PHY2FM106:Astronomy and Stargazing
Section-A-Mark-2

1. Describe why astronomy is called historical science
2. Explain the Ptolemy model of solar system
3. Describe how astronomy functions as an observational science.
4. Categorize the major astronomical models proposed in ancient times.
5. Describe the concept of the celestial sphere in ancient astronomy
6. Explain the terms zenith, celestial equator, horizon, and celestial poles in ancient astronomy
7. Represent the geocentric model and its limitations.
8. Express how ancient civilizations used celestial observations for navigation
9. Explain the contributions of different civilisations to astronomy
10. Abstract the main contributions of Copernicus to modern astronomy
11. Abstract the structure of the Milky Way galaxy.
12. Clarify why Pluto is no longer classified as a planet
13. Summarize Kepler's laws of planetary motion.
14. Discuss the main technological advancements that revolutionized modern astronomy
15. Summarize the structure of the solar system and the planets within it
16. Calculate the distance travelled by light in 1 year
17. Describe the concept of light-years and how they are used in measuring cosmic distances.
18. Abstract the enormity of the universe
19. Describe diverse celestial objects.
20. Define a constellation? Give two examples
21. Mention why stars appear to move across the night sky?
22. Mention how to locate the North Star using the Big Dipper?

23. Describe the relationship between color and temperature in stars
24. Explain why humans invented constellations.
25. Describe the difference between a constellation and a galaxy.
26. Name few circumpolar constellations
27. Explain how explorers sail by the stars.
28. Define black holes and neutron stars?
29. Abstract on Rashi and Nakshatra.
30. Define the ecliptic and explain its importance in astronomy
31. Discuss the differences and similarities of telescopes and binoculars.
32. Explain the importance on telescopes and binoculars in astronomy
33. Name a few stars in Ursa major
34. Name a few stars in Ursa Minor
35. Define pointer stars.
36. Name a few constellations located along the celestial equator
37. Define shooting stars
38. Describe a meteor shower and the best ways to observe it.
39. Describe how stars are born in stellar nurseries
40. Define a meteor shower and explain how it occurs.
41. Define open clusters
42. Define Globular clusters
43. What is meant by Darkness and Light.Explain
44. Discribe how to Measure Darkness.
45. Define Bortle scale
46. Explain the special words to describe places in the sky.
47. Name the different types of clouds.

48. Discribe the formation of rainbow
49. Clarify Sun pillar and sundog.
50. Explain Crepuscular rays and Halo
51. Sun looks red during sunrise and sunset. Give the reson behind it.
52. Make a short note on Night Vision.
53. Discribe the different parts of eye.
54. Draw the different phsases of moon.
55. Discribe about moonrise and moonset.
56. Explain the reasons behind Moon illusion
57. Explain the concept of Supermoon?
58. illustrate the difference between Mare and Maria on moon.
59. Explain the craters on the moon.
60. The ancient people refer to the maria on the Moon as seas . Discuss the reason behind it.
61. Explain the reason behind the formation of whitish rays around some craters?
62. Discribe why craters are appeared on the surface of the moon
63. Explain the difference between Kepler Crater and Copernicus Crater.
64. Discribe Far side and near side of a moon
65. What is meant by regolith of moon? Explain it.
66. Define Basalt and Anorthosite
67. Make an abstract on lunar eclipse.
68. Explain the different Stages of a Lunar Eclipse
69. Make a short note on Stages of a Lunar Eclipse
70. Explain about Big Splat model
71. Discuss the term Stonehenge.
72. Discribe about Cityhenge

73. Explain the reasons behind the formation of Seasons.
74. Define equinoxes.
75. Define solstices.
76. what is meant by Sun's path.Explain
77. Define midnight sun.
78. Why the Sun's Path is different in different parts of the world.Explain
79. Define sundial.
80. Define Sunspots.
81. Explain the Fusion Reaction.
82. Explain the Main energy sourse of the sun.
83. Define Nebula.
84. What is meant by main sequence stars. Explain.
85. Explain Solar eclipse
86. What is meant by Solar eclipse. Explain
87. write note on Stages of a Solar Eclipse
88. Define Planets.
89. Discuss the Features of Planets and Stars.
90. Define inferior planets.
91. Define superior planets.
92. What is meant by Sky Wanderer. Explain.
93. Define asteroids.
94. Define trans-Neptunian objects.
95. Define dwarf planets.
96. Write a short note on Solar System.
97. Define Terrestrial Planets.

98. Define Jovian Planets.
99. Define Small Solar System Bodies (SSSBs).
100. Write a short note on Eight planets.
101. Explain the formation of the Solar System.
102. Define Great Comet.
103. Define Other suns and their Solar Systems
104. Explain Transit method and Imaging Method
105. Explain Doppler and Microlensing method

Section-B-Mark-6

1. Analyze the self-correcting nature of science
2. Asses astronomy as an observational science and discuss the instruments in astronomical science
3. Categorize the major astronomical models proposed in ancient times.
4. Discuss the key contributions of ancient civilizations to the development of astronomy.How did early astronomers observe and interpret celestial events?
5. Describe Ptolemy’s geocentric model of the solar system and explain its limitation
6. Explain the concept of the celestial sphere in ancient astronomy and define terms such as zenith, celestial equator, horizon and celestial poles
7. Describe how the Earth's rotation affects the apparent motion of celestial objects on the celestial sphere. What is the impact of this motion on the rising and setting of stars?
8. Describe how ancient astronomers interpret the motion of wandering stars and fixed stars, and how is it explained in modern astronomy
9. Discuss how modern astronomy has evolved from ancient astronomy
10. Clarify the significance of Galileo’s observations in shaping modern astronomy
11. Clarify how Kepler’s observations contributed to the development of modern astronomy. Define Kepler’s laws of planetary motion

