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W—117—2018

FACULTY OF SCIENCE

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

OCTOBER/NOVEMBER, 2018

(CGPA Pattern)

PHYSICS

Paper XIII (Phy-303)

(Astrophysics)

(Wednesday, 24-10-2018) **Time : 10.00 a.m. to 12.00 noon**

Time—2 *Hours* *Maximum Marks*—40

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) *All* questions carry equal marks.

1. Attempt any *four* : 8

(*a*) Define Blackbody radiation.

(*b*) Give the range of Infrared, visible and ultraviolet radiations in terms of wavelength.

(*c*) Define sunspots.

(*d*) What are different parts of the atmosphere of the sun ?

(*e*) State main characteristics of earth responsible for existence of human life.

(*f*) State Hubble's law.

(*g*) What do you mean by minor objects in the solar system ? What are different types of minor objects ?

2. Attempt any *two* : 8

(*a*) Describe Electromagnetic spectrum with neat labelled diagram.

(*b*) Explain in brief transmission of radiation through the atmosphere.

(*c*) Discuss in short Milky Way Galaxy.

P.T.O.

3. Attempt any *two* : 8

(*a*) Describe the structure, composition and atmosphere of mercury.

(*b*) Derive an expression for the Blackbody radiation and Wien's law.

(*c*) Explain Kepler's laws of planetary motion.

4. Attempt any *one* : 8

(*a*) Discuss in detail Big Bang Universe.

(*b*) Describe chromosphere of the sun.

5. Write short notes on any *two* : 8

(*a*) Spectral classification of stars

(*b*) Inter-stellar molecules

(*c*) Comets

(*d*) Hubble law.