (75 words each)

- i. Tornadoes
- ii. Thunderstorms

9)

Explain different types of clouds based on their height. (150 words/10 marks)

- 1) a
- 2) c 3) d 4) a 5) d

- 6) a 7) c

1)

Consider the following statements about fronts:

- 1. Fronts are formed when two contrasting air masses meet.
- 2. Fronts are responsible for the formation of Temperate Cyclones
- 3. Fronts bring calm conditions4. When a warm air mass is approached by cold air the contact zone is called the warm front.

Which of the statements given above is/are correct?

- (b)1 and 2
- (c)1,2 and 4
- (d)1,3 and 4

2)

With reference to Fronts, consider the following statements:

- 1. Two Air masses of different physical characteristics when converging from Fronts.
- 2. Cold front is created when the cold air mass moves under the warm air mass and lifts the warm air mass.
- 3. Warm front is created when warm air is pushing into the cold air.

Which of the statements given above is/are correct?

- (a)1 only
- (b)2 and 3 only
- (c)1 and 3 only
- (d)1, 2 and 3

3)

Consider the following statements:

- 1. Subtropical and Polar Jet Streams are permanent jet streams.
- 2.Tropical Easterly Jet or African Easterly Jet and Somali Jet are found during specific period of a year.

Which of the statements given above is/are correct?

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)Neither 1 nor 2

4)

Consider the following statements with respect to the Jet Streams:

- 1. These are the upper air circulations in a meandering pipe-like structure, located in the upper troposphere or lower stratosphere.
- 2. Jet streams flow with a great velocity in the west to east direction
- 3. These are caused by a combination of the planet"s rotation on its axis and the contrasting characteristics of climatic conditions.

Which of the statements given above is/are correct?

- (a)1 and 2 Only
- (b)2 and 3 Only
- (c)1 and 3 Only
- (d)All of the Above

Consider the following statements about the wind shear seen in jet streams: 1. It refers to the drag which the airplanes feel while flowing in a direction opposite to the jetstreams. 2. Due to the wind shear, the velocity of winds is not uniform across the jetstream. 3. The wind shear is only in the vertical direction. Choose the incorrect statements from the codes given below. (a)1 and 2 only (b)2 and 3 only (c)1 and 3 only (d)1,2 and 3
6)
Consider the following statements about Polar Front Jet streams: (a) It is a continous wind system formed where tropical and polar airs interact. (b) It blows west to east. Choose the correct statement(s) from the codes given below: (a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2
7)
Consider the following statements: 1. Jet streams cause the winter precipitation in northwestern India. 2. Jet streams help in formation of temperate cyclones. 3. Jetstreams always hinder the aircraft travel. Choose the correct statements from the codes given below: (a)1 and 2 only (b)1 and 3 only (c)2 and 3 only (d)1,2 and 3
8)
Which of the following conditions are suitable for the formation of an Airmass? 1. The humidity conditions should also be uniform without much variability. 2. The surface area shall remain homogenous for a few 100s of kilometers. Select the correct order from the options given below: (a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2
9)
What do you understand by fronts? Briefly explain the different types of fronts. (150 words/10 Marks)
10)

What do you understand by Jet streams? Explain briefly any three Jetstreams. [150 Words,10 marks]

- 1) b
- 2) d
- 3) c 4) d 5) c 6) b 7) a 8) c

1)

With reference to Tropical Cyclones, consider the following statements:

- 1. At the eye of the cyclone the wind velocity is very high
- 2. At the eye of the cyclone subsidence of air takes place
- 3. It is characterized by low pressure at the center surrounded by high-pressure winds.

Which of the statements given above is/are correct?

- (a)1 only
- (b)1 and 3 only
- (c)2 and 3 only
- (d)1, 2 and 3

2)

With reference to the temperate cyclones, consider the following statements:

- 1) They are confined to 35 65 degrees N and S of the equator.
- 2) They can form only on land.
- 3) Rainfall is slow and continues for many days, sometimes even weeks.

Which of the statements given above is/are correct?

- (a)1 only
- (b)3 only
- (c)1 and 3 only
- (d)1,2 and 3

3)

Which of the following pair(s) is/are correctly matched?

Name for tropical cyclone Region

Atlantic

The South China Sea

 Hurricanes
 Willy willies
 Typhoon Australia

Select the correct answer from the codes given below:

- (a)1 and 3 only
- (b)1 only
- (c)3 only
- (d)1, 2 and 3

4)

Which of the following statements is/are **NOT** correct?

- 1. Tropical cyclones are usually more destructive than the extra-tropical cyclones.
- 2. Extra-tropical cyclones involve anti-clockwise circulation of wind in the southern hemisphere.
- 3. Eye of the cyclone is a region of relative calm.

Select the correct answer from the codes given below:

- (a)1 and 2 only
- (b)2 only
- (c)1 and 3 only
- (d)None of the above

Consider the following statements with respect to tropical cyclones:

- 1. The energy that intensifies the storm, comes from the condensation process in the towering cumulonimbus clouds, surrounding the centre of the storm.
- 2. On reaching the land the moisture supply is cut off and the storm dissipates.
- 3. The place where a tropical cyclone crosses the coast is called the landfall of the cyclone.
- 4. The cyclones, which cross 20 degrees North latitude generally, recurve and are more destructive.

Which of the statements given above is/are correct?

(a)1, 2, and 3

(b)1, 2, 3, and 4

(c)2 and 3 only

(d)3 and 4 only

6)

Which is the important factor needed for Tropical cyclones formation?

- 1) Coriolis force causing wind deflection.
- 2) The humidity of at least 50 to 60% of relative humidity.
- 3) Depth of warm water should extend up to 60-70 meters in depth.
- 4) Temperature above 27 degrees centigrade water temperature.
- (a)1, 2 and 3 only
- (b)2 and 4 only
- (c)1, 3 and 4 only
- (d)1,2,3 and 4

7)

Find the correct match

Structure of the cyclone

1) Eye.

- Explanation
- a) It is the centre of the storm.

2) Eyewall.

- b) wall of thick cumulonimbus clouds with 10-20 km of thickness.
- 3) Spiral bands.
- c) a zone of suppressed cloudiness, high temperature, and low humidity.
- 4) Annular zone.
- d) known as rain bands or feeder bands.
- (a)1 and 3 only
- (b)1 and 2 only
- (c)2 and 4 only
- (d)3 and 4 only

8)

What is temperate Cyclone? Explain the mechanism of its formation? (150 words/10 marks)

9)

Briefly explain the structure of tropical cyclone with the help of suitable diagram (150 words/10 marks)

- 1) c

- 2) c 3) b 4) b 5) b 6) d 7) b

1)

Which of the following is not a condition required for origin of tropical cyclone?

- (a)Calm Atmosphere
- (b)Humid Weather
- (c)Coriolis force
- (d)Low sea surface temprature.

2)

With reference to The Savanna or Sudan Climate, which of the following statements is/are correct?

- 1. These are found in the interiors of the continents.
- 2. The amount of rainfall received is not sufficient for the growth of large trees.
- 3. They are only found in Africa.

Select the correct answer using the code given below.

- (a)1 only
- (b)1 and 2 only
- (c)2 and 3 only
- (d)1, 2 and 3

3)

Consider the following statements:

- 1 Savanna climate is confined within the tropics and is best developed in Sudan, hence its name the Sudan Climate.
- 2. Savanna climate is a transitional type of climate found between the equatorial rainforests and hot deserts. Which of the statements given above is/are correct?
- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)Neither 1 nor 2

4)

What are the most important characteristics of the Hot, Wet Equatorial Climate?

- I. Great uniformity of temperature
- II. No winter
- III. Heavy precipitation
- (a)I only
- (b)I and II only
- (c)II only
- (d)All

5)

With respect to the Monsoon type of climatic region, which of the following statements is/are correct?

- 1. Precipitation is mainly concentrated during the monsoon period.
- 2. It has deciduous forests as the major vegetation.

Select the correct code from the options given below.

- (a)1 only
- (b)2 only
- (c)Both 1 and 2

(d	1(lei	ith	er	1	nor	2

6)

Find the incorrect statement with respect to Polar Vortex?

- (a)It is a large area of high pressure and hot air, surrounding the earth"s equator.
- (b) The term vortex refers to the counterclockwise flow of air which keeps the cold polar air locked inside.
- (c)The polar winter night jet stream keeps this region covered with strong winds.
- (d)Occasionally when the vortex weakens, it expands and sends the cold air southwards along with jet streams.

