DEPUTY DIRECTOR OF PUBLIC INSTRUCTION, KOLAR DISTRICT, KOLAR.

SUBJECT: GENERAL SCIENCE

MODEL QUESTION PAPER 19-20

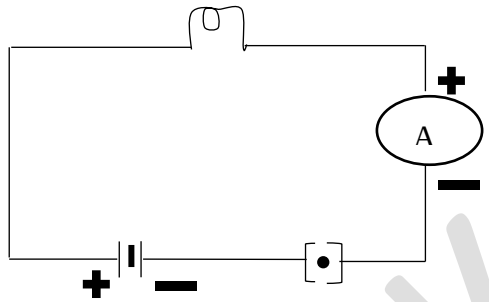
SET– 1

Marks: 80

Four alternatives are provided for each question. Choose the most appropriate alternative and write it with its alphabet. 1x8=8

1. Transport of food from leaves to other parts of a plant is.
   A. Translocation B. Transpiration
   C. Osmosis D. Diffusion

2. In the figure, the device labelled as 'A' is _____.



   A. bulb B. Key
   C. Ammeter D. Battery.

3. The human eye forms the image of an object at its _____.
   A. Cornea B. Iris
   C. Pupil D. Retina

4. Butanone is a four carbon compound with the functional group
   A. Carboxylic acid B. Aldehyde
   C. Ketone D. Alcohol

5. Part of plant that shows positively geotropic movement.
   A. Leaf B. Root
   C. Stem D. Flower

6. A balanced chemical equation always obeys.
   A. Law of conservation of mass B. Law of conservation of Energy
   C. Law of conversation of Thermal Equilibrium D. All the above

7. Components of Brass
   A. Cu + Zn B. Cu + Sn
   C. Zn + Sn D. Pb +Sn

8. The major pollutant from vehicles is
   A. Carbon dioxide B. Carbon monoxide
   C. Sulphur dioxide D. Hydrogen sulphide

Answer the following questions. 1x8=8

9. What happens when a current carrying conductor is placed in a magnetic field?

10. What are Homologous Series ?
11. Write the lens formula and give the meaning of the symbols used.
12. What are fossil fuels?
13. The flow of energy in a food chain is unidirectional. Why?
14. Write the products obtained when magnesium reacts with dilute hydrochloric acid.
15. Can copper displace iron from sulphate? Justify your answer.
16. What is the function of bile in the digestion of food?

Answer the following **2x8=16**

17. What is Isomerism. Give An example.

[OR]

What are Saturated Hydrocarbons Give an Example.

18. What potential difference must be applied across a 10Ω wire in order that a current of 2.5A flows through it.

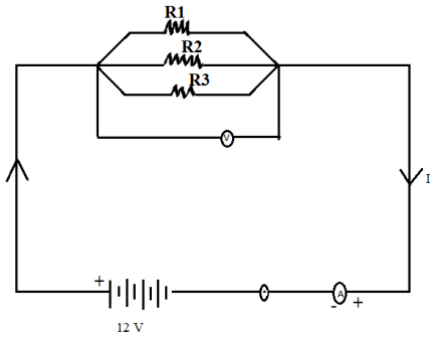
[OR]

Calculate the amount of charge that flows through a conductor when a current of 5A flows through it for 2 minutes.

19. Draw the diagram of a flower. Label the female reproductive parts of it.
20. Draw and label the diagram showing "Electrolyte refining of copper"
21. Explain the process of photosynthesis in plants.
22. What is presbyopia? How can it be corrected?
23. Explain the formation of covalent bond taking example of methane and write the electron dot formula.
24. Write the properties of biogas that make it a good fuel.

Answer the following **3x9=27**

25. In the circuit diagram given below suppose the resistors R_1, R_2 and R_3 have values 5Ω 10Ω and 30Ω respectively, which are connected to a battery of 12V. Calculate (a) the current through each resistor and also the total current in the circuit



[OR]

Four Resistors 5Ω, 6Ω, 4Ω and 8Ω are connected in parallel. Find the equivalent resistance in each case.

26. Sour substances are effective in cleansing tarnished sour substances.
27. Based on the usage Of Oxygen differentiate between Aerobic and Anaerobic respiration.

[OR]

Compare the functioning of Alveoli in the Lungs And Nephrons in the kidney with respect to their Structure and functioning

28. Aqueous solutions of sodium sulphate is mixed with adequate solution of barium chloride. Identify the type of chemical change and write the balanced chemical equation.
29. Draw a labelled diagram of an electric motor. Explain its principle and working.

