ORANGE™ GLOBAL OLYMPIAD

Astronomy

Curriculum & Sample Questions

1

CURRICULUM

The Solar System; The Sun; The Planets; Our Earth; The Moon; The Stars; Logical Reasoning

Sample Questions

The actual question paper contatins 30 MCQs, out of which 25 questions are based on Subject knowledge and 5 are based on Logical Reasoning. The duration of the test paper is 60 minutes.

1. _____ is an the object in sky which gives heat and light.

(A) Moon (B) Planet
(C) Sun (D) Both (A) and (C)

2. Which planet of the Solar System has water and air for existence of life?

(A) Mars (B) Venus
(C) Mercury (D) Earth

3. Which planet is more than 1000 times bigger than Earth and has 63 moons?

(A) Earth (B) Mercury
(C) Jupiter (D) Mars

4. Which of the following shows correct sequence of outer planets in Solar System?

(A) Jupiter, Saturn, Uranus, Mercury (B) Saturn, Mars, Uranus, Neptune
(C) Jupiter, Saturn, Uranus, Neptune (D) Uranus, Neptune, Earth, Mars

5. Why does Sun looks larger to us than other stars?

(A) It is close to the Earth. (B) It is moving around the Earth.
(C) It gives us heat and light. (D) All of these.

6. When an object comes in path of light, a _____ is produced on the opposite side of object.

(A) Brightness (B) Glow
(C) Shadow (D) None of these

7. What causes seasons on Earth?

(A) Rotation of the Earth. (B) Revolution of the Earth around the Sun.
(C) Moon's movement around the Earth. (D) Distance of the Earth from the Sun.

8. How long does it take for Mercury to revolve around the Sun?

(A) 100 days (B) 88 days
(C) 66 days (D) 365 days

9. **Earth is covered with land and water. At some places, the land is flat. These are called _____.**

(A) Plains
(B) Hills
(C) Mountains
(D) Valleys

10. **Earth's atmosphere has many gases. The gas that we use for breathing is _____.**

(A) Nitrogen
(B) Carbon dioxide
(C) Hydrogen
(D) Oxygen

Answers																			
1.	C	**2.**	D	**3.**	C	**4.**	C	**5.**	A	**6.**	C	**7.**	B	**8.**	B	**9.**	A	**10.**	D

ORANGE™ GLOBAL OLYMPIAD

Astronomy

Curriculum & Sample Questions

2

CURRICULUM

The Solar System; The Sun; The Planets; Our Earth; The Moon; The Stars; The Universe; Logical Reasoning

Sample Questions

The actual question paper contatins 30 MCQs, out of which 25 questions are based on Subject knowledge and 5 are based on Logical Reasoning. The duration of the test paper is 60 minutes.

1. The position of the Earth from the Sun in Solar System is _____.

(A) First (B) Second
(C) Third (D) Fourth

2. The hottest and biggest body in the Solar System is _____.

(A) Earth (B) Moon
(C) Jupiter (D) Sun

3. Which planet is famous for thousands of beautiful rings around it?

(A) Jupiter (B) Mercury
(C) Venus (D) Saturn

4. Which planet would fit all the planets in the Solar System inside it?

(A) Saturn (B) Uranus
(C) Neptune (D) Jupiter

5. Which planet of the Solar System appears green in colour?

(A) Mercury (B) Uranus
(C) Mars (D) Neptune

6. When the Sun is above our head, the shadows formed are _____.

(A) Very long (B) Long
(C) Short (D) None of these

7. Why nights are cool and dark?

(A) Because of Moon. (B) Because of planets and stars.
(C) Because of clouds. (D) Because there is no sunshine.

