



Class 10 Science | Chemical Reactions And Equations

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. The balanced equation for aluminium burning in oxygen is:

- A. $\text{Al} + \text{O}_2 \rightarrow \text{AlO}_2$ B. $2\text{Al} + 3\text{O}_2 \rightarrow \text{Al}_2\text{O}_3$
C. $4\text{Al} + 3\text{O}_2 \rightarrow 2\text{Al}_2\text{O}_3$ D. $2\text{Al} + \text{O}_2 \rightarrow \text{Al}_2\text{O}_3$

2. Heating calcium carbonate gives CaO and CO₂. This is a:

- A. Neutralisation reaction
B. Decomposition reaction
C. Displacement reaction
D. Combination reaction

3. Iron nails placed in copper sulfate solution acquire a coating of:

- A. Zinc B. Copper C. Iron oxide only D. Sulfur

4. The blue colour of CuSO₄ fades when iron is added because:

- A. Water decomposes completely
B. Copper becomes a gas
C. Iron is less reactive than copper
D. FeSO₄ forms as copper is displaced

5. Mixing barium chloride and sodium sulfate solutions forms a white precipitate of:

- A. Na₂O B. NaCl C. BaSO₄ D. Ba

6. Which reaction releases heat?

- A. Thermal decomposition of CaCO₃
B. Electrolysis of water
C. Decomposition of AgCl by light
D. $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$

7. Silver bromide darkens in sunlight due to formation of:

- A. Silver nitrate B. Silver oxide
C. Liquid bromine only D. Silver metal

8. In $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$, the substance oxidised is:

- A. H₂O B. CuO C. Cu D. H₂

9. In the same reaction, the oxidising agent is:

- A. H₂O B. H₂ C. Cu D. CuO

10. Rancidity of stored oily food is slowed by:

- A. Packing under nitrogen
B. Adding oxygen
C. Increasing sunlight exposure
D. Keeping it warm and open

11. Rusting of iron requires the presence of:

- A. Dry oxygen alone B. Oxygen and water
C. Pure hydrogen alone D. Nitrogen alone

12. When lead nitrate is heated, the brown gas evolved is:

- A. Hydrogen B. Oxygen
C. Carbon dioxide D. Nitrogen dioxide

13. Which observation most directly indicates a precipitation reaction?

- A. The beaker is moved
B. Water is added
C. An insoluble solid appears
D. The liquid is stirred

14. In $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$, the ratio of H₂ to O₂ molecules consumed is:

- A. 1:2 B. 4:1 C. 2:1 D. 1:1

15. Respiration is classified as exothermic because it:

- A. Needs no chemical reaction
B. Absorbs only light energy
C. Creates new atoms
D. Releases energy from food oxidation

ANSWER KEY — check after completing all 15 questions

1.C 2.B 3.B 4.D 5.C 6.D 7.D 8.D 9.D 10.A 11.B 12.D 13.C 14.C 15.D



Class 10 Science | Acids, Bases And Salts

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. Dry HCl gas does not change dry blue litmus because it lacks:

- A. Water needed for ion formation
- B. Chlorine atoms
- C. A strong smell
- D. Hydrogen atoms

2. A solution with pH 2 has how many times the H^+ concentration of pH 4?

- A. 1000 B. 2 C. 10 D. 100

3. Diluting an acidic solution with water generally makes its pH:

- A. Rise toward 7
- B. Fall toward 0
- C. Remain always unchanged
- D. Become exactly 14

4. Which ion is characteristic of aqueous alkaline solutions?

- A. H_3O^+ only
- B. Na^+ in every case
- C. Cl^- in every case
- D. OH^-

5. Zinc reacts with dilute hydrochloric acid to produce:

- A. Carbon dioxide
- B. Hydrogen
- C. Nitrogen
- D. Chlorine

6. An acid reacts with sodium carbonate. The evolved gas turns limewater milky and is:

- A. H_2 B. O_2 C. NH_3 D. CO_2

7. The main products of acid-base neutralisation are:

- A. Hydrogen and carbon
- B. Salt and water
- C. Metal and oxygen
- D. Only carbon dioxide

8. Which solution turns red litmus blue?

- A. Aqueous NaOH
- B. Lemon juice
- C. Vinegar
- D. Dilute HCl

9. The chemical formula of baking soda is:

- A. $CaCO_3$
- B. $CaSO_4 \cdot 2H_2O$
- C. $Na_2CO_3 \cdot 10H_2O$
- D. $NaHCO_3$

