

REVISION

Chapter 1: The Universe & Solar System - Practice Questions

Question 1: Consider the following statements regarding the formation of our Solar System:

1. The Nebular Hypothesis, proposed by Kant and Laplace, is the most widely accepted model for the formation of the solar system.
2. In the early stages, a rotating cloud of gas and dust, known as a nebula, began to collapse due to gravity.
3. The central part of the nebula formed the planets, while the outer parts formed the Sun.

Which of the statements given above is/are correct?

Options:

1. 1 and 2 only
2. 1 and 3 only
3. 2 and 3 only
4. 1, 2 and 3

Question 2: Which of the following statements correctly describe the planets in our solar system?

A) Venus is the hottest planet due to a runaway greenhouse effect.

B) Jupiter is the largest planet, while Mercury is the smallest.

C) The inner planets (Mercury, Venus, Earth, Mars) are also known as Jovian giants. D) Uranus and Neptune are classified as 'ice giants'.

Options:

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1. A, B, and D only
 2. A and C only
 3. B, C, and D only
 4. A, B, C, and D
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Question 3: Consider the following events in the timeline of the universe:

1. The Big Bang occurred approximately 13.8 billion years ago.
2. The formation of our Solar System predates the formation of the first stars and galaxies.
3. Modern humans (*Homo sapiens*) appeared around 200,000 years ago.

Which of the statements given above is/are correct?

Options:

1. 1 only
 2. 2 and 3 only
 3. 1 and 3 only
 4. 1, 2 and 3
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Question 4: Match the following geographical features with their correct description.

List-I (Feature) List-II (Description)

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|---------------------------|--|
| A. Astronomical Unit (AU) | 1. The flat plane in which most planets orbit the Sun. |
| B. Ecliptic Plane | 2. The average distance between the Earth and the Sun. |
| C. Dwarf Planet | 3. A celestial body that orbits the sun and is nearly spherical, but has not cleared its orbital neighborhood. |

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Options:

1. A-2, B-1, C-3
2. A-1, B-2, C-3
3. A-3, B-1, C-2
4. A-2, B-3, C-1

Question 5: Consider the following statements about small bodies in our solar system:

1. Most asteroids are found in a belt located between the orbits of Mars and Jupiter.
2. A comet's tail, formed by solar wind and radiation, always points towards the Sun.
3. A piece of rock in space is called a meteoroid; when it burns in the atmosphere it's a meteor, and if it lands on Earth it's a meteorite.

Which of the statements given above is/are correct?

Options:

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1. 1 and 3 only
 2. 1 and 2 only
 3. 2 and 3 only
 4. 1, 2 and 3
-

Question 6: Which of the following statements about Earth's geography and motions is/are correct?

I. Earth's seasons are primarily caused by its axial tilt of approximately 23.5 degrees, combined with its revolution around the Sun. II. Indian Standard Time (IST) is based on the 82.5° E longitude, which passes near Mirzapur.

Options:

1. Only I
 2. Only II
 3. Both I and II
 4. Neither I nor II
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Chapter 2: Earth's Structure & Landforms - Practice Questions

Question 1: Consider the following statements regarding the layers of the Earth's interior:

1. The continental crust, primarily composed of 'Sial' (Silica-Alumina), is thinner than the oceanic crust.
2. The asthenosphere is the weak, semi-molten upper part of the mantle on which the lithospheric plates float.
3. The Earth's outer core is in a liquid state, which is confirmed by the fact that S-waves cannot pass through it.

Which of the statements given above is/are correct?

Options:

1. 1 and 2 only
2. 2 and 3 only
3. 1 and 3 only
4. 1, 2 and 3

Question 2: Match the original rock in List-I with its metamorphic form in List-II.

List-I (Original Rock)	List-II (Metamorphic Rock)
A. Limestone	1. Quartzite
B. Sandstone	2. Slate / Schist
C. Shale	3. Marble

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Options:

1. A-3, B-1, C-2
 2. A-1, B-3, C-2
 3. A-2, B-1, C-3
 4. A-3, B-2, C-1
-

Question 3: Which of the following statements about landforms created by exogenic processes is correct?

I. U-shaped valleys are characteristic features of glacial erosion, while V-shaped valleys are formed by rivers. II. Stalactites and stalagmites are erosional landforms found in desert regions.