30. The atomic number of an element is 18. Write its electronic configuration to which period, group and block does it belong. Mention its chemical nature.

[OR]

Germanium and silicon are called as metalloids. Give reason. Where do you find these elements in the modern periodic table.

31. Draw the longitudinal section of brain.

a) label the part involved in maintaining equilibrium of the body.
b) label the part which is the seat of memory, thinking.

32. What is magnetic field? Write the properties of magnetic field lines.

33. Suggest some changes in your home in order to be eco-friendly.

[OR]

Explain about the 5 R you have learnt in your daily life to save environment.

Answer the following **4x4=16**

34. How do Mendel's experiments show that traits are inherited independently?

OR

Explain how the sex of the Child is determined in Human beings ?

35. A substance 'X' is used in the kitchen for making tasty crispy fries. It is also an ingredient of antacid. Name the substance 'X'. How does it help to make cakes and bread soft and spongy? What is the P^Hvalue of 'X'?

36. Draw ray diagram to show the image formation by convex lens when the object is placed at 2F and describe the nature, position and relative size of the image formed.

37. Why does the sun appear reddish early in the morning and appear white during mid-day?

Answer the following **1x5=5**

38. How does the reproduction help in providing stability to population of species.

****

DEPUTY DIRECTOR OF PUBLIC INSTRUCTION, KOLAR DISTRICT, KOLAR.

SUBJECT: GENERAL SCIENCE

MODEL QUESTION PAPER-19-20

SET– 2

Marks: 80

Four alternatives are provided for each question. Choose the most appropriate alternative and write it with its alphabet. 1x8=8

1. The part of the plant which helps in osmo-regulation
   A. Stem B. Root
   C. Leaves D. All the above.
2. The equation form of ohm's law is
   A. $V=\frac{I}{R}$ B. R=VI
   C. V=RI D. $I=VR^2$
3. Red coloured light is used in traffic signals to indicate the vehicles to stop, because compared to other colours red light.
   A. has high frequency B. Scatters more
   C. has less wave length D. Scatters less
4. A red brown gas is released on heating lead nitrate. It is an example of
   A. Combination reaction B. Oxidation reaction
   C. Decomposition reaction D. Reduction reaction
5. Plant that responds to touch
   A. Sunflower B. Grass
   C. Lotus D. Mimosa
6. A metal is obtained from its oxide.
   A. Calcination B. Reduction
   C. Roasting D. Oxidation
7. Ethanoic acid is also known as
   A. Acetic acid B. Formic acid
   C. Citric acid D. Nitric acid
8. Best way to get rid of non-biodegradable wastes is by.
   A. Burying B. Burning
   C. Recycling D. Dumping

Answer the following questions. 1x8=8

9. State the laws of reflection of light.
10. What is hydrogenation?
11. What is the function of a split ring in an electric motor?
12. What is biomass energy
13. Dumping of Non-biodegradable wastes reduce crop yield. Why?
14. Write the products obtained when zinc reacts with sulphuric acid.

15. Can rusting of iron taken place in distilled water?
16. What is the role of acid in our stomach?

Answer the following. **2x8=16**

17. Explain the mechanism of the cleansing action of soaps.

[OR]

A hydrocarbon contains 4 hydrogen atoms. Give the molecular formulas if it is an
a) Alkane b) Alkene c) Alkyne

18. An object is placed at a distance of 10cm from a convex mirror of focal length 15cm. Find the position and nature of the image.

[OR]

An object 4.0cm in size is placed at 25.0cm in front of a concave mirror of focal length 15.0cm. At what distance from the mirror should a screen be placed in order to obtain a sharp image?

19. Draw the diagram showing germination of pollen on stigma. Label the part that carries the male germ cell.
20. Draw and label the diagram showing "Electrolyte refining of copper"
21. Green plants are capable of preparing their own food. How.
22. Some people in old age develop both myopia and hypermetropia. How can this problem be corrected?
23. Explain the formation of covalent bond taking example of methane and write the electron dot formula.
24. What is the role of a plane mirror and a glass covering in a solar cooker?

Answerthe following **3x9=27**

25. Explain with the help of a neat, labelled diagram, the construction and working of a simple AC Generator
26. Aqueous solution of sodium chloride is mixed with the aqueous solution of silver nitrate. Identify the type of chemical change. Write balanced chemical equation.
27. How is carbon dioxide and oxygen transported in human beings?