10. Washing soda is:

- A. $Na_2CO_3 \cdot 10H_2O$ B. $NaHCO_3$ C. $NaCl$ D. $CaOCl_2$

11. Plaster of Paris has formula:

- A. $CaSO_4 \cdot 2H_2O$
- B. $CaSO_4 \cdot \frac{1}{2}H_2O$
- C. $CaCO_3$
- D. $Ca(OH)_2$

12. Plaster of Paris hardens after water is added because it forms:

- A. Bleaching powder
- B. Baking soda
- C. Quicklime
- D. Gypsum

13. Electrolysis of concentrated brine produces chlorine at the:

- A. Salt bridge
- B. Cathode
- C. Bottom of the vessel only
- D. Anode

14. On heating blue copper sulfate crystals strongly, they become white due to loss of:

- A. Oxygen gas only
- B. Sulfate ions
- C. Water of crystallisation
- D. Copper atoms

15. Which is the safe procedure for diluting concentrated acid?

- A. Add acid slowly to water with stirring
- B. Pour water rapidly into acid
- C. Mix while holding the container by hand
- D. Heat acid before adding water

ANSWER KEY — check after completing all 15 questions

1.A 2.D 3.A 4.D 5.B 6.D 7.B 8.A 9.D 10.A 11.B 12.D 13.D 14.C 15.A

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper



Class 10 Science | Metals And Non-Metals

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. A metal can be drawn into thin wires because it is:

- A. Brittle
- B. Sublimable
- C. Ductile
- D. Transparent

2. Which non-metal conducts electricity well in one common allotrope?

- A. Oxygen
- B. Sulfur
- C. Carbon as graphite
- D. Phosphorus

3. Sodium is stored under kerosene mainly to prevent reaction with:

- A. Glass
- B. Copper
- C. Air and moisture
- D. Nitrogen only

4. Which metal reacts vigorously with cold water?

- A. Potassium
- B. Gold
- C. Copper
- D. Silver

5. Aluminium resists further corrosion because it develops a:

- A. Protective oxide layer
- B. Non-metallic core
- C. Coating of hydrogen
- D. Layer of liquid aluminium

6. Which oxide reacts with both acids and bases?

- A. CO_2
- B. Al_2O_3
- C. SO_2
- D. Na_2O

7. A zinc strip displaces copper from CuSO_4 because zinc is:

- A. Less reactive than copper
- B. Insoluble in every acid
- C. A non-metal
- D. More reactive than copper

8. Which pair will not normally show displacement?

- A. $\text{Cu} + \text{ZnSO}_4$
- B. $\text{Cu} + \text{AgNO}_3$
- C. $\text{Fe} + \text{CuSO}_4$
- D. $\text{Zn} + \text{CuSO}_4$

9. An ionic compound usually has a high melting point because of:

- A. Absence of ions
- B. Weak attractions between molecules
- C. Strong electrostatic forces between ions
- D. Free motion of ions in the solid

10. During formation of MgCl_2 , one magnesium atom:

- A. Loses two electrons
- B. Gains two electrons
- C. Gains two neutrons
- D. Loses one proton

11. A metal high in the reactivity series is usually extracted by:

- A. Washing with water
- B. Heating its ore in air only
- C. Electrolysis of a suitable molten compound
- D. Reduction with charcoal only

12. Roasting converts a sulfide ore mainly into an:

- A. Oxide
- B. Alloy
- C. Element without oxidation
- D. Hydroxide

13. Calcination of zinc carbonate produces:

- A. Zn and O_2
- B. ZnO and CO_2
- C. ZnS and CO_2
- D. ZnCl_2 and H_2

14. In electrolytic refining of copper, impure copper is the:

- A. Anode
- B. Cathode
- C. Insulator
- D. Electrolyte

15. Galvanisation protects iron by coating it with:

- A. Sodium
- B. Carbon
- C. Zinc
- D. Sulfur

ANSWER KEY — check after completing all 15 questions

1.C 2.C 3.C 4.A 5.A 6.B 7.D 8.A 9.C 10.A 11.C 12.A 13.B 14.A 15.C

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper

Plot No. 15, Second Floor, Jaisingh Chowk, Sector 85, Gurgaon - 122004

8800 8800 28 | www.goodmarksclasses.com



Class 10 Science | Carbon And Its Compounds

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. Carbon commonly forms four covalent bonds because its valency is:

