

ZIET BHUBANESWAR
CCT Type Interactive Questions

SUBJECT: CHEMISTRY
STANDARD: IX - XII

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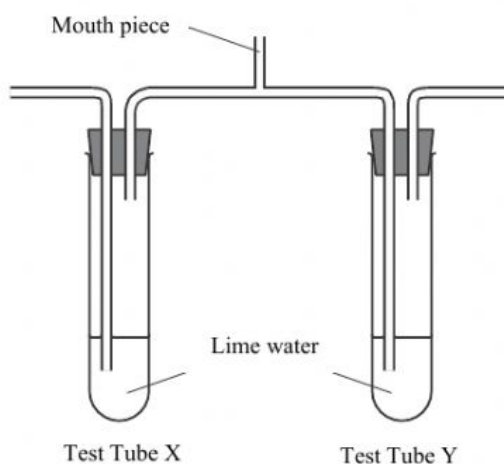
Q1. Process Q happens in cells.

Carbohydrates → process Q → energy released

What is process Q?

- A** growth
- B** nutrition
- C** respiration
- D** sensitivity

Q2. The diagram shows apparatus at the start of a breathing experiment.



A person breathes in and out through the mouthpiece for a short time.

Which row shows the results?

	limewater in tube X	limewater in tube Y
A	stays clear	stays clear
B	stays clear	turns cloudy
C	turns cloudy	stays clear
D	turns cloudy	turns cloudy

Q3. Materials are exchanged between a mother and her fetus across the placenta.

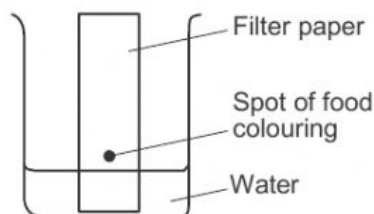
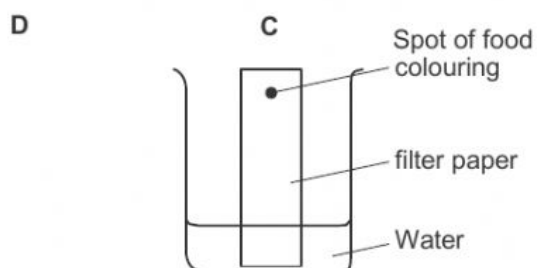
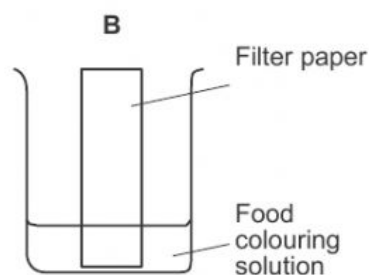
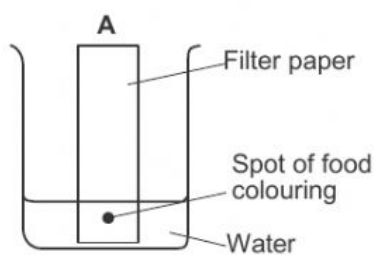
Which row shows the overall direction of movement of these materials?

	mother to fetus	fetus to mother
A	amino acids	glucose
B	amino acids	urea
C	carbon dioxide	glucose
D	carbon dioxide	urea

Q4. What is an undesirable effect of overuse of fertilisers in agriculture?

- A** acid rain
- B** deforestation
- C** eutrophication
- D** global warming

Q5. Which diagram shows how a mixture of dyes in a food colouring are separated?



Q6. Which statement describes a mixture?

- A** It contains molecules made from the same type of atom.
- B** It contains only one type of atom.
- C** It contains two different types of atom joined by chemical bonds.
- D** It contains two different types of atom that can be separated by physical processes.

Q7. Molten sodium chloride is electrolysed.

