DAV PUBLIC SCHOOL, KAILASH HILLS

2017-2018

Class X

Periodic Test-II

Science

Marks: 80

Time: 3hrs

Q.1. Which kind of mirror is used as a rear view mirror in vehicles? Convex (1)

Q.2. Explain the mode of nutrition shown by mushrooms. Saprophytic (1)

Q.3. Give the chemical name of washing soda and its formula. What happens when baking soda is heated? $Na_2CO_3$ Sodium Carbonate (2)

Q.4. Explain with a suitable diagram and equations electrolytic refining of copper. (2)

Q.5. What is synapse? How is nerve impulse transmitted at synapse? 8 spaces between Dendrite & Nerve ending (2)

Q.6. State two differences between metals and nonmetals.(chemical properties) write the equations and also give a suitable example. reaction with oxygen reaction with ~~hydrog~~ water (3)

Q.7. Differentiate between roasting and calcination giving example of Zn ore (3 points) (3)
Sol whiteore Carbonate ore

Q.8. Why are alloys preferred over metals? What are amalgams? Give the composition of brass and also one use. mercury + Metal
(Cu + lead)

OR

Explain Thermite reaction and also give its application.(write the equation involved) (3)

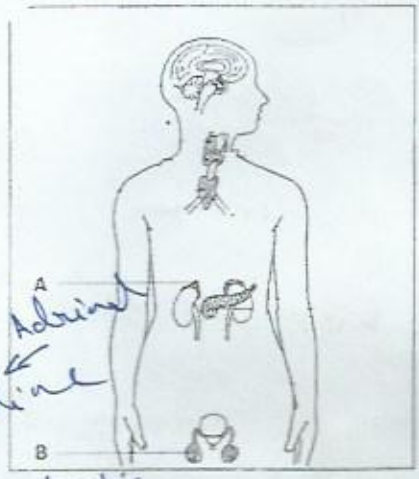
Q.9. Discuss the role played by secretions of liver in the digestion process.

Name the end products of digestion of fats? Partialy Digestion of Lipase (3)

Fatty Acid

Q.10. a) What are tropic movements? Give two examples of tropic movements.

b) Name a plant hormone which causes wilting of leaves. (3)




Adrenal

Adrenaline

testis → testistrone (testosterone) (Adrenaline)

Q.11.a) Identify endocrine glands 'A' and 'B' in the figure.

b) Name the hormones secreted by these glands and the functions performed by those hormones. (3)

Q.12. Draw ray diagrams and also state the position, size and nature of image formed by a convex lens when object is placed at

a) $2F_1$

b) Between $F_1$ and the optical centre O of lens.

virtual & erect

Bet $F_2$ & $2F_2$

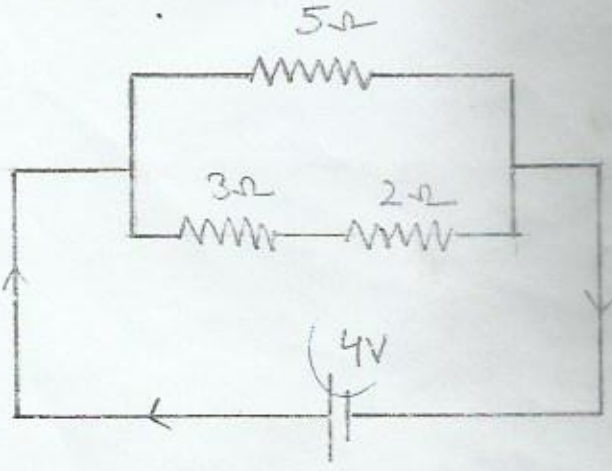
Real & Inverted (3)

Q.13. How far should an object be placed from a concave mirror of focal length 20cm to obtain its real image at a distance of 30cm from the mirror? What will be height of the image if the object is 6cm tall?

− 15 cm

(3)

Q.14. In the circuit given below:




$\frac{25}{10}$

$2.5$

a) Find the equivalent resistance of the circuit. 2.5Ω

b) The current drawn from the battery. 1.6A (V=IR)

OR

State Joule's law of heating.

