

BIOLOGY

BOOKS - CAMBRIDGE BIOLOGY (KANNADA ENGLISH)

DEPARTMENTAL MODEL QUESTION PAPER - 2

Choose The Correct Answer

1. Significant role of stomata in transpiration is

- A. create upward pressure
- B. absorb carbon dioxide
- C. release oxygen
- D. perform transpiration continuously

Answer: B



Watch Video Solution

2. Hydrogen gas is not liberated when a metal reacts with concentrated nitric acid because nitric acid

A. does not contain hydrogen atom

B. oxidises itself

C. oxidises hydrogen to form water

D. is a strong reducing agent and gains hydrogen

Answer: C



Watch Video Solution

3. Observe the following figure. We can understand that



A. there is a uniform magnetic field around
the solenoid

B. the magnetic field is same at all points
inside the solenoid

C. solenoid is kept in a strong magnetic
field

D. solenoid is experiencing mechanical force

Answer: B



View Text Solution

4. In a power station coal is burnt to heat water to produce steam which further runs the turbine to generate electricity. This power station is a

A. Thermal power plant because coal is burnt

B. Hydro power plant because water is heated

C. Nuclear power plant because turbine runs

D. Bio gas power plant because coal is used

Answer: A



Watch Video Solution

5. A response that does not happen in plants due to their growth is

- A. Bending of shoot towards light
- B. Penetration of roots in deep soil
- C. Folding of leaves when touched
- D. Climbing tendrils of a creeper

Answer: A



Watch Video Solution

6. In the environment, materials causing biomagnification

A. get recycled quickly

B. decompose only in soil

C. remain as permanent residues

D. are stored in less amount in trophic levels

Answer: C



Watch Video Solution

7. Ferrous sulphate crystals are taken in a test tube and heated, the correct statement related to this chemical reaction is

A. This is a photolytic decomposition reaction, and white coloured solid ferric oxide is formed

B. This is a thermal decomposition and green coloured fumes of ferric oxide is formed

C. This is a thermal decomposition reaction
and brown coloured fumes of ferric
oxide is formed

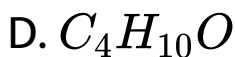
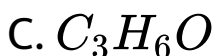
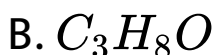
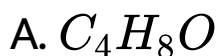
D. This is a thermal decomposition reaction
and brown coloured solid ferric oxide is
formed

Answer: D



Watch Video Solution

8. If one hydrogen atom of propane is replaced by a ketone group, then the molecular formula of the compound obtained is



Answer: A



Watch Video Solution

Answer The Following Questions

1. Complete this diagram by connecting two resistors R_1 & R_2 in series between A and B, also connecting two resistors R_3 & R_4 in parallel between C & D.



View Text Solution

2. Explain esterification reaction with an example.



[Watch Video Solution](#)

3. Give scientific reason : "The magnetic field produced by a current carrying conductor increases as the number of turns in the coil increases".



[Watch Video Solution](#)

4. What similarity is observed in the structures of 'A' and 'B' with respect to their function?



View Text Solution

5. A student connects a water heater to a 5A electric circuit. Is this correct? Give suitable reason to your answer.



Watch Video Solution

6. Use of CFC free refrigerators is considered as eco friendly. Why?



Watch Video Solution

7. Write the products obtained when sodium oxide reacts with hydrochloric acid.



Watch Video Solution

8. Does the chemical reaction take place when zinc is added to ferrous sulphate solution? Justify your answer.



Watch Video Solution

9. Draw the diagram showing longitudinal section of a flower and label the part where pollination takes place



Watch Video Solution

10. What is the difference between the molecules of soaps and detergents, chemically ? Explain the deansing action of soaps.



Watch Video Solution

11. How can ethanol be converted into ethanoic acid?



Watch Video Solution

12. Draw the diagram of the arrangement of apparatus to show the action of steam on a metal and label the part where hydrogen is collected.



View Text Solution

13. Draw the ray diagram showing myopic eye and correction for myopia.



Watch Video Solution

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



Watch Video Solution

15. “We need to look for alternative sources of energy”. Justify this statement scientifically.



View Text Solution

16. Write the events occurring during photosynthesis.



View Text Solution

17. Explain the formation of covalent bond taking the example of methane and write the electron dot structure of methane.



View Text Solution

18. In the following circuit, which device can be connected in place of AB to increase or decrease the brightness of the bulb? Give reason for your answer.