7)

Find the incorrect statement in the context of Hot and Wet Equatorial Climatic regions :

- (a) Average precipitation is above 250cm/annum through convectional rainfall.
- (b) Vegetation is the evergreen type with the layered arrangement of trees and high biodiversity.
- (c)The diurnal range of temperature is less than the annual range.
- (d)High precipitation causes leaching, making the soil fragile.

8)

- "Re-curvature" cyclone refers to:-
- 1. A curve in the path of the cyclone is known as a Re-Curving cyclone. When the air currents in the local atmosphere push the cold air from the poles towards the equator and intensify the cyclone which is about to diminish by supplying more wind.
- 2. Recurvature is very easy to predict.
- (a) 1 only
- (b)Both 1&2
- (c)Neither 1 &2
- (d)2 only

9)

What do you understand by Equatorial climate? Discuss the characteristics of Equatorial climate?(150 words)(10 marks)

10)

What is Polar Vortex? Explain its effects on weather patterns.(150 words/10 marks)

- 1) d
- 2) b 3) c 4) d 5) c 6) a 7) c 8) a

1)

Consider the following pairs

Downs: Australia
 Steppe: Central Asia
 Veldts: South Africa

Which of the above pairs is /are correctly matched?

(a)1 only (b)2 and 3 only (c)1 and 3 only (d)1, 2 and 3

2)

Which of the following deserts are found in Africa?

- 1) Sahara desert
- 2) Namibian desert
- 3) Kalahari desert
- 4) Atacama desert
- 5) Great Basin desert

Select the correct answer using the code given below.

(a)1, 2,3 and 4

(b)2, 3 and 4

(c)1, 2 and 3

(d)1, 3 and 5

3)

Which of the following Climate types have rainfall throughout the year?

- 1. Equatorial Climate
- 2. Mediterranean Climate
- 3. British type of Climate

Select the correct answer using the codes given below.

(a)1 only

(b)2 and 3 only

(c)1 and 3 only

(d)1, 2 and 3

4)

Consider the following statements with respect to the Polar Climate Region:

- 1. It is found in the Arctic and Antarctic regions of the earth and is extremely cold round the year
- 2. Precipitation is in the form of snowfall and the presence of cold winds like blizzards with the surface being frozen
- 3. This region is also known as the Tundra type of climate where we find some surface vegetation especially mosses and lichens

Which of the statements given above is/are correct?

(a)1 and 2 Only

(b)2 and 3 Only

(c)1 and 3 Only

(d)All of the Above

5)

Consider the following statements:

- 1. Vegetation is xerophytic with special modifications to survive hot desert conditions in Desert type climate.
- 2. Hot deserts are located along the western margins of the continents.

Which of the statements given above is/are correct?

- (a) 1only
- (b)2 only
- (c)1 and 2
- (d)neither 1 nor 2

6)

Which of the following is correctly matched:

Climate type

- cland
- Temperate grassland.
 Maditerrances.
- Mediterranean.
 China Type.
- 4. Desert Type.
- (a) 1 and 2 only
- (b)2 and 3 only
- (c)1 and 4 only
- (d)2 and 3 only

Vegetation a) Xerophytes.

- b) drought-resistant, deep-rooted, short bushes.
- c) A mixture of both deciduous and evergreen.
- d) short green grass.

7)

Match the following correctly:

Ocean Bottom topography

- 1. Continental shelf
- of the continents.

 2. Continental slope
- 3. Continental rise
- into the abyssal plain.
- (a)1-b, 2-c, 3-a
- (b)1-b, 2-a, 3-c
- (c)1-c, 2-b, 3-a
- (d)1-c, 2-a, 3-b

Explanation

- a) It is the boundary between continents and oceans formed by the outer edge
- b) It is the submerged shallow part of the continental crust.
- c) It is the base of the continental slope with very less gradient and continues

8)

In which of the following areas Extensive Commercial Foodgrain Agriculture is practised?

- 1. Steppes of Central Asia
- 2. Pampas
- 3. Velds
- 4. Downs

Select the correct answer from the code given below.

- (a)2,3 and 4 only
- (b)1,2 and 3 only
- (c)1,2,3 and 4
- (d)2 and 3 only

9)

Write a short note on the following: (50 words each)

- 1.British type of climate
- 2.China type of climate

3.Polar type of climate

10)

Enumerate the major climatic regions of the world? Briefly highlight the features of the Hot and Wet Equatorial Climate type? (150 words/10 marks)

- 1) d
- 2) c 3) c 4) d 5) c 6) d

- 7) b 8) a

1)

Which of the following factors increase/decrease Salinity in Seas?

- 1. The influx of river waters
- 2. More Precipitation
- 3. Melting of Ice
- 4. Higher temperature and higher wind velocity
- 5. Cold Ocean Current

Select the correct answer using the code given below.

(a)1, 2 and 3 only

(b)4 only

(c)3, 4 and 5 only

(d)1, 2, 3, 4 and 5

2)

Consider the following about Salinity in Oceans:

- 1. In hot and dry areas salts in ocean waters are evaporated thus salinity is low.
- 2. Influx of melted water and river water reduces salinity in oceans.
- 3. Oceans near the Equator have maximum salinity due to maximum insolation.
- 4. Addition of rainwater increases salinity.

Which of the following statements is/are correct?

1, 2 and 3

(b)

2 and 3

(c)

2 only

All of the above

3)

With reference to oceanic salinity, consider the following statements:

- Oceanic salinity is generally higher on the surface.
 Bay of Bengal has lower salinity than the Arabian Sea.

Which of the statements given above is/are **not correct**?

(a)

1 only

(b)

2 only

(c)

Both 1 and 2

(d)

Neither 1 Nor 2

4)

With reference to factors affecting ocean salinity, consider the following statements:

- The salinity of water in the surface layer of oceans depends mainly on evaporation and precipitation.
 Surface salinity is greatly influenced in coastal regions by the freshwater flow from rivers.
- 3. Higher the wind speed, the higher evaporation resulting in higher salinity.

Which of the statements given above is/are correct?

(a)1 only

(b)1 and 3 only

```
(c)2 and 3 only
(d)1, 2 and 3
5)
Conditions for the formation of Coral Reefs:
1) Shallow Water
2) Sunlight is not necessary
3) The salinity should be moderate.
4) The water should be free from sediments.
5) Moderate Temperature (Above 20 deg Celcius)
Select the correct options:
(a)1, 2, 3, 4, and 5
(b)1, 3, 4, and 5
(c)1, 2, 3, and 4
(d)1, 2, and 3
6)
Consider the following statements regarding the salinity in the oceans:

    Baltic sea is in the polar region is affected by high salinity
    Lake Van in Turkey has the highest salinity in the world at nearly 330 parts per thousand

Which of the statements given above is/ are correct?
(a)1 only
(b)2 only
(c)Both 1 and 2
(d)Neither 1 nor 2
7)
Consider the following with respect to the Horizontal Salinity Distribution:
1. Areas of moderate salinity: Equatorial regions
2. Areas of very high salinity: Subtropical Regions
3. Areas of low salinity: Polar Regions
Which of the statements given above is/are correct?
(a)1 and 2 Only
(b)2 and 3 Only
(c)1 and 3 Only
(d)1,2, and 3
8)
```

What do you understand by corals? Also, discuss the ideal conditions for coral reefs growth. (150 words/10 marks)

9)

What is Oceanic Bottom topography? Briefly discuss different types of oceanic bottom topography (150 words/10marks)

- 1) d
- 2) c
- 3) a 4) d 5) b 6) b 7) d

1)

Which of the following causes coral bleaching?

- 1. Change in Salinity
- 2. Addition of pollutants
- 3. Drastic increase in temperature
- 4. Increased sedimentation
- 5. Overloading of nutrients

Select the correct answer using the codes given below:

(a)1, 2 and 3 only

(b)4 and 5 only

(c)1, 3 and 5 only

(d)1, 2, 3, 4 and 5

2)

Consider the following Ocean water Currents:

- 1. Counter Equatorial Current
- 2. Falkland Current
- Benguela"s Current.
 Gulf stream
 Canary"s current

Which of the above currents is/are cold currents?

(a)2, 3 and 5 only

(b)3, 5 only

(c)2,3,4 and 5 only.

