PHYSICS

BOOKS - CHETANA PHYSICS (MARATHI ENGLISH)

SPACE MISSIONS

Exercise

1. Which of the is the communication satellite of India?

A. INSAT

B. EDUSAT

C. astrosat

D. Resourcesat

Answer:

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2. Launching of a rocket' is based on newton's

_____law of motion

A. first

B. second

C. third

D. fourth

Answer:

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3. _____planet has maximum number of satellites

A. Earth

B. Jupiter

C. Mars

D. Saturn

Answer:

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4. Which of the following is a satellite launch vehicle?

A. PSLV

B. IRS

C. INSAT

D. GSAT

Answer:

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5. _____is known as Pioneer of Indian space program

A. Neil Armstrong

B. Yuri Gagarin

C. Rakesh Sharma

D. Vikram Sarabhai

Answer:

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6. _____is a high earth orbit (HEO) satellite?

A. Navigational satellite

B. Geosynchronous

C. International space station

D. SPUTNIK

A. A. Navigational satellite

B. B. Geosynchronous

C. C. International space station

D. D. SPUTNIK

Answer:

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7. Which of the following is low earth orbit(LEO) satellite?

A. Navigational satellite

B. Geostationary satellite

C. International space station

D. all of the above

A. navigational satellite

B. Geostationary satellite

C. international space station

D. all of the above

Answer:

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8. To use a satellite for communication or meteorology, what type of orbit will be best suited?

A. Circular orbit

B. Geosynchronous orbit

C. Elliptical orbit

D. Polar orbit

A. circular orbit

B. geosynchronous obrit

C. elliptical orbit

D. polar orbit

Answer:

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9. Two satellites revolving in leo and geo-synchronous orbit have speed X and Y respectively which of the following relation is

correct?

A. X > Y

B. X < Y

C. X = Y

D. None of the above

A. A. X > Y

B. B. X < Y

C. C. X = Y

D. D. None of the above

Answer:

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10. Which is the best suited for a remote sensing satellite?

A. Geosynchronous orbit

B. Elliptical orbit

C. Circular orbit

D. sun synchronous polar orbit

A. A. Geosynchronous orbit

B. B. Elliptical orbit

C. C. Circular orbit

D. D. sun synchronous polar orbit

Answer:

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11. Find the odd man out:

Yuri Gagarin,Neil Armstrong,Rakesh Sharma,Vikram Sarabhai

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12. Find the odd man out:

Moon, Sputnik, INSAT, Mars

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13. Find the odd man out:

INSAT, GSAT, IRS, PSLV

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14. Find the odd man out:

HEO, LEO, MEO, GSLV

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15. Russia: Yuri Gagarin:: India:____

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16. PSLV: Polar satellite launch vehicle: : GSLV:

_____

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17. Complete the analogy:

2000 km to 35780 km: M.E.O : : 180 km to 2000 km:_____

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18. Moon, Chandrayan 1 : : Mars:_____

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19. Match the following :

Column A	Column B
(1) INSAT	(a) Polar Satellite Launch Vehicle
(2) GSAT	(b) Indian National Satellite
(3) GSLV	(c) Geo synchronous Satellite
(4) PSLV	(d) Geo synchronous Satellite Launch vehicle

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20. Match the following :

Column A	Column B
(1) Weather satellite	(a) Information of the area on protection point
(2) Communication satellite	(b) To decide accurate latitude and longitude
(3) Navigational satellite	(c) Communicate various places through waves
(4) Military satellite	(d) To predict weather forecast

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21. Match the following :

Column A	Column B
(1) Neil Armstrong	(a) The first man in space
(2) Yuri Gagarin	(b) The father of Indian Space Research
(3) Rakesh Sharma	(c) The first man on Moon
(4) Vikram Sarabhai	(d) The first Indian in space

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22. Match the following :

Column A	Column B
(1) Gravitational Constant	(a) 6×10^{24} kg
(2) Gravitational acceleration	(b) 6.4×10^{6} m
(3) Mass of the earth	(c) $9.8\ m/s^2$
(4) Radius of the earth	(d) $6.67 \times 10^{-11}\ Nm^2/kg^2$

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23. State whether the following statements are 'True or False'. Correct the false statement:

If a spacecraft has to be sent away from the

influence earth's gravitational field, its velocity must be less than the escape velocity

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24. State whether the following statements are 'True or False'. Correct the false statement: INSAT is an educational satellite.

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25. State whether the following statements are 'True or False'. Correct the false statement: The escape velocity on the Moon is less than that on the Earth

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26. State whether the following statements are 'True or False'. Correct the false statement: A satellite needs a specific velocity to revolve in specific orbit

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27. State whether the following statements are 'True or False'. Correct the false statement:

If the height of the orbit of a satellite increases it's velocity must also increase.

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28. State whether the following statements are 'True or False'. Correct the false statement:

All artificial satellites revolve in similar orbits around earth

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29. State whether the following statements are 'True or False'. Correct the false statement: ISS and Hubble revolve in L.E.O.

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30. Answer the following in one sentence:

What is an artifical satellite?

