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 ?

P.T.O.

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.
