



CHEMISTRY

BOOKS - PEARSON IIT JEE

FOUNDATION

MOCK TEST

Exercise

1. The order of diffusion of three states of matter is $A > B > C$. Identify the true

statement regarding A, B and C.

A. The order of density is also the same.

B. The order of compressibility is also the same.

C. The order of intermolecular forces is also the same.

D. The order of rigidity is $B > C > A$.

Answer: B



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2. A and B are two liquids at room temperature taken in containers of the same dimension and only liquid A can get converted into gaseous state below its boiling point. Identify the false statement regarding A and B.

(A) A is highly volatile and the process associated with B is quick.

(B) The process associated with A is a surface phenomenon and liquid B is less volatile.

(C) The process associated with B causes cooling and the process associated with A is boiling.

(D) The process associated with A is slow and the process associated with B is a surface phenomenon.

A. B and C

B. C and D

C. A and C

D. B and D

Answer: B



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3. Find the odd one out with respect to valency.

A. Ferrous

B. Mercurous

C. Stannous

D. Cupric

Answer: B



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4. Find the odd one out with respect to the number of constituent atoms.

A. Nitrogen pentoxide

B. Sulphuric acid

C. Calcium hydroxide

D. Ferric hydroxide

Answer: C



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5. Arrange the following compounds in the increasing order of total number of atoms.

(A) Aluminium phosphate

(B) Ammonium carbonate

(C) Magnesium sulphide

(D) Sodium bisulphate

(E) Silver nitrate

A. BEADC

B. CDAEB

C. CEADB

D. BDAEC

Answer: C



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6. Descriptions of some reactions are given below. Arrange them in the order of chemical displacement, decomposition, double displacement and chemical combination.

(A) Formation of precipitate.

(B) Liberation of H_2 gas when metal reacts with acid.

(C) Formation of ammonia from nitrogen and

hydrogen.

(D) Liberation of oxygen by heating of potassium nitrate.

A. BADC

B. CDAB

C. CADB

D. BDAC

Answer: D



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7. Which among the following acids form one normal salt and one acidic salt?

A. Acetic acid

B. Phosphorous acid

C. Phosphoric acid

D. Both (b) and (c)

Answer: B



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8. Identify the electronic configuration corresponding to the element which can form neutral oxide.

A. 2, 4

B. 2, 8, 6

C. 2, 5

D. Both (a) and (c)

Answer: D



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9. The process where tin is used to preserve edible food materials is called.....

A. galvanization

B. tinning

C. alloying

D. electroplating

Answer: B



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10. Nitrogen, oxygen, helium, carbon dioxide and water vapour are the components of air. Arrange the properties given below in the order of gases given above.

(A) Colourless, odourless gas, acidic in nature, and neither combustible nor a supporter of combustion

(B) Colourless, odourless gas, inert in nature, and dilutes the activity of active component of air

Colourless gas and forms acidic and basic compounds with non-metals and metals, respectively

(D) Colourless gas, inert in nature, and present in trace amounts

(E) Gaseous form, present in variable amounts, and chemically active along with the active component of air

A. BCDAE

B. DAECB

C. BCADE

D. DEABC

Answer: A



11. Passing the hard water sample through a chemical exchanges the ions with the ion of the same charge. Identify the chemical, the ion that replaces and the type of hardness being removed.

A. Permutit, Na^{+} ion, permanent hardness

B. Sodium carbonate, Ca^{+2} ion, temporary
hardness

C. Calcium hydroxide, Mg^{+2} ion,

temporary hardness

D. Sodium chloride, Na^{+} ion, permanent

hardness

Answer: A



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12. A little amount of sulphuric acid is added in the process of electrolytic decomposition of water. Two gases, the one liberated at negative

electrode puts off the burning splinter and burns with blue flame and another gas at positive electrode, glows the burning splinter and is a non-combustible gas. The gases liberated at negative and positive electrodes, respectively, are _____

A. hydrogen and sulphur dioxide

B. hydrogen and oxygen

C. oxygen and hydrogen

D. carbon dioxide and oxygen

Answer: B



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13. A medicine, extracted from the bark of a plant, is used in the treatment of malaria. Identify the medicine.

A. Quinine

B. Tetracycline

C. Penicillin

D. Sulfadiazine

Answer: A



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14. The characteristic uses of the different types of construction materials are given below. Arrange them in the order of their respective names.