Options:

1. Only I
 2. Only II
 3. Both I and II
 4. Neither I nor II
-

Question 4: Consider the following statements regarding Plate Tectonics:

1. The Himalayas were formed at a convergent boundary where two continental plates collided.
2. New crust is formed at divergent boundaries, such as the Mid-Atlantic Ridge.
3. The San Andreas Fault is an example of a convergent boundary.

Which of the statements given above is/are correct?

Options:

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1. 1 and 2 only
2. 1 and 3 only
3. 2 and 3 only
4. 1, 2 and 3

Question 5: Consider the following statements about rock types:

1. Igneous rocks are formed from the cooling and solidification of magma or lava.
2. Fossils are most commonly found in metamorphic rocks due to the intense pressure.
3. Granite is an example of an extrusive igneous rock.

Which of the statements given above is/are correct?

Options:

1. Only 1
2. 1 and 2 only
3. 1 and 3 only
4. 2 and 3 only

Question 6: Match the landform in List-I with its primary agent of formation in List-II.

List-I (Landform)	List-II (Agent)
A. Moraine	1. River (Fluvial)
B. Delta	2. Wind (Aeolian)

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C. Barchan 3. Glacier
Dune (Glacial)

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Options:

1. A-3, B-1, C-2
 2. A-1, B-3, C-2
 3. A-2, B-1, C-3
 4. A-3, B-2, C-1
-

Chapter 3: Atmosphere Questions

Question 1: Consider the following statements:

1. The Coriolis force, caused by the Earth's rotation, deflects winds to the right in the Northern Hemisphere.
2. The area of low pressure near the equator, where the trade winds converge, is known as the Doldrums or ITCZ.
3. The Westerlies blow from the Sub-Tropical High-Pressure Belts towards the Equatorial Low-Pressure Belt.

Which of the statements given above is/are correct?

Options:

1. 1 and 2 only
 2. 2 and 3 only
 3. 1 and 3 only
 4. 1, 2 and 3
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Question 2: Match the atmospheric phenomenon in List-I with the correct layer of the atmosphere in List-II.

List-I (Phenomenon)

List-II (Layer)

A. Almost all weather events

1.
Stratosphere

B. Absorption of UV radiation by Ozone

2.
Thermosphere

C. Reflection of radio waves by Ionosphere

3.
Troposphere

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Options:

1. A-3, B-1, C-2
 2. A-1, B-2, C-3
 3. A-3, B-2, C-1
 4. A-2, B-1, C-3
-

Question 3: Which of the following statements correctly differentiates between a Cyclone and an Anticyclone?

I. A Cyclone is a high-pressure system, while an Anticyclone is a low-pressure system. II. In the Northern Hemisphere, winds in a Cyclone spiral anti-clockwise, while in an Anticyclone they spiral clockwise.

Options:

1. Only I
 2. Only II
 3. Both I and II
 4. Neither I nor II
-

Question 4: Consider the following statements regarding the Earth's Heat Budget:

1. Albedo is the measure of heat absorbed by a surface from incoming solar radiation.
2. Greenhouse gases like Carbon Dioxide trap the outgoing terrestrial radiation, keeping the atmosphere warm.
3. Clouds and ice have a high albedo, meaning they reflect a large portion of the incoming solar energy.

Which of the statements given above is/are correct?

Options:

1. 1 and 2 only
2. 1 and 3 only
3. 2 and 3 only
4. 1, 2 and 3

Question 5: Which of the following is the correct match for the atmospheric instrument and the quantity it measures?

Options:

1. Barometer - Humidity
 2. Anemometer - Wind Direction
 3. Hygrometer - Humidity
 4. Wind Vane - Wind Speed
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Question 6: Consider the following statements about greenhouse gases:

1. Water vapor is the most abundant greenhouse gas in the Earth's atmosphere.
2. Chlorofluorocarbons (CFCs) are a primary cause of ozone layer depletion.
3. The main effect of greenhouse gases is that they absorb incoming shortwave solar radiation.

Which of the statements given above is/are correct?

Options:

1. 1 and 2 only
 2. 2 and 3 only
 3. 1 and 3 only
 4. 1, 2 and 3
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