Find the amount of current flowing through an electric iron of resistance 20Ω if 15000J of heat is produced in it in 30sec. (3)

Q.15. Ravi was doing an experiment by using a voltmeter, unfortunately it fell from his hand and broke. Fearing the scolding from teacher his classmates advised him not to tell the teacher but he told her. On listening to him patiently, the teacher did not scold him as it was just an accident and used the opportunity to show the whole class the internal structure of voltmeter.

a) Mention any two values displayed by Ravi.

b) What is the use of voltmeter? How is it connected in the circuit? (3)

Q.16. a) Draw a ray diagram to show the path of light when it falls obliquely on a rectangular glass prism. Show that incident ray is parallel to the emergent ray of light.

b) Speed of light in glass is $2X10^8$m/s and its refractive index is 1.5. What is the speed of light in medium whose refractive index is 4/3? (5)

Q.17. a) When marble reacts with mineral acid HCL a gas is liberated. Identify the gas evolved and also give the test for the gas. Write the chemical reactions involved.

b) Explain the following reactions with suitable equations:

1. Precipitation reaction
2. Photochemical decomposition
3. Redox reaction (5)

Q.18. a) How are reflex actions different from voluntary responses? (three points of Differences).

b) Raman met with an accident and suffered from brain injury. As a result he is not able to maintain body equilibrium.

i) Which part of the brain might have been affected due to accident? Cerebellum

ii) Name a structure which protects our brain during mild accidents. Cranic (5)

Skull → CSF → Cerebral spinal Fluid.

Q.19. What is meant by resistance of a conductor? List four factors on which resistance of a conductor depends. Opposing force, temp., Nature of metal, length, Area of cross-section

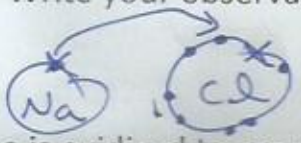
An unknown resistor is connected across a cell of potential difference of 2V. A current of 200mA is recorded by ammeter connected in the circuit. Calculate the resistance of the resistor in ohms. (5)

Q.20. a) How do metals react with nonmetals? What type of bond is formed? State its characteristics. Show the bond formation in sodium chloride.

b) What happens when Ferrous sulphate is heated? Write your observation and also identify the gas liberated. (5)

Ionic Bond

$Na^+ Cl^-$




$FeSO_4 \longrightarrow$

Q.21.a) What are the different ways in which glucose is oxidized to provide energy in various organisms?

b) Define double circulation. How many chambers are present in the heart of organisms with double circulation?

OR

a) Write the three events occurring during the process of photosynthesis. Absorbing, conversion or liberated

b) What are the differences between the transport of materials in xylem and phloem? (5)

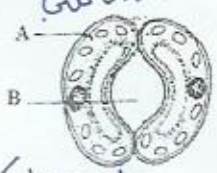
↓ Mineral → Root to Shoot

↓ Food → Shoot to root

Q.22. Identify parts 'A' and 'B' observed in a slide under microscope. (2)

Mention one function performed by 'B'.

Guard cell




Stomata

Q.23. In the experiment to show that CO2 is released during respiration, set up was arranged as in the figure given below :

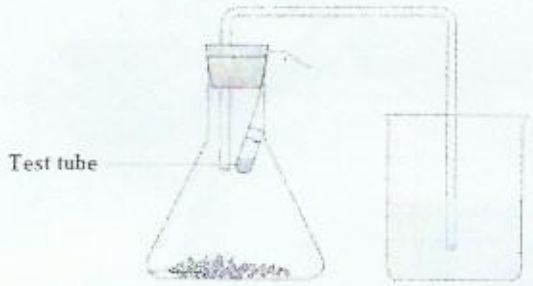



Fig: Production of carbon dioxide gas during respiration in conical flask

a) Which substance is taken in test tube?

b) Which observation makes us conclude that Co2 gas is produced during respiration? (2)

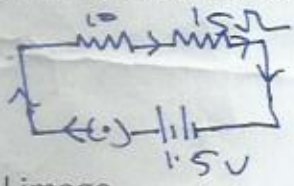
Q24. Give the significance of pH in digestive system What are anta acids? Name a compound of sodium used as anta acid. Baking Soda (NaHCO3) Bases notrilize Acid (2)

Q25. What happens when magnesium ribbon reacts with dil. Sulphuric acid? Write the chemical reaction involved and identify the gas liberated. (2)

$Mg + H_2SO_4 \rightarrow MgSO_4 + H_2\uparrow$

Q.26. a) Draw a schematic diagram of a circuit consisting of a cell of 1.5V, 10Ω and 15Ω resistors and a plug key all connected in series.

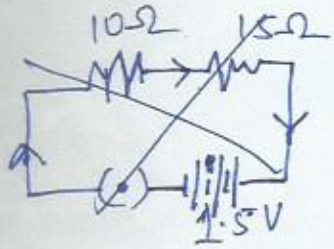
b) Mention any one disadvantage of the series combination. (2)




Q.27. Mention any two differences between real image and virtual image. (2)

Same plane → Inverted

other side of plane → Erect.




(1) (1) (2) (2) (1½) (1½)

(2) (4) (3)

(9) (2)



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