

### **PHYSICS**

# BOOKS - NAVNEET SCIENCE (HINGLISH)

## LAWS, RULES, UNITS AND DEFINITIONS

Gravitation

**1.** What is centripetal force?



2. Define centripetal force?



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**3.** Write the three laws given by Kepler. How did they help Newton to arrive at the inverse square law of gravity?



**4.** Write the three laws given by Kepler. How did they help Newton to arrive at the inverse square law of gravity?



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5. Kepler's Law



**6.** Assume that the force of gravitation  $F \propto \frac{1}{r^n}$  . Then show that the orbital speed in a circular orbit of radius r is proportional to  $\frac{1}{r^{(n-1)/2}}$  , while its period T is proportional to  $r^{(n+1)/2}$ 



7. State Newton's universal law of gravitation.

Express it in mathematical form.



8. Determine the SI unit of the universal constant of gravitation from the formula for the gravitational force between two particles. Hence, state the CGS unit of the constant of gravitation



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9. Define G (universal gravitational constant).



10. What is the acceleration due to gravity?

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11. Define acceleration due to gravity.



12. What is free fall?



**13.** Define free fall.



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14. What is gravitational potential energy?



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**15.** Define gravitational potential energy.

Write the formula for it .



**16.** What is escape velocity?



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**17.** Define escape velocity.



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**Periodic Classification Of Elements** 

**1.** State Dobereiner's law of traids giving one example .



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2. What is meant by Newlands law of octaves?



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3. State Mendeleev's periodic law.



4. State the modern periodic law.



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5. What is meant by modern periodic table?



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**6.** What is meant by periodic trends in the modern periodic table ?



### **Chemical Reactions And Equations**

**1.** What do you understand by a chemical change?



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2. Define: Chemical change.



3. What is meant by a chemical reaction?



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**4.** Explain the term reactant and product giving examples.



**5.** What is combination reaction? Give an example.



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**6.** COMBINATION REACTION



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7. What is meant by a decomposition reaction

?

**8.** What is meant by thermal decomposition reaction? Explain with an example.



**9.** What is meant by an electrolytic decomposition?



**10.** What is meant by a displacement reaction?



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11. DOUBLE DISPLACEMENT REACTION



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**12.** What do you mean by slow speed reaction

?



13. Define: Slow speed reaction.



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**14.** Define: Fast speed reaction.



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**15.** OXIDATION REACTION OF CARBONYL

**COMPOUND** 





**16.** What do you mean by oxidant? Explain with suitable example.



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17. Define: Reduction reaction.



**18.** What do you mean by reductant? Explain with suitable example.



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**19.** What is corrosion?



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**20.** RANCIDITY



#### **Effects Of Electric Current**

1. Define electric power and give its unit.



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**2.** State the formula for electric power. Hence, obtain its SI unit.



**3.** What is the commercial unit of electric energy? Obtain the relation between this unit and the SI unit of energy.



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**4.** What is one kilowatt hour?



5. State Joule's law about heating effect of electric current.



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**6.** State the right hand thumb rule.



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7. Write Fleming's left hand rule.



**8.** What is electric motor ?



**9.** What is electromagnetic induction?



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10. State Faraday's law of induction.



**11.** State Right hand rule with a labelled diagram.



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Heat

1. Define latent heat of fusion.



2. What is latent heat of fusion? State its units.



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3. Define specific latent heat of fusion.



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**4.** What is specific latent heat of fusion?

State its units.



5. Define normal boiling point of a liquid.



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**6.** What is specific latent heat of vaporization?



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**7.** Define regelation .



**8.** Define dew point temperature.



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9. Define absolute humidity. OR

Whatis absolute humidity ?State its unit.



10. Define relative humidity . OR

What is relative humidity?

Write the formula for % relative humidity .



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**11.** Define relative humidity . OR

What is relative humidity?

Write the formula for % relative humidity .



**12.** State the relation between the joule and the kilocalorie.



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13. Define specific heat capacity.



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14. Determine the unit of specific heat capacity.



**15.** Which principle is used to measure the specific heat capacity of a substance?



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**Refraction Of Light** 

1. What is meant by refraction of light?



2. Define angle of incidence and angle of refraction.



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**3.** State laws of refraction of light.



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4. Define the refraction index of the second medium with respect to the first medium.



**5.** Define absolute refraction index.



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6. What do you mean by dispersion of light?



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7. What is a spectrum of light?



**8.** Name the different colours of light in the proper sequence in the spectrum of white light.



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**9.** What is partial reflection of light?



**10.** Define total internal reflection of light.



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11. Define critical angle.



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**12.** Define the following terms in the context of spherical mirrors :

(i) Pole

- (ii) Centre of curvature
- (iii) Radius of curvature
- (iv) Principal axis
- (v) Principal focus



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13. State the rules used for drawing ray diagrams for the fomation of an image by a convex lens.



**14.** State the rules used fro drawing ray diagrams for the formation of an image by a concave lens.



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**15.** What are the Cartesian sign convention for refraction of light (image formation) by a lens . Draw diagrams to illustrate the same.



**16.** What is a lens formula? State it.



**17.** What is meant by the magnification produced by a lens State the formulae for it.



**18.** What is the power of a lens?



**19.** What is the unit of power of a lens?



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**20.** What is meant by the power of accommodation of the eye?



**21.** What is meant by the minimum distance of distinct vision ?



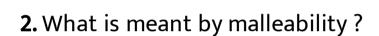
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**22.** What is persistence of vision? Give one example of persistence of vision.



1. What is meany by ductility?

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3. What is meant by an ionic bond?



**4.** What is meant by an ionic compound?



5. MINERALS



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6. Explain the Gangue.



**7.** Explain the Ores.



**8.** Explain the Metallurgy .



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9. Concentration of Ores



**10.** Explain the Roasting .



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11. What is Calcination?



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**12.** Explain:

(i). Zone refining

(ii). Column chromatography.



**13.** Explain the term corrosion with a suitable example.



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**14.** What is corrosion?



1. What is meant by catenation power?



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2. COPOLYMERS POLYMERS



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3. Explain the Monomer.



4. Explain the Oxidants.



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5. Explain the Reduction.



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6. Which is not a homopolymer :-



7. What is meant by a covalent bond?



**8.** Explain the term covalent bond with example .



**9.** Explain the term with example : Structural isomerism



10. Explain the term with example : Hetero atom in a carbon compound



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11. Define the Alkane?



## **12.** ALKENE



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## 13. ALKYNE



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## 14. ADDITION REACTION ON ALKENE



## **15.** Substitution reaction



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16. In esterfication



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17. Define Saponification.



18. Define the terms

Polymerization