(d)None of the above

3)

Consider the following statements:

- 1. The Coral reefs are diverse underwater ecosystems held together by calcium carbonate structures secreted by corals.
- 2. They are often called "rainforests of the sea", shallow coral reefs form some of the most diverse ecosystems on Earth.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

4)

What is the meaning of coral bleaching?

- (a)Paling of coral color due to decline in zooxanthellae
- (b)Secretion of calcium carbonates to form hard skeletons
- (c)Both a and b
- (d)None of the above

5)

Consider the following statements about the oceanic circulations:

 Near the Cape of Good Hope, the South Atlantic Current is diverted northward as the Cold Benguela Current. The cold Falkland current flows near the Southeast coast of South America and merges with the Brazilian Current. Labrador Current flows between Canada and Greenland and merges with the gulf Stream. Which of the statements given above is/ are correct? (a)1 and 3 only (b)2 only (c)3 only (d)1,2 and 3
6)
Consider the following statements with respect to the types of corals: 1. Fringing reefs are narrow coral platform lying close to the coast separated by a narrow lagoon 2. Barrier reefs are a circular coral reef developed around a seamount, a guyot, or an island Which of the statements given above is/are correct? (a)1 Only (b)2 Only (c)Both 1 and 2 (d)None of the Above
7)
Which of these is/are current in the North Atlantic Ocean? 1. Labrador Current 2. Humboldt Current 3. Gulf Stream Select the correct answer using the codes given below: (a)1 and 2 only (b)1 and 3 only (c)2 and 3 only (d)1, 2 and 3
8)
Define Ocean Currents. Highlight various factors affecting Ocean currents? (150 words/10 marks)
9)
Write a brief note on the currents of the Atlantic Ocean. [150 words/10 marks]

- 1) d
- 2) a 3) c 4) a 5) d

- 6) a 7) b

1)

What are the effects of the weakening of Thermohaline Circulation?

- 1. Strengthening surface current
- 2. The weakening of Atlantic vertical circulation
- 3. The weakening of the North Atlantic drift
- 4. Strengthening of Ocean Currents

Select the correct answer using the codes given below:

(a)1, 2 and 3 only

(b)3 and 4 only

(c)2 and 3 only

(d)1, 2, 3 and 4

2)

With reference to Thermohaline circulation, consider the following statements:

- 1. Coriolis force is its main driving force.
- 2. It strengthens the ocean currents.
- 3. It brings nutrient-rich water to the surface.

Which of the statements given above is/are correct?

(a)1 only

(b)2 and 3 only

(c)2 only

(d)1, 2 and 3

3)

Consider the following statements:

Assertion (A): Organic fertilizers and Fishery is a thriving sector in Peru.

Reason (R): Peru Ocean Current brings nutrient-rich water from deep inside the ocean resulting in a rich coastal ecosystem.

Select the correct option:

(a)Both A and R are true and R is the correct explanation of A.

(b)Both A and R are true but R is not the correct explanation of A.

(c)A is true but R is false.

(d)A is false but R is true.

4)

Consider the following statements:

- 1. Niagara Waterfall is considered the world"s highest waterfall which is located in North America.
- 2. Angel Falls is the highest waterfall on Earth and is found in the Guiana Highlands of Venezuela.

Which of the statements given above is/are correct?

(a)1 Only

(b)2 Only

(c)Both 1 and 2

(d)None of the above

5)

Which one of the following ocean currents is different from others? (a)Gulf stream

```
(b)Kuroshio
(c)North Atlantic Drift
(d)Labrador

6)
```

Consider the following statements about "Atlantic Meridional Overturning Circulation":

- 1. It carries warm water from the tropical regions to the north Atlantic.
- 2. It ensures continuous mixing and energy distribution in the ocean.

Which of the above statements is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

7)

Which of the following is correct about ocean currents:

- 1. They represent a regular volume of water in a definite path and direction.
- 2. Cold currents bring cold water into cold water areas.
- 3. Warm currents bring warm water into warm water areas.
- 4. The oceanic circulation pattern roughly corresponds to the earth's atmospheric circulation pattern.

Select the correct answer using the code given below:

(a)1 only

(b)2 and 3 only

(c)1 and 4 only

(d)1, 2 and 3

8)

With reference to the mixing regions of warm and cold current, which of the following statements is/are correct?

- 1. Mixing cold and warm ocean currents bears the richest fishing grounds in the world.
- 2. The mixing of warm and cold currents helps to replenish the oxygen and favor the growth of plankton, the primary food for the fish population.
- Grand Banks and Georges banks are situated at the confluence of cold oceanic current and warm oceanic current.

Select the correct answer using the code given below:

(a)1 and 3 only

(b)1, 2 and 3

(c)3 only

(d)1 and 2 only

9)

Consider the following statements with respect to Thermohaline circulation

- 1. Deep ocean currents driven by the difference in water density which is controlled by temperature and salinity called Thermohaline circulations
- 2. It begins in near-polar regions where ice forms leading to the water being saltier and denser resulting in the sinking, the deepwater upwells in the regions of cold current upwelling

Which of the following statements mentioned above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

10)

Consider the following statements about River Amazon:

- 1. It is the largest as well as the second-longest in the world.
- 2. It is the widest river in the world.3. Manaus is a famous city on the banks of the River Amazon.

Which of the statements are correct?

- (a)1 and 2
- (b)2 and 3
- (c)1 and 3
- (d)All of 3 statements are correct.

11)

Write a short note on the following: (10 marks/150 words)

- 1. Upwelling and Downwelling.
- 2. Atlantic Meridional Overturning Circulation (AMOC).

12)

Explain the significance of ocean currents with relevant examples. (150 words/10 marks)

- 1) c
- 2) b
- 3) a
- 4) b 5) d
- 6) c
- 7) c
- 8) b
- 9) c
- 10) d

1)

With reference to La Nina and El Nino, consider the following statements:

- 1. La Nina is the intensified low-pressure conditions and high temperatures along the eastern pacific.
- 2. El Nino is characterized by heavy drought in Peru and Chile.
- 3. El Nino has an adverse effect on the south-west monsoon of India
- 4. La Nina has no effect on the monsoon climate of India

Which of the statements given above is/are not correct?

- (a)1 and 2 only
- (b)3 and 4 only
- (c)3 only
- (d)1, 2 and 4 only

2)

Which of the following statement(s) is/are correct about El Nino?

- 1. EL NINO leads to flood situation in India
- 2. EL NINO leads to the appearance of warm ocean current off the coast of Peru(eastern pacific)

Select the correct answer using the codes given below:

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)Neither 1 nor 2

3)

Consider the following statements about Walker's circulation:

- 1. In this condition, the eastern pacific coast experiences drought with the western pacific having good rainfall.
- 2. The Walker cell is indirectly related to upwelling off the coasts of Peru.

Which of the statements given above is/are correct?

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)Neither 1 nor 2

4)

With reference to 'Indian Ocean Dipole (IOD)' sometimes mentioned in the news while forecasting Indian monsoon, which of the following statements is/are correct?

- 1. IOD phenomenon is characterized by a difference in sea surface temperature between the tropical Western Indian Ocean and the tropical Eastern Pacific Ocean.
- 2. An IOD phenomenon can influence an El Nino's impact on the monsoon.

Select the correct answer using the code given below:

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)Neither 1 nor 2

5)

Consider the following statements:

1) El Niño Modoki is a coupled ocean-atmosphere phenomenon in the tropical Pacific.

- 1) d
- 2) b
- 3) c 4) b 5) a 6) b 7) c

1)

Consider the following about Tides:

- 1. Tides are caused by the gravitational pull of both the Moon and the Sun.
- 2. Tides are caused by the gravitational pull of the Moon only.
- 3. Centrifugal force is also a causing factor for tides
- 4. When the tide is channeled between islands or into bays and estuaries they are called tidal currents.

Which of the following statements is/are correct?

(a)1, 3 and 4

(b)2, 3 and 4

(c)1 and 3

(d)1 and 4

2)

Which of the following factors is/are responsible for the occurrence of tides?

- 1. Gravitational attraction of the moon only.
- 2. Gravitational attraction of the sun and moon.
- 3. Centrifugal force of the earth.

Select the correct answer using the code given below.

(a)1 and 3 only

(b)2 and 3 only

(c)2 only

(d)3 only

3)

With reference to Tides, consider the following statements:

- Neap Tides are formed during the new moon and full moon days.

 Tides are selectively as a full moon day.