[OR]

What are the different way in which glucose is oxidised to provide energy in various organisms?

28. An element with atomic number 11 and another atomic number 17, react with each other and form a compound. Assign the elements to its respective group, period and block in the modern periodic table by writing its electronic configuration.

[OR]

Write the difference between ${}_6C^{12}$ and ${}_6C^{13}$. How are they placed in modern period table? Justify your answer.

29. Explain Faradays experiment to illustrate the phenomenon of electromagnetic induction.
30. Copper is used to make hot water tanks and not stell. Why?
31. Draw the structure of a Neuron. Explain the function of
a) dendrite b) axon
32. What is meant by principal focus of a convex mirror? Show by a diagram.

[OR]

Draw ray diagram to show the image formation in a convex mirror when the object is placed at infinity and describe the nature and position of the image formed.

33. How can you as an individual do to reduce your consumption of the various natural resources.

[OR]

Suggest some changes in your school which would make it environment friendly.

Answer the following **4x4=16**

34. How do Mendel's experiments show that traits may be dominant or recessive?

35. What will be the action of the following substances on litmus paper.
    A. Dry HCL gas
    B. Moistened ammonium gas
    C. Lemon Juice
    D. Soap solution
36. Several electric bulbs designed to be used on a 220V electric supply line, are rated 10W. How many lamps can be connected in parallel with each others across the two wires of 220V line if the maximum allowable current is 5A?
37. Describe the refraction of light through prism. Draw the diagram and explain.

Answer the following **1x5=5**

38. What are the different methods of contraception?

****

DEPUTY DIRECTOR OF PUBLIC INSTRUCTION, KOLAR DISTRICT, KOLAR.

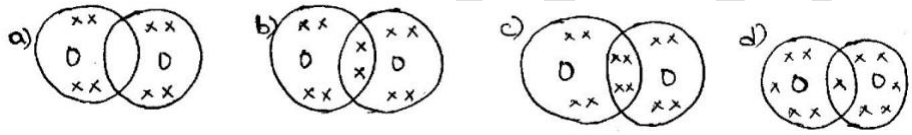
SUBJECT: GENERAL SCIENCE
MODEL QUESTION PAPER 19-20
SET – 3

Marks: 80

Four alternatives are given for the following question. Choose the appropriate alternative and write it with its alphabet. 1x8=8

1. What happens when dilute hydrochloric acid is added to iron fillings?
   A. Hydrogen gas and iron chloride are produced
   B. Chlorine and iron hydroxide are produced
   C. No reaction takes place
   D. No reaction takes place

2. A positively charged particle projected towards west is deflected towards north by a magnetic field. The direction of magnetic field is.
   A. Towards South B. Towards East
   C. Downward D. Upward

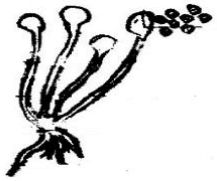
3. The electron dot structure of O_2 molecule is
   

4. The energy not derived from sun's energy.
   A. Geothermal energy B. Wind energy
   C. Nuclear energy D. Biomass

5. The xylem in plants are responsible for
   A. transport of water B. transport of food
   C. transport of amino acids D. transport of oxygen

6. An element with electronic configuration of 2, 8 is placed in modern periodic in
   A. Group 8 B. Group 18
   C. Group 2 D. Group 10

7. Bandharas and tals are the ancient water harvesting methods in
   A. Madhya Pradesh B. Maharashtra
   C. Karnataka D. Kerala

8. The below figure of an example of
   
   A. Budding B. Spore formation
   C. Fission D. Fragmentation

Answer the following in a sentences 1x8=8

9. Oil and fat containing food items are flushed with nitrogen. Why?

10. Draw the neat diagram of electric circuit?
11. What are antacids?
12. State Fleming right hand thumb rule.
13. What is Mono Hybrid cross ?
14. Define Gangue.
15. A current of 0.5A is drawn by a filament of an electric bulb for 10 minutes. Find the amount of electric charge that flows through the circuit.
16. Why are forests called 'bio-diversity hotspot'?

Answer the following in 2-3 sentence. 2x8=16

17. Why do you think the noble gases are placed in a separate group?
18. Draw the ray diagram showing myopic eye and correction for myopia.

