



PHYSICS

BOOKS - BITSAT GUIDE

UNIVERSE

Others

1. Which planet is closest to Sun?

A. Earth

B. Mercury

C. Mars

D. Jupiter

Answer:



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2. Which planet is farthest to Sun ?

A. Saturn

B. Uranus

C. Neptune

D. Pluto

Answer:



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3. The group of small pieces of rock revolving round the sun between the orbits of Mars and Jupiter are called

A. meteors

B. comets

C. meteorite

D. asteroids

Answer:



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4. The tail of a comet points away from the Sun due to

A. centrifugal force

B. electrical repulsion

C. attraction of comet due to other planets

D. radiation pressure

Answer:



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5. A star which appears blue will be

A. as hot as the sun

B. cooler than the sun

C. very cold indeed

D. much hotter than the sun

Answer:



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6. Sun radiates continuously and maintains its brightness because

A. helium is converted into iron in its core

B. of fusion of hydrogen nuclei in helium

C. fusion of helium in hydrogen

D. burning of carbon in its core

Answer:



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7. One astronomical unit (AU) is equal to

A. 10^{-10} m

B. $1.496 \times 10^{11} \text{ m}$

C. $9.45 \times 10^{15} \text{ m}$

D. $4.964 \times 10^{11} m$

Answer:



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8. The planet which has no satellite is

A. neptune

B. Mercury

C. Jupiter

D. Mars

Answer:



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9. The galaxy to which our solar system belongs is called

- A. milky way
- B. radios galaxy
- C. solar galaxy
- D. elliptical galaxy

Answer:



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10. Galaxy in which we live is

- A. milky way
- B. radios galaxy
- C. circular galaxy
- D. irregular galaxy

Answer:



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11. Milky way is

A. Planet of our solar system

B. a sun

C. one of the stars of solar system

D. one of the enormous galaxies of
universe

Answer:



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12. The universe is

A. expanding

B. contracting

C. constant in size

D. increasing northwards and decreasing southwards

Answer:



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13. Hubble's law is expressed as [v= speed of recession, r=distance r of galaxy, H=Hubble constant]

A. $v = Hr^2$

B. $v = Hr$

C. $v = \frac{H}{r}$

D. $v = \frac{H}{r^2}$

Answer:



14. The group of 100 to 1000 stars held in position by mutual gravitational forces are called

- A. galactic clusters
- B. globular clusters
- C. comets
- D. astetrods

Answer:



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15. The most common stars like the Sun is called

- A. dwarfs
- B. white dwarfs
- C. milky way
- D. neutron stars

Answer:



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16. Very small stars having diameter $1/5$ th that of sun are called

- A. dwarfs
- B. white dwarfs
- C. milky way
- D. neutron stars

Answer:



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17. The brightest planet in the solar system is

A. Mars

B. Jupiter

C. Venus

D. Mercury

Answer:



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18. The planet which has no atmosphere is

A. Venus

B. Mercury

C. Mars

D. Earth

Answer:



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19. The spectrum of stars is most closely related to

A. colour

B. pressure

C. distance from earth

D. mass

Answer:



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20. Venus appears brighter than other planets because

- A. it is heavier than other planets
- B. its density is more than other planets
- C. it is nearest to Earth than other planets
- D. fusion takes place at its surface

Answer:



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21. One main characteristics of blackhole is that, it

A. emits a photon

B. absorbes a photon

C. changes photon into mass

D. changes all colours into one

Answer:



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22. The spectrum of a star is usually

- A. continuous emission spectrum
- B. continuous absorption spectrum
- C. line absorption spectrum
- D. line emission spectrum

Answer:



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23. The solar constant at earth's surface is

A. $1.4\text{watt} / m^2$

B. $14\text{watt} / m^2$

C. $0.14\text{watt} / m^2$

D. $1400\text{watt} / m^2$

Answer:



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24. If r denotes the mean distance of a planet from the sun and T is the time period of planet, then

A. $r \propto T^{2/3}$

B. $r \propto T^{3/2}$

C. $r \propto T^{1/3}$

D. $r \propto T$

Answer:



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25. Which of the following theories is the most satisfactory about the origin of the universe ?

- A. Big-Bang theory
- B. Pulsating theory
- C. Steady state theory
- D. None of these

Answer:



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26. Hubble's law states that the velocity with which milky way is moving away from the earth is proportional to

A. square of distance of milky way

B. distance of milky from the earth

C. mass of milky way

D. product of mass of milky way and its
distance from earth

Answer:



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27. Albedo is

A. a star

B. a galaxy

C. a constellation

D. reflecting power of a planet

Answer:



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28. During a total solar eclipse, the disc of the moon almost completely covers the disc of the sun. If the distance of the Sun from the earth=

1.496×10^{11} m, diameter of the Sun

1.393×10^8 m, then calculate the diameter of

the moon.

A. 1.26×10^6 m

B. 4.30×10^6 m

C. 3.58×10^6 m

D. 6.86×10^6 m

Answer:



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29. Suppose the sun shrank from its present size so that its radius is halved. What would energy? (Given that mass of Sun = 1.989×10^{30} kg and the radius of the Sun = 6.95×10^8 m)

A. $4.321 \times 10^{50} J$

B. $2.275 \times 10^{41} J$

C. $1.102 \times 10^{30} J$

D. $8.123 \times 10^{10} J$

Answer:



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30. When the Jupiter is at a distance of 824.7 million km from the earth, its angular diameter is measured to be 35.72 sec of an arc. Calculate the diameter of jupiter.

A. 234265.54 km

B. 142745.38 km

C. 312108.82 km

D. 121310.12 km

Answer:



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