



CHEMISTRY

BOOKS - CAMBRIDGE CHEMISTRY (KANNADA ENGLISH)

CPC MODEL QUESTION PAPER-4

Answer The Following Questions

1. Draw a diagram of testing the conductivity of a salt solution.



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2. What is neutralisation reaction?



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3. What do you mean by double circulation of blood?



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4. What do you understand by the term natural selection?



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5. Which one is having lesser resistance, a 60W bulb or a 40W bulb?



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6. What two characteristics are observed when dilute hydrochloric acid is added to zinc granules?



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7. An organic compound burns with a sooty flame. Is it saturated or unsaturated compounds.



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8. What is an armature?



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9. What are the two general principles of energy flow?



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10. How is caustic soda obtained? Mention its uses.





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11. Draw a diagram of testing the conductivity of a salt solution.



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12. Energy transfer is said to be unidirectional where biochemical transfer is said to be cyclic? Why.



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13. What is Myopia? Name the lens used to correct Myopia.



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14. The far point of a myopic person is 150cm in front of eye, calculate the focal length and the power of lens to enable see distant object clearly.



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15. 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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16. Sketch and label the structure of nephron.



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17. How is plaster of paris prepared?



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18. What is reproduction? What are its two types? Which one of the two confers new characteristics on the offsprings and how?



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19. How will an organism be benefited if it reproduces through spores?



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20. One day Suresh connected many household high power appliances having a current rating more than 6A to a multiplug of 6A rating when he was about to switch them on his elder sister shouted and asked him to remove the appliances from a single socket. a) According to you, why she would not advise to connect multiple high power appliances on a single socket? b) What would have happened

if he switched them on. c) What was the value shown by his sister.



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21. Draw ray diagrams showing the image formation by a convex lens when an object is placed

(a) between optical centre and focus of the lens

(b) between focus and twice the focal length of the lens

OR

Draw the ray diagram when the object is kept between F_1 and $2F_1$ of the convex lens. With the help of the diagram mention the position and nature of the image formed. [F_1 : Principal focus of the lens]

(c) at twice the focal length of the lens

(d) at infinity

(e) at the focus of the lens



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22. How can you as an individual contribute or make a difference to the management of a) Forests and wildlife b) Water resources and c) Coal and petroleum



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23. a) What is Biomass.

b) An environmentalist on visit to your school suggested the use of three R's to save the environment. Explain what he meant by three

'R's and how you would follow his advice at home.



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24. Draw the diagram showing the schematic sectional view of the human heart. Label the following parts :

(i) Aorta

(ii) Pulmonary veins.



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25. Define refractive index of a transparent medium. What is its unit? Which has a higher refractive index glass or water? The radius of curvature of a spherical mirror is 20 cm. What is its focal length



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26. The magnification produced by a plane mirror is +1. What does this mean. An object is placed at a distance of 10cm from a convex

mirror of focal length 15cm .Find the position and nature of the image.



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27. i) Who proposed Modern - periodic law?

ii) How does the electronic configuration of an atom of an element relate to its position in the modern periodic table? Explain with one example.



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28. The position of three elements A,B and C in the periodic table are shown below



a) State whether A is non metal or metal b)
State whether C is more reactive or less
reactive than A c) Will C be larger or smaller in
size than B .

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29. Write the balanced chemical equations for the following chemical reactions .

(i) Potassium bromide reacts with Barium iodide.

(ii) Zinc carbonate is heated.



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30. (i) Write the electron dot structure for sodium, oxygen and magnesium.

(ii) Show the formation of Na_2O and MgO by the transfer of electrons.

(iii) What are the ions present in these compounds.



31. Give reason for the following:

a) Metals are regarded as electropositive elements.

b) When a piece of copper metal is added to a solution of Zinc sulphate, no change take place, but the blue colour of copper sulphate fades away when a piece of zinc is placed in its solution .

c) Articles of aluminium do not corrode even though alluminium is an active metal.



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32. Mention the function of forebrain, cerebellum and medulla.



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33. Explain the terms

(i) Speciation (ii) Natural selection



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34. a) What factors could lead to the rise of a new species.

b) Only variations that can have an advantage to an individual organism will survive in a population. Do you agree with this statement why or why not.



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35. How can ethanol and ethanoic acid be differentiated on the basis of their physical and chemical properties?



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36. What are the different methods of contraception?



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37. a) What is hypermetropia? What are the two causes of this defect of vision.

b) What is the colour of the clear sky during day time. Give reason for it.



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38. a) What is the resistance of a conductor?

Mention the factors on which the resistance of a conductor depend.

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



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Choose The Correct Answer

1. Lack of oxygen in muscles often leads to cramps among cricketers. This results due to

A. Conversion of pyruvate to ethanol

B. Conversion of pyruvate to glucose

C. Conversion of pyruvate to lactic acid

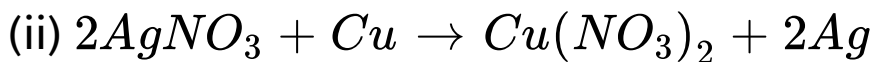
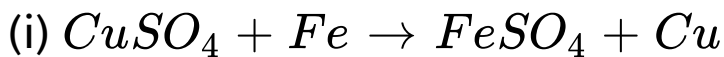
D. Conversion of pyruvate to carbon dioxide and water

Answer: C



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2. Observe the following chemical equations and identify the correct statement.



A. Copper is more reactive than Iron and

Silver

B. Iron is less reactive than Copper and

Silver

C. Copper is more reactive than Silver but
less reactive than Iron

D. Silver is more reactive than Copper and
Iron

Answer: C



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3. In an ecosystem, the 10% energy available
for transfer from one trophic level to the next
is in the form of

A. Heat energy

B. Light energy

C. Chemical energy

D. Mechanical energy.

Answer: C



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4. Which of the following is not an oxidising agent

A. oxygen

B. conc sulphuric acid

C. chlorine

D. hydrogen

Answer: B



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5. An antiseptic to sterilise wounds and syringes in hospitals

A. Propanol

B. Ethylalcohol

C. Butanol

D. Methanol

Answer: B



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6. Which of the following correctly describes the magnetic field near a long straight wire?

A. The field consists of straight line perpendicular to the wire.

B. The field consists of straight lines parallel to the wire.

C. The field consists of radial lines originating from the wire.

D. The field consists of concentric circles centred on the wire.

Answer: D



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7. Most of the sources of energy we are represent stored solar energy. Which of the following is not ultimately derived from the sun's energy

A. Geothermal energy

B. Wind energy

C. Fossil fuel

D. Biomass

Answer: A



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8. The growth of tendrils in pea plants is due to

A. Rapid cell divisions in the tendril in the region away from support

B. Rapid cell division in the tendril in the region of contact to the support.

C. The effect of light

D. The effect of gravity

Answer: A



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