[OR]

Draw the ray diagram showing the recombination of the spectrum of white light
19. Give two important uses of washing soda and baking soda.
20. State any two reasons to justify that LPG is considered as an ideal fuel.
21. Draw a neat labelled diagram of germination of pollen on stigma.
22. Draw magnetic field lines around a bar magnet.
23. Explain homologous series with example.
24. What is irritability?

Answer the following in 4-5 sentences. 3x9=27

25. How does P^H affect our digestive system?
26. A concave lens has focal length of 15cm. At what distance should the object from the lens be placed so that it forms an image at 10cm from the lens? Also find the magnification produced by the lens.
27. Explain the advantages of Mendeleev's periodic table.

[OR]

Write the limitations of Mendeleev's periodic table
28. Draw the diagram of an electric motor and label split rings
29. What is the role of decomposers in ecosystem?
30. State Ohm's law and write the factors on which the resistance of the conductor depend.

[OR]

Draw the ray diagram showing the image formation by a convex lens, when the object is kept between principal focus and optic centre. Mention the nature of the image formed.
31. Draw a neat labelled diagram of electrolytic refining of copper.
32. How is the sex of the child determined in human beings?
33. Write the disadvantages of building large dams.

[OR]

Sustainable management of natural resources is necessary why?

Answer the following in 5-6 sentences. 4x4=16

34. Explain why do stars twinkle and planets do not twinkle

35. Explain the Formation of Sodium Chloride

[OR]

Explain the Formation of Magnesium Chloride
36. Lists the practical applications of heating effect of electric current.

37. What are plant hormones? Explain phototropism.

[OR]

What is reflex action? Name the components and write their function.

Answer the following **1x5=5**

38. Draw a neat labelled diagram of digestive system of man and write the enzyme secreted by stomach and write its function.

DEPUTY DIRECTOR OF PUBLIC INSTRUCTION, KOLAR DISTRICT, KOLAR.

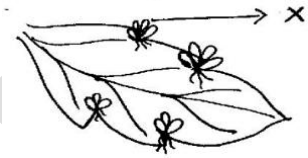
SUBJECT: GENERAL SCIENCE

MODEL QUESTION PAPER- 19-20

SET– 4 Marks: 80

Four alternatives are provided for the following question. Choose the appropriate alternative and write with alphabets. **1x8=8**

1. $Fe+Cuso_4 \longrightarrow Fe\ So_4 + Cu$, the above reaction is an example of
   A. Combination Reaction B. Decomposition Reaction
   C. Displacement reaction D. Double displacement
2. The breakdown of pyruvate to the carbon dioxide water and energy take place
   A. Cytoplasm B. Mitochondria
   C. chloroplast D. Nucleus
3. While cooking if the bottom of the vessel is getting blackened on the outside it means
   A. The food is not cooked completely B. The fuel is not burning completely
   C. The fuel is wet D. The fuel is burning completely
4. On crossing tall plant with dwarf plant Mendel found the ratio of dwarf plant in F_2 generation Was
   A. 25% B. 40%
   C. 60% D. 75%
5. In the given figure 'x' is



   A. Bud B. Spore
   C. Tentacle D. Germ cell
6. Significant role of stomata in transportation is to
   A. Create upward pressure B. Absorb carbon dioxide
   C. Release oxygen D. perform transpiration continuously
7. Which one of the following is a conductor
   A. Porcelain B. Copper C. Glass D. Plastic
8. The change in focal length of an eye lens is caused by the action of the
   A. Pupil B. Retina C. Ciliary muscles D. Iris

Answer the following in a sentences **1x8=8**

9. Why does the colour of copper sulphate solution change when an iron nail is dipped in it?
10. What is neutralisation reaction?
11. Why are traits acquired during the lifetime of an individual not inherited?
12. Sustainable management of natural resources is necessary why?
13. What is the role of acid in our stomach?

14. Define electric potential.
15. An electric Iron of resistance 20Ω takes a current of 5A calculate the heat developed in 30S.
16. What precaution should be taken to avoid the over loading of domestic electric circuits?

Answer the following in 2-3 sentence **2x8=16**

17. How is the concentration of hydroxide ion (OH) affected when excess base is dissolved in a solution of sodium hydroxide?
18. What are metalloids? Given examples of metalloids.
19. Draw are neat labelled diagram of electrolysis of water.
20. Draw a neat labelled diagram of neuron.
21. What are advantages of sexual reproduction over asexual reproduction?
22. A ray of light travelling in air enters obliquely into water. Does the ray bend toward the normal or away from the normal why?
23. Write the Working Principal of Electric generator.

