CENTRAL ACADEMY, REWA (MP)

PERIODIC TEST-[2]- 2019 – 20

CLASS – X

Subject – Science

Time: 3:00 Hrs M.M.: 60

Note –

1- All questions are compulsory.

PHYSICS

[M.M.-20]

Q.1 What is meant by power of accommodation of the eye? [01]

Q.2 Calculate the number of electrons constituting one coulomb of charge. [01]

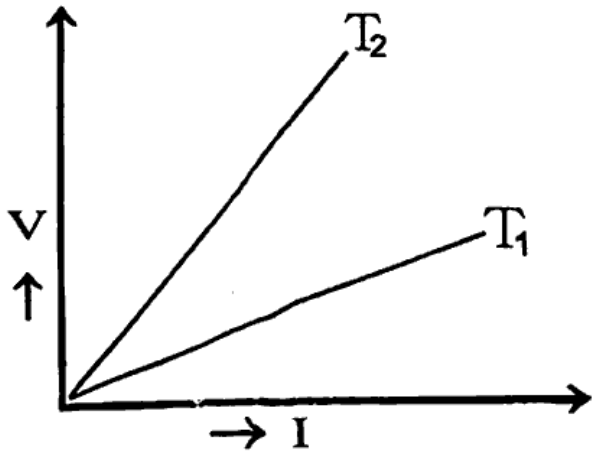
Q.3 Name an instrument that measures electric current in a circuit. Define the unit of electric current. [01]

Q.4 Write in one word or at the most in one sentence about the following - [01]

(i) Mirror used by dentists to examine teeth.

(ii) The smallest distance, at which the eye can see objects clearly without strain.

Q.5 Why is resistance less when resistors are joined in parallel? [01]



Q.6 Should the resistance of an ammeter be low or high? Give reason. [01]

Q.7 (a) What is myopia? State the two causes of myopia with the help of labelled ray diagram show - [03]

(i) The eye defect myopia. (ii) correction of myopia using a lens

(b) Why is the normal eye unable to focus on an object placed within 10 cm from the eye?

Q.8 The values of current I flowing in a given resistor for the corresponding values of potential difference V across the resistor are given below: [03]

I	(amperes)	0.5	1.0	2.0	3.0	4.0
V	(Volts)	1.6	3.4	6.7	10.2	13.2

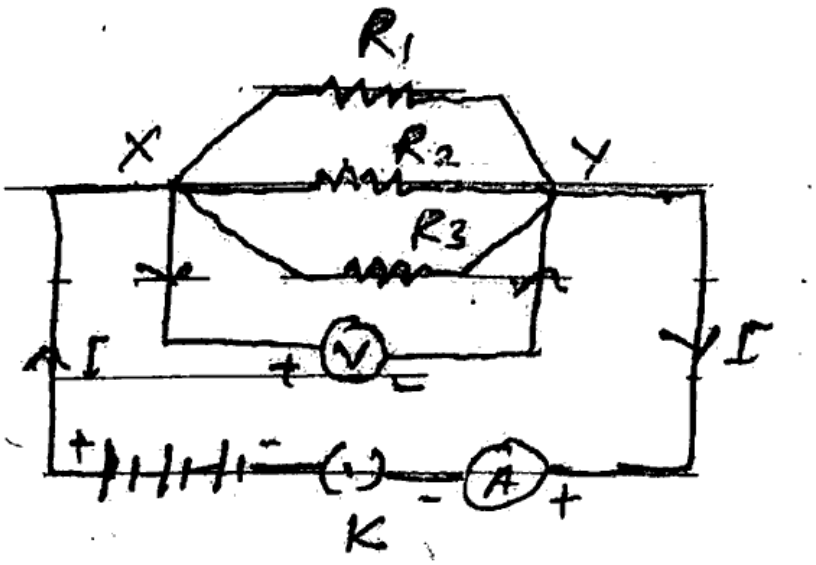
Plot a graph between V and I and calculate the resistance of that resistor.

Q.9 In the circuit diagram. Suppose the resistors R_1, R_2 and R_3 have the values 5Ω, 10 Ω, 30 Ω respectively. Which have been connected to a battery of 12 volt? Calculate - [03]

(a) The current Through each resistor

(b) Total current in the circuit

(c) Total resistance



Q.10 *Explain the following -* [05]

(a) Why is the Tungsten used almost exclusively for filament of electric lamps?

(b) Why is the series arrangement not used for domestic circuits?

(c) Why are copper and aluminium wires usually employed for electricity Transmission?

(d) On what factors does the resistance of a conductor depend?

(e) Draw a open circuit and closed circuit diagram.

CHEMISTRY

[M.M.-20]

Q.1 Plaster of Paris should stored in a moisture proof container. Explain why? [01]

Q.2 What is neutralisation reaction? Give examples. [01]

Q.3 How will you test for the gas which is liberated when hydrochloric acid reacts with an active metal? [01]

Q.4 What is the colour of litmus in a solution of ammonium hydroxide? [01]

Q.5 Oil and fat containing food its are flushed with nitrogen why? [01]

Q.6 Write chemical equation for the reactions to take place when. iron nails dipped in copper sulphate solution. [01]

Q.7 What happens when chlorine is passed over slaked lime at 313 k. Write chemical equation of the reaction involved and state two uses of the product obtained. [03]

Q.8 State reason for the following statements: [03]

(i) Tap water conduct electricity where as distilled water does not.

(ii) Dry hydrogen chloride gas does not turn blue litmus red whereas dilute hydrochloric acid does.

(iii) During summer season, a milk man usually adds a very small amount of baking soda to fresh milk.

Q.9 (a) A shiny brown coloured element 'X' on heating in air becomes black in colour. Name the elements 'X' and the black coloured compound formed. [03]

(b) On heating blue coloured powder of copper (II) nitrate in boiling tube copper oxide (Black), oxygen gas and a brown gas 'Y' is formed. Identify the brown gas and write down the chemical reaction.

Q.10 (a) Dry pellets of a base 'X' when kept in open absorbs moisture and turn sticky. The compound is also formed by chlor-alkali process. Write chemical name and formula of 'X'. Described chlor-alkali process with balanced chemical equation. Name the type of reaction that occurs when 'X' is treated with dilute HCl write the chemical equation. [05]

(b) While diluting an acid, why is it recommended that the acid should be added to water and not water to the acid?

OR

A student dropped few pieces of marble in dilute HCl, contained in a test tube. The evolved gas was then passed through lime water. What change would be observed in lime water? What will happen if excess of gas is passed through lime water? With the help of balanced chemical equations for all the changes explain the observations.

BIOLOGY

[M.M.-20]

General Instructions –

1- Attempt all the questions.
2- Draw neat & clean diagrams (if any).
3- Marks are allotted at front of each question.

Answer the questions -

Q.1 Which tissue transports soluble products of photosynthesis? [01]

Q.2 What is the role of Saliva in digestion of food? [01]

Q.3 Name the hormone which helps in regulating sugar level in our blood? Name the gland which secretes this hormone? [01]

Q.4 Mention one example of chemotropism? [01]

Q.5 Write name of three hormones secreted by the pituitary gland. [01]

Q.6 State the main function of abscisic acid. [01]

Q.7 Differentiate between blood and lymph. [03]

Q.8 What is reflex action? Describe the steps involved in reflex action. [03]

Q.9 A compound of iodine is compulsorily added to common salt in small quantity. [03]

(a) Why is it important for us to have iodised salt in our diet.

(b) Name the disease caused by its deficiency.

(c) Write the symptoms of the disease.

Q.10 Draw the diagram of human brain and label the parts. Write the function of cerebellum and pons. [05]