(A) The structural material for the construction of walls of a building

(B) Mixed with definite proportion of water, and used in filling the gaps of construction.

(C) Concrete reinforced with structural steel and is used in the construction of bridges,

prefabricated structures, etc

(D) Construction material used for joining bricks and plastering.

(E) Construction material used for casting roofs, pillars and beams

(RCC, cement mortar, cement, brick and concrete)

A. DBACE

B. CDBAE

C. EDCBA

D. DCBEA

Answer: B



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15. Detergents are superior to soaps because they -----.

- A. are environment friendly
- B. form lather even with hard water
- C. are light in weight
- D. are easy to prepare

Answer: B



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16. Which of the following fertilizers do not replenish deficiency of nitrogen in the soil?

- A. Ammonium nitrate
- B. Calcium nitrate
- C. Super phosphate of lime
- D. Ammonium sulphate

Answer: C



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17. Arrange the following acids in the decreasing order of their basicities.

(A) Phosphoric acid

(B) Hydrochloric acid

(C) Sulphurous acid

A. ACB

B. ABC

C. BCA

D. CBA

Answer: A



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18. Arrange the following indicators in the order of their colours in the acidic solution.

The colours are red, pink, colourless and yellow. The indicators are

(A) Turmeric

(B) Litmus

(C) Methyl orange

(D) Phenolphthalein

A. CBAD

B. CBDA

C. BCAD

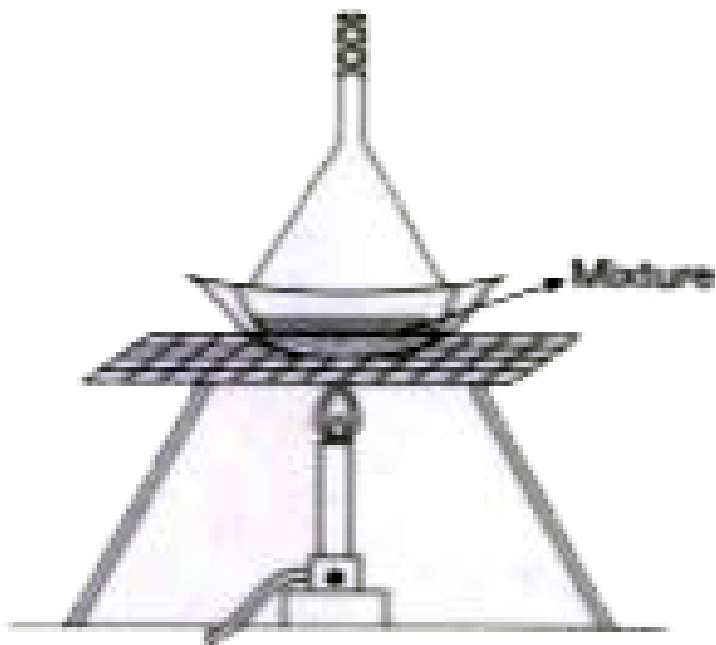
D. BCDA

Answer: D



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19. Identify the mixture that can be separated by the diagram shown below.



A. Salt and sugar

B. Salt and onion

C. Sugar and sawdust

D. Sawdust and iron fillings

Answer: B



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20. Arrange the following in the order of homogeneous mixture, compound, heterogeneous mixture and element.

(A) Sugar solution

(B) Sodium

(C) Sugar

(D) Water and oil

A. ACBD

B. ACDB

C. CADB

D. CABD

Answer: B



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21. Atomicity of ozone is _____ .



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22. Atomicity of helium is ____



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23. In an atom, the mass of total positive charge present is 7348 times to that of the mass of a negatively charged particle. What is

the atomic number of the element?

$$(m_e = 9.1 \times 10^{-31} kg, m_p = 1.67 \times 10^{-27} kg)$$

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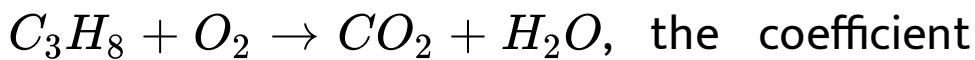
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24. The maximum number of electrons that can be accommodated in M-shell is.....



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25. In the combustion reaction



the coefficient for O_2 is



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