    [OR]

    What is the role of the split rings in an electric motor?
24. On what factors does the resistance of a conductor depend.

Answer the following **3x9=27**

25. Compare and contract fossil fuel and the sun as direct sources of energy.
26. Write the function of the following

    a) Retina b) Pupil c) Cornea

    [OR]

    Draw a ray diagram showing the image formation at a convex lens when object is placed at C, Mention the nature of image formed
27. Compare the power used in the 2Ω resistor in each of the following circuits

    i) A 6V battery in series with 1Ω and 2Ω

    ii) A 4V battery in parallel with 12Ω and 2Ω
28. How does P^H affect our digestive system?
29. Explain the advantages of Mendeleev's periodic table.

    [OR]

    Write the limitations of Mendeleev's periodic table
30. What is the role of decomposers in the ecosystem?
31. Draw a neat labelled diagram of electric refining of copper.
32. How is the sex of the child determined in human beings?
33. Write the disadvantages of building large dams.

    [OR]

    Sustainable management of natural resources is necessary why?

Answer the following **4x4=16**

34. a) List the properties of ionic compounds

    [OR]

    b) What are amphoteric oxides? Give example.

    What is corrosion? Give two ways to prevent corrosion.
35. List out the plant hormones? Explain their function.

    [OR]

    List any Four Animal hormones And explain Their Function.
36. Describe the working of electric motor with a neat diagram.
37. Explain why do Stars twinkle but not planets.

Answer the following **1x5=5**

38. Draw a neat labelled diagram of digestive system of man and write the enzyme secreted by stomach and write its function.

DEPUTY DIRECTOR OF PUBLIC INSTRUCTION, KOLAR DISTRICT, KOLAR.

SUBJECT: GENERAL SCIENCE

MODEL QUESTION PAPER -19-20

SET– 5 **Marks: 80**

Four alternatives are provided for each question. Choose the most appropriate alternative and write it with its alphabet. **1x8=8**

1. The function of Olfactor receptors is to_____.
   A. detect smell B. detect light
   C. detect sound D. detect taste
2. 17^{th} group elements are also called _____.
   A. Alkali metals B. Alkaline earth metals
   C. Halogens D. O group elements
3. Butanal is a one of carbon compound with the functional group _____.
   A. Carboxylic acid B. Aldehyde
   C. Ketone D. Alcohol
4. In spirogyra the type of a sexual reproduction takes place by _____.
   A. Regeneration B. Fragmentation
   C. Binary fission D. Budding
5. A zygote which has a 'XY' pair will always develop into a _____.
   A. Girl B. Boy C. Girl or Boy D. None of the above
6. A rectangle coil of copper wires is rotated in a magnetic field. The direction of the induced current changes ones in each.
   A. Two revolution B. One revolution
   C. Half revolution D. One-fourth revolution
7. Which of the following is not an example of a bio-mass energy source?
   A. Wood B. Global gas C. Nuclear Energy D. Coal
8. Which is the correct order of reactivity of metals.
   A. Zn>Cu>Fe>Ag B. Ag>Cu>Zn>Fe
   C. Zn>Fe>Cu>Ag D. Fe>Zn>Cu>Ag

Answer the following **1x8=8**

9. When does the pancreas secrete excess insulin?
10. What are the functions of guard cell?
11. Why are alloys preferred than metals?
12. What happens during electrolysis of water?
13. Metals get transmitted on reactions with atmosphere air?
14. Draw a neat diagram of resistors in series.
15. Name two safety measures commonly used in electric air circuits and appliances

16. How much work is done in moving a charge of 2C across two points having a potential difference 12V?

Answer the following questions **2x8=16**

17. a) What will be the PH of milk when it is added with Baking soda or Sodium bicarbonate?
    b) Antacids are acidic basic neutral.
18. Write the difference between calcination and roasting.
19. Draw a neat diagram showing the structure of a flower and label
    a) Stigma b) Anther
20. Plants do not have a excretory system but excretory products are got rid off. How?
21. a) State Mendeleev's Periodic Law.
    b) Write two advantages of Mendeleev's Periodic table.
22. Mention the defects of vision and its correction.
    [OR]
    Why do stars twinkle?
23. What are the qualities of an ideal source of energy?
24. Draw a neat diagram of an electric motor.

