

**SAASTA ASTRO QUIZ 2015
ROUND 1**

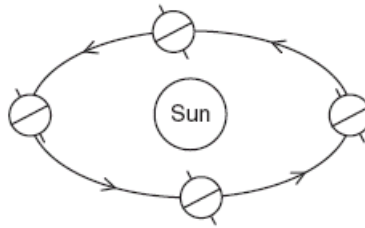
1. Each year the Earth moves once around _____

- A Mars
- B Venus
- C the Moon
- D the Sun

2. The time it takes the Moon to revolve once around the Earth is approximately a _____

- A day
- B month
- C week
- D year

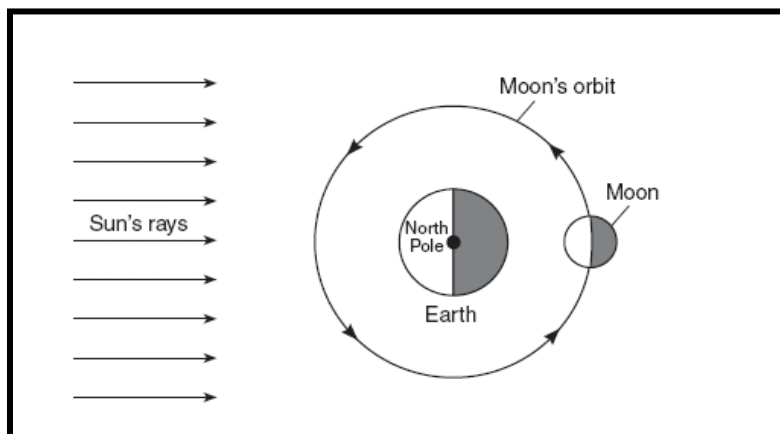
3. The diagram below shows Earth at four locations in its orbit around the Sun.



The arrows in the diagram represent -----

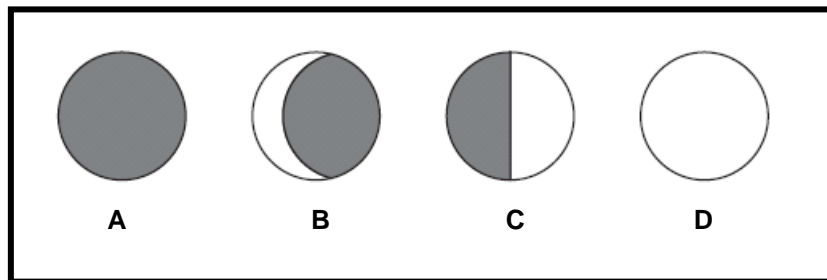
- A Earth's rotation
- B the Sun's rotation
- C the Sun's revolution
- D Earth's revolution

Base your answers to Questions 4 and 5 on the diagram below and on your knowledge of science. The diagram represents the motion of the Moon around the Earth as seen from above the North Pole. One position of the Moon in its orbit is shown.

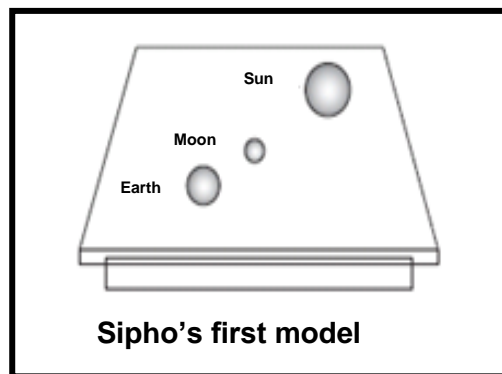


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- 4. Which Moon phase will usually be seen from Earth when the Moon is in this position (above)?**



- 5. Sipho built a model of the Sun, the Moon, and the Earth as shown below. This model was not built to scale. Which phase of the Moon is shown in Sipho's model?**



- A Full moon
B First quarter
C Third quarter
D New moon
- 6. Mars is the only planet that human beings selected for possible explorations. Since these explorations started, only a few human beings have set foot on this planet.**
- A True
B False
- 7. Which South African micro Earth Observation Satellite was launched on 17 September 2009?**
- A SunspaceSat
B SASat

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- C SunSat
- D SumbandilaSat

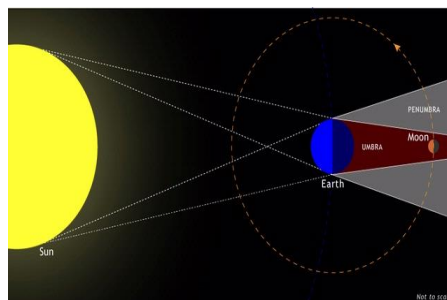
8. The saying “once in a blue moon” refers commonly to:

- A the Moon showing a blue colour
- B full Moon rising twice in one month
- C new Moon rising twice in a month
- D full Moon being blue in colour

9. Lunar and solar eclipses refer to events involving 3 celestial bodies. These bodies are the:

- A Sun, Earth and Moon
- B Moon, Venus and Earth
- C Earth, Sun and Mars
- D Sun, Moon and Jupiter

Look at the diagram below and answer questions 10 and 11.