8. How many earths can inside the Sun?

(A) 109 (B) One thousand
(C) One lakh (D) 13 lakhs

9. **Which of the following is responsible for seasons and sleeping patterns of all creatures on Earth?**

(A) Moon
(B) Mercury
(C) Sun
(D) Venus

10. **The _____ is a huge rock which does not have its own light.**

(A) Moon
(B) Sun
(C) Telescope
(D) Space station

Answers																			
1.	C	**2.**	D	**3.**	D	**4.**	D	**5.**	B	**6.**	C	**7.**	D	**8.**	D	**9.**	C	**10.**	A

ORANGE™ GLOBAL OLYMPIAD

Astronomy

Curriculum & Sample Questions

3

CURRICULUM

The Solar System; The Sun; The Planets; Our Earth; The Moon; The Stars; The Universe; Logical Reasoning

Sample Questions

The actual question paper contatins 30 MCQs, out of which 25 questions are based on Subject knowledge and 5 are based on Logical Reasoning. The duration of the test paper is 60 minutes.

1. A meteoroid which lands on the Earth's surface is called _____.

(A) Comet (B) Asteroid

(C) Meteorite (D) Nebula

2. Largest satellite of the Solar System is _____.

(A) Moon (B) Phobos

(C) Ganymede (D) Deimos

3. Asteroids lie between the orbits of which two planets?

(A) Mars and Jupiter (B) Saturn and Uranus

(C) Earth and Mars (D) Mercury and Venus

4. Sometimes, _____ enter the Earth's atmosphere and burn up forming streaks of light called _____.

(A) Meteors, comets (B) Meteoroids, meteors

(C) Meteoroids, comets (D) Asteroids, meteors

5. Which of the following statement is true about Sun?

(A) It is a ball of hydrogen and helium. (B) It is a ball of oxygen and hydrogen.

(C) It is a ball of helium and phosphorus. (D) It is a ball of carbon dioxide and oxygen.

6. The rapidly moving stream of charged particles that is being driven away from the Sun is known as _____.

(A) Solar wind (B) Solar flare

(C) Solar storm (D) None of these

7. What type of reaction takes place on the surface of Sun?

(A) Chemical reaction (B) Nuclear reaction

(C) Explosive reaction (D) None of these

8. **What is the name of the layer of Earth's atmosphere that absorbs harmful ultraviolet rays from the Sun?**

(A) Ionosphere
(B) Thermosphere
(C) Ozone
(D) None of these

9. **Which planet has the shortest day of all the planets in the Solar System?**

(A) Mercury
(B) Jupiter
(C) Saturn
(D) Neptune

10. **The planet which has the minimum time period of rotation is _____.**

(A) Earth
(B) Mercury
(C) Venus
(D) Jupiter

Answers																			
1.	C	**2.**	C	**3.**	A	**4.**	B	**5.**	A	**6.**	A	**7.**	B	**8.**	C	**9.**	B	**10.**	D

ORANGE™ GLOBAL OLYMPIAD

Astronomy

Curriculum & Sample Questions

4

CURRICULUM

Introduction to Astronomy; The Solar System; The Sun; The Night Time Sky; Our Earth; The Universe; Space Exploration; Logical Reasoning

Sample Questions

The actual question paper contatins 30 MCQs, out of which 25 questions are based on Subject knowledge and 5 are based on Logical Reasoning. The duration of the test paper is 60 minutes.

1. **Who first gave the hypothesis that the Earth orbits around the Sun?**

   (A) Socrates (B) Tycho Brahe

   (C) Copernicus (D) Alexander the Great

2. **Early astronomers noticed some patterns in the sky which helped them in tracking the movement of stars and other heavenly bodies. What are these patterns called?**

   (A) Galaxies (B) Constellations

   (C) Planets (D) Comets

3. **One complete turn or revolution equals how many degrees?**

   (A) 180° (B) 90°

   (C) 360° (D) 270°

4. **In a heliocentric system, Earth revolves around _____.**

   (A) Jupiter (B) The stars

   (C) Moon (D) Sun

5. **What is Stonehenge?**

   (A) An astronomical instrument (B) Birthplace of Ptolemy

   (C) Famous astronomical site (D) A constellation

6. **The feather-like substances which are actually streams of gases that appear on the surface of the Sun are called _____.**

