



PHYSICS

BOOKS - NAVNEET SCIENCE (HINGLISH)

MODEL ACTIVITY SHEET

Question

1. The escape velocity of a body from the earth's surface, $v_{\text{esc}} = \dots\dots\dots$.

A. $\sqrt{\frac{GM}{R}}$

B. $\sqrt{\frac{GM}{R}}$

C. $\sqrt{\frac{2GM}{R}}$

D. $\sqrt{\frac{GM}{2R}}$

Answer: C



Watch Video Solution

2. Choose the correct alternative and write the alphabet corresponding to the correct answer:

In a double displacement reaction.....

A. ions remain at rest

B. ions get inberated

C. ions are exchanged

D. ions are not created

Answer: C



View Text Solution

3. A lens does not produce any deviation of a ray of light passing through

A. its centre of curvature

B. its optical centre

C. its principal focus

D. an axial point at a distance $2f$ from its
centre

Answer: B



Watch Video Solution

4. Choose the correct alternative and write the alphabet corresponding to the correct answer:

..... is an allotropic form of a nonmetal which conducts electricity .

A. sulphur

B. Graphitic

C. Chlorine

D. Iodine

Answer: B



View Text Solution

5. Choose the correct alternative

Which of the following satellite launchers is developed by Indian ?

A. INSAT

B. IRNSS

C. EDUSAT

D. PSLV

Answer: D



Watch Video Solution

6. Write true or false: Electric power = $I^2 R$.

What is the unit of electric power?



[Watch Video Solution](#)

7. Match the columns :

| Column I | Column II |
|------------------------------|-------------------------------|
| (1) <i>d</i> -block elements | (a) Lanthanides and actinides |
| (2) <i>f</i> -block elements | (b) Group 1 and 2 |
| | (c) Groups 3 to 12 |
| | (d) Zero group elements |



[View Text Solution](#)

8. Considering the first correlation, complete the second. INSAT: Wather satellete :IRS



Watch Video Solution

9. Name the force that keeps a satellite in the orbit around the earth.



Watch Video Solution

10. A coin kept in a bowl is not visible when seen from one side. But, when water is poured in the

bowl, the coin becomes visible.



[Watch Video Solution](#)

11. It is recommended to use air tight container for storing oil for long time. Give reason



[Watch Video Solution](#)

12. Calcium floats on water during the reaction with water.

Give reason





[Watch Video Solution](#)

13. Write a short note on the zig-zag line in the modern periodic table.



[View Text Solution](#)

14. When water of mass 70g and temperature $50^{\circ}C$ is added to water of mass 30g, the maximum temperature of the mixture is found to be $41^{\circ}C$. Find the temperature of water of mass 30g before hot water was added to it.



[Watch Video Solution](#)

15. Explain the following reaction with the help of balanced equation: Electrolysis of alumina is done



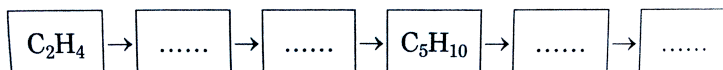
[View Text Solution](#)

16. Draw a neat and well labelled ray diagram for image formation by a convex lens when an object is placed in front of the lens, between F_1 and $2F_1$



[Watch Video Solution](#)

17. Complete the flow chart :



[View Text Solution](#)

18. What is the periodic trend in the variation of valency while going down a group? Explain your answer with reference to the group 1, group 2 and group 18.



[Watch Video Solution](#)

 [Watch Video Solution](#)

19. Obtain the mathematical expression for the heat generated in a metallic conductor by electric current (Joule's law).



[Watch Video Solution](#)

20. What is the difference between mass and weight of an object ? Will the mass and weight of an object on the earth be the same as their values on Mars ? Why ?





[Watch Video Solution](#)

21. On what basis and how are the orbits of artificial satellites classified ?



[Watch Video Solution](#)

22. 20 cm high object is placed at a distance of 25 cm from a converging lens of focal length of 10 cm . Determine the position , size and type of the image .



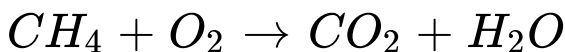
[Watch Video Solution](#)

23. How will you explain the role of latent heat in the change of state of a substance?



[Watch Video Solution](#)

24. Write the balanced equations for the following reactions :



[Watch Video Solution](#)

25. State the factors on which the magnitude of the magnetic field due to a current-carrying conductor depends and how it depends.



Watch Video Solution

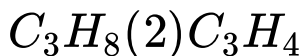
26. With a neat labelled diagram, explain twinkling of a star. Also explain why a planet does not twinkle.



Watch Video Solution

27. (a) What causes the existence of very large number of carbon compounds ?

(b) Draw structural formulae of compounds from their molecular formula given below : (1)



[View Text Solution](#)

Exercise

1. Which one of the following is a Low Earth Orbit (LEO) satellite ?

A. Navigational satellite

B. Geostationary satellite

C. Internatinal Space Station

D. All of the above

Answer:



Watch Video Solution

2. Which of the following is an expression for acceleration due to gravity at a height h ?

$$A. g = \frac{GM}{(R + h)}$$

$$B. g = \frac{GM}{\sqrt{R + h}}$$

$$C. g = \frac{GM}{(R + h^2)}$$

$$D. g = GM(R + h)^2$$

Answer:



Watch Video Solution

3. In a chemical equations, theare written on the left hand side.

A. products

B. reactants

C. catalysts

D. elements

Answer:



Watch Video Solution

4. How does an air bubble behave when it is inside water?

A. like a flat plate

B. like a concave lens

C. like a convex lens

D. like a concave mirror

Answer:



Watch Video Solution

5. Considering the first correlation, complete the second.

Graviational potential energy : $-\frac{GMm}{R+h}$:

Centripetal force :



[Watch Video Solution](#)

6. Write true or false : A satellite needs a specific velocity to revolve in a specific orbit. Also justify your answer by giving expression for the same.



