

## MODEL TEST PAPER

Science (Term First)

Class X (2021-22)

Time:---- 1 hr

Maximum Marks:40

Choose the correct option from the following: -

Q1. Name the type of chemical reaction given below.



- a) Combination Reaction
- b) Displacement Reaction
- c) Decomposition Reaction
- d) Double Displacement Reaction

Q2. When magnesium Ribbon is burned in the air a white substance is obtained, what is its name.

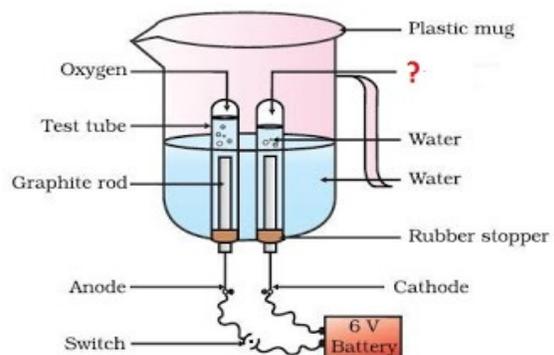
- a) Magnesium carbonate
- b) Magnesium oxide
- c) Magnesium sulphide
- d) Magnesium chloride

Q3. What happens when dilute hydrochloric acid is added to iron filings? Tick the correct answer.

- (a) Hydrogen gas and iron chloride are produced.
- (b) Chlorine gas and iron hydroxide are produced.
- (c) No reaction takes place.
- (d) Iron salt and water are produced

Q4. In the process of water electrolysis oxygen and----- gases are obtained.

- a) Nitrogen
- b) Ozone
- c) Hydrogen
- d) Methane



Q5. What is the chemical formula of lime water?

- a)  $\text{Ca(OH)}_2$
- b)  $\text{Ca(OH)}_3$
- c)  $\text{CaO}$
- d)  $\text{CO}_2$

Q6. In the modern periodic table which are the metals among the first ten elements?

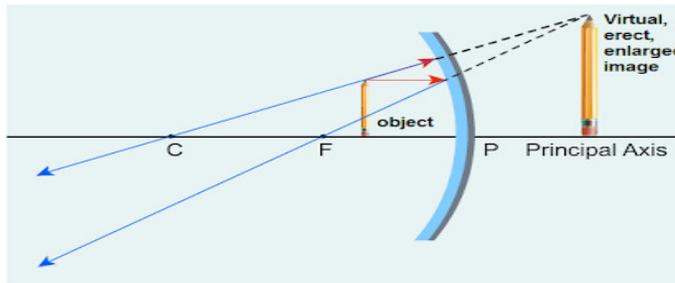
- a) Na and Mg
- b) Zn and Cu
- c) Li and Be
- d) K and Ca

Q7. Which law of classification is known as, 'Law of Octaves'?

- a) Dobereiner's Law
- b) Newland's Law
- c) Mendeleev's Law
- d) Modern Periodic Law

Q8. Electronic configuration of an element is 2,8,7 The atomic number of this element is----

- a) 10
- b) 7
- c) 17
- d) 11



Q9. Identify the group which is not a Dobereiner's triad?

- a) Li, Na, K
- b) Be, Mg, Cr
- c) Ca, Sr, Ba
- d) Cl, Br, I

Q10. Where should an object be placed in front of concave mirror so that the image formed is virtual and erect?

- a) At F
- b) Between F and P
- c) Between C and F
- d) At infinity

Q11. No matter how far you stand from a mirror, your image appears erect. The mirror is likely to be

- a) Only plane.
- b) Only concave.
- c) Only convex.
- d) Either plane or convex.

Q12. Amrita Devi Bishnoi sacrificed her life to protect the-

- a) Palm trees
- b) Khejri trees
- c) Sal trees
- d) Teakwood trees

Q13. Find the power in diopter of a concave lens whose focal length is 2 m ?

- a) 2
- b) - 0.5
- c) 0.5
- d) 1

Q14. The focal length of a convex lens is -----.

- a) Positive
- b) Negative
- c) Zero
- d) None Of These

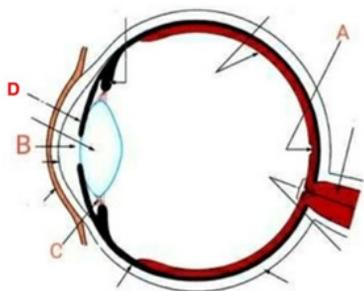
Q15. The human eye forms the image of an object at its :-

- a) Cornea      b) Iris      c) Pupil      d) Retina

Q16. The human eye can focus objects at different distances by adjusting the focal length of the eye lens. This is due to

- (a) Presbyopia      (b) Accommodation  
(c) Near-sightedness      (d) Far-sightedness

Q17. Label the part ( D ) in the given diagram of human eye .

