

U.G. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2023.

Fourth Semester

Physics

Non Major Elective — SPACE PHYSICS

(For those who joined in July 2021-2022)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. Which is the planet nearest to the sun?
(a) Earth (b) Mars
(c) Mercury (d) Saturn
2. Ganymede, the biggest moon in our solar system, belongs to which planet?
(a) Saturn (b) Uranus
(c) Neptune (d) Jupiter

3. How long is a comet's tail?
(a) Hundreds of miles long
(b) Thousands of miles long
(c) Millions of miles long
(d) None of the above
4. What is an Asteroid?
(a) a giant snowball in space
(b) a miniature star
(c) a large rock that is orbiting the sun
(d) none

5. The outermost layer of sun is called _____.
(a) Convection zone (b) Photosphere
(c) Chromosphere (d) Corona
6. Which of the following part of the sun is visible at the time of the eclipse?
(a) Photosphere (b) Corona
(c) Chromosphere (d) Core

7. First variable star was identified in _____.
(a) 1639 (b) 1637
(c) 1640 (d) 1638
8. M87 is a
(a) giant galaxy
(b) spiral galaxy
(c) dwarf galaxy
(d) irregular galaxy
9. If there is no sun, the colour of the sky would be _____.
(a) orange (b) blue
(c) yellow (d) black
10. The distance between the Earth and the sun (in million kms) is _____.
(a) 111 (b) 149
(c) 168 (d) 193

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Distinguish between interior and exterior planets.

Or

(b) Describe the different regions of earth's atmosphere.
12. (a) Give the structure of comets.

Or

(b) Give the structure of asteroids.
13. (a) Write about Corona.

Or

(b) Write the features of moon.
14. (a) Explain about constellation.

Or

(b) Explain about types of galaxies.



15. (a) What is big bang theory? Explain.

Or

(b) Describe steady state theory.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain in detail about the core of the Earth.

Or

(b) Explain about Magnetosphere.

17. (a) Explain in detail about Periodic comets.

Or

(b) Describe a brief explanation of meteors.

18. (a) Give the structure of photosphere.

Or

(b) Explain about solar plages.

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19. (a) Explain the different types of star clusters and their origin.

Or

(b) Write in detail types of variable stars.

20. (a) Write in detail about Pulsating theory.

Or

(b) Describe in detail about composition of universe expansion.

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