



K19U 0138

Reg. No. :

Name :

**VI Semester B.Sc. Degree (CBCSS-Reg./Supple./Improve.)
Examination, April 2019
(2014 Admission Onwards)
CORE COURSE IN PHYSICS
6B15 PHY : (Elective – B) : Astronomy and Astrophysics**

Time : 3 Hours

Max. Marks : 40

Instruction : Write answers in **English** only.

SECTION – A

Answer **all**. Very short answer type. **Each** question carries **one** mark.

1. Who introduced six color photometry system ?
2. The color index of sun is _____
3. Declination and right ascension are the two coordinates of _____ system.
4. Give an example of star having zero magnitude.

SECTION – B

Answer **any seven**. Short answer type. **Each** question carries **two** marks.

5. What are the quantities on which the brightness of a star depends on ?
6. Give period-luminosity law.
7. What is the relation between parsec and light year ?
8. What is meant by heat index of a star ?
9. What is meant by absorption spectra ?
10. What are cosmic rays ?

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11. Define the term distance modulus.
12. Describe Zenith and Nadir.
13. Explain Limb darkening.
14. Define Stellar parallax.

SECTION – C

Answer **any four**. Short essay/ problem type. **Each** question carries **three** marks.

15. Distinguish between absolute and apparent magnitude. Also obtain the relation between them.
16. What is Schwarzschild radius of a black hole ? Calculate the Schwarzschild radius of a star with 5 solar mass.
17. Explain angular magnification and resolving power.
18. Explain the origin of cosmic rays.
19. Explain how sun spots are formed.
20. Compare asteroids and meteorites.

SECTION – D

Answer **any two**. Long essay type. **Each** question carries **five** marks.

21. What are Galaxies ? Explain the origin and evolution of Galaxies. How are they classified ?
22. Explain the general properties and various aberrations of a telescope.
23. Discuss the Stellar positions and any two celestial co-ordinate system for describing the position of a heavenly object.
24. Give an account on the internal structure and atmosphere of sun.