- A. 1 B. 4 C. 2 D. 8

2. Carbon's ability to form long chains is called:

- A. Precipitation B. Neutralisation
C. Calcination D. Catenation

3. Which hydrocarbon is unsaturated?

- A. C_2H_4 B. C_3H_8 C. C_2H_6 D. CH_4

4. Members of one homologous series have the same:

- A. Number of carbon atoms
B. Molecular formula
C. Functional group
D. Molecular mass

5. Successive members of a homologous series differ by:

- A. CH_4 B. CO_2 C. H_2O D. CH_2

6. The functional group in CH_3CH_2OH is:

- A. Aldehyde B. Hydroxyl C. Carboxyl D. Ketone

7. The compound CH_3COOH is named:

- A. Propanone B. Ethanol
C. Ethanal D. Ethanoic acid

8. Oxidising ethanol with suitable oxidant gives:

- A. Methane B. Ethanoic acid
C. Ethene only D. Sodium ethoxide

9. Ethanol heated with concentrated H_2SO_4 at 443 K mainly forms:

- A. Ethene B. Methanol
C. Ethanoic acid D. Ethane

10. Ethanoic acid reacts with ethanol in acid catalyst to form an:

- A. Ester B. Amine
C. Alkane D. Inorganic carbonate

11. Hydrogenation of vegetable oil uses a catalyst such as:

- A. Sodium chloride B. Nickel
C. Calcium carbonate D. Sulfur

12. Methane reacts with chlorine in sunlight mainly by:

- A. Neutralisation B. Addition
C. Precipitation D. Substitution

13. In a soap micelle, the hydrocarbon tails point mainly:

- A. Only upward
B. Outward into water
C. Inward toward grease
D. Away from all oil

14. Soap forms scum in hard water due to:

- A. Excess pure water
B. Hydrogen gas formation
C. Dissolved sugar
D. Insoluble calcium and magnesium salts

15. Which formula represents a ketone?

- A. CH_3COCH_3 B. CH_3COOH C. CH_3OH D. CH_3CHO

ANSWER KEY — check after completing all 15 questions

1.B 2.D 3.A 4.C 5.D 6.B 7.D 8.B 9.A 10.A 11.B 12.D 13.C 14.D 15.A

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper



Class 10 Science | Life Processes

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. Which substance emulsifies fats in the small intestine?

- A. Salivary amylase B. Pepsin
C. Hydrochloric acid D. Bile

2. Protein digestion in the stomach is mainly aided by:

- A. Pepsin B. Bile salts
C. Amylase D. Lipase from saliva

3. Villi in the small intestine increase the surface area for:

- A. Air exchange B. Chewing
C. Absorption D. Acid secretion

4. Stomata close when guard cells:

- A. Divide rapidly
B. Gain water and become turgid
C. Lose their cell walls
D. Lose water and become less turgid

5. In a leaf starch test, alcohol is used mainly to remove:

- A. Oxygen B. Starch C. Cellulose D. Chlorophyll

6. During anaerobic respiration in yeast, glucose produces mainly:

- A. Lactic acid only B. Oxygen and water
C. Ethanol and CO₂ D. Protein and nitrogen

7. A muscle cell short of oxygen may form:

- A. Bile B. Lactic acid C. Ethanol D. Starch

8. Alveoli are efficient gas-exchange surfaces because they have:

- A. Thin walls and a large area
B. Rigid cartilage walls
C. No blood supply
D. Thick dry walls

9. Oxygenated blood from the lungs enters the:

- A. Right ventricle B. Left atrium
C. Vena cava D. Right atrium

10. Which vessel carries blood from the heart toward the lungs?

- A. Hepatic vein B. Pulmonary artery
C. Aorta D. Pulmonary vein

11. The separation of oxygenated and deoxygenated blood in mammals mainly supports:

- A. Production of food
B. Absence of respiration
C. Efficient oxygen supply
D. Single circulation

12. Transpiration pull primarily moves water through:

- A. Guard-cell nuclei B. Xylem C. Phloem D. Cork

13. Transport of sucrose through phloem requires:

- A. No living cells
B. Only evaporation
C. Only gravity
D. Energy for loading sugars

