

1. The 'Big Bang Theory' is related to which of the following?

- A. Continental Drift
- B. Origin of Universe
- C. Origin of Himalayas
- D. Eruption of Volcanoes

Ans: B

Explanation: The Big Bang theory is the prevailing cosmological model for the universe from the earliest known periods through its subsequent large-scale evolution. Hence, B is the correct option.

2. The Milky Way is classified as_____.

- A. Spiral Galaxy
- B. Electrical Galaxy
- C. Irregular Galaxy
- D. Round Galaxy

Ans: A

Explanation: The Milky Way galaxy is disk-shaped and because spiral galaxies were disk-shaped, the Milky Way was probably a spiral galaxy. Hence, A is the correct option.

3. What does the colour of star indicates?

- A. Distance from the Sun
- B. Lighting or glow
- C. Distance from the earth
- D. Temperature

Ans: D

Explanation: The colour of a star is an indication of its brightness, temperature, and age. Stars are classified into groups called "spectral types." From oldest to youngest and hottest to coolest, the types of stars are:

| Temperature | | |
|-------------|------------|---------------|
| Type | Colour | Celsius |
| O | Blue | 25,000-40,000 |
| B | Blue | 11,000-20,000 |
| A | Blue-white | 7,500-11,000 |
| F | White | 6,000-7,500 |
| G | Yellow | 5,000-6,000 |
| K | Orange | 3,500-5,000 |
| M | Red | 3,000-3,500 |

4. What is the time taken by the Sun to revolve around the centre of our galaxy?

- A. 2.5 Crore years
- B. 10 Crore years
- C. 25 Crore years
- D. 50 Crore years

Ans: C

Explanation: The Sun's completes an almost circular orbit of the centre (of the galaxy) about 25 Crore years. Hence, C is the correct option.

5. Which of the following concept related to the limit beyond stars suffer internal collapse?

- A. Chandrasekhar limit
- B. Eddington limit
- C. Hoyle limit
- D. Fowler limit

Ans: A

Explanation: The Chandrasekhar limit is the maximum mass possible for a star, such that it remains a stable white dwarf star. The concept envisages that the mass above which electron degeneracy pressure in the star's core is insufficient to balance the star's own gravitational self-attraction. If the mass of the star greater than the limit then it undergo internal collapse. Hence, A is the correct option.

6. Which of the following celestial phenomena occurs due to stars?

- A. Ozone
- B. Black hole
- C. Rainbow
- D. Comet

Ans: B

Explanation: A black hole is a region of space-time exhibiting such strong gravitational effects that nothing—not even particles and electromagnetic radiation such as light—can escape from inside it. Hence, B is the correct option.

7. Who among the following propounded the theory of Black Hole?

- A. C.V Raman
- B. H.J Bhabha
- C. S Chandrasekhar
- D. Hargovind Khurana

Ans: C

Explanation: The term "black hole" was coined by American astronomer John Wheeler. Chandrasekhar worked on a wide variety of physical problems in his lifetime, contributing to the contemporary understanding of stellar structure, white dwarfs, stellar dynamics, stochastic process, radiative transfer, the quantum theory of the hydrogen anion, hydrodynamic and hydromagnetic stability, turbulence, equilibrium and the stability of ellipsoidal figures of equilibrium, general relativity, mathematical theory of black holes and theory of colliding gravitational waves. Hence, C is the correct option.

8. Assertion (A): A black Hole is an astronomical entity that cannot be seen by telescope.

Reason (R): The gravitational field on a black hole is so strong that it does not allow even light to escape.

Codes:

- A. Both A and R are true and R is the correct explanation of A
- B. Both A and R are true but R is not a correct explanation of A
- C. A is true but R is false
- D. Both A & R is not true

Ans: B

Explanation: A black hole is a region of space-time exhibiting such strong gravitational effects that nothing—not even particles and electromagnetic radiation such as light—can escape from inside it. The theory of general relativity predicts that a sufficiently compact mass can deform space-time to form a black hole. It is an astronomical entity that cannot be seen by telescope. Hence, B is the correct option.

9. Which of the following planet of the solar system associated with Goldilocks Zone?

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

Ans: B

Explanation: The Earth has Goldilocks Zone which means it is neither too hot nor too cold, where all conditions are available for life to sustain. Hence, B is the correct option.

10. Which is the brightest star outside the Solar System?

- A. Sirius
- B. Proxima Centauri
- C. Alpha Centauri
- D. Beta Centaury

Ans: A

Explanation: The brightest star outside the Solar System is Sirius. The closest star to our Solar System is Proxima Centaury followed by Alpha Centaury. Hence, A is the correct option.