

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086**  
**(For the candidates admitted during the year 2015-2016 & thereafter)**

**B.A./ B.Com./ B.C.A./ B.S.W./ B.Sc. DEGREE EXAMINATION APRIL 2019**

**CODE: 15PH/UI/AP23**

**COURSE : INDEPENDENT ELECTIVE**

**MAX. MARKS: 100**

**PAPER : ASTROPHYSICS**

**TIME : 3 HRS.**

**SECTION A**

**ANSWER ALL THE QUESTIONS**

**(10X3=30)**

1. Define i) Pulsars ii) Black holes iii) Supernovae
2. What is a Newtonian telescope?
3. State the Inverse square law.
4. What is meant by Chandrasekhar limit?
5. Define luminosity of a star.
6. Comment on the expanding universe.
7. What is meant by absolute magnitude of a star?
8. Why is the sky blue?
9. Differentiate the terms Meteors and Meteorites.
10. What is a radio galaxy?

**SECTION B**

**ANSWER ANY FIVE QUESTIONS**

**(5X5=25)**

1. How do astronomers detect light?
2. Write a brief note on radio galaxies.
3. Discuss the internal structure of a star.
4. Write a brief description of the constellations.
5. What is Hertzsprung-Russell diagram? Explain its significance and results.
6. Write a brief note on the different celestial bodies.
7. Write a brief note on the astronomical telescopes.

**SECTION C**

**ANSWER ANY THREE QUESTIONS**

**(3X15=45)**

1. What are Galaxies? How are they classified? Explain the origin and evolution of galaxies.
2. Discuss the structure, orbit, orbital orientation and the detection of Comets.
3. What are Binary stars? Write a note on the different types of binaries.
4. Explain in detail the life cycle of a star.

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