

Reg. No. :

Name :

Sixth Semester B.Sc. Degree Examination, March 2021

First Degree Programme under CBCSS

Physics

Elective Course

PY 1661.2 : SPACE SCIENCE

(2018 Admission Regular)

Time : 3 Hours

Max. Marks : 80

SECTION – A

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

1. Define hubble distance.
2. What is solar corona?
3. Distinguish between apparent and absolute luminosity of stars?
4. What are proto stars?
5. Define the term cosmology.
6. What is meant by the optical identification of radio sources?
7. Explain the term quasar.
8. What is the difference between the absorption and emission spectra?

9. Name the radiation belt around the earth consisting of high energy particles?
10. In which layer of the atmosphere the temperature decreases with increasing height.

(10 × 1 = 10 Marks)

SECTION – B

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

11. Describe in brief the atmospheric composition
12. Briefly describe about the Troposphere of earth atmosphere.
13. Explain in brief about the Stratosphere of earth atmosphere.
14. What is the origin of Cosmic rays?
15. Discuss the role of Ozone in stratosphere warming.
16. Distinguish between cosmology and astronomy.
17. What are asteroids?
18. Explain Microwave background radiation.
19. What is meant by sun spot?
20. Explain the term solar storm?
21. Explain in brief about the ionosphere electric fields
22. Explain the origin of solar wind.
23. What do we mean by Chandrasekhar limit?

24. What is solar flare.
25. Write a short note on internal temperature of a star
26. Define sunspots and solar storm.

(8 × 2 = 16 Marks)

SECTION – C

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

27. What are H-R diagrams explain its main features?
28. Write a short note about the stellar evolution.
29. Describe in detail about the internal temperature of a star.
30. Describe in detail about the disturbed Solar wind.
31. Describes in details about the Nomenclature and temperature profile of earth's atmosphere.
32. Explain in detail about the white dwarf?
33. Explain the influence of solar activity on earth's atmosphere.
34. Describes the structure of earth's magnetosphere.
35. Give detailed explanation about Black holes.
36. Write a short note on expansions of universe.
37. Briefly explain photo diffusion time.
38. Write a short note on Dungey's open magnetosphere.

(6 × 4 = 24 Marks)

SECTION – D

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

39. What are Galaxies? Explain the origin and evolution of Galaxies. How are they classified?
40. Discuss the layers of ionosphere and discuss their charge distribution.
41. Explain the composition of atmosphere in detail. Mention the atmospheric layers and explain one of them with suitable diagram.
42. Describe the structure of earth's magnetosphere.
43. Explain the solar activity? Briefly explain sun spots and solar storms.
44. Write and explain the internal pressure of a star? Derive an expression to calculate the photon diffusion time.

(2 × 15 = 30 Marks)