

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. 9,80 km/h
- B. 4,20 km/h
- C. 3,68 km/h**
- D. 2,39 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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