

10th Class Exam 2018 SAMPLE PAPER - 7

Time Allowed: 3 hours

Subject: Science

Maximum marks: 80

Section-A

1. What is the mode of reproduction in Hydra?
 2. What is the role of bile?
 3. Why are the members of group I called alkali metals?
 4. The Focal length of convex lens is 20 cm. Find its power.
 5. What are the main uses of coal and petroleum products?
 6. A wire has a diameter of 0.5 mm and resistivity of 16.2 ohm meter. How much of this wire would be required to make a 10 Ohm coil?
 7. Why is fuel oil considered a better fuel than coal in industries? Give any three reasons.
 8. A compound 'X' of sodium is commonly used in kitchen tin making crispy pakoras. It is also used for curing acidity in the stomach. Identify 'X'. What is its chemical formula? State the reaction that takes place when it is heated during cooking.
 9. Locate the following groups in the periodic table: (a) Alkali metals (b) Halogens (c) Alkaline earth metals
 10. Why is artificial kidney required?
 11. (a) "Each organism has its own identity". Explain. (b) What is speciation ?
 12. (a) What is the relation between focal length and radius of curvature?
(b) What are the possible positions of an object in front of concave mirror to get enlarged image.
(c) Which mirror has a wider field of view?
- OR (a) What do you understand by optically denser and optically rarer medium?
(b) What is the relation between n_2 , and n_1 ?
(c) For the same angle of incidence, the angle of refraction in three different media A, B and C are 15° , 25° and 35° respectively. In which medium velocity of light will be minimum?
13. How is chloride of lime chemically different from calcium chloride? Why does chloride of lime gradually lose its chlorine when kept exposed to air?
 14. An organism has genotype AaBb. What are the types of gametes formed?
 15. Abhishek and his friends were on a trip to the tundra region there they find themselves stranded in the scorching bright sun. They were hungry but they could not cook as they could not light a fire although they had matches and dry wood. The matchsticks they had brought with them had been spoiled by the ice. Just then Anamika and her friends were passing by. Seeing the stranded group she thought of helping them. She cut a piece of ice and gave it a convex shape. Staking the pieces of paper and dry wood she allowed the rays coming from the sun to pass through the convex shaped ice. By adjusting the distance of the convex ice-piece from the pieces of paper she was able to light a fire. Avishka and his friend thanked her and relished the cooked food which they then made.
(a) What values do you think are there in Anamika? (b) How could Anamika light a fire with the help of ice?
 16. (a) Explain Maxwell's right hand thumb rule? (b) Explain the importance of earthing in domestic circuit.
 17. The molecules of alkane family are represented by a general formula C_nH_{2n+2} .
- Answer the following : (i) What do n and 2n signify (ii) What is the molecular formula of alkene when n = 6?
(iii) What is the molecular formula of the alkene if there are six atoms in it?

(iv) What is the molecular formula and structural formula of the first member of the alkene family?

(v) Write the molecular formula of lower and higher homologues of an alkene which contains four carbon atoms.

OR,

Give two differences between soap and synthetic detergents? Give the name of the byproduct of soap industry? How is it formed?

18. Prepare a chart of different hormones with their function and location in the body with diagram

19. (i) Explain working of human eye

(i) A person suffering from long sightedness cannot see objects before 1.5 m distinctly. Suggest a lens with proper focal length and power for his remedy. Assume the near point of the normal eye to be

20. (i) Which metals does not stick to glass?

(ii) Which metal is commonly used in thermite welding?

(ii) What is the nature of zinc oxide?

(iv) Will CO (carbon monoxide) change the colour of blue litmus solution?

(v) What is the nature of phosphorus oxide?

21. "Damage to the ozone layer is a cause of concern." Justify the statement. Suggest any two steps to limit this damage

OR, (a) We do not clean ponds or lakes but an aquarium needs to be cleaned. Why?

(b) Why is improper disposal of wastes a curse to environment?

Section-B

22. When potassium iodide solution is added to a solution of Lead (II) nitrate in a test tube, a precipitate is formed,

(0) Name the compound precipitated.

(ii) Write balanced chemical equation for this reaction

(iii) What type of reaction is this?

23. A trivalent metal X is manufactured by the process of electrolysis. It is the most abundant metal in the earth's crust. Identify the metal and state its two uses

24. A lady went to a party with one of her friend. At the party she ate lots of gulab jamun. After some time she faint down and got hospitalized. After diagnosing, doctor concluded that her sugar level had raised very high. So doctor gave her insulin injection

(i) Name the disease she is suffering from. (ii) How does healthy life style help the patients to control this diseases?

25. An organic compound. X is an essential constituent of wine and beer. X is responsible for the intoxication caused by these drinks. Oxidation of X yield an organic acid Y which is present in vinegar. Name the compounds X and Y and write their structural formula?

26. A person wears glasses of power - 2.5 D. Is the person far-sighted or near-sighted? What is the far point of the person without glasses?

OR, A person can see clearly up to 3 meter only. Prescribe a lens for him so that he can see clearly up to 12metre

27. A boy is standing in front of plane mirror finds his image at a distance of 20m from himself. Find the distance between boy and mirror.