 Tides are selectively as a full moon day.
- 2. Tides are relatively more affected by the gravity of the moon compared to that of the sun.
- 3. Hooghly port is a tidal port

Which of the statements given above is/are correct?

(a)1 and 3 only

(b)2 and 3 only

(c)1 and 2 only

(d)1, 2 and 3

4)

Spring tides are caused as result of:

- (a) Moon and the Sun aligned in the same line, pulling the Earth gravitationally in the same direction.
- (b) Moon and the Sun aligned in the same line pulling the Earth gravitationally in the opposite direction.
- (c)Both a and b
- (d)None of the above

5)

Which of the following pairs are matched correctly?

Soil HorizonCharacteristic1. O horizonRich in Organic Matter2. C horizonWeathered parent material

3. B horizon

Consolidated Rock

Select the correct answer from the codes given below: (a)1 and 2 only (b)2 and 3 only (c)1 and 3 only (d)2 only
6)
Which of the following factors affect soil formation? 1. Parent rock 2. Organism 3. Relief 4. Time Select the correct answer from the codes given below: (a)1,2 and 4 Only (b)1,2 and 3 Only (c)1 and 4 Only (d)1,2,3 and 4
7)
Which of the following shows Vertical arrangement of horizons down to parent rock material? (a)Regolith (b)Pedon (c)Horizon (d)Soil profile
8)
Which of the following maritime zone has no right over the air space? (a)Contiguous Zone (b)High Sea (c)Both a and b (d)None
9)
Consider the following statements with regard to the Maritime Zones: 1. The classification is on the basis of UNCLOS. 2. The coastline is generally the region where the ocean water meets the land. 3. The baseline generally runs along with the outward locations of the coastline. Which of the statement(s) given above is/are Incorrect? (a)1 and 2 Only (b)2 and 3 only (c)All of the above. (d)None of the above,
10)
What are the factors that impact the soil formation? (10 marks/ 150 words)

What is role of climate in soil formation explain with an example. (150 words/10 marks)

12)

Discuss about various maritime zones in oceans as per UNCLOS. (150 words/10marks)

- 1) a
- 2) b

- 3) b 4) c 5) a 6) d
- 7) d
- 8) a 9) d

1)

Consider the following statements:

- 1. India shares both land and coastal boundaries with Nepal.
- 2. India shares only land boundaries with Bangladesh.

Which of the statement(s) given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

2)

Myanmar shares a boundary with which of the following Indian States?

- 1. Nagaland
- 2. Arunachal Pradesh
- 3. West Bengal
- 4. Tripura
- 5. Mizoram
- 6. Manipur
- 7. Assam

Select the current answer using the code given below.

(a)1, 2, 3 and 5

(b)2, 5, 6 and 7

(c)1,2, 5 and 6

(d)1,2,3, 4, 5 and 7

3)

Which of the following are types of upward translocation-

- 1. Calcification
- 2. Gleying
- 3. Salinization
- 4. Podzolization

Select the correct code from the options given below

(a)1 and 2

(b)2,3 and 4

(c)1,2 and 3

(d)1,2,3, and 4

4)

Which of the following statements is not true for laterite soil

- (a) They are the soils of the humid tropical regions
- (b)They are highly leached soils
- (c)Their fertility is low
- (d)They are rich in lime

5)

Soil leaching is a major problem

(a)In tropical rainforest (b)In African savanna (c)In Mediterranean regions (d)In Australian Dawns
6)
Consider the following statements: 1. Eluviation: It is the downward transport process through which minerals are removed from the top layer. 2. Illuviation: This is the reverse of eluviation in which matter accumulates in the lower horizons. Which of the statements given above is/are correct? (a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2
7)
Consider the following regarding Soil Formation Processes: 1. Transformation: The process of change of soil constituents from one form to another through weathering, breakdown, decay, etc. 2. Translocation: The movement of soil constituents from one horizon to another within the soil profile. Which of the statements given above is/are correct? (a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2
8)
Regarding Pedolfer & Pedocals soil types: 1. Pedolfer: More precipitation than evaporation. 2. Pedocals: More evaporation than precipitation. Choose the correct statement/s: (a)1 only (b)2 only (c)Both 1 and 2 (d)Neither 1 nor 2
9)
Write short notes on (15 marks/250 words) i. Leaching ii. Eluviation iii. Illuviation iv. Podzolisation v. Calcification

10)

Write a note on the Pedalfer & Pedocal soil types. (10 Marks/150 Words)

- 1) d

- 2) c 3) c 4) d 5) a 6) c 7) c 8) c

1)

The Himalayas cross five countries
(a)Bhutan, India, Nepal, China, and Pakistan
(b)Bhutan, India, Russia, China, and Pakistan
(c)Bhutan, India, Nepal, Indonesia, and Pakistan
(d)Australia, India, Nepal, China, and Pakistan

2)

Which of the following is not a lake in the Himalayas?

- (a)Tso Moriri
- (b)Pangong Tso
- (c)Lake Baikal
- (d)Dal lake

3)

The origin of Himalayas can be explained by which of the following?

- (a)Continental Drift Theory
- (b)Sea Floor Spreading
- (c)Theory of Plate Tectonics
- (d)None of the above

4)

Which of the following mountain ranges are not located in the Middle/Lesser Himalayas?

- 1. Pir Panjal
- 2. Dhauladhar
- 3. Rengma Hills
- 4. Mahabharata

Select the correct answer using the codes given below:

- (a)3 only
- (b)1 and 4 only
- (c)2 and 4 only
- (d)None of the above

5)

Which of the following make up the Trans Himalayas?

- 1. Zaskar mountains
- 2. Laddakh plateau
- 3. Himadri ranges
- 4. Dhauladhar range
- 5. Karakoram range

Select the correct answer using the codes given below:

- (a)1 and 4 only
- (b)2,3 and 4 only
- (c)1, 2, 3 and 5 only
- (d)1, 2 and 5 only

6)

Which of the following statements are correct in the context of the Himalayas:

- 1. The Greater Himalayas stretches from Nanga Parbat(Jammu & Kashmir) to Namcha Barva (Arunachal Pradesh)
- 2. Eastern Himalayas are greater in height as compared to Western Himalayas.
- 3. Eastern Himalayas are moist in nature in comparison to the western Himalayas.

Select the correct answer using the code given below

(a)2 only

(b)1, 2 and 3

(c)1 and 2 only

(d)1 and 3 only.

7)

Consider the following statements-:

- 1. Indo Tsangpo Suture Zone lies between the Lesser Himalayas and Ganga plains
- 2. Main Central Thrust lies between Great Himalayas and Middle Himalayas

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

8)

If you travel from Shimla to Vishakhapatnam, the minimum number of states through which we have to travel (including origin and destination):

(a)5

(b)7

(c)4

(d)6

9)

Consider the following statements about the Lesser Himalayas:

- 1. It is also called the outer Himalayas.
- 2. It is a continuous range across its length.
- 3. It merges with Shiwaliks in Arunachal Pradesh.

Choose the **incorrect** statements from the codes given below:

(a)1 and 2 only

(b)2 and 3 only

(c)1 and 3 only

(d)1,2 and 3

10)

Bring out the difference between the Eastern and Western Himalayas? (150 words/ 10 marks)

11)

Describe the evidences which support the continued growth of the Himalayas. (10 marks/150 words)

- 1) a

- 2) c 3) c 4) a 5) d 6) d

- 7) b
- 8) c 9) a

1)

The northern part of Western Ghats is known as

- (a)Sahyadri Range
- (b)Annamalai Range
- (c)Kardamam range
- (d)Nilgiri range

2)

Arrange the following rivers from south to north:

- 1. Beas
- 2. Jhelum

- Sutlej
 Ravi
 Chenab

Select the correct order using the code given below.

- (a)3-1-4-5-2
- (b)1-2-3-4-5
- (c)2-3-1-4-5
- (d)5-4-3-2-2

3)

Which of the following is/are correct with respect to the antecedent river system?

- 1. It maintains its original course
- 2. Antecedents Rivers are Northern Rivers of India

Select the correct answer from the code given below.

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)None of the above

4)

The Narmada river flows to the west, while most other large peninsular rivers flow to the east. Why?

- 1. It occupies a linear rift valley.
- 2. It flows between the Vindhyas and the Satpuras.
- 3. The land slopes to the west from Central India.

Select the correct answer using the codes given below.