Answer the following questions. **3x9=27**

25. What is budding? Explain with examples the process of budding.
26. Explain thechloro–alkali process.
27. a) Write the chemical formula of plaster of Paris
    b) Why is it used for fractured bones.
    [OR]
    What is the Common name of $CaOCl_2$.list out their Uses
28. a) How Respiration is an Exothermic reaction
    b) Write the chemical equation to represent Aerobic respiration
    [OR]
    a) Name the acid present in gastric juice.
    b) Write the functions of Pancreatic juice
29. What are soaps? Explain the cleaning action of soap on oily dirt.
30. A yellow coloured flower plant YY is crossbreed with that of white coloured flower plant yy
    a) State the colour of the flower in F, plants
    b) If F_1 plants are self-pollinated what is the ratio of yellow and white flowers.
    c) Write the ratio of genotype YY and Yy in the F_2 Progeny
31. A 20cm tall object is placed perpendicular to the principle axis of a convex lens of focal length 10cm. The distance of the objects from the lens is 15cm. Find the nature, position and size of the image. Also find its magnification.
32. Describe an experiment to show the magnetic field lines in a straight current carrying conductor.
33. The image Focussed At the distance of 15 Cm y Concave of a Focal length 20 Cm.Find the object Distance or

    Draw a ray diagram to get a highly enlarged image in a concave mirror. Mention the positon and nature of the image.

Answer the following. **4x4=16**

34. What are Biodegradable and non-biodegradable substance. How does harmful substances enter the trophic levels? Explain.
35. What are natural resource? What are their types? Explain the 3R's to save the environment.
36. Draw and label Biogas plant

37. An electric lamp where resistance is 20Ω and a conductor of 4Ω resistance are connected to a 6V battery calculate.
    a) The total resistance of the circuitb) The current through the circuit and
    c) The potential difference across the electric lamp and conductor.

Answer the following question. **1x5=5**

38. What is variation? Traits acquired during the lifetime of an individual are not inherited Explain.

DEPUTY DIRECTOR OF PUBLIC INSTRUCTION, KOLAR DISTRICT, KOLAR.

SUBJECT: GENERAL SCIENCE

MODEL QUESTION PAPER 19-20

SET – 6

Marks: 80

Four alternatives are given for the following question. Choose the appropriate alternative and write with its alphabet.
1x8=8

1. Electrical resistivity of a given metallic wire depend upon.
   A. its length B. its thickness
   C. its shape D. nature of the metallic

2. According to the law of Reflection angle of incidence (î) and angle of reflection ($\hat{r}$) have relation.
   A. $\hat{\imath} = \hat{r}$ B. $\hat{\imath} > \hat{r}$
   C. $\hat{\imath} < \hat{r}$ D. $\hat{\imath}/\hat{r} = 0$

3. In plants cell division is brought about by the plant hormone.
   A. Cytokine B. Gibberellins
   C. Abscisic acid D. Auxin

4. Insert gases or noble gases belong to the group.
   A. 1^{st} group B. 2^{nd} group
   C. 17^{th} group D. 18^{th} group

5. Pentanone is a five carbon compound with the functional group of.
   A. Carboxylic acid B. Aldehyde
   C. Ketone D. Alcohol

6. In hydra, the type of asexual reproduction takes place by
   A. Fragmentation B. Budding
   C. regeneration D. Spore formation

7. A zygote which has an 'Y' chromosome inherited from the father will develop into a .
   A. Boy B. Girl
   C. Girl or Boy D. Y chromosome does not determine the sex of a child.

8. During electrolytic refining of a metal pure metal gets deposited on
   A. Cathode B. Anode
   C. Anode Mud D. Any electrode

Answer the following **1x8=8**

9. Write the Function of Insulin hormone.
10. Metals lose their lustre on exposing to air. Why?
11. What will happen of stomata is absent?
12. Alloys are used more than metals in daily. Why?
13. What is a redox reaction?
14. Define an electric circuit.
15. How much energy is given to each coulomb of change passing through 6v Battery.
16. Name some devices in which electric motors are used

Answer the following. **2x8=16**

17. a) A milkman adds a very small amount of a baking soda to fresh milk. Why?
    b) Salivary amylase is acidic, basic or neutral.
18. Mention two methods to prevent rusting.
19. Draw a neat diagram of neuron and labelled.
    a) Cell body b) Axon
20. a) State modern periodic law.
    b) What are periods and groups with reference to the periodic table?
21. What is the difference between photosynthesis and respiration? Represent with chemical equation.
22. Define Hypermetropia? What is the power of the lens required to correct the defect?
23. What are the disadvantages of fossil fuels? OR

    List the properties of magnetic lines of force.
24. Draw a neat diagram of Dispersion of white light by the glass prism.

