

TB145640A

Reg. No:.....

Name.....

B. Sc. DEGREE (C.B.C.S.S.) EXAMINATION, OCTOBER 2016
SEMESTER V – OPEN COURSE (PHYSICS)
PHY5AA(O) - AMATEUR ASTRONOMY

Time: Three Hours

Maximum Marks: 80

PART A

I. Answer all questions. Each question carries 1 mark.

1. What are circumpolar constellations? Give one example.
2. What are solar flares?
3. What do you understand by the term moon illusion?
4. How Copernican model of the universe was different from that of Ptolemy?
5. Who is the author of the book “Starry Messenger”?
6. What do we mean by CMBR?
7. What was referred to as Zodiacal Constellations or ‘rashi’ by ancient Indian Astronomers?
8. Name the official calendar of India.
9. What are sun spots?
10. What is “SETI”?

(10x1=10)

PART B

II. Answer any eight questions. Each question carries 2 marks.

11. What are the four major visible stars in Orion (the Hunter) constellation? Sketch their distribution over a night sky.
12. How do we classify the galaxies on the basis of their shape?
13. What is a celestial sphere? Also explain the term celestial poles and equator.
14. Distinguish between apparent solar day and mean solar day.
15. Write down the names of all planets in solar system in the order of their distance from the Sun.
16. What is summer solstice? In which month of the year it occurs?
17. Some people refer Venus as ‘evil twin’ of earth. Why?
18. How could we predict presence of Uranus even before it was identified through telescope?
19. Today we have a rough idea about size of our universe using Hubble’s Constant. How do we calculate it ?
20. What was the ‘new star’ Tycho Brahe discovered in the constellation of Cassiopeia in 1572?
21. Give an account of Hubble space telescope.
22. Describe Open Cluster of stars.

(8x2=16)

PART C

III. Answer any six questions. Each question carries 4 marks.

23. What are the advantage of reflecting type telescopes over refracting type telescopes?
24. What is the difference between a sidereal day and a solar day ?
25. Distinguish between apparent magnitude and absolute magnitude of a star. Which gives us a clear idea about the brightness of the star? Why?
26. With the help of a diagram explain how the phenomenon of lunar eclipse occurs
27. Make a short note on each terrestrial planets.
28. Explain missing neutrino problem associated with solar radiation.
29. Write a short note on comets and Asteroids.
30. Describe Kelpers laws of Planetary motion.
31. Describe (a) Black hole (b) Neutron star

(6x4=24)

PART D

IV. Answer any two questions. Each question carries 15 marks.

32. Explain different coordinate systems used in Astronomy.
33. Describe different layers of the 'atmosphere' of the Sun.
34. Explain modern concept of origin or Universe. Substantiate your answer with available evidences.
35. Explain different stages a star may under go during tis evolution.

(2x15=30)