Piyali Halder
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St. Lawrence High School

A JESUIT CHRISTIAN MINORITY INSITUTION

THIRD TERM EXAMINATION-2019

Subject: Physical Science CLASS VIII F.M= 80

Duration: 2hrs 30mins **Date: 22.11.19**

GROUP –A (15 MARKS)

I. CHOOSE THE CORRECT OPTION: (1X5=5)

1.1The minimum audible sound that can be heard is-

a) 10 dB b) 1 dB **c) 0dB** d) 100dB

2. Electrons can flow through -

a) insulators **b) conductors** c) both a and b d) none of these

3. What instrument is used to measure fluid pressure?

a) Thermometer b) Odometer c) Altimeter **d)Manometer**

4.Which of the following is an amorphous or microcrystalline forms of carbon-

a) Graphite b) Fullerene c) Diamond d) Coke

5. Which of the following substances will cause temporary hardness of water-

a) NaCl **b) $Ca(HCO_3)_2$** c) $MgSO_4$ d) Na_2SO_4

2. NAME THE FOLLOWING: (1x5=5)

2.1. Compound obtained by removing the elements of water from an acid-**Anhydrate**

2.2. Wire made up of an alloy of tin and lead-**Fuse.**

2.3. Glass that expands very little on heating- **Pyrex glass.**

2.4. A sound that contains a single frequency-**Monotone** .

2.5. Process of formation of carbon compound into carbon-**carbonisation.**

III. MATCH THE FOLLOWING: (1X5=5)

1. Black diamond- Rock drilling
2. Graphite - Lubricant
3. Wood charcoal – Gas mask
4.Bone charcoal - Refining sugar
5.Lampblack - Printer's ink

GROUP-B (25 MARKS)

IV.VERY SHORT ANSWERS: **(2x5=10)**

1. Define allotropy and name any one element which exhibit this phenomenon.

Ans-The phenomenon of some elements existing in different forms is called allotropy.Example- carbon has three allotropes.

2. What do you mean by clockwise and anticlockwise moment?

Ans-The turning effect of force about a fixed point towards the direction of force is called clockwise moment and if the turning effect of force is opposite to the direction of force then is called anti-clockwise moment.

3. What are the two conditions necessary for work to be done?

Ans- The two conditions are-

1.a force must act on an object

2.the point where the force is applied should move in the direction of the force.

4.What do you mean by a colloid? Given an example.

Ans- A colloid is a homogeneous mixture of one or more dispersed phases in a dispersion medium. e.g Milk is a colloid

5.How are pitch and frequency related to each other?

Ans- Frequency which is the number of oscillation made by a vibrating body in a unit time determines the pitch of the sound higher the pitch higher is the frequency of vibration and low frequency will have sound called as low pitched .

V. SHORT ANSWER QUESTIONS: (any five) **(3x5=15)**

1. Write the factors on which loudness of sound depends

Ans- Loudness of sound depends on

1. Distance between Delhi sun and the suits if distance between listener and source increases loudness of sound decreases vice versa. Loudness of sound depends on

1. Distance between Delhi sun and the suits if distance between listener and source increases loudness of sound decreases vice versa.

2. Area of vibrating body larger the area lauda is a salt produced

3. Sensitivity of ear to the listener of the listener to the sword particulars on may appear allowed to one listener but not show to other listener because of sensitivity of the ear.
4.loudness of sound depends on amplitude, if amplitude is doubled loudness of sound increases four times so loudness is directly proportional to square of the amplitude of vibration.

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2. What do you mean by softening of water? State two methods used to soften water.

Ans- If the hardness of water is removed ,soft water is produced and the process called softening of water .
The two methods for softening of water are –boiling- temporary hard water can become soft a by boiling it.When such water is heated the hydrogen carbonates of calcium and magnesium are decomposed to the carbonates which as insoluble the carbonats precipitate out.
2. Treating with washing soda -permanent hardness of water is removed by treating with washing soda.

3. Explain the working of a fuse.

Ans- Fuse is a safety device used to limit the flow of electric current in a circuit.It is based on the heating effect of electric current fuse wire made of an alloy of tin and lead.
Working-if more than a specific value of current flows through the circuit the heat that is developed melts the fuse wire the circuit gets broken and therefore the flow of current stops different circuits different greeting of the fuse wire.