14. The functional filtration unit of a kidney is the:

- A. Neuron B. Alveolus C. Nephron D. Villus

15. If tubular reabsorption in nephrons is greatly reduced, urine would generally contain:

- A. More water and useful solutes
B. No water
C. Only proteins
D. Only red blood cells

ANSWER KEY — check after completing all 15 questions

1.D 2.A 3.C 4.D 5.D 6.C 7.B 8.A 9.B 10.B 11.C 12.B 13.D 14.C 15.A

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper



Class 10 Science | Control And Coordination

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. The part of a neuron that usually receives incoming signals is the:

- A. Dendrite
- B. Synaptic gap
- C. Myelin sheath
- D. Axon terminal

2. At a typical chemical synapse, a signal crosses the gap using:

- A. Bone fibres
- B. Neurotransmitters
- C. Starch grains
- D. Red blood cells

3. A withdrawal reflex from a hot object is coordinated initially mainly by the:

- A. Cerebrum only
- B. Spinal cord
- C. Pituitary gland
- D. Cerebellum only

4. Which sequence correctly describes a simple reflex arc?

- A. Brain → receptor → sensory neuron → muscle
- B. Muscle → sensory neuron → receptor → brain
- C. Motor neuron → receptor → muscle → sensory neuron
- D. Receptor → sensory neuron → CNS → motor neuron → muscle

5. Balance and precision of voluntary movement depend strongly on the:

- A. Cerebellum
- B. Medulla only
- C. Hypothalamus only
- D. Retina

6. Which brain region controls many involuntary functions such as breathing?

- A. Optic nerve
- B. Cerebellum only
- C. Cerebrum surface only
- D. Medulla

7. A shoot bends toward light because auxin promotes more elongation on the:

- A. Root cap
- B. Shaded side
- C. Illuminated side
- D. Flower stigma

8. Growth of roots toward gravity is:

- A. Positive geotropism
- B. Thigmonasty
- C. Positive phototropism
- D. Negative geotropism

9. Growth of a pollen tube toward an ovule is an example of:

- A. Geotropism only
- B. Phototropism
- C. Chemotropism
- D. Hydrotropism

10. Folding of touch-me-not leaves differs from shoot phototropism because it is mainly:

- A. A turgor movement rather than directional growth
- B. A response to gravity alone
- C. Permanent elongation
- D. Always caused by cell division

11. Which plant hormone generally inhibits growth and promotes dormancy?

- A. Cytokinin
- B. Abscissic acid
- C. Gibberellin
- D. Auxin

12. Insulin helps control blood glucose by:

- A. Increasing glucose release in all cases
- B. Producing bile
- C. Promoting its uptake and storage
- D. Digesting proteins

13. Iodine is required to synthesise:

- A. Thyroxine
- B. Adrenaline
- C. Growth hormone
- D. Insulin

14. The rapid hormonal response to danger involves increased secretion of:

- A. Thyroxine only
- B. Insulin
- C. Oestrogen only
- D. Adrenaline

15. Hormone levels are often regulated by:

- A. Feedback mechanisms
- B. Only external light
- C. Random secretion without signals
- D. Stopping blood flow

ANSWER KEY — check after completing all 15 questions

1.A 2.B 3.B 4.D 5.A 6.D 7.B 8.A 9.C 10.A 11.B 12.C 13.A 14.D 15.A



Class 10 Science | How Do Organisms Reproduce?

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. DNA copying during reproduction is important because it:

- A. Removes all variation
- B. Destroys chromosomes
- C. Transmits hereditary information
- D. Creates only proteins

2. Asexual reproduction usually involves:

- A. Fusion of eggs only
- B. Two parents in every case
- C. One parent without gamete fusion
- D. No DNA copying

3. Plasmodium can form many daughter cells together by:

- A. Vegetative propagation
- B. Multiple fission
- C. Budding
- D. Pollination

4. A piece of Spirogyra filament develops into a new individual by:

- A. Fertilisation
- B. Pollination
- C. Fragmentation
- D. Implantation

5. Planaria can develop whole organisms from suitable body fragments through:

- A. Seed formation
- B. Spore formation
- C. Binary fission only
- D. Regeneration

6. Vegetative propagation is especially useful for preserving:

- A. Only novel sexual combinations
- B. Only recessive mutations
- C. Desirable parental traits
- D. A fixed number of seeds

