

Reg. No. :

Name :

Fifth Semester B.Sc. Degree Examination, December 2022

First Degree Programme Under CBCSS

Physics

Open Course

PY 1551.2 : ASTRONOMY AND ASTROPHYSICS

(2013-2017 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions in **one** or **two** sentences. Each question carries **1** mark.

1. Name the device employed to measure the diameters of stars and our galaxy (Milky Way)
2. Name the planet that has the largest number of Artificial satellite.
3. Name the planet which is also called morning star or evening star?
4. Name the planet which completes one revolution in 88 days around the Sun.
5. Which galaxy is home to the Solar system?
6. Which object lost its status as a planet in 2006?
7. How many moons do Mars have?
8. What is the third brightest astronomical object in the sky?

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9. What is the Hubble constant?
10. What is the escape velocity from the Solar system at the distance of Earth?

(10 × 1 = 10 Marks)

SECTION – B

Answer **any eight** questions; not exceeding a paragraph. **Each** question carries **2** marks.

11. How many moons do Mars have?
12. Name the satellite of Neptune.
13. How does gravity affect life on Pluto?
14. How many planets are now in the solar system?
15. How many stars are there in the whole universe?
16. Define Hubble distance.
17. What do you mean by Singularity?
18. Explain Chandrasekhar limit.
19. What are Asteroids?
20. Define Luminosity of star.
21. What are Solar flares?
22. Briefly explain supernovae.

(8 × 2 = 16 Marks)

SECTION – C

Answer **any six** questions; not exceeding a paragraph. **Each** question carries **4** marks.

23. Why meteors are not visible during daytime?
24. Write the scope of Astronomy?

25. Who proposed the law governing the motion of planets? Explain the laws.
26. Write a short note on birth of the universe.
27. Define
- (a) Neutron stars
 - (b) Black holes
 - (c) Supernovae
 - (d) Galaxies
28. If the moon emits light of its own, then would it still have phases?
29. Write two difference between
- Meteoroid and Comets
 - Galaxy and Constellation
30. Why the Sun is also called as star?
31. What is artificial satellite? Give examples.

(6 × 4 = 24 Marks)

SECTION – D

Answer **any two** questions; not exceeding a paragraph. Each question carries **15** marks.

32. How does the earth's movement affect the seasons? What are the 4 main motions of the earth? How many kinds of movements does the earth make?
33. What is the main cause of the seasons? Why are seasons important to humans? How do seasons work on earth?
34. Explain the birth of the universe. Explain four stages of Astronomy in detail.
35. Give an account on the internal structure and atmosphere of sun.

(2 × 15 = 30 Marks)