   (A) Flares (B) Corona

   (C) Sunspots (D) Prominences

7. **Which satellite was launched in 1998 to study Sun's atmosphere?**

   (A) SOHO (B) TRACE

   (C) Solar Max (D) INSAT

8. **A spacecraft named 'Ulysses' was launched in 1990 to study what features of Sun?**

(A) Poles of the Sun
(B) Observation of solar activity
(C) Sun's atmosphere
(D) Sun's explosions

9. **Which reaction produces enormous amount of energy in the form of heat and light?**

(A) Explosion
(B) Chemical reaction
(C) Nuclear reaction
(D) None of these

10. **Sun's surface releases short-lived bursts of heat and light. These are called _____.**

(A) Flares
(B) Prominences
(C) Sunspots
(D) Corona

Answers																			
1.	C	**2.**	B	**3.**	C	**4.**	D	**5.**	C	**6.**	D	**7.**	B	**8.**	A	**9.**	C	**10.**	A

ORANGE™ GLOBAL OLYMPIAD

Astronomy

Curriculum & Sample Questions

5

CURRICULUM

Astronomy; The Solar System; The Night Time Sky; Earth and Moon; The Universe; The Stars; Eclipses; Space Exploration; Logical Reasoning

Sample Questions

The actual question paper contatins 30 MCQs, out of which 25 questions are based on Subject knowledge and 5 are based on Logical Reasoning. The duration of the test paper is 60 minutes.

1. Name the scientist who first realised gravity as the basic force of Universe.

(A) Isaac Newton (B) Albert Einstein

(C) Nicolaus Copernicus (D) Galileo Galilei

2. What kind of telescope did Galileo used for his studies?

(A) Radio telescope (B) Reflecting telescope

(C) Refracting telescope (D) Microscope

3. The theory that many astronomers have developed to explain the formation of the universe is called _____.

(A) Expanding cloud theory (B) Big Bang theory

(C) Big Crunch theory (D) Big Rip theory

4. The distance from the Sun to Mars is 1.5 AU. The distance from the Sun to Jupiter is 5.2 AU. Calculate the distance from Earth to Jupiter.

(A) 6.8 AU (B) 3.7 AU

(C) 4.2 AU (D) 2.5 AU

5. How did ancient people primarily tell the difference between planets and stars?

(A) The planets moved relative to the stars.

(B) The stars were brighter than the planets.

(C) The planets showed phases.

(D) The planets did not twinkle.

6. Which of the following is NOT associated with Galileo?

(A) Discovery of moons of Jupiter

(B) Discovery of phases of Venus

(C) Discovery of mountains of Venus

(D) First use of the telescope to see heavenly bodies

7. **_____ are rocks or metal chunks that float around in the Solar System, with no fixed orbit.**

(A) Meteoroids (B) Meteorites

(C) Asteroids (D) Comets

8. **A region between Mars and Jupiter where most of the Solar System's asteroids are found is called _____.**

(A) Kuiper belt (B) TNO area

(C) Dark halo (D) Asteroid belt

9. **Which planet was found to show phases like our Moon?**

(A) Jupiter (B) Mercury

(C) Saturn (D) Venus

10. **Besides Earth, which other celestial body in the Solar System has liquid water below its surface?**

(A) Triton (B) Enceladus

(C) Europa (D) Titan

Answers																			
1.	A	**2.**	C	**3.**	B	**4.**	C	**5.**	D	**6.**	C	**7.**	A	**8.**	D	**9.**	D	**10.**	A

ORANGE™ GLOBAL OLYMPIAD

Astronomy

Curriculum & Sample Questions

6

CURRICULUM

Introduction to Astronomy; The Solar System; Stars; The Earth and the Moon; The Universe; Galaxies; Space Travel; Logical Reasoning

Sample Questions

The actual question paper contains 40 MCQs, out of which 32 questions are based on Subject Knowledge and 8 are based on Logical Reasoning. Out of 32 subject based questions, 7 questions have 2 keys (answers). The duration of the test paper is 60 minutes.