4. How can you charge a gold leaf electroscope by conduction?

Ans- Charging a gold leaf electroscope by conduction if a glass rod with a silk cloth to make it positively charged and touch the mental disorder electroscope with this charged glass rod then we will observe the leaves of the electroscope diverge because a positive charge acquired by them from the glass rod on removing the glass rod the leaves will still be diverse showing that electroscope has been charged through conduction.

5. What do you mean by refraction of light? What are its two causes?

Ans- Refraction of light -when a Ray of light travels from one medium to another it appears to bend at the surface of separation of the two so this bending of light ray when the passes from one transparent medium to another is called refraction of light. The cause of refraction of light are-
the speed of light is different in different mediums

the Ray of light always choose a path which takes a shortest time to cover a particular distance

6. What are acidic and basic oxides? Give one example with reaction.

Ans- Acidic oxide the oxides of non metal which dissolve in water to form acids these are called acidic oxide. example carbon dioxide sulphur trioxide dinitrogen pent oxide acidic in nature.
Basic oxides of oxides of metals generally basic and reacts with acid to form salt and water are called basic oxide they also react with acidic oxide to form solids. Example calcium oxide.

7. Describe the preparation of lampblack, Coke and gas carbon.

Ans- Lampblack- substances like oil that burns shoot is given out this is called lamp black.
Coke- Coke is obtained when coal is heated strongly in absence of air.
gas carbon -gas carbon deposits on wall of a retort when hydrocarbon is heated in it in absence of air.

GROUP- C (40 MARKS)

VI. LONG ANSWER QUESTIONS: (any eight) (5x8=40)

1. List two uses of a concave mirror and convex mirror each. The focal length of a concave mirror is 25 cm. Find its radius of curvature.

Ans- Two uses of concave mirror -used as shaving mirror, used by dentist ,use as reflector and solar cooker, used in flood lights, used in telescope.
two uses of convex mirror -used as rear view mirror in automobiles ,used as a lens mirror in departmental store ,also used to diverse light over a large area as in street lights.
focal length f =25 cm
by using the formula R = 2 f =2X25=50 cm
therefore the radius of curvature of spherical mirror is 50 centimetre.

2. State reason for the following ---

(i) Why is water sprinkled outside houses and shops during summer.

Ans-. During summer water sprinkled outside houses and shops because less water molecules are present in the atmosphere and after drinking water the fine water molecules evaporates and takes up the heat required for evaporation making the surrounding cooler from previous.

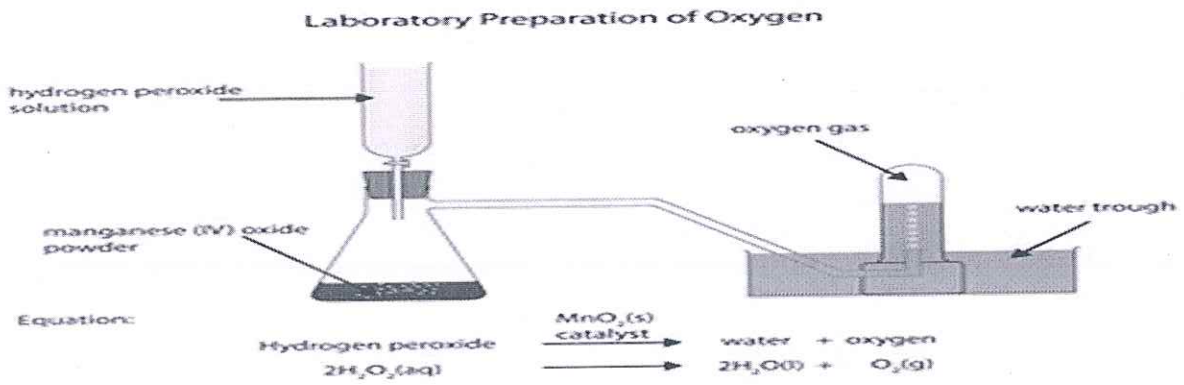
(ii) An electric metre shows a reading of 150 units at the beginning of a month and 600 units at the end of the month calculate the energy consumption in that month. If the cost of one unit is rupees 5, find the cost of the electrical energy consumed.