7. Which flower part receives pollen during pollination?

- A. Sepal
- B. Filament
- C. Stigma
- D. Anther

8. A pollen tube normally carries male gametes toward the:

- A. Ovule
- B. Sepal
- C. Petal
- D. Filament

9. Fertilisation produces a:

- A. Spore coat
- B. Stigma
- C. Zygote
- D. Pollen grain

10. The testes lie in the scrotum mainly because sperm formation needs:

- A. Direct sunlight
- B. A temperature below core body temperature
- C. No blood supply
- D. A temperature above core body temperature

11. The vas deferens primarily carries:

- A. Urine from kidney to bladder
- B. Eggs
- C. Sperm
- D. Menstrual blood

12. The human embryo receives nutrients and oxygen through the:

- A. Oviduct wall alone
- B. Cervix
- C. Placenta
- D. Ovary

13. If fertilisation does not occur, the uterine lining is shed during:

- A. Implantation
- B. Pollination
- C. Ovulation itself
- D. Menstruation

14. A vasectomy prevents pregnancy mainly by blocking:

- A. Egg production
- B. Testosterone production completely
- C. Urine formation
- D. Sperm transport

15. Which method is a physical barrier preventing sperm from reaching the egg?

- A. Oral emergency contraceptive
- B. Periodic hormone injection
- C. Condom
- D. Oral contraceptive pill

ANSWER KEY — check after completing all 15 questions

1.C 2.C 3.B 4.C 5.D 6.C 7.C 8.A 9.C 10.B 11.C 12.C 13.D 14.D 15.C



Class 10 Science | Heredity

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. A trait expressed in a heterozygote is called:

- A. Acquired
- B. Dominant
- C. Non-heritable
- D. Recessive

2. For T dominant over t, the genotype of a pure tall pea plant is:

- A. tt
- B. TT
- C. Tt
- D. T only

3. Crossing TT with tt gives offspring that are all:

- A. Tt
- B. TT
- C. tt
- D. TT and tt equally

4. In Tt × Tt, the expected fraction of dwarf plants is:

- A. 1/4
- B. 3/4
- C. 1
- D. 1/2

5. The genotypic ratio in Tt × Tt is:

- A. 1 TT : 2 Tt : 1 tt
- B. All Tt
- C. 3 TT : 1 tt
- D. 1 TT : 1 Tt

6. A tall Tt plant crossed with tt gives a tall:dwarf ratio of:

- A. 1:3
- B. 1:1
- C. 3:1
- D. All tall

7. A recessive trait appears when the genotype is:

- A. Heterozygous only
- B. Homozygous dominant
- C. Homozygous recessive
- D. Any genotype

8. A gamete from a Tt plant carries:

- A. Neither allele
- B. Both T and t
- C. Only T always
- D. Either T or t

9. Genes influence visible traits primarily by controlling:

- A. Only food availability
- B. Protein production
- C. Only body water
- D. The number of limbs directly without cell processes

10. A scar caused by an injury is generally not inherited because it:

- A. Changes every chromosome
- B. Does not alter germ-cell DNA
- C. Creates a dominant allele
- D. Always affects gametes

11. In humans, a typical ovum carries which sex chromosome?

- A. Both X and Y
- B. Y
- C. Either X or Y equally
- D. X

12. A typical human sperm may carry:

- A. Both X and Y together
- B. X or Y
- C. Only X
- D. Only Y

13. Under the usual XX-XY model, an XY zygote develops as:

- A. Female
- B. Male
- C. Always infertile
- D. Neither sex can develop

14. In the usual XX-XY model, the probability of an XX child at each conception is approximately:

- A. 1
- B. 1/2
- C. 3/4
- D. 1/4

15. Two parents both show a dominant trait but have a recessive child. Their genotypes must be:

- A. Both heterozygous
- B. One homozygous dominant and one heterozygous
- C. Both homozygous recessive
- D. Both homozygous dominant

ANSWER KEY — check after completing all 15 questions

1.B 2.B 3.A 4.A 5.A 6.B 7.C 8.D 9.B 10.B 11.D 12.B 13.B 14.B 15.A



Class 10 Science | Light - Reflection And Refraction

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. A concave mirror forms an image of the same size when the object is at:

- A. Pole
- B. Centre of curvature
- C. Principal focus
- D. Infinity

2. A convex mirror always forms an image of a real object that is:

- A. Real and same size
- B. Virtual, erect and diminished
- C. Virtual and inverted
- D. Real, inverted and enlarged