[View Text Solution](#)

19. Draw the ray diagram showing the image formation by a convex lens, when the object is kept between principal focus and optic centre. With the help of the diagram mention the nature of the image formed.



[View Text Solution](#)

20. The reaction between lead nitrate and potassium iodide solutions is an example for

what types of chemical reaction? Explain.

Write the balanced chemical equation for this reaction.



View Text Solution

21. a) An object is kept between centre of curvature and principal focus of a concave mirror. Write the nature of the image formed.

b) Define focal length of a convex mirror. Write the relationship between focal length and radius of curvature of a convex mirror.



[View Text Solution](#)

22. (a) Give any two examples for refraction of light in daily life. State the laws of refraction of light.

b) "The power of a lens is -2.5D . Which type of lens is this?



[View Text Solution](#)

23. In the modern periodic table, 'A' and 'B' are two elements belonging to first and

seventeenth group respectively and both of them belong to the third period. Write their electronic configuration. Which of them is a metal? Why? Write the chemical formula of the compound obtained when these two elements react with each other.



Watch Video Solution

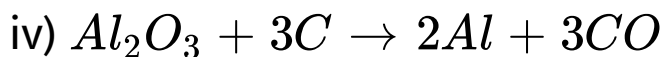
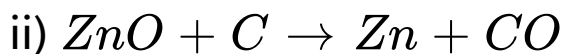
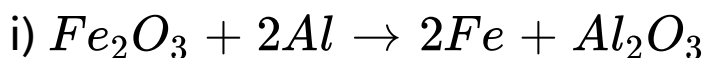
24. ${}^{12}_6\text{C}$ and ${}^{14}_6\text{C}$ are two elements. Do both these elements get different positions in modern periodic table? Explain your answer.

Identify the period and group to which they belong in the modern periodic table with suitable reason.



Watch Video Solution

25. Observe the following chemical reactions



Which of the above reaction is wrong? How is

the metal present in the wrong equation extracted? Which of the above reaction can be used to join the broken parts of the machines. Why?



Watch Video Solution

26. How is the end product of nutrition glucose breaks down among all the organisms under the conditions given below.

i) In the presence of atmospheric oxygen. ii) In

the absence of atmospheric oxygen iii) in muscle cells due to lack of oxygen



Watch Video Solution

27. Explain the methods of i) Oxygen supply to the cells ii) Release of carbondioxide to the atmopshere from the cells during the process of transportation in humans.



View Text Solution

28. Draw the diagram showing longitudinal section of human brain and label the following parts.

i) Part of hind brain that controls involuntary functions

ii) The part that interprets sensory information



View Text Solution

29. An electric motor is taken out from a toy car. How do you convert this motor into a small electric generator? Compare the function of electric generator with the phenomenon of electromagnetic induction.



View Text Solution

30. Which ancient systems of water harvesting can be rejuvenated? What is the major advantage of these methods?





[View Text Solution](#)

31. "Conscious usage of natural resources nowadays is inevitable". Why? Give reasons for you answer.



[Watch Video Solution](#)

32. Two black female mice are crossed with a brown male. Later female I produces 9 black and 7 brown offsprings, female II produced 57 black off springs during first filial generation.

Then

- i) What inference can you make concerning inheritance of black and brown coloured mice?
- ii) With the help of phenotype given, find out what are the genotypes of parents?



View Text Solution

33. a) What is Tyndall effect? Give two examples for Tyndall effect.

b) What is the meaning of power of

accommodation of eye? How does this help us to see objects at different distances?



View Text Solution

34. a) Name the gas released at anode during chlor - alkali process and mention the uses of this gas.

b) Which gas is released when sodium carbonate reacts with hydrochloric acid? How do you test this gas? Write the word equation for this reaction.



[Watch Video Solution](#)

35. a) What happens if too much of acid is produced in the stomach? What is the remedy for this situation?

b) What is water of crystallization? How is plaster of . The fixed number paris prepared? Write any two uses of plaster of paris .



[View Text Solution](#)

36. An electric bulb is connected to a 220 V generator. The current is 0.5 A. What is the power of the bulb ?



Watch Video Solution

37. How are general growth and sexual maturation different from each other? Which are the symptoms observed in sexually matured females? When a matured female

receives male sex cells due to sexual contact
what changes will happen in her uterus?



View Text Solution