B.Sc. 5th Semester (Honours) Examination, 2020-21

PHYSICS

Course ID: 52417   **Course Code: SH/PHS/504/DSE-2**

Course Title: Astronomy and Astrophysics

Time: 2 Hours   **Full Marks: 40**

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable

Section - I

1.   Answer *any five* of the following: **2×5=10**

   a)   What is the unit of Astronomical distance?

   b)   What do you mean by celestial sphere?

   c)   What do you mean by diurnal motion of stars?

   d)   What is corona?

   e)   Write down the virial theorem.

   f)   What is stellar temperature?

   g)   Write down the Hubble's law in connection with the expanding universe.

   h)   What are meteoroids?

Section -II

Answer *any four* of the following: **5×4=20**

2.   Write a short note how can we measure the distance of star by parallax method.   5

3.   How can we determine the temperature and radius of stars?   5

4.   Write a short note on solar atmosphere.   5

5.   What are stellar spectra? Write down their classifications.   5

6.   Write down the properties of galactic nucleus. How surrounding are affected by them? 5

7.   Briefly explain Nebular model.   5

P.T.O

Answer *any one* of the following: **10×1=10**

8. (i) Discuss about helioseismology.

    (ii) Write a short note on positional astronomy.   [5+5=10]

9. (i) Write the basic structure and properties of milky way galaxy.

    (ii) What is cosmic distance ladder? Define dark matter.

                                                                         [5+(3+2)=10]

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