

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2019
(First Semester)

Branch - PHYSICS

ASTROPHYSICS AND PHILOSOPHY OF PHYSICS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10x1 = 10)

- 1 In 1821 _____ built electricity powered motor.
(i) Georg ohm (ii) Joseph henry
(iii) Faraday (iv) all the above
- 2 In 1835 _____ canonical equations of motion.
(i) WilliamHamilton (ii) Johnrussed
(iii) Jacobi (iv) All the above
- 3 The point where the ecliptic crosses the equator from south to north is called
(i) autumnal equinox (ii) vernal equinox
(iii) winter solstice (iv) summer solstice
- 4 In magnitude scale the ratio of bright ness from 1 to 2 magnitudes is
(i) 3 (ii) 2.5
(iii) 4 (iv) 1.5
- 5 One per sec is _____.
(i) $1.496 \times 10^{18} \text{ cm}^{-1}$ (ii) $3.085 \times 10^{18} \text{ cm}^{-1}$
(iii) $15.45 \times 10^{18} \text{ cm}^{-1}$ (iv) $9.46 \times 10^{17} \text{ cm}^{-1}$
- 6 Indicate the stars that show periodic change of brightness
(i) Cepheid (ii) Sirius
(iii) Spica (iv) Altair
- 7 Find the temperature of the Venus is order of _____.
(i) 100 (ii) 480
(iii) 450 (iv) 1000
- 8 The milky way galaxy the diameter of the disc is _____.
(i) 10 light years (ii) 8 light years
(iii) 9 light years (iv) 7 light years
- 9 A group at _____ stars called galactic cluster.
(i) 100 stars (ii) 100 to 1000
(iii) 50 to 100 (iv) all the above
- 10 Identify the sun and stars period of revolution is about
(i) 220 million (ii) 320 million
(iii) 200 million (iv) all the above

SECTION - B (35 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 7 = 35)

- 11 a Explain about the scientists of 16 century.
OR
b Explain about the K ones, Sir C.V. Raman.
- 12 a Discuss the Local Equatorial System.
OR
b Explain the photographic method.
- 13 a Explain about the cluster parallax.
OR
b Bring out angular size.
- 14 a Explain about the reflecting telescope.
OR
b Analyze the milky way galaxy.
- 15 a Outline the Harvard or Draper classification of stars.
OR
b Explain about the Chandrasekhar limits.

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16 Examine about the scientists who contributed to the development of atomic and radioactivity model.
- 17 Discuss the celestial coordinates the Local Equatorial System.
- 18 Elucidate the measurement of Terrestrial distances and solar system.
- 19 Point out the Big bang theory and mass of system.
- 20 Enumerate the equation of the stellar structure.

Z-Z-Z

END