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31. Answer the following in one sentence:

Which planet in our solar system has maximum satellites?

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32. Answer the following in one sentence:

What is the name of the first indian satellite?

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33. Answer the following in one sentence:

Who is called the father of indian space programme?

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34. Answer the following in one sentence:

Name two female astronauts of indian origin?

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35. Answer the following in one sentence:

What are the applications of geo-stationary satellite?

Watch Video Solution

36. Answer the following in one sentence:

Name two female astronauts of indian origin?

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37. Name the following

Satellite designed by the student of COEP in pune.

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38. Name the following

In 2008 ,the ISRO launched which satellite ?

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39. Name the following

First satellite launched by Indian

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40. Define write the laws: Universal constant of gravitation(G)

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41. Name the following

Orbits of a satellite between 180 km to 2000 km from earth's surface.

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42. Name the following

Energy on which satellites work

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43. Name the following

Satellite which appears stationary with respect to earth,revolving parallel to the equator.

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44. Name the following

Orbits in which satellites complete one revolution in 2 to 24 hours

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45. Name the following

The velocity required for launching a remote sensing satellite

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46. Name the following

Indian satellite working for monitoring and management of natural resources and disaster management.

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47. Write the full form of :

INSAT

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48. Write the full form of :

GSAT

Watch Video Solution

49. Write the full form of :

IRNSS

Watch Video Solution

50. Write the full form of :

GSLV

Watch Video Solution

51. Write the full form :

PSLV

Watch Video Solution

52. Write the full form of :

ISRO

Watch Video Solution

53. Write the full form of :

NASA

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54.

If mass of planet is eight times the mass of the earth and its radius is twice the radius of the earth, what will be the escape velocity for that planet?

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55.

Suppose the orbit of a satellite is exactly 35780 km above the earth's surface. Determine the tangential velocity of the satellite.

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56.

If the orbit of a satellite is exactly 35780 km above the earth's surface then tangential velocity of the satellite is 3.08 km/s. how much

time the satellite will take to complete one revolution around the earth?

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57.

How much time satellite in an orbit at height 35780 km above earth's surface would take, if the mass of the earth would have been four times its original mass?

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58. How much time a satellite in an orbit at height 35780 km above earth's surface would take,if the mass of the earth would have been four times its original mass?

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59.

If the height of a satellite completing one revolution around the earth in T seconds is H_1 meter,Then what would be the height of a

satellite taking $2\sqrt{2}T$ second for one revolution?

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60. Define the following

Geo-stationary satellite

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61. Define the following

High earth orbit

Watch Video Solution

62. Define the following

Medium earth orbit

Watch Video Solution

63. Define the following

Low earth orbit

Watch Video Solution

64. Define the following:

Polar orbit

Watch Video Solution

65. Critical velocity is given by

Watch Video Solution

66. Define the following

Satellite launch vehicle

Watch Video Solution

67. Write short notes:

Space Expolartion

Watch Video Solution

68. Answer the following in one sentence:

What is an artifical satellite?

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69. Write short notes:

Lunar expeditions

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70. Label the diagram:

Orbits of satellites

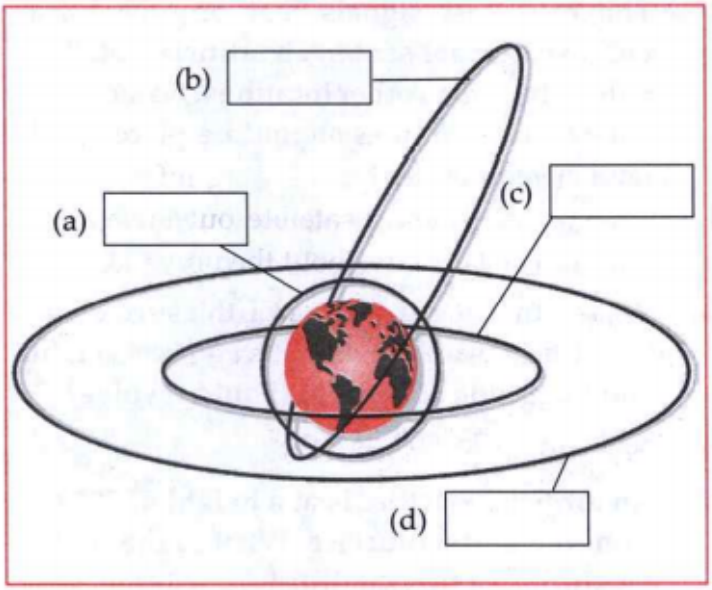

Fig 10.1 : Orbits of Satellites

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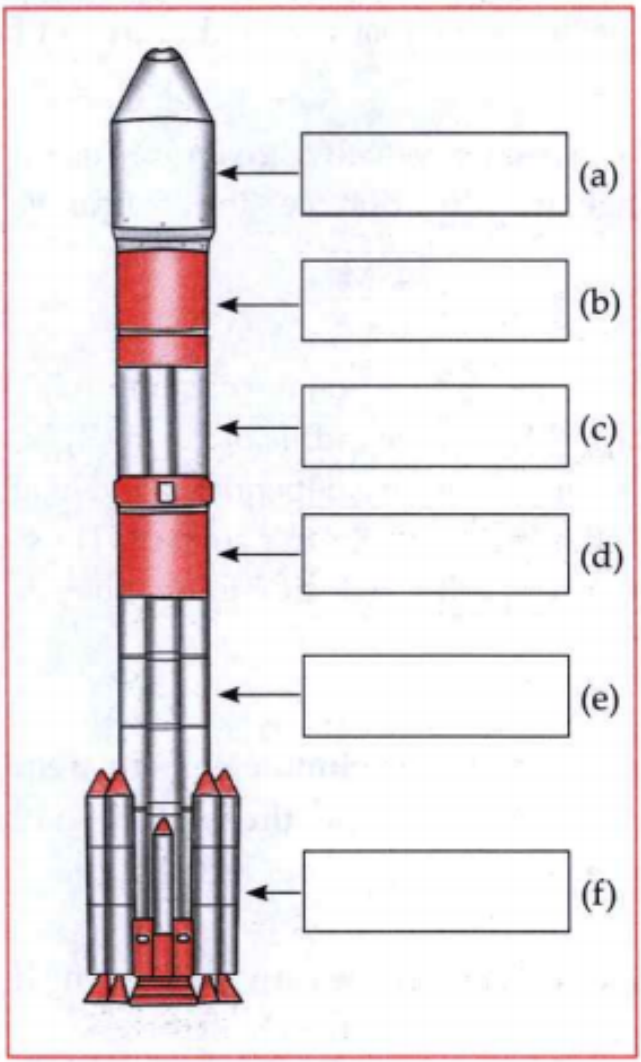
71. Label the diagram:

Structure of PSLV made by ISRO



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72. Answer the following in one sentence:

What are the applications of geo-stationary satellite?

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73. What is space debris?How this debris is managed?

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74. Explain the terms: escape velocity

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75. Why are geo-stationary satellites not useful for studies of polar regions?

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76. Which types of telescopes are orbiting around the earth? why it is necessary to put

them in space?

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77. How are satellites launched in an orbit?

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78. What are different components of solar system?

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79. Answer the following in one sentence:

What is an artifical satellite?

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80. How many natural satellites does the earth have?

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81. Where does the signal in your cell phone come from?

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82. Where from do mobile towers receive the signals?

Watch Video Solution

83. Where does the signal to your TV set come from?

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84. You have seen photographs showing the position of monsoon clouds over the country in the newspaper. How are these images obtained?

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85. The broadcast signals that originate from a radio station are sent to an artificial satellite for redistribution to other locations. Name the orbit where such satellites should be placed and the launch vehicle used.

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86. What is the range from the Earth's surface ,where an artificial satellite, to detect a precise latitude and longitude of a place, should revolve?

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87. An artificial satellite is at a height of 35780 km .from the earth's surface. What is the period of revolution of this satellite?

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88. Satellites need a specific velocity to revolve in specific orbits. Justify whether true of false

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89. Explain the terms: escape velocity

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90. Derive the formula for critical velocity (V).

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91. What is meant by the orbit of a satellite ?

On what basis and how are the orbits of

artificial satellites classified?

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92. Why is it beneficial to use satellite launch vehicles made of more than one stage?

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93. What is meant by satellite launch vehicle? Explain a satellite launch vehicle developed by ISRO with the help of a schematic diagram

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94. Launching of a rocket' is based on newton's _____law of motion

A. first

B. second

C. third

D. fourth

Answer:

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95. _____is known as Pioneer of Indian space program

A. Nell armstrong

B. yuri gagarin

C. rakesh sharma

D. vikram sarabhai

Answer:

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96. Find the odd man out:

Moon, Sputnik, INSAT, Mars

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97. Complete the analogy:

2000 km to 35780 km: M.E.O : : 180 km to 2000 km:_____

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98. State whether the following statements are 'True or False'. Correct the false statement:

The escape velocity on the Moon is less than that on the Earth

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99. Answer the following in one sentence:

What is an artifical satellite?

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100. What is the difference between space and sky.

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101. Define : High earth orbits and Low earth orbits.

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102. How are satellites classified based on their functions?

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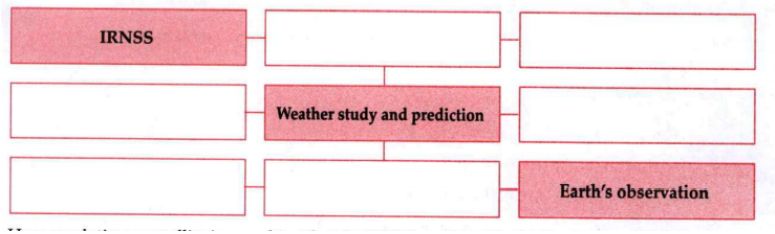
103. Complete the following table:



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104. How much time a satellite in an orbit at height 35780 km above earth's surface would take,if the mass of the earth would have been four times its original mass?

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105. Define: Escape velocity

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106. What are satellite launch vehicles?

explain a satellite Launch vehicle developed by ISRO with the help of schematic diagram.

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