1. Who postulated that Earth is the centre of the Universe?

(A) Copernicus (B) Aristotle

(C) Galileo (D) Newton

2. Who discovered phases of Venus like that of Moon?

(A) Ptolemy (B) Copernicus

(C) Galileo (D) Aristotle

3. According to Kepler's law, planets in the Solar System move in _____ orbits around the Sun.

(A) Parabolic (B) Elliptical

(C) Hyperbolic (D) Square

4. In a classroom, the teacher asked Rohan to look at the current model of the Solar System on the blackboard. Which of the statements best describes Rohan's observation?

(A) The model is geocentric, which means Earth is at the centre.

(B) The model is geocentric, which means Sun is at the centre.

(C) The model is heliocentric, which means Earth is at the centre.

(D) The model is heliocentric, which means Sun is at the centre.

5. A dwarf planet _____.

(A) Is in orbit around the Sun

(B) Has sufficient mass for its self gravity

(C) Has not cleared the neighborhood around its orbit

(D) All of these

6. As Jupiter has Great Red spot, Neptune has _____.

(A) Great Blue spot (B) Great Green spot

(C) Great Dark spot (D) Neptune doesn't have any spots

7. **Stars are formed in huge clouds of dust and gas called _____.**

(A) Globular clusters
(B) Interstellar medium
(C) Nebulae
(D) Galaxies

8. **The swollen red form that is taken by a giant red star as it dies is called _____.**

(A) Nova
(B) Supergiant stage
(C) Red giant
(D) Red Monster

9. **What could be the reason that early astronomers mistook galaxies as single stars?**

(A) Galaxies are far away that they appear like a single star.
(B) Only one star is visible at a time in a galaxy.
(C) Light from galaxy gets refracted.
(D) Earth is so small when compared to the galaxies.

10. **Which of the following gives the correct reason behind the shining of stars?**

(A) They reflect light from other planets.
(B) They reflect light received from Sun.
(C) They generate their own light.
(D) They are found in groups.

Answers																			
1.	A	**2.**	C	**3.**	B	**4.**	D	**5.**	D	**6.**	C	**7.**	D	**8.**	C	**9.**	A	**10.**	C

ORANGE™ GLOBAL OLYMPIAD

Astronomy

Curriculum & Sample Questions

7

CURRICULUM

Introduction to Astronomy; The Solar System; Stars; The Earth and the Moon; The Universe; Galaxies; Space Travel; Logical Reasoning

Sample Questions

The actual question paper contains 40 MCQs, out of which 32 questions are based on Subject Knowledge and 8 are based on Logical Reasoning. Out of 32 subject based questions, 7 questions have 2 keys (answers). The duration of the test paper is 60 minutes.

1. 'The planet Saturn is not alone, but is composed of three, which almost touch one another and never move or change with respect to one another.' Who wrote this?

(A) Galileo (B) Copernicus

(C) Brahe (D) Ptolemy

2. Which planet did Kepler study to formulate his famous laws of planetary motion?

(A) Jupiter (B) Mars

(C) Saturn (D) Venus

3. Which of the following does NOT belong to newer astronomical technologies?

(A) Sextants (B) Interferometric astrometry

(C) Satellite-aided GPS (D) Astrolabe

4. Which of the following is NOT associated with Galileo?

(A) Discovery of phases of Venus

(B) First used telescope to see heavenly bodies

(C) Discovery of mountains of Venus

(D) NASA spacecraft was named after him

5. Apart from heat and light, the sun gives off a steady stream of particles that continuously blow past the Earth and turn the tail of comets away from the Sun. What is this called?

(A) Solar energy (B) Solar wind

(C) Cosmic wind (D) Ionized particle stream

6. The angle of tilt of which planet is so large that it virtually rolls on its sides as it goes around the Sun?

(A) Jupiter (B) Saturn

(C) Neptune (D) Uranus

7. **What appears when stars reach the end of their life, exploding as supernova?**

(A) Quasars (B) Pulsars

(C) Protostar (D) Neutron star

8. **When pieces of rock present in space enter the Earth's atmosphere, most of them burn up. This is what appears to us as _____.**

(A) Shooting stars (B) Comets

(C) Meteors (D) Meteorites

9. **What is a solar flare?**

(A) A sudden flash of brightness observed near the Sun's surface.