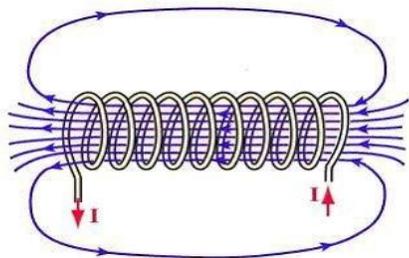


- a) Cornea  
b) Iris  
c) Pupil  
d) Retina

Q18. The least distance of distinct vision for a young adult with normal vision is about

- (a) 25 m      (b) 2.5 cm      (c) 25 cm      (d) 2.5 m

Q19. Identify the following instrument-



- a) Electromagnet  
b) Generator  
c) Motor  
d) Solenoid

Q20. Which of the following terms does not represent electrical power in a circuit?

- a)  $I^2R$       b)  $IR^2$       c)  $VI$       d)  $V^2/R$

Q 21. Find the equivalent resistance when the registers of resistance  $3\Omega$  and  $6\Omega$  are connected in parallel

- a)  $3\Omega$       b)  $6\Omega$       c)  $2\Omega$       d)  $18\Omega$

Q22. The commercial unit of electricity is kWh, what is the value of 1kWh in joules?

- a)  $3.6 \times 10^6$  J      b)  $6.3 \times 10^6$  J      c)  $3.6 \times 10^3$  J      d)  $6.3 \times 10^5$  J

Q23. Which of the following are environment-friendly practices?

- (a) Carrying cloth-bags to put purchases in while shopping
- (b) Switching off unnecessary lights and fans
- (c) Walking to school instead of getting your mother to drop you on her scooter
- (d) All of the above

Q24. Factors on which the resistance of a conductor depends

- a) On its length
- b) On its area of cross section
- c) On the nature of its material
- d) All of the above

Q25. The image which is formed behind the mirror is -----

- a) Real image
- b) Virtual image
- c) Partial image
- d) Blue image

Q26. From the list given below, pick the item that is not a natural resource?

- a) Soil
- b) water
- c) electricity
- d) air

Q27. What should be the minimum speed of Air to generate electricity by a wind energy farm ?

- a) 10 Km/h
- b) 5 Km/h
- c) 8 Km/h
- d) 15 Km/h

Q28. Why do we need to use our resources carefully?

- a) Because they are not unlimited
- b) Because their demand is increasing at an exponential rate
- c) Environment is polluted during extraction of these resources
- d) All of above

Q29. Identify the secondary consumer in the following food chain :- Grass → Grass hopper → frog → snake

- a) Grasshopper
- b) Frog
- c) Snake
- d) Grass

Q30. The phenomenon of electromagnetic induction is:

- a) The process of charging a body
- b) The process of generating magnetic field due to a current passing through a coil
- c) Producing induced current in a coil due to relative motion between a magnet and the coil
- d) The process of rotating a coil of an electric motor.

Q31. Which of the following groups contain only biodegradable items?

- (a) Grass, flowers and leather
- (b) Grass, wood and plastic
- (c) Fruit-peels, cake and lime-juice
- (d) Cake, wood and grass

Q32. The quality of environment can be improved by-

- a) Deforestation
- b) Overuse of natural environment
- c) Soil Erosion
- d) Conservation

Q33. The essential difference between an AC generator and a DC generator is that:

- (a) AC generator has an electromagnet while a DC generator has permanent magnet.
- (b) DC generator will generate a higher voltage.
- (c) AC generator will generate a higher voltage.
- (d) AC generator has slip rings while the DC generator has a commutator.

Q34. A solar water heater cannot be used to get hot water on

- (a) a sunny day
- (b) a cloudy day
- (c) a hot day
- (d) a windy day.

Q35. The 'Chipko Andolan' originated from –

- a) Himachal Pradesh
- b) Garhwal
- c) Rajasthan
- d) Madhya Pradesh

Q36. The device used for producing electric current is called -----

- a) Generator
- b) Galvanometer
- c) Ammeter
- d) Motor.

Q37. Which of the following correctly describes the magnetic field near a long straight wire?

- (a) The field consists of straight lines perpendicular to the wire
- (b) The field consists of straight lines parallel to the wire
- (c) The field consists of radial lines originating from the wire
- (d) The field consists of concentric circles centred on the wire

Q38. Most of the sources of energy we use represent stored solar energy. Which of the following is not ultimately derived from the Sun's energy?

- a) wind energy
- b) nuclear energy
- c) bio-mass.
- d) None of the above

Q39. At the time of short circuit, the current in the circuit.

- a) Reduces substantially.
- b) Does not change.
- c) Increases heavily.
- d) vary continuously.

Q40. Which of the following is not an example of a bio-mass energy source?

- (a) wood
- (b) gobar-gas
- (c) nuclear energy
- (d) coal