This question paper contains **2** printed pages]

SB—62—2022

FACULTY OF SCIENCE

B.Sc. (Third Year) (Fifth Semester) EXAMINATION

JUNE/JULY, 2022

(CBCS/Old Pattern)

PHYSICS

Paper XIII (PHY-303)

(Astrophysics)

(Monday, 13-6-2022) **Time : 10.00 a.m. to 12.30 p.m.**

Time—2½ *Hours* *Maximum Marks*—40

N.B. :— (*i*) Attempt *All* questions.

(*ii*) Illustrate your answers with suitably labelled diagrams, wherever necessary.

1. Explain in detail the Terrestrial and Jovian planets. 15

Or

(*a*) Write notes on the following terms : 8

(*i*) Hour angle

(*ii*) Mean solar time

(*iii*) Light year

(*iv*) Parsec.

(*b*) Explain stellar parallax method for distance measurement. 7

2. Explain the concept of sunspot and sunspot cycle. 15

Or

(*a*) Obtain the expression for Kepler's first law of planetary motion. 8

(*b*) Describe Nebular hypothesis for origin in solar system. 7

P.T.O.

3. Write short notes on (any *two*) (each of **5** marks) : 10

(*a*) Solar and lunar eclipses

(*b*) Celestial sphere

(*c*) Radiant flux and luminosity

(*d*) Solar photosphere.