Which equations represent the reactions at the electrodes?

	anode	cathode
A	$2Cl^- \rightarrow Cl_2 + 2e^-$	$Na^+ + e^- \rightarrow Na$
B	$Cl_2 + 2e^- \rightarrow 2Cl^-$	$Na \rightarrow Na^+ + e^-$
C	$Na \rightarrow Na^+ + e^-$	$Cl_2 + 2e^- \rightarrow 2Cl^-$
D	$Na^+ + e^- \rightarrow Na$	$2Cl^- \rightarrow Cl_2 + 2e^-$

Q8. Which statement about chemical reactions is **not** correct?

- A** A higher temperature increases the rate of an endothermic reaction.
- B** Chemical energy is converted into thermal energy in an endothermic reaction.
- C** Temperature decreases in an endothermic reaction and there is an increase in chemical energy.
- D** Temperature increases in an exothermic reaction because there is an increase in thermal energy.

Q9. Hydrogen peroxide decomposes to form water and oxygen.

Which changes in temperature and in concentration **both** reduce the rate of this reaction?

	temperature of hydrogen peroxide	concentration of hydrogen peroxide
A	decrease	decrease
B	decrease	increase
C	increase	decrease
D	increase	increase

Q10. In which word equation is copper reduced?

- A** anhydrous copper sulfate + water → hydrated copper sulfate
- B** copper carbonate + hydrochloric acid → copper chloride + water + carbon dioxide
- C** copper oxide + hydrogen → copper + water
- D** copper + oxygen → copper oxide

Q11. Acidified barium nitrate solution is added to solution X. A white precipitate forms. What is X?

- A** hydrochloric acid
- B** limewater
- C** potassium chloride
- D** sulfuric acid

Q13. Which element is a non-metallic solid at room temperature?

	melting point / °C	number of electrons in outer shell
A	-210	5
B	-7	7
C	98	1
D	3730	4

Q14. What is an alloy?

- A** a compound containing two metallic elements
- B** a compound containing two non-metallic elements
- C** a mixture containing two metallic elements
- D** a mixture containing two non-metallic elements

Q15. X, Y and Z are three metallic elements.

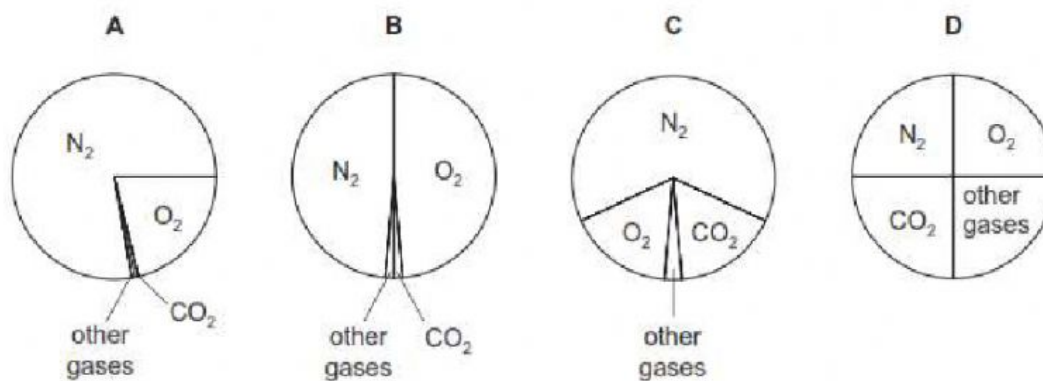
When Z is heated with the oxide of X, the element X is formed.

When X is added to a solution of Y^{2+} ions no reaction takes place.

What is the order of reactivity of the metals?

	least reactive	→	most reactive
A	X	Y	Z
B	Y	X	Z
C	Y	Z	X
D	Z	Y	X

Q16. Which pie chart shows the proportions of gases in clean air?



Q17. Which statement about the products of the fractional distillation of petroleum is **not** correct?

A Fractions obtained from high up the fractional distillation column have low boiling points.

B Fractions obtained from low down the fractional distillation column contain large molecules.

C Large molecules have weak intermolecular attractive forces.

D Refinery gas is used for heating and cooking.