



PHYSICS

BOOKS - NAND LAL PUBLICATION

STARS AND THE SOLAR SYSTEM

Questions Asked In Between The Chapter

1. Do all of them appear to twinkle? Do you find any star like object which does not twinkle?



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2. Are all the celestial objects similar?



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3. Is there a change in the shape of the moon everyday?



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4. Are there days when the shape of the moon appears to be perfectly round?



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5. Are there days when the moon cannot be seen at all even if the sky is clear?



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6. Is there a change in the shape of the moon everyday?



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7. Can you now guess the relative positions of the Sun, moon and the day of the full moon and on the day of the new moon? Sketch these positions in your notebook.



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8. In which part of the sky would you look for the full moon?



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9. I have heard that we never see the backside of the moon from the Earth. Is it true?



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10. Can your friend see your back?





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11. How many rotations did you complete in one revolution?



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12. Can any life exist on the moon?



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13. Suppose you and your friend are on the moon. Will you be able to hear any sound produced by your friend ?



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14. Suppose you and your friend are on the moon. Will you be able to hear any sound produced by your friend ?



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15. What objects do you see in the night sky?



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16. Are all stars equally bright?



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17. Are stars of the same colour?



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18. Why does moon appear so bright compared to the other stars?



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19. Can you read distance in millions of kilometers?



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20. If light from stars takes years to reach us, I wonder if we are looking into the past when we look at stars.



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21. I want to know why we do not see the stars during the day? Why are they visible only at night?



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22. What do you find? Do you find any change in the positions of the stars in the sky?



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23. Why do the heavenly bodies seem to move from east to west?



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24. Stand in the centre of a big room and start rotating. In which direction will the objects in the room appear to move?



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25. Do you see them moving in the direction opposite to your motion?



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26. My grandfather told me that there is one star in the sky which does not move at all. How is it possible?



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27. Is there any star which does not appear to move? Where is this star located?



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28. Can you see some stars forming groups with shapes like those in Fig. 17.11



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29. Do you find any change in its shape? Do you find any change in its position?



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30. True or False

There are nne planets in the solar system.



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31. Can you distinguish between planets and stars?



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32. I wonder, why the planets do not collide while revolving around the Sun?



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33. Can planets collide with one another?



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34. Does the Sun would rise in the west and set in the east on Venus?



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35. If I am 13 years old, how many times have I gone round the Sun?



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36. Boojho has a naughty idea! "If we imagine Saturn in a large pool of water then it will float" (Fig. 17.23)



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37. When was Halley's comet last seen?



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Exercises Choose The Correct Answer

1. Which of the following is NOT a member of the solar system?

A. An asteroid

B. A satellite

C. A constellation

D. A comet

Answer: C



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2. Which of the following is NOT a planet of the sun/

A. Sirius

B. Mercury

C. Saturn

D. Earth

Answer: A



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3. Phases of the moon occur because

A. We can see only that part of the moon
which reflects light towards us.

B. Our distance from the moon keeps changing.

C. The shadow of the Earth covers only a part of the moon's surface.

D. The thickness of the moon's atmosphere is not constant.

Answer: A



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Exercises Fill In The Blanks

1. The planet which is farthest from the sun is :



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2. Fill in the blank

the planet which appears reddish in colour

is.....



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3. Fill in the blank

A group of stars that appear to form a pattern in the sky is known as a.....



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4. Fill in the blank

A celestial body that revolves around a planet in the known as



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5. Fill in the blank

Shooting stars are actually not



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6. Fill in the blank

Asteroids are found between the orbits of
..... And



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Exercises Mark The Following Statements As True T Or False F

1. True or False

Pole star is a member of our solar system.



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2. True or False

Mercury is the smallest planet in the solar system.



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3. True or False

Mercury is the smallest planet in the solar system.



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4. True or False

INSAT is an artificial satellite.



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5. True or False

There are nne planets in the solar system.



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6. True or False

Constellation Orion can be seen ony with
atelescope.



