BIOLOGY

BOOKS - CAMBRIDGE BIOLOGY (KANNADA ENGLISH)

MARCH - 2019 QUESTION PAPER - 10

Mcqs

1. The change that occurs in the eye to see the distant object clearly is

A. focal length of the eye lens decreases

B. curvature of the eye lens decreases

C. focal length of the eye lens increases

D. cilary muscles of the eye contract.

Answer: C

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2. The functional groups present in propanol and propanal respectively are.

A. $-OH$ and $-CHO$

B. $-OH$ and $-COOH$

C. $-COH$ and $COOH$

D. $-CHO$ and $-CO$

Answer: A

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3. The resistance of a conductor is 27 . If it is cut into three equal parts and connected in parallel, them its total resistance is

A. 6Ω

B. 3Ω

C. 9Ω

D. 27Ω

Answer: B

4. The chemical equation that represents neutralization reaction among the following is

A. $BaCl_2 + H_2SO_4 \rightarrow BaSO_4 + 2HCl$

B.

$$MnO_2 + 4 \ \ \mathrm{HCl} \rightarrow MnCl_2 + 2H2O + Cl_2$$

C. $2NaOH + H_2SO_4 \rightarrow NaSO_4 + 2H_2O$

D. $AgNO_3 + HCl \rightarrow AgCl + HNO_3$

Answer: C

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5. By constructing Khadin check-dams in level terrains.

A. underground water level decreses

B. underground water level increases

C. vegetation in the nearby areas are destroyed due to exces moisture

D. underground water gets polluted

Answer: B

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6. To obtain a diminished image of an object from a concave mirror, position of the object should be

(F = principal focus , C = centre of curvature. P - pole)

A. between C and F

B. beyond C

C. between P and F

D. at F

Answer: B

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7. The electronic configuration of element x is 2, 8, 8, 1 and the electronic configuration of element Y is 2, 8, 7. Them the type of bond formed between these two element is

A. covalent bond

B. hydrogen bond

C. metallic bond

D. ionic bond

Answer: D

8. Part of the flower that devlops into fruit and part the seed that devops into root respectively are

A. ovary and plumule

B. plumule and radicle

C. ovary and radicle

D. ovary and ovule

Answer: C

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9. A pure dominant pea plant producing round - yellow seeds is crossed with pure recessive pea plant producing wrinkled - green seeds, The numbers of plants bearing round - green seeds in the F_1 generation of Mendel's experiment is

A. 0

B. 1

C. 3

D. 9

Answer: A

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Questions

1. The functions of hormones are given in Column-A and the names of the hormones are

given in Column-B. Match them and write the answer along with its letters : 

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2. Name the acid present in the stinging hairs of nettle leaves.

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3. What are fossils ?

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4. Why do we perfer a convex mirror as rear-view mirror in vehicle ?

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5. What is roasting in metallurgy ?

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6. Observe the given figure. Name the eye defect indicated in the figue snd also mention the lens used to correct this defect.

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7. What is Tyndall effect ?

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8. Under what condition lactic acid is produced in the muscle cells ?

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9. Draw the diagram of an electric circuit in which the resistors R_1, R_2 and R_3 are connected in parallel including an ammeter and a voltmeter and mark the direction of the current.

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10. Name the brown fumes liberated when lead nitrate is heated. Write the balanced chemical equation for this reaction.

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11. Explain the process of translocation of food materials in plants.

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12. Explain the process of digestion in the small intestine of man.

Digestion of food in small intestine :

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13. Draw the diagram of a simple electric motor.

Label the following parts :

i] Split rings ii] Brushes.

i] Burshes ii] Battery

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14. What are structural isomers? Name the first member of alkanes that shows structural isomerism.

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15. a] Draw a diagram of the longitudinal section of a flower and label on it sepal, petal, ovary and stigma.

OR

Draw the diagram showing the longitudinal section of a flower.

Label the following parts :

i] Style ii] Anther.

b] Write the names of male and female reproductive parts of a flower.