(B) A sudden increase in the rate of nuclear reactions at the Sun's centre.

(C) A dark region on the photosphere.

(D) The bright visible surface of the Sun.

10. **The boundary between the Sun's interior and solar atmosphere is called _____.**

(A) Chromosphere (B) Photosphere

(C) Solar corona (D) Core

Answers																	
1.	A	**2.**	B	**3.**	D	**4.**	C	**5.**	B	**6.**	D	**7.**	D	**8.**	C	**9.**	A	**10.**	B

ORANGE™ GLOBAL OLYMPIAD

Astronomy

Curriculum & Sample Questions

8

CURRICULUM

Introduction to Astronomy; The Solar System; Stars; The Earth and the Moon; The Universe; Galaxies; Space Exploration; Logical Reasoning

Sample Questions

The actual question paper contains 40 MCQs, out of which 32 questions are based on Subject Knowledge and 8 are based on Logical Reasoning. Out of 32 subject based questions, 7 questions have 2 keys (answers). The duration of the test paper is 60 minutes.

1. Who obtained the spectrum of sunlight by passing it through a prism?

(A) Galileo (B) Kepler

(C) Newton (D) Dalton

2. The hottest stars are _____ in colour.

(A) White (B) Red

(C) Blue (D) Orange

3. In which year Newton published his theory of gravity?

(A) 1705 (B) 1801

(C) 1905 (D) 1687

4. Which astronomer first studied Milky Way scientifically?

(A) Asaph Hall (B) Edmond Halley

(C) Johann Galle (D) William Herschel

5. Solar storms that shoot bright bursts of energy away from the sun are called _____.

(A) Solar flares (B) Prominences

(C) Sunspots (D) None of these

6. Apart from its eccentricity, the orbit of Pluto is unusual in what respect?

(A) It tilts at an angle of 17 degrees.

(B) The orbit extends till the edge of solar System.

(C) The orbit is inclined to Neptune's orbit at 5 degrees.

(D) None of these

7. Sun derives its energy primarily from _____.

(A) Combustion of hydrogen (B) Nuclear fission

(C) Fusion of hydrogen (D) Its strong magnetic fields

8. **Valles Marineris on Mars shows the evidence of what on its surface?**

(A) Water
(B) Volcano
(C) Highlands
(D) Desert

9. **A part of constellation of Ursa Major is also known as Big Dipper. Such groups of stars smaller than a constellation is known as _____.**

(A) Galaxy
(B) Asterism
(C) Nebula
(D) Night sky

10. **What is the observed magnitude of a star or celestial object called?**

(A) Brightness
(B) Apparent magnitude
(C) Absolute magnitude
(D) Star magnitude

Answers																			
1.	C	**2.**	C	**3.**	D	**4.**	D	**5.**	A	**6.**	A	**7.**	C	**8.**	A	**9.**	B	**10.**	B

ORANGE™ GLOBAL OLYMPIAD

Astronomy

Curriculum & Sample Questions

9

CURRICULUM

History of Astronomy; Sun Astronomy; Night Sky Observation; Space Exploration; Planetary Science; Astronomy Concepts; Astronomy Facts; Logical Reasoning

Sample Questions

The actual question paper contains 50 MCQs, out of which 40 questions are based on Subject Knowledge and 10 are based on Logical Reasoning. Out of 40 subject based questions, 15 questions have 2 keys (answers). The duration of the test paper is 60 minutes.