12. Summarize the heliocentric theory and its impact on our understanding of the universe.
13. Categorize the major astronomical models proposed in ancient times.
14. Define light year. Calculate the distance travelled by light in 100 days.
15. Mention the different types of celestial bodies in our universe
16. Abstract the characteristics that differentiate planets from stars.
17. Abstract the structure of the Milky Way galaxy and mention different types of galaxies in the universe
18. Define a star's life cycle and describe the different stages briefly.
19. Explain why different constellations are visible in different seasons
20. Describe Supergiant and Dwarf
21. Explain the process by which a star evolves into a black hole or a neutron star
22. Discuss the Western zodiac system and the Indian Rasi-Nakshatra system, and compare their similarities and differences.
23. Explain the concept of the zodiac and the ecliptic, and how they influence astrology and astronomy
24. Discuss how the stars help in navigation, especially in locating the North and South directions
25. Clarify the relationship between the zodiac, the ecliptic, Rasis, and Nakshatras, explaining their astronomical and astrological importance.
26. Classify northern circumpolar stars
27. Explain star seasons
28. Summarize the major stars occurring in November, December, and January.
29. Describe the life cycle of stars, from their formation to their death.
30. Describe deep-sky objects and explain their significance in astronomy.
31. Explain the special words to describe places in the sky with a diagram.
32. Discuss Cosmic Protractor

33. Explain the Special Effects related to sun.
34. Discribe the different parts of eye with a diagram.
35. Make a short note on Milky way
36. Make a short note on different Phases of the Moon
37. Explain Moon illusion.
38. Explain the different Phases of the Moon.
39. Explain the craters on the moon.
40. Differentiate Mare and Maria on moon.
41. Explain the Giant Impact Hypothesis for the formation of the Moon
42. Explain Big Splat model
43. How did the Moon form? Explain.
44. What are some similarities and differences between the Moon and Earth?
45. Explain lunar eclipse
46. Make a short note on lunar eclipse
47. Make a short note on Stages of a Lunar Eclipse
48. Explain with diagram the Stages of a Lunar Eclipse
49. Differntiate between equinoxes and solstices.
50. Explain equinoxes and solstices.
51. Define Sun's path.
52. How Seasons Happen. Explain
53. Define the different parts of the sun.
54. Define Sunspots.
55. Explain the storms on the sun .
56. Explain the Power house of the sun
57. How did the sun form? Explain

58. Explain the formation of the sun.
59. Explain Solar eclipse
60. Write a short note on Solar eclipse
61. write note on Stages of a Solar Eclipse
62. Explain with diagram the Stages of a Solar Eclipse
63. How Are Eclipses of the Sun and Moon the Same and different. Explain.
64. Make a short note on Planets in our Solar system.
65. What is meant by Earth's Siblings in the Sky. Explain
66. Differentiate Planets and Stars.
67. Define Planets and Stars
68. Discuss the difference between inferior planets and superior planets
69. Explain the term Sky Wanderer
70. Differentiate Terrestrial Planets and Jovian Planets
71. Explain Terrestrial, Jovian Planets and Small Solar System Bodies (SSSBs)
72. Write a short note on Eight Planets.
73. Differentiate eight plants.
74. Discuss the difference between eight planets.
75. Explain the formation of the Solar System.
76. Explain the formation of our Solar system.
77. Explain Great Comet
78. What is meant by Other suns and their Solar Systems. Explain.
79. Explain any four methods for finding Stars.

Section-C-Mark-10

1. Discuss the progression of modern astronomy from ancient astronomy
2. Explain the major flaws of the Ptolemaic system, and how were they addressed by later astronomers like Copernicus and Galileo?

3. Describe the concept of the celestial sphere in ancient astronomy discuss how ancient civilizations used celestial observations for navigation.
4. Discuss ancient astronomy and modern astronomy with a focus on earth-centered view and heliocentric view
5. Describe the vast expanse of the universe and the various celestial bodies within it.
6. Summarize the enormity of the universe and its diverse celestial objects
7. Explain the universe we live in, our position within it, and the celestial objects surrounding us.
8. Clarify the concept of stars and constellations, explaining their significance in astronomy. Describe the movement of stars in the night sky and assess the importance of the North Star in navigation and celestial observations.
9. Describe how stars can be used to determine direction, particularly in identifying North and South. Summarise the concept of the zodiac and the ecliptic, and assess the significance of Rashis and Nakshatras in astronomy and astrology
10. Summarize the prominent stars and constellations visible during different times of the year, specifically November-January, highlighting their significance in astronomy.
11. Describe the life cycle of a star, from its birth in a stellar nursery to its eventual death. Additionally, explain the phenomenon of meteor showers and discuss the significance of deep-sky objects in understanding the universe
12. Write a note on Moon. Differentiate different phases of moon. With neat diagram explain Lunar eclipse and its stages.
13. Make a short note on Lunar Eclipse.
14. Explain the formation of Moon.
15. Write a note on Sun. Explain the Formation of Sun. With neat diagram explain Solar eclipse and its stages.
16. Write a short note on Solar Eclipse.
17. Explain the formation of Sun.

19. Discuss theformation of the Solar system
20. Write a note on Eight plants in the Solar system
21. Explain the Solar system and its formation.
22. Write a note on Planets. Discuss eight planets and Solar system.