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16. Draw the diagram of arrangement of the apparatus to show the reaction of zinc granules with blue sulphuric acid and testing hydrogen gas by burning. Label the following

parts :

(i) Test tube (ii) Soap solution.

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17. What are the advantages of connecting electrical devices in parallel with the battery instead of connecting them in series?

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18. According to Joule's iaw of heating, mention the factors on which heat produccd in a resistor depends.

According to this law write the formula used talculate the heat produced.

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19. What are the disadvantage of fossil fuels?

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20. List the advantages of 'reduce' and 'reuse' to save environment. Advantages of reduce and reuse to save environment:

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21. The focal length of a concave lens is 30 cm. At what distance should the object be placed from the lens so that it forms an image at 20cm from the lens?

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22. Draw the diagram of the apparatus used in the electrolysis of water. Label the following parts.

i) Graphite rod

ii) Cathode

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23. Growth of thread like structures along with the gradual spoilage of tomato can be observed when a cut tomato is kept aside for four days. Interpret the causes for this change.

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24. An electric refrigerator rated 300 W is used for 8 hours a day. An electric iron box rated 750 Wis used for 2 hours a day. Calculate the cost of using these appliances for 30 days, if the cost of 1 kWh is Rs. 3/-

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25. There is no change in the colour of red litmus and blue lit mus paper when introduced into an aqucous solution of sodium chloride. A fter passing direct current through the same solution, red litmus ehanges to blue colour. Which product is responsible for this change? Mention any two uses of this produet.

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26. A food chain in a polluted aquatic ecosystem is given. Observe it and answer the

following questions.

Fresh water $\rightarrow$ Algae $\rightarrow$ Fishes $\rightarrow$ Birds.

(i) Which organisms are disturbed more due to biomagnification? Why?

(ii) This ecosystem will be destroyed gradually due to biomagnification. Why?

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27. A student places a piece of cucumber a glass piece, a banana peel and a plastic pen in a pit and closes it. What changes can be

observed in these materials after a month ? Give scientific reason for these changes.

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28. What is disporsion of light? Mention the colour that bonds the least and the colour that bends the most when ligh undergoes dispersion through a prism.

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29. Mention any four phenomena that can be observed due to atmospheric refraction of light on the earth.

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30. Draw ray diagram showing the image formation by a concave lens when an object is placed

(a) at the focus of the lens

(b) between focus and twice the focal length of

the lens

(c) beyond twice the focal length of the lens

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31. (i) Write the differences between saturated and unsaturated hydrocarbons.

(ii) Write the molecular formula and structural formula of an alkene having five carbon atoms.

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32. (i) Carbon atom does not form C^{4-} anion and C^{4+} cation. Why ?

(ii) How can ethanol be converted into ethanoic acid?

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33. Draw the diagram showing the sectinal view of the human heart.

Label the following parts.

(i) Aorta

(ii) Chamber of the heart that receives deoxygenated blood.

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34. Name the major constituent of biogas. Write the properties of biogas which make it a good fuel.

ii. Name the two devices that work using heat energy of the sun.

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35. (i) Write the advantages of solar cells.

(ii) Write any two hazards of nuclear power generation.

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36. Observe the given table and answer the following question :

Identify the two elements that belong to the same period and the two elements that belong

to the. same group. Give reason for your conclusion.

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37. (i) How does overload and short-circuit occur in an electric circuit ? Explain . What is the function of fuse during this situation ?

(ii) Mention two properties of magnetic field lines .

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38. Give reasons :

i) lonic compounds in solid state do not conduet electricity, whereas in molten state are good conductors of electricity.

(ii) ii) Silver articles when exposed to air gradually turn blackish.

ii) Chenmical reaction does not take place when copper is added to iron sulphate solution.

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39. Give reasons: (i) "Alloys of iron are more useful when compared to pure iron."

(ii) Copper loses its brown layer gradually when exposed to air.

(iii) Aluminium oxide is called amphoteric oxide.

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40. Write the differences between homologous organs and analogous organs.

(ii) Write tlie dilferences between the sex

chromosomes of man and sexchromosones of woman.

(iii) Sex of achildis determined by the latler. How?

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