1. What is the approximate lifetime of Sun?

(A) 600 million years (B) 6 billion years

(C) 10 billion years (D) 120 billion years

2. This process involves combining of smaller atomic nuclei into a larger nucleus. What is it called?

(A) Gravitational attraction (B) Parallax

(C) Nuclear fusion (D) Doppler effect

3. Neptune is the windiest planet. How fast are its strongest winds?

(A) 12 mph (B) 120 mph

(C) 1200 mph (D) 12000 mph

4. Name the first piloted flight of Apollo spacecraft which got the live TV footage of the crew.

(A) Apollo 9 (B) Apollo 7

(C) Apollo 10 (D) Apollo 11

5. All the planets bulge slightly at the equator due to the centrifugal force. This bulge is called _____.

(A) Oblateness (B) Gravity

(C) Planetoid (D) Epicycle

6. A bright region in the chromosphere of Sun typically found near sunspots is _____.

(A) Spicules (B) Flares

(C) Faculae (D) Plages

7. Measurement of infrared, gamma and X-ray suggest that the core of our galaxy contains a black hole called _____.

(A) HE1327 (B) HE1327-2326

(C) Saggitarius-A (D) Virgo

8. **Approximately how many times could a beam of light travel around the Earth in one second?**

(A) 3 times
(B) 7.5 times
(C) 15 times
(D) 25 times

9. **About how many light years across is Milky Way?**

(A) 1,000
(B) 10,000
(C) 100,000
(D) 1,000,000

10. **What is the name given to molten rocks erupted by a volcano?**

(A) Geyser
(B) Crater
(C) Lava
(D) Firestone

Answers																			
1.	C	**2.**	C	**3.**	C	**4.**	B	**5.**	A	**6.**	D	**7.**	C	**8.**	B	**9.**	C	**10.**	C

ORANGE™ GLOBAL OLYMPIAD

Astronomy

Curriculum & Sample Questions

10

CURRICULUM

History of Astronomy; Sun Astronomy; Night Sky Observation; Space Exploration; Planetary Science; Astronomy Concepts; Astronomy Facts; Logical Reasoning

Sample Questions

The actual question paper contains 50 MCQs, out of which 40 questions are based on Subject Knowledge and 10 are based on Logical Reasoning. Out of 40 subject based questions, 15 questions have 2 keys (answers). The duration of the test paper is 60 minutes.

1. When Earth is farthest from the Sun, what season is it in the Northern Hemisphere?

(A) Winter (B) Summer
(C) Spring (D) Autumn

2. The brightest star in this constellation is Vega. Name the constellation.

(A) Gemini (B) Lyra
(C) Bootes (D) Canis Major

3. Which three planets have moons larger than Mercury?

(A) Venus, Neptune, Saturn (B) Venus, Earth, Mars
(C) Jupiter, Saturn, Earth (D) Saturn, Jupiter, Neptune

4. Name the spacecraft that carried first lunar rover for first deep spacewalk.

(A) Apollo 14 (B) Apollo 15
(C) Apollo 11 (D) Apollo 10

5. In the lowest level of the photosphere of the Sun, the temperature is _____.

(A) 1,000 kelvin (B) 13,000 kelvin
(C) 10,000 kelvin (D) 6,000 kelvin

6. Which planet was named after the 'fleet-footed messenger' of the Roman gods?

(A) Mercury (B) Venus
(C) Mars (D) Jupiter

7. Prominences of the Sun can be observed with the naked eye only during _____.

(A) Total lunar eclipse (B) Total solar eclipse
(C) Partial lunar eclipse (D) None of these

8. After the death of a low-mass star it turns into what?

(A) Black hole (B) Pulsar
(C) Quasar (D) White dwarf

9. Ring nebula is an example of a planetary nebula. It is _____.

(A) An expanding ring of gas released from a dying star

(B) A ring of planets circling a star

(C) A contracting ring of gas and dust falling circling into a massive object

(D) A ring of stars in a circular orbit

10. One Jupiter day is equal _____.

(A) 30 hrs 40 min

(B) 9 hrs 50 min

(C) 3 hrs 20 min

(D) 52 hrs 10 min

Answers																			
1.	B	**2.**	B	**3.**	D	**4.**	B	**5.**	D	**6.**	A	**7.**	B	**8.**	D	**9.**	A	**10.**	B