Ans-

Initial reading =150 units
final reading = 600 units
therefore energy consumed in 1 month=600-150=450 units
cost of 1 unit =Rs 5
therefore cost of 450 units =5x 450= Rs 2250
Thus, the cost of electrical energy consumed in one month is Rs 2250

3.Describe the laboratory preparation of carbon dioxide with diagram.

Ans- . Laboratory preparation of carbon dioxide with diagram-
Principal- carbon dioxide is prepared in the laboratory by the action of dilute hydrochloric acid on marble chips .As carbon dioxide is heavier than air it is collected by the upward displacement of air.



Procedure -We take some marble chips in a conical flux and covered with water, the flusk is fitted with the thistle funnel and a delivery tube.Dilute hydrochloric acid is poured through this which fall into the flusk, a brisk reaction take placeand gas evolved displaces the air which is inside the flusk and through the delivery tube is collected in a gas jar .The test whether the gas jar is completely filled in carbon dioxide for this we bring a lighted matchstick near its mouth when the flame gets extinguished we infer that air is filled with carbon dioxide.

4.State five differences between mixture and compound.

Ans-Five differences between mixture and compound

mixture it is impure substance, the component can be present in any proportion, the components show the individual properties, the components can be separated by physical means .
compounds- it is pure substance the constituent must present in a fixed

portion, the constituents do not show their individual properties and constituents cannot be separated by physical means.

5. Why it is difficult to cut vegetables with the butter knife? A solid body weighing 25 Newton placed on a table. The area of contact is 50 cm square. Find the pressure exerted by the solid on the table.

Ans- It is difficult to cut vegetables with buffer knife because in this case area of contact is very large for cutting .For using knife the sharp edges help to reduce the area of contact and

does exerts greater pressure with comparatively less force virus buffer knife uses large area of contact and so the force reduce s.

Force = 25 Newton
Area = 50 cm square = 50 / 10000 square meters= 1 / 200 square metre
therefore pressure =F/A = 5000 Pascal

6. Discuss an example to show that physical and chemical change can occur together.

Ans- Example of physical and chemical change can occur together the wax - lighted candle shows both physical and chemical change the wax under the week melts the molten wax close down and solidifies these are changes in state and therefore these are physical changes a part of molten wax that vaporizers burns to form carbon dioxide and water vapour the burning of wax is a chemical change.

7. What are the precautions to be taken during lightning? (any five)

Ans-. Precautions during lightning-

1. avoid standing under tall tree or near tall buildings
2. avoid holding, touching metallic object
3. avoid bathing as well as contact with running water
4. do not use an umbrella
5. unplugged television computer the electronic appliances if you are in a car continue to sit inside the same.

8. Explain one experiment to show cubical expansion of a solid with diagram.

Ans- Material required- bunsen burner, boll ring apparatus

Procedure- we set the ball and ring apparatus ball and ring apparatus consists of metal ball with just passes through the ring attached to a stand at room temperature. When we heat the ball over the Bunsen for 1 or few minutes and then try to pass the ball through the ring.

Observation- we will observe that the body does not pass to the ring when it is heated because the size of the ball has increased of heating when the ball goes on after sometime and we try to pass the world so that you will observe that this time the ball will pass .

Conclusion- this shows that metal boll which is a solid expands in volume on heating and contracts on cooling.

9. State the differences between charging by conduction and charging by induction (three only). Why MCB is considered better than a fuse wire?

Ans- CONDUCTION- the charged objects touches the uncharged objects.the uncharged object gets the same charge as that of charged objects.electrons flow from charged object to uncharged object.

INDUCTION –the charged object does not touch the uncharged object.the charged object gets the opposite charge as that of the charged object. No electrons flow from the charged object to uncharged object.

MCB can be easily reset whereas fuse needs to be replaced.

10. Why is water called a universal solvent? Define a suspension with an example.

Ans-

Water is called universal solvent because it helps solute fragment into molecules and water molecule is electrically neutral.Water allow to dissolve many substances solids and amorphous and any other this is the property of water that helps river dissolve many minerals from soil and finally discharge them into the sea.

Suspension-a suspension is a heterogeneous mixture of one or more dispersed phase in a dispersion medium muddy water is a common example of suspension soil is dispersed phase and what are the dispersion medium similarly chauk of gypsum when mixed with water gives a suspension.
