QP CODE: 22103399

22103399

Reg No : .....

Name : .....

UNDER GRADUATE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, NOVEMBER 2022

Fifth Semester

(Offered by the Board of Studies in Physics)

OPEN COURSE - PH5OPT01 - OUR UNIVERSE

2017 Admission Onwards

B9551E6E

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. Explain the importance of Spiral Arms of a Spiral Galaxy.
2. Who proposed the Big Bang Theory ?
3. State Hubble's law.
4. What are cardinal points? How to identify north in a starry night?
5. How the origin of equatorial coordinate system is defined?
6. What do you mean by summer solstice?
7. Define solar day.
8. What is meant by zodiacal constellations? How are they significant?
9. Which is the outer layer of the sun's atmosphere?
10. What are umbra and penumbra of sunspots?
11. Why is Pluto no longer a planet?
12. Does the sun always rise in the east? Why?

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. Explain the retrograde motion of planets in geo centric model.
14. Explain doppler effect and red shift.
15. Even light cannot come out of a black hole. Why?
16. Explain how parallax method can be used to determine stellar distances.
17. How can eyepieces offer a telescope's widest true field?
18. Explain radio telescopes. Do they work during cloudy days?
19. Describe the characteristics of terrestrial planets.
20. Write a short note on planet Jupiter.
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. (a) Discuss the main features of Ptolemy's geocentric model of Universe and (b) Discuss the Copernican model of universe.
23. Briefly explain the stellar evolution.
24. What are the uses of optical telescopes? Describe refracting and reflecting telescopes.
25. Describe in detail about minor members of solar system.

(2×15=30)