

Reg. No.:

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**G.T.N. ARTS COLLEGE SELF FINANCE
(AUTONOMOUS)**

(Affiliated to Madurai Kamaraj University || Accredited with 'B' Grade by NAAC)

END SEMESTER EXAMINATION - NOVEMBER - 2021

(UNDER OUTCOME BASED EDUCATION (OBE) PATTERN)

Programme : M.Sc. Chemistry

Course Code : 20PPHN31

Course Title : Astrophysics

Date : 08.02.2022

Time : 10:00 AM - 1:00 PM

Max. Marks : 60

Q. No.	SECTION - A (10 * 1 = 10 Marks) Answer ALL Questions	CO(s)	K - Level
1.	The Phythagoras appear to have been the first to have taught that the Earth is_____. 1.all the center of universe 2.spherical in shape 3.orbits around the sun 4.flat with sharp edges	CO1	K1
2.	Spectral line splitting due to the influence of magnetic fields is called_____. 1.Boltzmann Effect 2.Zeeman Effect 3.Planck Effect 4.Zanstra's Effect	CO1	K2
3.	The cosmic background radiation, a remnant of the Big Bang, is at what temperature? 1.100 K 2.0 K 3.2.3 K 4.2.7 K	CO2	K1
4.	Which is the only moon in the solar system with a substantial atmosphere? 1.Saturn's TITAN 2.Venus's TITAN 3.Neptune's TITAN 4.Mars TITAN	CO2	K2
5.	What process produces a star's energy? 1.Hydrogen and oxygen combustion 2.Nuclear fusion 3.Neutron beta decay 4.Nuclear fission	CO3	K1
6.	Most stars are cooler than the sun. These stars, the planets, interstellar clouds and star-forming regions emit most of their radiant energy in the_____. 1.Visible 2.X-ray region 3.Ultraviolet 4.Infrared	CO3	K2
7.	What type of visible star is the coolest? 1.O 2.A 3.G 4.M	CO4	K1
8.	Heliocentric means around_____. 1.The Sun 2.The Earth 3.The Moon 4.The Mars	CO4	K2
9.	A coordinate system based on the ecliptic system is especially useful for the studies of_____. CO5	CO5	K1

1.Planet

2.Stars

3.Milky way

4.Stars

10. In which spectral region is it possible for astronomers to observe through clouds?

CO5 K2

1.Visual

2.Ultra violet

3.RADIO

4.X-ray

Q. No.**SECTION - B (5 * 4 = 20 Marks)****CO(s)****K -
Level****Answer ALL Questions**

11. (a) Discuss about origin of earth and other planets.

CO1 K2

[OR]

(b) Interpret Kepler's third law of planetary motion and their consequences.

CO1 K2

12. (a) Discuss the characteristics of Spiral galaxies.

CO2 K3

[OR]

(b) Describe the brief outline about Milky way.

CO2 K3

13. (a) Classify various stars in Milky way.

CO3 K4

[OR]

(b) Compare the characteristics of white dwarf star and neutron stars.

CO3 K4

14. (a) Interpret Structure of sun and its properties.

CO4 K2

[OR]

(b) Interpret the role and properties of asteroids.

CO4 K2

15. (a) Analyse Light year and its distance parameter.

CO5 K3

[OR]

(b) Examine the dimensions of Celestial sphere.

CO5 K3

Q. No.**SECTION - C (3 * 10 = 30 Marks)****CO(s)****K -
Level****Answer any of 3**

16. Briefly explain Pythagorean spherical earth.

CO1 K2

17. Show the difference between Spiral, elliptical and irregular galaxies.

CO2 K3

18. Compare the properties of Red giant, white dwarf and neutron stars.

CO3 K4

19. Compare Sunspot and solar flares in Milky way.

CO4 K5

20. Examine the content of Inter planetary distance and inter galactic space.

CO5 K3
