



QP CODE: 24805711



24805711

Reg No :

Name :

INTEGRATED MSC DEGREE EXAMINATION, OCTOBER 2024

Third Semester

INTEGRATED MSC BASIC SCIENCE-PHYSICS

CORE - IPH3CR03 - ASTRONOMY & ASTROPHYSICS

2021 Admission Onwards

B62C5BFA

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

Answer any **eight** questions.

Weight **1** each.

1. Define Summer Solstice.
2. Give the relationship between distance, brightness, and luminosity of a star.
3. State Wein's displacement law.
4. What are Meteors?
5. How birth of a star occurs?
6. What are the different stages of star formation?
7. What is the importance of Chandrasekhars limit?
8. Define apparent magnitude.
9. What is bolometric magnitude of a star?
10. What is mean solar time?

(8×1=8 weightage)

Part B (Short Essay/Problems)

Answer any **six** questions.

Weight **2** each.

11. Explain the energy production mechanism in Sun.
12. Discuss the basic characteristics of sun spots.
13. Give a comparison between Eruptive Prominences and Sunspot Type Prominences.





14. Why are some planets surrounded by rings?
15. Write a note on Hubble's law.
16. How does a White dwarf form?
17. Briefly explain the inference of stellar mass from the HR diagram.
18. How are stars classified based on colours?

(6×2=12 weightage)

Part C (Essay Type Questions)

Answer any **two** questions.

Weight 5 each.

19. Describe the ecliptic coordinate system with neat sketches. Explain how the precession of Equinoxes affects the measurement of celestial longitudes and celestial latitudes.
20. Discuss the characteristics of magnetic fields existing in various planets in the solar system.
21. Briefly discuss the features of the Milky Way galaxy.
22. Explain the HR diagram of stars in detail.

(2×5=10 weightage)

