

B.Sc. Semester - 5 (NEP-2020) Examination**Oct/Nov - 2025****PHY: Introduction to Astronomy (Minor-4)****Time: 2:00 Hours****Marks: 50****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1 Answer any two questions: (10)
- (1) Explain the concept of retrograde motion of planets.
 - (2) Discuss the significance of sidereal time in astronomy.
 - (3) Explain earth, sun and the solar system.
- Que.2 Answer any two questions: (10)
- (1) Discuss the electromagnetic spectrum.
 - (2) Describe the construction and working of a refractor telescope.
 - (3) Write a note on observation at visible frequencies.
- Que.3 Answer any two questions: (10)
- (1) Describe the early stages of star formation.
 - (2) Discuss the evolution of a star on the main sequence.
 - (3) Write a note on black holes.
- Que.4 Answer any two questions: (10)
- (1) Explain the dynamo mechanism responsible for the generation and enhancement of the Sun's magnetic field.
 - (2) Discuss the solar cycle.
 - (3) Write a note on corona.
- Que.5 Answer any five questions: (10)
- (1) Explain how the angle subtended by the Sun and Moon at Earth leads to the phenomenon of solar eclipses.
 - (2) Discuss the importance of astronomical catalogs and software in modern observational astronomy.
 - (3) Explain the principle and design of a reflecting telescope.
 - (4) Define "seeing" in observational astronomy.
 - (5) Explain the process of fragmentation.
 - (6) Describe the formation of neutron stars.
 - (7) Describe the structure of solar photosphere.
 - (8) Describe sunspots.