3. A concave mirror gives a virtual enlarged image when the object lies:

- A. At centre of curvature
- B. Beyond centre of curvature
- C. Between pole and focus
- D. At infinity

4. A spherical mirror has radius of curvature 40 cm. Focal-length magnitude is:

- A. 40 cm
- B. 80 cm
- C. 20 cm
- D. 10 cm

5. For a concave mirror, $u = -30$ cm and $f = -15$ cm. Image distance v is:

- A. -30 cm
- B. -10 cm
- C. +10 cm
- D. +30 cm

6. A ray enters glass obliquely from air. It generally bends:

- A. Back along its path always
- B. Away from the normal
- C. Toward the normal
- D. Through 90° always

7. Refractive index of glass is 1.5. Speed of light in glass is ($c = 3 \times 10^8$ m/s):

- A. 4.5×10^8 m/s
- B. 1.5×10^8 m/s
- C. 3×10^8 m/s
- D. 2×10^8 m/s

8. A ray through the optical centre of a thin lens emerges approximately:

- A. Through the first focus always
- B. Undeviated
- C. Reflected backward
- D. Parallel to the axis always

9. A convex lens forms a real image of equal size when the object is at:

- A. $2F_1$
- B. F_1
- C. Optical centre
- D. Between F_1 and optical centre

10. A concave lens forms for a real object an image that is:

- A. Real and same size
- B. Real and enlarged
- C. Virtual and diminished
- D. Virtual and always enlarged

11. For a convex lens, $u = -30$ cm and $f = +20$ cm. Image distance is:

- A. -12 cm
- B. -60 cm
- C. +12 cm
- D. +60 cm

12. A lens has focal length +0.50 m. Power is:

- A. -2 D
- B. +2 D
- C. +50 D
- D. +0.5 D

13. A lens of power -4 D has focal length:

- A. +25 cm
- B. -40 cm
- C. -4 cm
- D. -25 cm

14. If a real image is twice the object height and inverted, magnification is:

- A. +2
- B. -1/2
- C. -2
- D. +1/2

15. An object at infinity is focused by a convex lens at its:

- A. Principal focus on the other side
- B. Twice focal length
- C. Optical centre
- D. First focus on object side

ANSWER KEY — check after completing all 15 questions

1.B 2.B 3.C 4.C 5.A 6.C 7.D 8.B 9.A 10.C 11.D 12.B 13.D 14.C 15.A



Class 10 Science | The Human Eye And The Colourful World

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. The eye changes its focal length mainly by changing the shape of its:

- A. Crystalline lens
- B. Retina
- C. Optic nerve
- D. Cornea rapidly

2. For viewing a nearby object, the eye lens becomes:

- A. Opaque
- B. Flat with infinite focal length
- C. Thicker with shorter focal length
- D. Thinner with longer focal length

3. A myopic eye forms distant-object images:

- A. Behind the retina
- B. Exactly on the retina without correction
- C. In front of the retina
- D. On the cornea

4. Myopia is corrected with a:

- A. Prism only
- B. Concave lens
- C. Convex lens
- D. Plane glass only

5. A hypermetropic eye needs a convex lens mainly to improve:

- A. Hearing
- B. Only colour vision
- C. Near vision
- D. Night vision by widening pupil

6. The near point of a normal young adult is conventionally about:

- A. 25 cm
- B. 25 m
- C. 2.5 cm
- D. 250 m

7. Age-related loss of accommodation is called:

- A. Scattering
- B. Presbyopia
- C. Reflection
- D. Dispersion

8. The splitting of white light into colours by a prism is:

- A. Dispersion
- B. Magnetisation
- C. Total absorption
- D. Diffraction

9. In a glass prism, visible light of which colour is deviated least?

- A. Violet
- B. Red
- C. Indigo
- D. Blue

10. A second suitably inverted prism can recombine a spectrum into:

- A. Only violet light
- B. Only red light
- C. No light
- D. White light

11. Twinkling of stars is mainly due to:

- A. Changing atmospheric refraction
- B. Earth's magnetic field
- C. Reflection from the Moon
- D. Rapid burning and extinguishing of stars

12. Planets generally twinkle less than stars because they:

- A. Have no atmosphere
- B. Are stationary
- C. Appear as extended sources
- D. Emit no light toward Earth