10. What kind of an eclipse is shown in the diagram above?

- A Partial lunar eclipse
- B Total solar eclipse
- C Total lunar eclipse
- D Partial solar eclipse

11. What phase of the Moon can be observed during this event?

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

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12. Which is the smallest of the terrestrial/rocky planets?

- A Pluto
- B Mercury
- C Mars
- D Earth

13. Which planet in our Solar System spins fastest?

- A Saturn
- B Earth
- C Mercury
- D Jupiter

Use the information below to answer question 14.

According to the International Astronomical Union (IAU) a planet is a celestial body which:

1. is in orbit around the Sun,
2. has sufficient mass to assume hydrostatic equilibrium (a nearly round shape), and
3. has "cleared the neighbourhood" around its orbit.

14. Pluto was reclassified to be a dwarf planet because

- A Points 1 & 2 were not satisfied
- B Point 3 was not satisfied
- C All points were not satisfied
- D Points 1 & 3 were not satisfied

15. The concept "habitable zone" of a star refers to:

- A The area around a star where the temperature does not change
- B The area around a star where there is a possibility of finding liquid water
- C The area around a star where human beings are found
- D The area around a star where other small stars can be found

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- 16. Pluto and its moon Charon are considered to be a binary system due to the fact that:**
- A Pluto is a dwarf planet
 - B Pluto's orbital axis is situated inside itself
 - C They orbit a common centre of gravity
 - D Charon is a moon
- 17. Pluto and Charon are said to be "tidally locked" to each other, this means that:**
- A They orbit a common centre of gravity
 - B They always present the same face to each other
 - C They revolve around each other
 - D They love each other
- 18. The spacecraft New Horizon, launched in 2006, is scheduled to reach Pluto in 2015 travelling at an average speed 54 000 km/h. At what distance will the spacecraft encounter Pluto.**
- A 6 billion km
 - B 2.8 billion km
 - C 200 billion km
 - D 28 billion km
- 19. The exoplanet Gliese 667Cc is believed to be in the habitable zone of the star Gliese 667C and it orbits that star every four (4) weeks. If you had a twin brother on the planet, how old will he be when you celebrate your 15th birthday?**
- A 4 weeks old
 - B 195 years old
 - C 91 years old
 - D 4 years old

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20. Which planet is approximately 30 times farther from the Sun than Earth is?

- A Jupiter
- B Saturn
- C Uranus
- D Neptune

21. The length of a year on Pluto is approximately 248 Earth years. If you were living on Pluto, how much older would you be in Pluto years, after 7 Earth years?

- A 0,028
- B 1736
- C 241
- D 255

22. Stars and planets are born from:

- A Other stars
- B Cloud of gas and dust
- C Cloud of gas
- D Rocks

23. How long is a Mercury day (in Earth years?)

- A 176 Earth days or $\frac{1}{2}$ year
- B 2 years
- C 1 year
- D $\frac{1}{10}$ year

24. Which planet comes closest to the Earth as it revolves around the Sun?

- A Jupiter
- B Mars
- C Venus
- D Pluto

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25. Which moon of Saturn resembled the Earth immediately after it was born?

- A Mimas
- B Tethys
- C Lapetus
- D Titan

26. A star with small mass will die as a neutron star.

- A True
- B False

27. If you want to leave the Earth's gravity, at what minimum speed do you have to travel?

- A 11 km/s
- B 10 km/s
- C speed of light
- D speed of sound

28. Mars is a terrestrial planet

- A True
- B False

29. Reddish stars are cooler than bluish stars

- A True
- B False

30. The temperatures on Uranus and Neptune are said to be approximately -200 and -210 °C respectively. Which of the following statements is false?

- A Neptune is colder than Uranus
- B Uranus is colder than Neptune

THANK YOU & ALL OF THE BEST.

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TIE BREAKERS 2015

1. Which of the following is not part of the listed planets?

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

2. How many planets have rings around them?

- A. Three
- B. Four
- C. Six
- D. All

3. The year 2015 marks the celebration of the second closest star to Earth after the Sun. Which star is that?

- A. Alpha Centauri
- B. Omega Centauri
- C. Proxima Centauri
- D. Eris

4. The Sun rotates on its axis approximately once every

- A. 1 year
- B. 25 days
- C. 25 weeks
- D. 1 month

5. Dark spots on the surface of the Sun have lower temperatures than the rest of the Sun's surface.

- A. True
- B. False

THANK YOU & ALL THE BEST.