UNDER GRADUATE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, OCTOBER 2023

Fifth Semester

(Offered by the Board of Studies in Physics)

OPEN COURSE - PH5OPT01 - OUR UNIVERSE

2017 Admission Onwards

0A1D6336

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Who proposed the geocentric model of the universe and what is considered as the center of the universe according to this model?

2. Why is the Big Bang theory called so ?

3. What is doppler effect?

4. Define celestial poles and celestial equator.

5. What is the difference between apparent solar day and mean solar day?

6. Name the zodiacal constellations.

7. Define a light year.

8. What do you mean by visual angle of of an object ?

9. Why do sunspots appear dark?

10. Distinguish between Terrestrial and Jovian planets.

11. Which are the two planets in the life habitable zone?

12. What Causes the seasons of Earth?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Mention any four important observations of Galileo.

14. State the Hubble law. Why is the Hubble constant so important in cosmology?

15. Explain the death of a star based on their mass.

16. Describe the equatorial coordinate systems.

17. What is a solstice and an equinox?

18. Write a short note on the features of HST. Why it is placed on space?

19. Give a brief description about different layers of Sun.

20. Why was Pluto reclassified as a dwarf planet?

21. State the Universal Law of Gravitation. Give the Mathematical Form and Explain each term.

(6×5=30)

Part C

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

22. Define the term Galaxy. Describe the Hubble's classification of galaxies.

23. What are the end stages of a star ? Explain how a star evolves into these stages.

24. Explain various parameters associated with an optical telescope. Describe various types of optical telescopes used in astronomical observations.

25. Describe in detail about minor members of solar system.

(2×15=30)