- (a)1 only
- (b)2 and 3 only
- (c)1 and 3 only
- (d)None

5)

Consider the following statements:

- 1. The northern plains are formed by the alluvial deposits brought by the rivers the Indus, the Ganga, and the Brahmaputra
- Bhangar is a narrow belt ranging between 8-10 km parallel to the Shiwalik foothills.

The north of Tarai is a belt consisting of old and new alluvial deposits known as the Bhangar and Khadar respectively. Which of the statements given above is/are correct? (a)1 only (b)1 and 2 only (c)3 only (d)2 and 3 only 6) Consider the following statements: 1. The drainage pattern resembling the branches of a tree is known as "dendritic" the examples of which are the rivers of the northern plain. 2. When the rivers originate from a hill and flow in all directions, the drainage pattern is known as 'centripetal'. 3. When the rivers discharge their waters from all directions in a lake or depression, the pattern is known as Which of the statements given above is/are correct? (a)1 only (b)2 and 3 only (c)3 only (d)1, 2 and 3 7) Which of the following are examples of antecedent drainage? 1. Brahmaputra Sutlej
 Indus 4. Teesta 5. Kosi Select the correct answer using the code given below: (a)1,2 and 3 only (b)1 and 3 only (c)2, 3 and 4 only (d)1, 2, 3, 4 and 5 8) Which of the following Indian river has the largest river basin in the peninsular plateau? (a)Narmada (b)Ganga (c)Godavari (d)Krishna 9) Consider the following with reference to Northern Plains: 1. The porosity of Bhabar is its unique feature. 2. North of Bhabar, the region is an ill-drained, marshy, and thickly forested narrow tract called Terai.

3. The Khadar is composed of newer alluvium and forms the flood plains along the river banks.

Which of the statements given above is/are correct?

(a)3 only (b)1 and 3 only (c)2 only (d)1, 2 and 3 10)

What are the important characteristic features of Peninsular rivers? How are these different from north Indian rivers? (150 words)

11)

Bring out the contrast between the western coastal plains and eastern coastal plains of India? (150 words/ 10 marks)

- 1) a
- 2) a

- 3) c 4) a 5) a 6) a
- 7) d
- 8) c 9) b

1)

Which of the following is/are tributary/tributaries of Brahmaputra?

- Lohit
- 2. Dibang
- 3. Kameng
- 4. Manas

Select the correct answer using the code given below.

- (a)1, 2, and 3 only
- (b)2 and 4 only
- (c)1 and 3 only
- (d)1, 2, 3 and 4

2)

Consider the following rivers: (UPSC 2015)

- 1. Vamsadhara
- 2. Indravati
- 3.Pranahita
- 4.Pennar

Which of the above are tributaries of Godavari?

- a) 1, 2 and 3
- b) 2, 3 and 4
- c) 1, 2 and 4
- d) 2 and 3 only

3)

With reference to the Indus river system, consider the following statements:

- 1. The Indus flows in India only through the Leh district in Jammu and Kashmir
- 2. The Jhelum, an important tributary of the Indus, rises from a spring at Verinag situated at the foot of the Pir Panjal
- 3. The Chenab is the smallest tributary of the Indus.
- 4. The Ravi is the largest tributary of the Indus.

Which of the statements given above is/are correct?

- (a)1, 2 and 3 only
- (b)3 and 4 only
- (c)1 and 2 only
- (d)1, 2, 3 and 4

4)

Which of the following are the right bank tributaries of the Ganges river?

- 1. Yamuna
- 2. Betwa
- 3. Son
- 4. Gomti
- 5. Gandak

Select the correct answer using the codes given below:

- (a)1 and 3 only
- (b)1, 2 and 3 only
- (c)3, 4 and 5 only
- (d)1, 3 and 5 only

5)

Arrange the following tributaries of Indus river from south to north:

- 1. Beas
- 2. Jhelum
- 3. Sutlej
- 4. Ravi
- 5. Chenab

Select the correct code:

- (a)2-3-1-4-5
- (b)1-2-3-4-5
- (c)3-1-4-5-2
- (d)5-4-3-2-1

6)

Choose the correct statements about the Brahmaputra-

- 1. Its main right bank tributaries are Dibang and Lohit.
- 2. The Subansiri which is an antecedent river is the right bank tributary of Brahmaputra.
- 3. The Brahmaputra is well-known for floods, channel shifting, and bank erosion because most of its tributaries are large, and bring large quantity of sediments owing to heavy rainfall in its catchment area. Select the correct option from the codes given below
- (a)1 and 2
- (b)1 and 3
- (c)2 and 3
- (d)All statements are correct

7)

Choose the correct statements about the Godavari river-

- 1. The Godavari is the largest Peninsular river system and is also called the Dakshin Ganga.
- 2. It rises in the Nasik district of Maharashtra and discharges its water into the Bay of Bengal.
- 3. The Penganga, the Indravati, the Pranhita, and the Tungabhadra are its principal tributaries
- (a)1 and 2 only
- (b)2 and 3 only
- (c)1 and 3 both
- (d)All are correct

8)

which of the following are the tributaries of Cauveri?

- 1. Amravati
- 2. Indravati
- 3. Bhavani

Select the correct code-

- (a)1 and 2 only
- (b)3 only
- (c)1 and 3 only
- (d)1,2 and 3

With reference to the Ganga Drainage System, consider the following statements:

- (1) At Devprayag, the Bhagirathi meets the Alaknanda; hereafter, it is known as the Ganga.
- (2) The Alaknanda has its source in the Satopanth glacier above Badrinath.
- (3) The Ganga enters the plains at Kanpur.

Which of the statements given above is/are correct?

- (a)1 only
- (b)1 and 2 only
- (c)1 and 3 only
- (d)3 only

10)

Consider the following statements regarding the river Luni in India-:

- 1) It flows from west to east
- 2) It originates from the Aravalli range
- 3) It drains into the Gulf of Khambat

Choose the incorrect statements from the codes given below

- (a)1 only
- (b)2 and 3 only
- (c)2 only
- (d)1 and 3 only

11)

Write a note on the Indus drainage system with a special focus on its right bank tributaries. (10 Marks/150 Words)

12)

Write a note on the major factors affecting India"s climate. (10 Marks/150 Words)

- 1) d
- 2) d
- 3) c

- 4) a 5) c 6) c
- 7) a 8) c
- 9) b
- 10) d

1)

Consider the following statements:

- 1. South-West monsoon does not cause rainfall in the Tamil Nadu Coastal Plains.
- 2. Bay of Bengal branch of South West Monsoon blows parallel to the Tamil Nadu coastal region. Tamil Nadu"s coastal region is lying on the Leeward side of the Arabian Sea branch.

Select the correct answer using the code given below.

- (a)Statement 1 is the cause and Statement 2 is its effect
- (b)Statement 2 is the cause and Statement 1 is its effect
- (c)Both Statements 1 and 2 are independent of each other
- (d)Both the Statements are not correct

2)

Consider the following statements:

- 1. When ITCZ is at the foothill of the Himalayas, it leads to the rainless spell over the plains though causes rainfall in the Himalayan"s foothills
- 2. Monsoon causes nearly three fourth of total rainfall
- 3. Somali Jet stream adversely affects the South West Monsoon over the Indian Sub-continent

Which of the statements given above is/are correct?

(a)1 only

(b)2 and 3 only

(c)1 and 2 only

(d)1, 2 and 3

3)

Consider the following statements:

- 1. South-west monsoon does not cause rainfall in the Tamil Nadu Coastal Plains
- 2. Arabian sea branch of South West Monsoon blows parallel to the Tamil Nadu coastal region.

Which of the statements given above is/are not correct?

(a) 1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

4)

With reference to Indian Ocean Dipole (IOD), consider the following statements:

- 1. A positive IOD is associated with cooler-than-normal sea surface temperatures in the eastern equatorial Indian Ocean
- 2. A negative IOD enhances the monsoonal period rainfall over the Indian Peninsular region
- 3. Indonesian region does not get affected by IOD

Which of the statements given above is/are correct?

(a)1 only

(b)2 and 3 only

(c)1 and 3 only

(d)1, 2 and 3

5)

Consider the following about Monsoon:

- 1. Monsoon occurs only in India.
- 2. Tibetan Plateau plays an important role in Indian Monsoon.
- 3. The difference in air pressure due to the differential heating of land and sea causes a reversal in the direction of monsoon winds.
- 4. During the southwest monsoon period after having rained for a few days, if rain fails to occur for one or more weeks, it is known as a break in the monsoon.