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7. Match items in column A with one or more items of column B:

Column A

- (i) Inner Planets
- (ii) Outer Planets
- (iii) Constellation
- (iv) Satellite of the Earth

Column B

- (a) Saturn
- (b) Pole star
- (c) Great Bear
- (d) Moon
- (e) Earth
- (f) Orion
- (g) Mars



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Exercises

1. In which part of the sky can you find Venus if it is visible as an evening star?



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2. Name the largest planet of the solar system.



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3. What is a constellation? Name any two constellations.



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4. Draw sketches to show the relative positions of prominent stars in

Ursa Major

Orion



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5. Name two objects other than which are members of the solar system.





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6. Explain how you can locate the Pole stars with the help of Ursa Major.



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7. Do all the stars in the sky move? Explain.



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8. Why is the distance between stars expressed in light years? What do you understand by the statement that a star is eight light years away from the earth?



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9. The radius of Jupiter is 11 times the radius of the Earth. Calculate the ratio of the volumes of Jupiter and the Earth. How many Earths can Jupiter accommodate?





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10. Booja made the following sketch of the solar system. Is the sketch correct? If not, correct it.



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Additional Questions Multiple Choice Questions

1. Explain how you can locate the Pole stars with the help of Ursa Major.

A. Big Dipper

B. The Great Bear

C. Saptarishi

D. All of these

Answer: D



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2. Which planet has rings around it?

A. Venus

B. Earth

C. Saturn

D. Mars

Answer: C



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3. Which of the following is not a planet?

A. Jupiter

B. Pluto

C. Uranus

D. Earth

Answer: B



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4. True or False

Mercury is the smallest planet in the solar system.

A. Venus

B. Jupiter

C. Mars

D. Mercury

Answer: D



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5. Our galaxy is known as ,

A. Milky way

B. Sun way and

C. Moon galaxy

D. Earth galaxy

Answer: A



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Additional Questions Fill In The Blanks

1. The pole star is not visible from the.....hemisphere



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2.is the brightest star of the sky



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3. Venus is also known as.....



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4. The density of..... planet is less than that of water.



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5. appears after nearly every 76 years.



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Additional Questions Write The Following Statements As True Or False

1. Which planet rotates on its axis from East to West?



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2. The earth can be said to be a satellite of the Sun. true/false



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3. The objects which twinkle in the sky are planets. true/ false



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4. Can an astronaut listen to the sound produced by another astronaut on the surface of moon?



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5. The surface of the moon is dusty and barren. true/false



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Additional Questions Answer The Following Questions

1. Name the constellation which looks like a distorted letter 'W' or 'M'.



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2. Name the nearest and the farthest planet from the sun.



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3. When did Neil Armstrong land on the surface of moon?



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4. Name a planet which does not have its own satellite .



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5. What is the speed of light?



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Additional Questions Very Short Answer Type Questions

1. Define orbit.



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2. What are Asteroids?



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3. Write two uses of artificial satellites.



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4. What are celestial bodies?



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5. What are meteorites?



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6. What do you mean by solar system?



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7. How can you locate the brightest star Sirius in the sky?



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8. What is a satellite?



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9. Which planet is nearest to the Sun? Why is it difficult to observe it?



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10. What are outer planets?



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11. Why is life possible on the earth?



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12. What are comets?



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13. Solar system is the "Sun and its family of objects which revolve around it". The Sun is at the center of the solar system and all other objects are revolving around it in a fixed paths called orbits.

What values do members of the solar system teach us?



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Additional Questions Long Answer Type Questions

1. What are phases of moon?



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Additional Questions Higher Order Thinking Skills Hots

1. Why do planets not collide with each other while moving around the Sun?



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Additional Questions Value Based Question

1. Solar system is the "Sun and its family of objects which revolve around it". The Sun is at the center of the solar system and all other objects are revolving around it in a fixed paths called orbits.

What are the various objects which revolve around the Sun?



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Additional Questions Self Practice Problem

1. What is the difference between a meteor and a meteorite ?



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2. Define a light year.



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3. How is a star different from shooting star ?



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