



CHEMISTRY

BOOKS - ICSE

PHYSICAL & CHEMICAL CHANGES

Exercise Physical Chemical Changes

1. Change - is the law of nature which occurs in everyday life. State when a substance [i.e. matter) undergoes a kind of change.



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2. Give a reason why- Freezing of water is a reversible change while burning of a candle an irreversible change.



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3. Give a reason why Change of seasons is a periodic change while change of weather is a non-periodic change



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4. State which of the following pertain to -
chemical changes.

Substance retains its identity



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5. State which of the following pertain to -
chemical changes.

The change is permanent



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6. State which of the following pertain to -
chemical changes.

No new substance is formed.



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7. State which of the following pertain to -
chemical changes.

Is easily reversible



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8. State which of the following pertain to -
chemical changes.

Produces one or more new substances by
change in its composition.



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9. State which of the following pertain to -
chemical changes.

The change is temporary



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10. State which of the following pertain to -
chemical changes.

The composition and properties of the original substance are not altered.



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11. Give four reasons why burning of a magnesium ribbon in air is considered a chemical change.



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12. Compare the energy changes involved during a physical and a chemical change.



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13. Is change of state of matter - a physical or a chemical change. Give reasons.



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14. State which of the following terms connected with change of state of matter i.e. -

a] Melting b] Vaporisation c] Condensation d]

Freezing - pertain to -

(i) Conversion of a liquid into a vapour or gas

[ii] Conversion of a liquid into a solid.

[iii] Conversion of a solid into a liquid on heating.



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15. Potassium chloride is added to water and stirred. A salt solution is obtained which is then boiled leaving behind a residue.

Is the above change physical or chemical



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16. Potassium chloride is added to water and stirred. A salt solution is obtained which is then boiled leaving behind a residue.

Name the residue which remains behind after the salt solution is boiled



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17. Potassium chloride is added to water and stirred. A salt solution is obtained which is then boiled leaving behind a residue.

Is the change reversible or not reversible



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18. Potassium chloride is added to water and stirred. A salt solution is obtained which is then boiled leaving behind a residue.

Are the composition and properties of the original substance altered



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19. Potassium chloride is added to water and stirred. A salt solution is obtained which is then boiled leaving behind a residue.

Give a reason why the above experimentation would not be possible, if calcium carbonate is taken, in place of potassium chloride.



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20. Give a reason why

Heating a platinum wire is a reversible change but, heating a magnesium wire is an irreversible change.



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21. Give a reason why

Addition of zinc nitrate to water is a physical change but, addition of zinc to dilute nitric acid is a chemical change.



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22. Give a reason why

Rusting of iron is a chemical change but, magnetization of iron is a physical change



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23. Select the chemical changes from the following list of changes -

Vaporisation of water into water vapour



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24. Select the chemical changes from the following list of changes -

Boiling of milk



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25. Select the chemical changes from the following list of changes -

Respiration in mammals



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26. Select the chemical changes from the following list of changes -

Rotting of eggs



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27. Select the chemical changes from the following list of changes -

Drying of a fruit.



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28. Select the chemical changes from the following list of changes -

The carbon cycle



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29. Select the chemical changes from the following list of changes -

Occurrence of lightening



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30. Select the chemical changes from the following list of changes -

Breaking of glass



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31. Select the chemical changes from the following list of changes -

Butter turning rancid



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32. Select the chemical changes from the following list of changes -

Glowing of an electric bulb



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33. Select the chemical changes from the following list of changes -

Crystallisation of a salt from its solution



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34. Select the chemical changes from the following list of changes -

Change of seasons.



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Objective Type Questions Physical Chemical Changes

1. Select the correct answer from the choice in bracket to complete each sentence.

A change in which a substance retains its identity is a — [physical/chemical] change



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2. Select the correct answer from the choice in bracket to complete each sentence.

Matter is added or removed during a -
[chemical/physical] change



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3. Select the correct answer from the choice in
bracket to complete each sentence.

Energy required for completion of a physical
change is - [released/absorbed] when the
change is reversed.



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4. Select the correct answer from the choice in bracket to complete each sentence.

Dissolution of lead nitrate in water is deemed as a - [physical/chemical] change.



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5. Select the correct answer from the choice in bracket to complete each sentence.

A change in which matter undergoes a change but the total mass of substance is unaltered is a - [physical/ chemical] change.



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6. State which of the following 1 to 5 pertain to

A: Physical Change B: Chemical change:

Sublimation



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7. State which of the following 1 to 5 pertain to

A: Physical Change B: Chemical change:

Fermentation





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8. State which of the following 1 to 5 pertain to

A: Physical Change B: Chemical change:

Liquefaction or condensation.



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9. State which of the following 1 to 5 pertain to

A: Physical Change B: Chemical change:

Magnetization



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10. State which of the following 1 to 5 pertain to

A: Physical Change B: Chemical change:

Respiration



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11. Give reasons why the following are considered as chemical changes.

Copper carbonate on heat gives copper oxide and carbon dioxide.



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12. Give reasons why the following are considered as chemical changes.

A bright light is seen evolved when a strip of magnesium is heated.



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13. Give reasons why the following are considered as chemical changes.

Sulphur when burnt in air evolves a gaseous acidic product.



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14. Give reasons why the following are considered as chemical changes.

An iron nail kept open in the atmosphere rusts.





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15. Give reasons why the following are considered as chemical changes.

A piece of magnesium strip is dropped into a beaker containing dilute hydrochloric acid.



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16. Match the examples of changes in List I with the correct type of change in List II

List I

1. Burning of paper
2. Ringing of an electric bell
3. Curdling of milk
4. An electric light is switched on.
5. Melting of butter

List II

- A: Physical change*
B: Chemical change



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17. Name the following.

The salt obtained when a chemical change takes place on addition of iron to dilute sulphuric acid.



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18. Name the following.

The product obtained during a physical change when water converts from a liquid into a solid.



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19. Name the following.

The product of the chemical change on keeping a polished iron nail exposed to the atmosphere.



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20. Name the following.

A form of energy required for a chemical change.



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21. Name the following.

The gaseous product of the chemical change which takes place during respiration in living organisms.



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