

BIOLOGY

BOOKS - CAMBRIDGE BIOLOGY (KANNADA ENGLISH)

CPC MODEL QUESTION PAPER -3

Choose The Correct Answer

1. The power of lens is -4.0 D. What is the nature of the lens

A. pla	ane
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B. Concave

C. Plano-convex

D. convex

Answer: B



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

- A. underground water level increases
- B. underground water level decrease
- C. vegetation in the nearby areas are destroyed due to excess moisture
- D. underground water gets polluted

Answer: A



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3. When the gases sulphurdioxide and hydrogensulphide mix in the presence of water, the reaction $SO_2+2H_2S \rightarrow 2H_2O+3S$ occur. Here hydrogen sulphide is acting as

A. an oxidising agent

B. a reducing agent

C. a dehydrating agent

D. a catalyst

Answer: B

4. What is the condition of an electromagnetic induction

A. There must be a relative motion between the coil of wire and galvanometer

B. There must be a relative motion between the galvanometer and a magnet

C. There must be a relative motion

between galvanometer and generator

D. There must be a relative motion between the coil of wire and a magnet

Answer: D



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- 5. The salts which make water hard are
 - A. calcium and magnesium sulphates

- B. calcium and magnesium chlorides
- C. calcium and magnesium bicarbonates
- D. any of the above

Answer: D



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6. Food cans are coated with tin and not with zinc because

A. zinc is costlier than tin

- B. zinc has a higher melting point than tin
- C. zinc is more reactive than tin
- D. zinc is less reactive than tin

Answer: C



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7. A human hormone reducing blood flow to the digestive systems and skin during stress is

A. Thyroxin

- B. Adernaline
- C. Growth hormone
- D. Insulin

Answer: B



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8. A cross between a tall plant (TT) and short pea plant (tt) resulted in progeny that were all tall plants because

- A. Tallness is the dominant trait
- B. Shortness is the dominant trait
- C. Tallness is the recessive trait
- D. Height of pea plant is not governed by gene 'T' or 't

Answer: A



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Answer The Following Questions

1. What is the role of inhalation and exhalation?



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2. A student has difficulty reading the blackboard while sitting in the last row. What could be the defect the child is suffering from? How can it be corrected



3. Name the phenomenon associated with the use of (i) CFC (ii) DDT



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4. Name the gas usually liberated when a dilute acid reacts with a metal. What happens when a burning candle is brought near this gas?



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5. Which endocrine gland is called master gland? Why?



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6. An alternating current has frequency of 50Hz. How many times it has changed its direction In one second.



7. Mention the mode of reproduction used by
(a) Amoeba (b) Planaria



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8. Why is the reaction between methane and chlorine considered a substituion reaction..



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9. Compute the heat generated which transferring 96000 coulomb of charge in one hour through a potential difference 50V.



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10. Draw the diagram of the apparatus used in the electrolysis of water.



11. Write the difference between metals and non metals on the basis of chemical properties .



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- 12. State two reason for the following facts
- (i) Sulphur is a non metal
- (ii) megnesium is a metal



13. Draw the ray diagram showing the recombination of the spectrum of white light



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14. Draw the diagram of an electric generator .



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15. Name the hormones responsible for the following

- i) Excess production causes gigantism
- ii) Causes changes in the body during emergency.
- iii) Induces wilting of leaves
- iv) Target site is heart muscles, diaphragm and skin.



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



17. What is a homologus series? Explain with an example.



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18. What are isomers? Give example.



19. Out of two elements A and B with mass number 2 and 235 respectively. Which one is suitable for making. a) A nuclear reactor b) A hydrogen bomb

Name the nuclear reaction involved in each case, write one difference between the two types of nuclear reactions.



20. A coil of insulated copper wire connected to a galvanometer. What will happen if a bar magnet is (i) pushed into the coil (ii) withdrawn from inside the coil (iii) held stationary inside the coil.



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21. Name the three common defects of vision. What are their causes? Name the type of lens used to correct each of them.

22. The far point of a myopic person is 80cm in front of the eye. What is the nature and power of the lens required to correct the problem.



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23. Balance the following chemical equation and identify the type of chemical reaction.

a)
$$Mg(s) + Cl_2(g) o MgCl_2(s)$$

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b) $HgO(s)
ightarrow \stackrel{ ext{heat}}{\longrightarrow} Hg(l) + O_2(g)$ \uparrow

c) $Na(s)+S(s)\stackrel{\mathrm{heat}}{\longrightarrow} Na_2S(s)$

24. What does one mean by exothermic and endothermic reaction? Give example.



25. Distinguish between homologus organs and analogus organs. In which catagory would

you place wings of a bird and wings of a bat?

Justify your answer giving a suitable reason.



26. What is fertilization? Distinguish between external fertilisation and internal fertilisation.



27. Explain how sexual reproduction gives rise to more viable variation than asexual

reproduction. How does this affect the evolution of those organism that reproduce sexually.



28. What is meant by water table? Why is it important?



29. a) What are groups and period in the periodic table? b) Two elements M and N belong to group I and II respectively and are in the same period of the periodic table. How do the following properties of M and N vary?

- 1) Sizes of their atoms 2) Their metallic characters. 3) Their valencies informing oxides.
- 4) Molecular formula of their chlorides.



- **30.** Explain why the following statements are not correct?
- i) All groups contain both metals and non metals.
- ii) In group 1, reactivity decreases with increase in atomic number.
- iii) Elements in a period become more metallic with increasing atomic number.
- iv) Atoms of elements in the same group have the same number of electrons.



31. a) Write two points of difference between electric energy and electric power.

b) An electric bulb of 200Ω draws a current of 1 ampere. Calculate the power of the bulb the potential different at its ends and the energy in KWh consumed burning it for 5h.



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32. a) A, B and C are 3 elements which undergo chemical reaction according to following

equations

a) $A_2O_3+2B o B_2O_3+2A$

b) $3CSO_4+2B
ightarrow B_2{(SO_4)}_3+3C$

c) $3CO+2A
ightarrow A_2SO_3+3C$

Answer the following:

i) Which element is most reactive? ii) Which element is least reactive? b) Why is ZnO called amphoteric oxide? Name another amphoteric oxide.



33. Explain the process of nutrition in Amoeba.



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34. State the laws of refraction. What is the meaning of the refractive index of crown glass is 1.52. Define the power of lens. What is the meaning of 'The power of a lens is 1 diaptor'. If the power of a lens is -2.0 D, then what type of lens is that? When an object is kept at infinity

from this type of lens, what is the size of the image formed?'