13. The blue appearance of the clear sky is mainly due to:

- A. Preferential scattering of shorter visible wavelengths
- B. Reflection from blue oceans only
- C. Blue emission by nitrogen
- D. Absorption of all blue light

14. The Sun looks reddish near the horizon because:

- A. Red light scatters away most strongly
- B. Much shorter-wavelength light is scattered out along the longer path
- C. Atmosphere creates red photons only
- D. Sun's temperature drops sharply

15. A rainbow involves sunlight undergoing:

- A. Refraction, dispersion and internal reflection in droplets
- B. Only reflection from clouds
- C. Magnetic bending in air
- D. Only diffraction by dust

ANSWER KEY — check after completing all 15 questions

1.A 2.C 3.C 4.B 5.C 6.A 7.B 8.A 9.B 10.D 11.A 12.C 13.A 14.B 15.A

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper

Plot No. 15, Second Floor, Jaisingh Chowk, Sector 85, Gurgaon - 122004

8800 8800 28 | www.goodmarksclasses.com



Class 10 Science | Electricity

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. A charge of 120 C passes a point in 60 s. Current is:

A. 7200 A B. 60 A C. 2 A D. 0.5 A

2. Moving 6 C charge through a potential difference of 12 V requires work:

A. 72 J B. 2 J C. 18 J D. 0.5 J

3. A resistor carries 0.5 A at 6 V. Its resistance is:

A. 6.5 Ω B. 3 Ω C. 12 Ω D. 0.083 Ω

4. For an ohmic conductor at constant temperature, doubling voltage makes current:

A. Unchanged B. Four times C. Double D. Half

5. The resistance of a uniform wire is proportional to its:

A. Cross-sectional area B. Square of area
C. Current always D. Length

6. A wire is doubled in length without changing area or material. Resistance becomes:

A. $R/4$ B. $R/2$ C. $2R$ D. $4R$

7. A wire is stretched to twice its length with volume unchanged. Resistance becomes:

A. $R/2$ B. $R/4$ C. $4R$ D. $2R$

8. Two resistors 4 Ω and 6 Ω connected in series have equivalent resistance:

A. 24 Ω B. 2 Ω C. 2.4 Ω D. 10 Ω

9. Resistors 6 Ω and 3 Ω in parallel have equivalent resistance:

A. 9 Ω B. 2 Ω C. 18 Ω D. 3 Ω

10. In a parallel arrangement, each branch has the same:

A. Power necessarily
B. Resistance necessarily
C. Potential difference
D. Current necessarily

11. A 12 V battery across 3 Ω produces power:

A. 48 W B. 144 W C. 36 W D. 4 W

12. An appliance rated 1000 W runs for 2 h. Electrical energy used is:

A. 0.5 kWh B. 2000 kWh C. 2 kWh D. 1002 kWh

13. Heat generated in 5 Ω by 2 A in 10 s is:

A. 20 J B. 100 J C. 50 J D. 200 J

14. An ammeter is connected:

A. In series with the measured branch
B. In parallel across the battery only
C. Across a resistor like a voltmeter
D. Without a complete circuit

15. A voltmeter measuring a resistor's voltage is connected:

A. In parallel across the resistor
B. Across an open switch only
C. In series only
D. In place of the battery

ANSWER KEY — check after completing all 15 questions

1.C 2.A 3.C 4.C 5.D 6.C 7.C 8.D 9.B 10.C 11.A 12.C 13.D 14.A 15.A

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper



Class 10 Science | Magnetic Effects Of Electric Current

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. The magnetic field lines around a straight current-carrying wire are:

- A. Parallel straight lines
- B. Radial outward lines
- C. Random disconnected curves
- D. Concentric circles

2. The right-hand thumb rule relates thumb direction to the direction of:

- A. Conventional current
- B. Force on a charge
- C. Magnetic north only
- D. Electron drift always

3. Reversing current in a straight wire reverses its:

- A. Magnetic field direction
- B. Mass
- C. Length
- D. Resistance necessarily

4. At a fixed distance from a wire, increasing its current generally:

- A. Destroys field lines
- B. Strengthens its magnetic field
- C. Weakens its magnetic field
- D. Leaves its field zero

5. Magnetic field-line density is greatest where the field is:

- A. Weakest
- B. Always zero
- C. Changing polarity only
- D. Strongest

6. Two magnetic field lines cannot intersect because that would imply:

- A. No north pole
- B. Zero magnetic force everywhere
- C. Only one field line exists
- D. Two field directions at one point

