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Y—136—2019

FACULTY OF SCIENCE

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

OCTOBER/NOVEMBER, 2019

(CBCS Pattern)

PHYSICS

Paper XIII (PHY-303)

(Astrophysics)

(Wednesday, 20-11-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :—All questions are compulsory and carry equal marks.

1. Attempt any *four* (each of 2 marks) : 8
 - (i) What are the types of classification of stars ?
 - (ii) State Wien's law.
 - (iii) What is the distance between milky way centre to our sun ?
 - (iv) What is sunspot ?
 - (v) State Kepler's second law.
 - (vi) Write the Hubble constant.
2. Attempt any *two* of the following (each of 4 marks) : 8
 - (a) Explain transmission of radiations through atmosphere.
 - (b) Explain the condensation theory.
 - (c) Write a short note on H-R diagram.
3. Attempt any *one* of the following : 8
 - (a) Explain interstellar molecules and interstellar medium.
 - (b) Derive an expression for Planck's law for black body radiation.

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4. Attempt any *two* of the following (each of 4 marks) : 8
- (a) Write a note on composition and atmosphere of saturn.
 - (b) Explain corona of sun.
 - (c) Describe oscillating cosmology.
5. Attempt any *one* of the following : 8
- (a) Write a short note on Comets, Asteroids, Meteors and Meteoroids.
 - (b) State Hubble law and explain Big-Bang theory of universe.