Answer the following. **3x9=27**

25. What is fission? Write the difference between binary fission and multiple fission.
26. Draw a neat labelled diagram showing action of steam on a metal.
27. a) Write the chemical name of baking soda.
    b) Write the uses of Baking soda.
    c) Why is it used as an antacid.
28. What is the difference between soaps and detergents. What are the disadvantages of using detergents?

    [OR]

    a) Write the chemical name of bleaching powder.
    b) How is it obtained?
    c) Write its uses?
29. The end product of nutrition is glucose, how is it broken down during.
    a) Aerobic respirationb) Anaerobic respiration
    c) in muscle cells due to lack of oxygen.
30. a) Describe the process of digestion in amoeba
    b) What is the end product of nutrition in humans?
    c) Bile juice plays an important role during the digestion of food in the human digestive system. Explain.
31. An object is placed at a distance of 10cm from a convex mirror of focal length 15cm. Find the position and nature of the image.
32. What are the advantages and disadvantages of using a solar cooker?
33. List the properties of magnetic lines of force. or
    Describe an experiment to show that solenoid behave like a magnet.

Answer the following **4x4=16**

34. Describe the working of electric generator with a help of a neat diagram.

35. Describe an experiment of Refraction of light through a prism.
36. What is Bio-magnification? The amount of harmful substances is highest in the highest tropic level. Explain
37. What is the role of stake holders in saving the environment. What methods are employed to save our environment.

VI. Answer the following. **1x5=5**

38. What is speciation? Explain the factors that could lead to speciation

DEPUTY DIRECTOR OF PUBLIC INSTRUCTION, KOLAR DISTRICT, KOLAR.

SCIENCE QUESTION PAPER- 19-20

SET-7

I. Four alternatives are given for each statement. Choose correct alternative and write the complete answer along with its alphabetic number.
1*8=8

1. Teacher helps a student to identify that Zinc metal is more reactive than iron so that what is the right procedure the student should follow.

A) Observe when Zinc and iron metals are burnt.
B) Observe when Zinc and iron metals are over steam
C) Observe when Zinc and iron metals are immersed in solution of iron sulfate
D) Observe when Zinc and iron metals are immersed in solution of Zinc sulfate

2. When metal reacts with Con.HNO_3, Hydrogen Gas is not liberated why?
A) There is no Hydrogen Atom present in HNO_3
B) Oxidation Atoms not present in HNO_3
C) HNO_3oxidizes with H_2 to produce H_2O
D) $HNO_3$is a powerful reducing agent to gain Hydrogen Atom

3. If an element 'X' Atomic number 12 , reacts with element Atomic no 17 to produce 'Z' compound.
a) Molecular formula of Z is XY_2
b) Obtained Compound is dissolves in water.
c) Distribution of Valence electrons in X & Y element to produce compound
d) The Compound which shows electrical conductivity in liquid state

A) ii& iii B) i & ii C) ii & iv D) i & iv

4. No feedback mechanism during the development of green plants
A) Stems are bent towards the light B) Roots to descends in soil
C) Leaves can fold on touch D) tips of tendrils are upright

5. Among the following helps to find out origin of new Species.
A) Heredity determines the Nature B) Heredity is the path
C) Transformation D) Varies during Asexual reproduction

6. This defects related to Human eye Accommodation of Eye ball. Find a correction and Solution.
A) Short sightedness and it can be corrected by concave lens
B) Short sightedness and it can be corrected by convex lens
C) Long sightedness and it can be corrected by concave lens
D) Long sightedness and it can be corrected by convex lens

7. Which equation is not related to Electric power

A) I^2R B) IR^2 C) VI D) V^2R

8. Materials which produce biological enhancement

A) Recycles immediately B) Decomposes only in Soil

C) Permanent residues D) Stores less percentage in Nutritional levels.

