

P. R. Thakur Govt. College

Department of Physics

B.Sc. Semester-VI Internal Examination, 2024

Paper – PHSADSE05T

Astronomy and Astrophysics

Time: 1 Hour

Full Marks: 20

1. Answer any five questions from the following:

2×5=10

- (a) Draw a schematic diagram of different layers of the Sun's atmosphere.
- (b) What is active galaxy ? Give one such example.
- (c) Why is the temperature of sunspots lower than their surrounding?
- (d) State de Vaucouleurs law for galaxies.
- (e) What is meant by "Differential Rotation" of Milky Way?
- (f) Why is it necessary to propose the existence of Dark matter?
- (g) Two stars are 1.5 arc-second apart. Examine if they would be resolved by 25 cm telescope working at wavelength 550 nm.
- (h) List the types of binary star system.

**Department of Physics
P.R. Thakur Govt. College**

2. Answer any two questions from the following:

5×2=10

- (a) What do you understand by a White Dwarf Star? What is Corona? Why it is not seen in normal time? 2+1+2
- (b) Explain the equatorial system of coordinates with the help of a diagram. What are the factors which determine the resolving power of a telescope? 4+1
- (c) Briefly describe the nebular model of the origin of the solar system. 5
- (d) How do you estimate magnetic field at solar surface? What is butterfly pattern and how does it form? 2+1+2

**Department of Physics
P.R. Thakur Govt. College**