Which of the above statements is/are correct?

(a)1 only

(b)2,3 and 4

(c)1, 2 and 3

(d)All of the above

6)

Which of the following factors can affect the monsoon in the Indian Sub-continent?

- 1. Differential heating of land and sea over the Sub-continent
- 2. Shifting of ITCZ and the creation of low-pressure cells in the Indian Sub-continent
- 3. The Continentallity effect of the Tibetan plateau and the Himalayas4. Upper atmospheric circulations in the Sub-Tropical high-pressure belt

Which of the statements given above is/are correct?

(a)1, 2, and 3

(b)2, 3, and 4

(c)1, 3, and 4

(d)All of the above

7)

Consider the following statements:

- 1. The duration of the monsoon decreases from southern India to northern India.
- 2. The amount of annual rainfall in the northern plains of India decreases from east to west.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

8)

Which of the following(s) local warm winds is/are correctly matched:

- (1) Mango Showers: They are pre-monsoon showers that are a common phenomenon in Kerala and coastal areas of Karnataka.
- (2) Blossom Shower: With this shower, coffee flowers blossom in Kerala and nearby areas.
- (3) Loo: Hot, dry and oppressing winds blowing in the Northern plains from Punjab to Bihar with higher intensity between Delhi and Patna.
- (4) Kal Baishakhi: These are dreaded evening thunderstorms in Bengal. In Assam, these storms are known as "Bardoli Chheerha".

Select the correct answer using the code given below:

(a)1 only

(b)1, 2, 3 and 4

(c)1, 2, and 3 only

(d)1 and 3 only

9)

Consider the following statements with respect to the Western Disturbances:

1. The western disturbance originates in the Mediterranean region that brings sudden winter rain to the Northern

part of Indian sub-continent

- 2. This rainfall in India has nothing to do with the Monsoons and so they are called non-monsoonal rainfall driven by Westerly Jet Streams
- 3. It gives winter rainfall to the regions like Jammu and Kashmir, Punjab, and Haryana and is important for Rabi Crop like Winter Wheat, Barley, etc

Which of the statements given above is/are correct?

(a)1 and 2 Only

(b)2 and 3 only

(c)1 and 3 Only

(d)1,2, and 3

10)

Consider the following statements about Indian monsoons:

- 1. Cherapunji region gets ten times more rainfall as compared to the national average due to the narrowing effect of Meghalaya hills on the Arabian Sea Branch.
- 2. Chotanagpur Plateau gets rains from both the Arabian Sea and the Bay of Bengal Branches.
- 3. Only one sub-branch of the Bay of Bengal branch rains over Tamil Nadu.
- 4. Andaman & Nicobar receives monsoon before Kerala.

Choose the correct answer from the codes given below:

- (a)Only one statement is correct.
- (b)Only two statements are correct.
- (c)Only three statements are correct.
- (d)All The statements given above are correct.

11)

Write important characteristics of the Indian Monson. (10 Marks/150 Words)

12)

What do you understand by the Western Disturbances? Write its significance.(10 Marks/150 Words)

- 1) b
- 2) c
- 3) b
- 4) a 5) b
- 6) d
- 7) c
- 8) b
- 9) d
- 10) b

1)

Consider the following statements:

- 1. Humus is the organic matter which provides nutrients to the plants
- 2. The uppermost horizon of the soil is less rich in humus and minerals

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

2)

When you travel in certain parts of India, you will notice red soil. What is the main reason for this colour?

- (a)Presence of ferric oxides
- (b)Accumulated humus
- (c)Abundance of magnesium
- (d)Abundance of Phosphates

3)

Consider the following statements regarding the Laterite soil of India. It is generally red in color.

- 2. It is rich in nitrogen and potash.
- 3. It is well-developed in Rajasthan and UP.
- 4. Tapioca and cashew nuts grow well on them.

Select the correct answer using the codes given below

(a)1, 2 and 3

- (b)2, 3 and 4
- (c)1 and 4
- (d)2 and 3 only

4)

Which of the following is/are correct with respect to alluvial soil?

- 1. Good for both rabi and Kharif crops.
- 2. Formed by the solidification of Lava.
- 3. Rich in Potash but deficient in Nitrogen and Humus content.

Select the correct answer using the code given below.

- (a)1 only
- (b)2 only
- (c)1 and 3 only
- (d)1 and 2 only

5)

In which of the following regions can peaty soil be found?

- 1. Terai regions of UP & Bihar
- 2. Foothills of Arunachal Pradesh

3. Deltaic regions like Sunderbans 4. Chota Nagpur plateau region Select the correct answer using the codes given below: (a)1, 2 and 4 only (b)1 and 3 only (c)1, 2 and 3 only (d)All of the above 6) Salinization occurs when the irrigation water accumulated in the soil evaporates, leaving behind salts and minerals. What are the effects of salinization on irrigated land? (2011) (a)It greatly increases the crop production (b)It makes some soils impermeable (c)It raises the water table (d)It fills the air spaces in the soil with water 7) Which one of the following is the most widespread and most productive category of soil? (a) Alluvial Soil (b)Black Soil (c)Laterite Soil (d)Forest Soil 8) 'Regur Soil' is another name for the. (a)Saline Soil (b)Black Soil (c)Arid Soil (d)Laterite Soil Which of the following soil type is best suitable for tea and coffee growth? (a)Alluvial soil (b)Red soil (c)Laterite soil (d)Black soil 10)

Consider the following characteristic of a soil

- 1. This soil is the second most abundant in the country.
- 2. The soil is known for its characteristic of Self-ploughing.
- 3. Also known as Regur soil.

Which of the soil have the above characteristics:

- (a)Red soil
- (b)Black soil
- (c)Alluvial soil
- (d)Mountain soil

11)

Write about the ocean water resources, what are the challenges in utilizing them to their potential? (10 Marks/150 Words)

12)

Write about India"s potential in Marine Fishing and steps taken by the government to promote it. (10 Marks/150 words)

- 1) a
- 2) a

- 3) c 4) c 5) c 6) b 7) a 8) b
- 9) c
- 10) b

1)

Which among the following are sources of water pollution?

- 1. Soil erosion
- 2. Leaching of minerals from rocks
- 3. Decaying of organic matter

Select the correct answer using the codes given below:

- (a)1 & 2 only
- (b)2 & 3 only
- (c)1 & 3 only
- (d)1, 2 & 3

2)

With reference to the Equatorial climate region, consider the following statements:

- 1. Precipitation is heavy and well-distributed throughout the year.
- 2. High temperatures and abundant rainfall support a luxuriant tropical rainforest.
- 3. The equatorial vegetation comprises a multitude of evergreen trees that yield tropical hardwood.

Which of the statements given above is/are correct?

- (a)1 only
- (b)1 and 2 only
- (c)2 and 3 only
- (d)1, 2 and 3

3)

A geographic region has the following distinct characteristics:

- 1) Warm and dry climate
- 2) Mild and wet winter
- 3) Evergreen oak trees

The above features are the distinct characteristics of which one of the following regions:

- (a)Mediterranean
- (b)Eastern China
- (c)Central Asia
- (d)Atlantic coast of North America

4)

With reference to water pollution, consider the following statements,

- 1. Arsenic contamination takes place due to over-exploitation of the groundwater.
- 2. Arsenic poisoning leads to black foot disease.

Which of the statements given above is/ are correct?

- (a)1 Only
- (b)2 Only
- (c)Both 1 and 2
- (d)Neither 1 nor 2

5)

Which of the following can be the Components of the Watershed Development Programme?

- 1. Soil and land management
- 2. Water management

- 3. Crop management
- 4. Afforestation
- 5. Pasture or fodder development
- 6. Livestock management

Choose the correct code from below:

(a)1, 2, 3, and 4 only

(b)2 and 4 only

(c)1, 2, 4, 5, and 6 only

(d)1, 2, 3, 4, 5, and 6

6)

consider the following statements regarding Rainwater harvesting:

- 1. it increases the groundwater level.
- 2. it increases the contamination of groundwater.
- 3. Rooftop rainwater harvesting is an in-situ method of rainwater collection.

Which of the above-given statement/s is/are correct?

- (a)1 only
- (b)1 and 2 only.
- (c)all of the above.
- (d)1 and 3 only.