II. Answer the following Questions **1*8=8**

9. P,Q,R,S& T Solutions are tested by universal indicator these shows PH 4, 1,11, 7,& 9. And identify Concentrated Base and Concentrated Acid

10. Write the structural formula of aromatic Hydrocarbon containing a 6C & 6 H.

11. Observe the diagram and find out type of Reproduction and Name the organism.

12. Write an examples of each

1. Organism reproduces by germination

2. Sexually Transmitted diseases caused by Viruses.

13. Ability of a lens is -2.0D then find out the type of lens and its focal length.

14. What is the reason for induction of current by the motion of magnet and a coil of conductor.

15. What is the advantages if management and maintenance should given to local peoples.

16. Write any two examples of devices which works on Solar energy.

III. Answer the following Questions **2*8=16**

17. When 2 gram of Ferrous Sulphate crystals are heated in a dry boiling tube.

a) Find out the colour of chemical ferrous Sulphate crystals before And after heating.

b) Write the balanced Chemical equation .

18. Draw a diagram of Electrolytic refining of Copper and label the pure Copper metal is deposited strip

19. What are the Techniquesof the excretory system in highly Organized plants ?

20. Compare and contrast nervous and hormonal mechanisms for control and coordination in animals.

21. Draw a diagram of the longitudinal section of a flower and label the parts where pollination takes place

22. Justify the statement " Only variation the confer an advantage to individual organisms will survive, in population.

23 . Name 5 R's to save the environment And which is best method among them

24. Distinguish between the far point and near point of the human eye with normal eye.

IV. **Answer the following Questions** 3*9=27

25. Draw a diagram of Action of Steam on a metal and label the part where Hydrogen gas collected.

26. Observe the following table and Answer Questions

Metals	Zinc	Magnesium	Copper
Zinc oxide	No reaction	Displacement	NO reaction
Magnesium Oxide	No reaction	No reaction	No reaction
Copper Oxide	Displacement	Displacement	No reaction

A) Which is the most reactive metal? Why?

B) Arrange 3 metals in the order of increasing reactivity.

27. Tall plant with Red flower (TtRr) is cross pollinated with F2 generated plants and write its checker board and show that traits are inherited only in progeny but not in parents.

28. See the given modern periodic table and Answer the following Questions.

Group ->	1	2	13	14	15	16	17	18
1st period	A	-	-	-	-	-	-	-
2nd period	-	B	-	-	-	E	-	-
3rd period	C	-	D	-	-	-	F	G

i) Name the element 'D' and its reaction with element E find out its product and its nature.

ii) Name the element " B" and mention two elements which have Similarity to elements "B".

29. Draw schematic sectional view of the Human heart and label the following parts.

a) Aorta B) The chamber which receives Oxygenated blood.

30.In a class room, Teachers explains about feathers in birds are not let to the flying of birds evolution. Do you agree with the teacher Statement ?explain? Why are traits acquired during the life time of an individual not inherited ?

31. A convex lens forms a real and inverted image of a needle at a distance of 50 cm from it .where is the needle placed in front of the convex lens . if the image is equal to the size of the object ? also find the power of the object.

32. What are the advantages of Connecting electrical devices in parallel with the battery instead of Connecting them in series.

33. If you become a friend of environment What are the changes to manage in your life or what are changes adapted as friendly practice in environment.

i) forests and wild life

ii) Water management iii) coal and petroleum

V. **Answer the following Questions** 4*4=16

34. Compound 'X' is the unit of Vinegar. Compound 'Y' is used As Fuel and medicine.

When compound X and Y are reacts with Con.Sulphuric Acid Produces 'Z' Compound having a fruity smell. i) Name the Compound X,Y,Z

ii) Write the chemical reaction between X and Y

iii) Name chemical reaction between X and Y

iv) what is the main process of Con.Sulphuric acid in the reaction.

35. Draw a diagram Showing Human Alimentary canal and label the Following parts

a) part which stores, bile juice b) Longest part of the digestive system

36. a) Mention any two practical Applications of thermo dynamics of electrical Conductor.

b) An electric bulb is connected to 220V generator. The current is 0.5 V what is the power of the bulb?

37. Understand the dispersion of white light by a glass prism. Give suitable reasons for its dispersion When light is passed through prism. The sequence of colours produced and identify find out a least and More bent light rays.

VI. Answer the following Questions **1*5=5**

38. the refractive index of Air 1.0003 & crown glass 1.52 respectively, when rays of light is passes through crown glass through Air

i) How is the light ray Changes its direction and mention the reasons

ii) If the light rays move from rarer medium to denser Medium, how it is changes the direction(the refractive index of water is 1.33)

iii) the refractive index of diamond is 2.42 what is the meaning of this statement.

iv) Illustrate the refractive index.