Reg. No. : | | | | | | | | | | | | |

Question Paper Code: 1104394

B.E. / B.Tech. DEGREE EXAMINATIONS, NOV / DEC 2024
Fourth Semester
Aerospace Engineering
U20AS404 – SPACE SCIENCE
(Regulation 2020)

Time: Three Hours | Maximum: 100 Marks

Answer ALL questions

PART – A (10 x 2 = 20 Marks)

1. What is meant by debris?

2. Define Newton's law of gravitation.

3. Define Hubble's law.

4. Define dark energy.

5. What is Kuiper Belt?

6. Explain about "Population I" Stars in galaxy.

7. Define Chandrasekhar limit.

8. Infer about binary star.

9. Summarize Kepler's law of planetary motion.

10. Infer about asteroids.

PART – B (5 x 16 = 80 Marks)

11. (a) Enumerate the historical development of space science over the years. (16)

(OR)

(b) Explain about the space environment and state its merits and demerits. (16)

12. (a) Discuss Big Bang model for expansion for universe. How does it differ with Hubble model? (16)

(OR)

(b) How does dark energy and dark matter affect the universe? Explain it. (16)

13. (a) Explain about origin and evolution of galaxies. Discuss the violent activities in galaxies. (16)

(OR)

(b) Infer about the galactic rotation and galactic magnetic field. (16)

14. (a) Describe the birth and evolution of star. Also mention Nucleo- synthesis and formation of elements in star. (16)

(OR)

(b) Inference about the luminosity of star. How it can be related with size of a star? Explain with an example. (16)

15. (a) Explain about Bode's law. Which planets do not fit into it? Why? (16)

(OR)

(b) Describe about the comets, meteoroids and satellites of a solar system. (16)

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