7)

Consider the following statements regarding Watershed development:

- 1. It implies rational utilization of land and water resources for optimum and sustained production with minimal hazard to natural resources.
- 2. It involves the conservation and management of surface as well as groundwater.

Which of the above-given statement/s is/are correct?

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)neither 1 nor 2.

8)

consider the following statements regarding the National river linking project:

- 1. It aims to transfer water from the Himalayan drainage system(water excess) to the peninsular region (water deficit).
- 2. It aims to transfer water through 30 river links connecting a total of 37 rivers.
- 3. It will connect only the minor rivers and not the major rivers.

Which of the above-given statement/s is/are correct?

- (a)1 and 2 only.
- (b)1 and 3 only
- (c)1 only
- (d)2 and 3 only.

9)

Which of the followings are the issues associated with the National River Linking Project:

- 1. submergence of the vegetation.
- 2. the loss of wildlife species.
- 3. high cost for the implementation and maintenance.
- 4. Interstate water disputes.

Select the answer using the codes given below:

(a)1, 2 and 3 only

(b)2, and 3 only
(c)1, 2, 3 and 4
(d)1 and 2 only

10)
Consider the following statements

1. On planet earth greater percentage of water is in the ocean.
2. Rivers have a Higher share of freshwater compared to lakes.

Which of the Given statements is/are not correct?

(a)1 only
(b)2 only
(c)Both 1 and 2
(d)Neither 1 nor 2

11)
Write issues related to freshwater in India and suggest measures to handle them in brief. (10 Marks/10 words)

12)

Explain the concept of watershed management and its significance in water stress management. (10 marks/150 Words)

- 1) d
- 2) d
- 3) a 4) c 5) d
- 6) d
- 7) c
- 8) a
- 9) c
- 10) b

1)

With reference to the Mangroves, consider the following statements:

- 1. Mangrove forests are not found in sub-tropical regions.
- 2. The Mangroves are salt-tolerant trees, also called halophytes.
- 3. They are adapted to the low oxygen (anoxic) conditions of waterlogged mud.

Which of the statements given above is/are correct?

(a)1 and 2 only

(b)2 and 3 only

(c)1 and 3 only

(d)3 only

2)

Which of the following can be examples of Commercial farming:

- 1. Livestock ranching
- 2. Extensive agriculture
- 3. Plantation agriculture
- 4. Shifting agriculture

Select the correct answer using the codes given below:

(a)1 and 4 only

(b)1, 2 and 3 only

(c)1 and 3 only

(d)1, 2, 3 and 4

3)

Consider the following regarding the Tropical Moist Deciduous vegetation of India:

- 1. It requires 50-75 cm of rainfall
- 2. Teak is an important species found here

Which of the above statements is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

4)

Consider the following statements regarding mangroves-

- 1. Mangroves are highly productive ecosystems, and they protect the shoreline from the effect of cyclones and tsunamis.
- 2. They are important for carbon sequestration.
- 3. They produce pneumatophores (breathing roots) to overcome the respiration problem in anaerobic soil conditions.

Which of the above-given statement/s is/are correct?

(a)1 and 2 only

(b)2 and 3 only

(c)1 and 3 only

(d)1,2, and 3

With reference to Plantation Agriculture, consider the following statements:

- 1. It is a form of commercial farming where crops are grown for profit.
- 2. Large land areas are needed for this type of agriculture.
- 3. It is usually found in temperate regions.

Which of the following statements given above is/are correct?

- (a)1 and 2 only
- (b)2 and 3 only
- (c)1 and 3 only
- (d)1,2 and 3

6)

Which of the following is/are features of the tropical evergreen forests?

- 1. Annual precipitation of over 200 cm
- 2. No definite time for trees to flowering
- 3. Absence of stratification

Select the correct answer from the following codes:

(a)Only 1

(b)Only 1 and 2 (c)Only 2 and 3

(d)1,2 and 3

7)

Arrange the following forests in the increasing order of their abundance in India:

- 1. Tropical Deciduous forests
- 2. Littoral and Swamp forests
- 3. Tropical Evergreen forests

Select the correct answer using the code given below.

(a)2-3-1

(b)1-3-2

(c)2-1-3

(d)3-2-1

8)

With reference to shifting cultivation, which of the following statement(s) is/are correct?

- Shifting cultivation or Jhum, predominantly practiced in the northeast of India is an agricultural system where a farming community slashes secondary forests in a predetermined location, burns the slash, and cultivates the land for a limited number of years.
- The land is then left fallow and the farming community moves to the next location to repeat the process till they return back to the starting point.

Select the correct answer using the codes given below.

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

9)

With regard to Tropical Evergreen and Semi Evergreen Forests, consider the following statements:

- 1. These forests are found in the western slope of the Western Ghats, the hills of the northeastern region, and the Andaman and Nicobar Islands.
- 2. They are found in warm and humid areas with annual precipitation of over 200 cm and a mean annual temperature above 22 degrees C.

Which of the statements given above is/are correct?

(a)1 Only (b)2 Only (c)Both 1 and 2 (d)Neither 1 nor 2

10)

In the context of Truck Farming, consider the following statements:

- 1. It"s limited only to urban areas of Europe.
- 2. It aims to transport perishable goods overnight to the urban centers. Which of the statements given above is/are correct?

(a)1 only (b)2 only (c)Both 1 and 2

(d)Neither 1 nor 2

11)

Write the characteristics features and distribution of the Tropical Evergreen Forests vegetation in India. (10 Marks/150 Words)

12)

Write about the various types of agriculture done in the tropical regions of the world. (10 Marks/150 Words)

- 1) b
- 2) b
- 3) b
- 4) d
- 5) a
- 6) b
- 7) a
- 8) c
- 9) c
- 10) b

1)

Which of the following was a part of the green revolution strategy?

- 1. High-yielding variety seeds
- 2. Chemical fertilizers and pesticides
- 3. Irrigation

Select the answer from the codes given below:

- (a)1 and 2 only
- (b)1 and 3 only
- (c)2 and 3 only
- (d)1, 2, and 3

2)

What is meant by Net Sown Area?

- (a)It is the total area sown with crops in a country.
- (b)It is land which left without cultivation.
- (c)It is land used for non-agricultural purposes.
- (d)None of the above.

3)

Consider the following statements regarding Land use changes in India;

- 1. land use changed in favor of non-agricultural use.
- 2. The areas under the forest have shown an increase.

Select the correct answer using the code given below;

- (a)1 only
- (b)2 only
- (c)Both 1 and 2
- (d)Neither 1 nor2

4)

Which of the following crops was/were the main focus in the first and second phases of the Green Revolution?

- 1. Oilseeds
- 2. Pulses
- 3. Wheat
- 4. Rice
- 5. Maize

Select the correct codes from the option given below

- (a)1,2 and 3
- (b)2,3 and 4
- (c)3 and 4
- (d)3,4 and 5

5)

Consider the following statements

- 1. Sugarcane is a dry land area crop.
- 2. Wheat is a Rabi crop and rice is a Kharif crop.
- 3. 75-150 cm rainfall is suitable for sugarcane cultivation.

Which of the above is/are correct?

```
(a)All of the above
(b)Only 1 and 2
(c)Only 2 and 3
(d)Only 1 and 3
6)
Consider the following statements:
        1. Majority of farmers in India practice subsistence farming
        2. Advent of the Green Revolution promoted subsistence farming in almost all parts of India.
        3. Sugarcane and groundnut are examples of cash crops.
Which of the above statements is/are correct?
(a)1 and 3 Only
(b)1 and 2 only
(c)1, 2 and 3
(d)None of the above
7)
Consider the following statements about Green Revolution:

    Green revolution ensured that there was no regional disparity.
    There was an increase in the production of all food grains and commercial crops.

Which of the above statements is/are not correct?
(a)1 only
(b)2 only
(c)Both 1 and 2
(d)None of the above
8)
Which of the following are Rabi crops in India?
        1. Wheat
        2. Mustard
            Barley
Select the correct items from the codes given below:
(a)1 and 2 only
(b)1 and 3 only
(c)2 and 3 only
(d)1, 2 and 3
9)
Consider the following statements
1. Rice is grown in India all around the year provided an irrigation facility is available.
2. Wheat is grown only as Kharif in Northern India.
Select the correct statement/ statements from the codes given below
(a)1 only
(b)2 only
(c)Both 1 and 2
(d)Neither 1 nor 2
```

10)

Which of the following(s) is/are demerits of the Green Revolution in India?