[Watch Video Solution](#)

7. Two elements having a single electron in their outermost shell



[Watch Video Solution](#)

8. State the relation between the refractive index and the critical angle. Derive with suitable diagram.



[Watch Video Solution](#)

9. The material used for fuse has low melting point.

A fuse should be made of a material of low melting point.

Are above statements true? Justify



Watch Video Solution

10. Saturated hydrocarbons and unsaturated hydrocarbons.



Watch Video Solution

11. Explain how dew and fog are formed.



Watch Video Solution

12. Two convex lenses of equal focal lengths are kept in contact with each other. If the power of their combination is $10D$, find the focal length of each convex lens.



Watch Video Solution

13. What are the factors affecting the value of g .

Where is the value of g maximum ?



Watch Video Solution

14. What are the difficulties faced by a colour-blind person? Explain the cause of colour blindness.



Watch Video Solution

15. The speed of light in water is $2.2 \times 10^8 \text{ m/s}$ and that in glass is $2 \times 10^8 \text{ m/s}$. What is the refractive index of (i) water with respect to glass (ii) glass with respect to water (iii) absolute refractive index of glass (iv) absolute refractive index of water?



Watch Video Solution

16. A mountaineer climbing on the Everest, experienced the following facts. Explain each fact with the scientific reason : (1) He found

fishes alive below the ice. (2) Time required for cooking was more as he went higher. (3) He saw tubes carrying water broken.



[Watch Video Solution](#)

17. Prove that the angle of emergence and angle of incidence are equal in case of refraction through a glass slab



[Watch Video Solution](#)

18. State the principle on which the working of an electric motor is based. With a neat and well labelled diagram, explain the construction of an electric motor.



Watch Video Solution

Answer The Following Questions

1. Match the columns :

Column I

- (1) Polluting energy
- (2) Eco-friendly energy

Column II

- (a) Soot particles
- (b) Thermal energy
- (c) Nuclear energy
- (c) Wind energy



[Watch Video Solution](#)

Answer The Following

1. Explain the meaning of symbols A and B.

A



B



Watch Video Solution

2.



In case of this disaster what will your pre and post disaster management be?

In case of this disaster what will your pre and post disaster management be ?



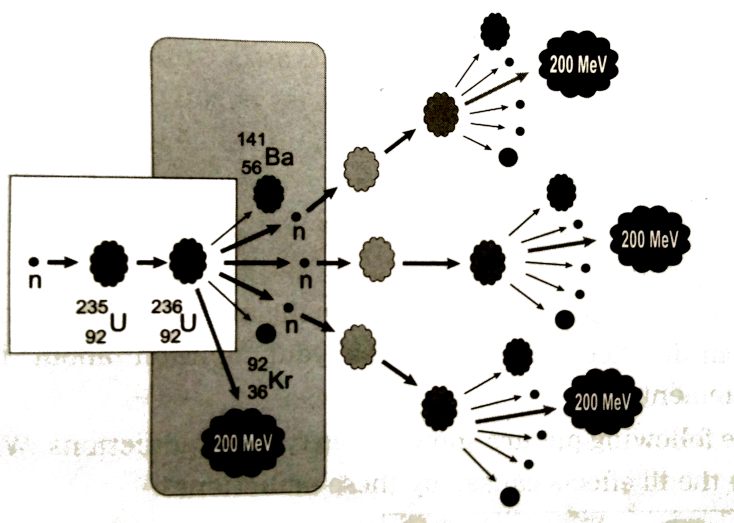
[Watch Video Solution](#)

3. Reorganize the following food chain. Describe the ecosystem to which it belongs. Grasshopper → Snake → Paddy field → Eagle → Frog



[Watch Video Solution](#)

4. Observe the diagram given below and answer the questions :

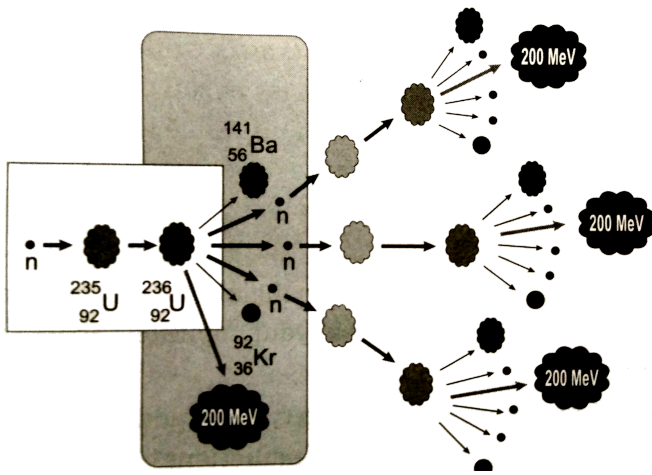


(c) Where element is used in it ?



[Watch Video Solution](#)

5. Observe the diagram given below and answer the questions :



(d) Sketch and label a flow chart showing nuclear power plant.



[Watch Video Solution](#)