

WELCOME
to the
SAASTA
AstroQuiz 2016
ROUND 2



science
& technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA



SAASTA
South African Agency for Science
and Technology Advancement

RULES

- You only have 60 seconds to answer the questions.
- You are allowed to discuss amongst yourselves.
- Calculators may be used if needed.
- No internet is to be used, therefore the use of cellphones is also prohibited.
- The judge's decision is final.

QUESTION 1

Which of the following simply describes the term “umbra”?

- A. The Earth
- B. The Moon
- C. Shadow
- D. Eclipse

QUESTION 2

Unlike a solar eclipse which can only be viewed from a certain relatively small area of the Earth, a lunar eclipse may be viewed from anywhere on the night side of the Earth.

- A. True
- B. False

QUESTION 3

A lunar eclipse occurs during the day whilst a solar eclipse occurs only at night.

- A. True
- B. False

QUESTION 4

The Sun and Sirius A are yellow and white main sequence stars respectively. Which of the following is true?

- A. Sirius has a greater absolute magnitude value than the Sun
- B. Sirius has a lower absolute magnitude value than the Sun

QUESTION 5

In a neutron star, electrons and protons are squeezed together to form _____

- A. Nuclei
- B. Neutrons
- C. Neutrals
- D. Neutrinos

QUESTION 6

Phases of the moon come from Earth's shadow cast on the Moon.

- A. True
- B. False

QUESTION 7

Moon phases occur as a result of the Moon's position relative to the Earth and the Sun.

- A. True
- B. False

QUESTION 8

We always see the same side of the Moon from Earth.

- A. True
- B. False

QUESTION 9

During New Moon, the Moon, the Earth and the Sun lie almost in the same line.

- A. True
- B. False

QUESTION 10

The terms waxing and waning in Moon phases refer to:

- A. Growing and shrinking in illumination respectively
- B. Growing and shrinking in size respectively
- C. Shrinking and growing in illumination respectively
- D. Shrinking and growing in size respectively

QUESTION 11

Which of the following statements is incorrect about the Kuiper belt?

- A. It is found beyond Neptune
- B. It is where most dwarf planets are found
- C. It is found between Mars & Jupiter
- D. It surrounds our star, the Sun

QUESTION 12

At what average speed does Earth go around the Sun?

- A. 9,8 km/s
- B. 11,2 km/s
- C. 29,8 km/s
- D. 23,9 km/s

QUESTION 13

At what average speed does the Moon go around the Earth?

- A. 9800 km/h
- B. 4200 km/h
- C. 3680 km/h
- D. 2390 km/h

QUESTION 14

The combination of the Moon's size and its distance from the Earth causes it to appear the same size as the Sun from the Earth.

- A. True
- B. False

QUESTION 15

Colours of stars can tell their surface temperatures. Which of the following arrangement represents colours of stars from hottest to coolest.

- A. Blue>white>red
- B. White>blue>red
- C. Red>Blue>white
- D. Blue>Red>white

QUESTION 16

Which of the following planets has the shortest year, zero satellites and is covered with high mountains, valleys & craters?

- A. Mars
- B. Venus
- C. Earth
- D. Mercury

QUESTION 17

The northern and southern hemispheres of the Earth experience the same seasons at the same time.

A: True

B: False

QUESTION 18

What is the name given for the shortest and the longest days of the year?

A: Equinoxes

B: Solstices

C: Vernal

D: Autumnal

QUESTION 19

Which one of the following spacecrafts passed one of the dwarf planets in July 2015?

- A. Mariner Mark II
- B. Viking
- C. Cassini
- D. New Horizons

QUESTION 20

Which dwarf planet was passed by the spacecraft in Question 19 above?

- A. Ceres
- B. Eris
- C. Pluto
- D. Haumea

QUESTION 21

Just like stars have different sizes and colours, galaxies have different sizes and shapes.

- A. True
- B. False

QUESTION 22

During which moon phase can we experience a total solar eclipse?

- A. Full Moon
- B. New Moon
- C. First Quarter
- D. Last Quarter

QUESTION 23

This planet has satellites, craters and higher mountain peaks than any other planet. Which planet is it?

- A. Mercury
- B. Mars
- C. Venus
- D. Earth

QUESTION 24

Which celestial body has satellites and a centre of compressed hot liquid of metallic hydrogen?

- A. Neptune
- B. Pluto
- C. Jupiter
- D. Uranus

QUESTION 25

Which of the following planets is tilted over by approximately 90° ?

- A. Earth
- B. Saturn
- C. Uranus
- D. Neptune

QUESTION 26

The planets of which pair below, represent the biggest planets within their own groups?

- A. Mercury & Saturn
- B. Jupiter & Earth
- C. Uranus & Mercury
- D. Jupiter & Uranus

QUESTION 27

Which planet spins on its axis more slowly than all others?

- A. Mercury
- B. Venus
- C. Pluto
- D. Jupiter

QUESTION 28

Which of the following celestial bodies takes the least time to go around the Sun?

- A. Earth
- B. Pluto
- C. Mercury
- D. The Moon

QUESTION 29

Who was the first man in space?

- A. Alan Shephard
- B. Yuri Gagarin
- C. Neil Armstrong
- D. Mark Shuttleworth

QUESTION 30

It is possible to have more than four eclipses in one year.

- A. True
- B. False

**THANK YOU
FOR PARTICIPATING**



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SUDDEN DEATH TIE BREAKERS



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RULES

- Please note that the first team to give the correct answer, is the winner. Other than that, you can proceed with other questions until you get a winner.
- If all questions are exhausted and no winner is identified, you are more than welcome to set other questions or use the previous ones.

QUESTION 1

The speed at which the Moon goes around the Earth is the same as that at which the Earth goes around the Sun.

- A. True
- B. False

QUESTION 2

An instrument used to measure the movement of a star towards or away from the Earth is a(n)_____

- A. Spectroscope
- B. Microscope
- C. Stethoscope
- D. Oscilloscope

QUESTION 3

Which one of the following is the smallest?

- A. Atom
- B. Asteroid
- C. Pluto
- D. The Moon

QUESTION 4

What is a starburst galaxy?

- A. It is a galaxy with bursting stars
- B. It is a galaxy with very high star birth rate
- C. It is a galaxy that produces burst of intense light in a regular way
- D. None of the above

QUESTION 5

A light year is a measure of_____

- A. Time
- B. Light
- C. Distance
- D. Speed

QUESTION 6

The Milky Way Galaxy belongs to a collection of galaxies known as _____

- A. Local Group
- B. Milky Way Galaxy
- C. Triangulum Galaxy
- D. Small Magellanic Cloud

QUESTION 7

What is the name of the supercluster of galaxies to which the Milky Way belongs?

- A. Sagittarius
- B. Virgo
- C. Superfly
- D. Coma

QUESTION 8

Which of the following is incorrect about the Milky Way and Andromeda Galaxies?

- A. They are almost similar in shape
- B. They have dwarf galaxies orbiting them
- C. They are expected to collide together in future
- D. They are equidistant from the Earth

QUESTION 9

The solar system lies at the centre of the Milky Way Galaxy.

- A. True
- B. False

QUESTION 10

The most abundant element in the universe is _____

- A. helium
- B. hydrogen
- C. carbon
- D. silicon



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