- (1) Wheat and rice have largely displaced more nutritious pulses and other cereals such as millets in consumption.
- (2) Soil has lost its fertility due to the unscientific application of fertilizers.
- (3) Indian agriculture became diverse and regionally balanced. Select the answer using the codes given below:

- (a)1 and 2 Only
- (b)2 and 3 Only
- (c)1 and 3 Only
- (d)1,2 and 3

11)

Write about various land use categories in India and the changes in them over time along with the reasons. (10 Marks/150 words)

12)

Write a note on the Cropping Seasons and Cropping Conditions in India. (10 Marks/150 Words)

- 1) d
- 2) a
- 3) c 4) c 5) c 6) a 7) c

- 8) d
- 9) a
- 10) a

1) Which of the following iron ores has high iron content? (a)Hematite (b)Magnetite (c)Limonite (d)Siderite 2) Consider the following statements with regard to Hydraulic cracking/fracturing: 1) It is used to extract shale gas and coal bed methane from sedimentary deposits under the earth's surface 2) It is an environmentally friendly method for gas extraction 3) It makes use of little or no water thus helping in conserving water Select the correct answer using the codes given below: (a)1 only (b)1 and 3 only (c)2 and 3 only (d)1, 2 and 3 only 3) The first modern cotton mill was established in Mumbai because: (a)Mumbai is a port. (b)It is located near cotton growing area. (c)Mumbai was the financial centre. (d)All of the above 4) Which of the following are potential shale gas regions in India? 1. Assam- Arakan region 2. Krishna- Godavari basin 3. Cauvery basin Select the correct answer using the codes given below: (a)1 and 2 only (b)1 and 3 only (c)2 and 3 only (d)1, 2 and 3 5) Which of the following places is famous for Uranium mining? (a)Rae Bareli (b)Raurkela (c)Jadugoda

(d)Karnal

Which of the following factors determine the location of an industry? 1. Market 2. Industrial policy 3. The climate of a region Choose the correct code given below (a)1 and 2 only (b)1 and 3 only (c)1 and 3 only (d)1,2 and 3 7) With regard to Chotanagpur Industrial Region, consider the following statement: 1. Proximity of coal, iron ore and other minerals facilitated the location of heavy industries in this region. 2. Densely populated surrounding regions provide cheap labor and the Hugli region provides a vast market for its 3. Heavy engineering, machine tools, fertilizers, cement, paper, locomotives, and heavy electrical are some of the important industries in this region. Which of the statements given above is/are correct? (a)1 and 2 only (b)2 and 3 only (c)1 and 3 only (d)1,2 and 3 8) Consider the following statements with respect to the minerals and Indian rock formations: Dharwar rocks are the oldest sedimentary rocks found in the Dharwar region of Karnataka, Chotanagpur Plateau Cuddapah rocks were formed next which are important sources of limestone, dolomite, etc found in the Andhra Pradesh 3. Vidhayas rock system where Diamond is found of Panna Diamond, limestone, Sandstone, etc Which of the statements given above is/are correct? (a)1 and 2 Only (b)2 and 3 Only (c)1 and 3 Only (d)All of the Above 9)

Consider the following statements with respect to the Classification of minerals:

- 1. Metallic Minerals can be ferrous (Iron, Steel) and non-ferrous minerals (Copper, Bauxite)
- 2. Non-Metallic Minerals can be organic or energy minerals (coal, petroleum) and inorganic minerals (Mica, Graphite, Limestone)

Which of the statements given above is/are correct?

(a)1 Only

(b)2 Only

(c)Both 1 and 2

(d)Neither 1 nor 2

10)

Consider the following statements with respect to the Foot Loose Industry:

- 1. These industries are free from the factors of the location of raw materials.
- They are based on government support.
 IT hub in Bangalore is an example of a footloose industry.

Which of the statements given above is/are correct	t?
(a)1 and 2 only	٠.
(b)1 and 3 only	
(c)1,2 and 3	
(d)2 and 3 only	

11)

Write the significance and distribution of Coal, Petroleum & Natural Gases resources around the world. (10 Marks/150 Words)

12)

Write about various rock formations in India and the important mineral resources found in them. (10 Marks/150 Words)

- 1) b
- 2) a
- 3) d
- 4) d 5) c 6) d
- 7) d
- 8) d
- 9) c
- 10) c

1)

Consider the following statements:

- 1. Britain, France, Germany, USA, and Italy were the traditional producer of cotton textiles
- 2. India and Bangladesh are the major producers of Jute
- 3. Due to a lack of technology India does not produce all types of Silk

Which of the statements given above is/are correct?

(a)1 only

(b)1 and 2 only

(c)2 and 3 only

(d)1, 2 and 3

2)

Which of the following are correctly matched?

- 1. Salem Steel Plant
- 2. Kanchipuram Cotton
- 3. Coimbatore Silk

Choose the correct option

- (a)1 only
- (b)1 and 3
- (c)2 and 3
- (d)1,2 and 3

3)

With reference to the Jute Industry, consider the following statements:

- 1. Much of the Jute is cultivated in the Kolkata hinterland.
- 2. Jute processing requires highly skilled labour and is a relatively less labour-intensive industry
- 3. Jute has lost its former competitiveness due to the development of cheaper packaging materials such as plastic

Which of the statements given above is/are correct?

- (a)1 only
- (b)1 and 2 only
- (c)1 and 3 only
- (d)1, 2 and 3 only

4)

Consider the following statements regarding modern industrial development in India:

- I. The modern industrial development in India started with the establishment of the first cotton textile mill in Mumbai in 1854, predominantly with Indian capital and entrepreneurship.
- II. Jute industry made a beginning in 1855 with the establishment of a jute mill in the Hooghly Valley near Kolkata with foreign capital and entrepreneurship.
- III. Coal mining was first started at Raniganj in 1774 while Railways were introduced in 1854.

Which of the following statement(s) is/are correct?

- (a)Only I
- (b)I and II
- (c)II and III
- (d)All of the above

Consider the following statements

- 1. The process of cultivating silkworms is called sericulture.
- 2. Jute grows best in black soil and a dry climate.

Which of the statement/s given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)None

6)

Consider the following specific stages of demographic transition associated with economic development

- 1. Low birth rate with a low death rate
- 2. High birth rate with a high death rate
- 3. High birth rate with a low death rate

Select the correct order of the above stages using the codes given below:

(a)1, 2, 3

(b)2, 1, 3 (c)2, 3, 1

(d)3, 2, 1

7)

Consider the following sentences-

- 1. Coalfields of the Godavari basin provide energy.
- 2. Petroleum refinery based on imported petroleum facilitated the growth of several petrochemical industries.
- 3. Iron and steel plant in this region uses raw material from Bailadila iron ore.

Which region is described above?

(a) Vishakhapatnam Guntur region

(b)Chhotanagpur region

(c)Madras Bangalore region

(d)Kollam Thiruvananthapuram region

8)

Which of the following is/are used as important raw materials for the fertilizer industry:

- 1. Naphtha.
- 2. Ammonium sulfate.
- 3. Rock phosphate.
- 4. Sulphuric acid.

Select the correct answer using the code given below:

(a)1 only

(b)2 and 3 only

(c)1,2 and 3 only

(d)1,2,3, and 4

9)

Consider the following statement regarding the sugar industry in India:

- 1. Sugarcane in the south had more sucrose content as compared to the northern region due to marine impact.
- 2. The crushing season is more in the southern part of India as compared to the north.
- 3. Cooperatives played a crucial role in north India while in south India industries were established by individuals. Select the correct answer using the code given below:
- (a)1 only
- (b)2 annd 3 only/
- (c)1 and 2 only.

(d)1,2, and 3

10)

What is the Maternal Mortality Rate?

- (a)Women"s death occurred before 9th month of pregnancy
 (b) The annual number of female deaths per 100,000 live births due to pregnancy.
- (c)The death of women occurred within 2 year of childbirth
- (d)None of the above

11)

Write the Significance of, challenges faced, and the government initiatives related to the Jute Industry. (10 Marks/ 150 Words)

12)

Write about the varieties of silk found in and distribution of the Silk Textile Industry in India. (10 Marks/150 Words)

- 1) b
- 2) a
- 3) c
- 4) d
- 5) a
- 6) c
- 7) a
- 8) d
- 9) c
- 10) b