7. Inside a long current-carrying solenoid, the field is approximately:

- A. Radially outward
- B. Uniform and parallel to its axis
- C. Zero everywhere
- D. Circular around each point randomly

8. Inserting a soft iron core inside a solenoid generally:

- A. Stops all current
- B. Reverses current
- C. Strengthens the magnetic field
- D. Removes the field

9. A current-carrying wire parallel to a uniform magnetic field experiences:

- A. Force proportional to voltage alone
- B. Zero magnetic force
- C. Maximum force
- D. Force along the field

10. The force on a current-carrying wire in a magnetic field is greatest when they are:

- A. Antiparallel
- B. Perpendicular
- C. Parallel
- D. At 0°

11. Fleming's left-hand rule helps determine the direction of:

- A. Battery voltage
- B. Heat flow
- C. Force on a current-carrying conductor
- D. Electric resistance

12. Reversing both current and magnetic field directions leaves the force direction:

- A. Along the conductor
- B. Always zero
- C. Reversed
- D. Unchanged

13. The earth wire in an appliance mainly provides a:

- A. Normal supply path to its heater
- B. Means to increase power
- C. High-voltage output
- D. Low-resistance safety path from its metal body

14. A domestic fuse should be connected in the:

- A. Neutral wire only with live uninterrupted
- B. Earth wire only
- C. Plastic casing
- D. Live wire

15. A short circuit can occur when:

- A. A lamp is switched off normally
- B. Live and neutral wires contact with very low resistance
- C. Only the earth wire is removed
- D. Resistance becomes infinite

ANSWER KEY — check after completing all 15 questions

1.D 2.A 3.A 4.B 5.D 6.D 7.B 8.C 9.B 10.B 11.C 12.D 13.D 14.D 15.B

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper



Class 10 Science | Our Environment

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. In a grass → grasshopper → frog food chain, the frog is a:

- A. Secondary consumer B. Primary consumer
C. Decomposer D. Producer

2. The first trophic level consists primarily of:

- A. Carnivores B. Parasites
C. Herbivores D. Producers

3. If producers contain 10000 J, approximately how much reaches primary consumers by the 10% rule?

- A. 10000 J B. 1000 J C. 9000 J D. 100 J

4. In grass → deer → tiger, grass has 20000 J. Approximate energy reaching tigers is:

- A. 2000 J B. 20 J C. 200 J D. 20000 J

5. Energy flow through a food chain is mainly:

- A. Unidirectional
B. Independent of producers
C. From consumers to the Sun
D. Completely cyclic

6. Bacteria and fungi decomposers mainly help by:

- A. Preventing all decay
B. Removing every gas from air
C. Creating solar energy
D. Recycling nutrients from dead matter

7. Which material is usually biodegradable?

- A. Polyethylene bag B. Vegetable peel
C. Aluminium foil D. Glass bottle

8. Which is an abiotic component of an ecosystem?

- A. Sunlight B. Grass C. Fungus D. Earthworm

9. A food web is formed by:

- A. Animals of one species only
B. Interconnected food chains
C. Only decomposers
D. Only one producer and one consumer

10. Biomagnification is most likely for a pollutant that is:

- A. Rapidly broken down and excreted
B. Always biodegradable
C. Persistent and accumulates in tissues
D. Only pure water

11. In water → algae → small fish → large fish, a persistent pesticide is usually most concentrated in:

- A. Large fish B. Small fish C. Algae D. Water

12. The ozone layer protects life mainly by absorbing:

- A. All visible light B. Ultraviolet radiation
C. Sound waves D. Radio broadcasts

13. Which group of chemicals has contributed to ozone depletion?

- A. Proteins B. Ordinary sugars
C. Cellulose D. CFCs

14. Removing all decomposers would most directly reduce:

- A. Incoming sunlight
B. Water's molecular mass
C. Nutrient recycling
D. Earth's rotation

15. A plant-eating insect is eaten by a bird, which is eaten by a hawk. The hawk occupies the:

- A. Second trophic level B. First trophic level
C. Fourth trophic level D. Third trophic level

ANSWER KEY — check after completing all 15 questions

1.A 2.D 3.B 4.C 5.A 6.D 7.B 8.A 9.B 10.C 11.A 12.B 13.D 14.C 15.C