



# CHEMISTRY

## BOOKS - NTA MOCK TESTS

### NTA NEET SET 35

#### Chemistry

1. A compound possesses 8% sulphur by mass.

The least molecular mass is

A. 300

B. 400

C. 200

D. 255

**Answer: B**



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2. For which subatomic particle the ratio of charge and mass would be greater. (A) Proton, (B) Alpha particle, (C) Neutron, (D) Electron

A. Proton

B. Alpha particle

C. Neutron

D. Electron

**Answer: D**



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3. With which of the given pairs,  $CO_2$  resembles

A.  $HgCl_2$ ,  $C_2H_2$

B.  $HgCl_2$ ,  $SnCl_4$

C.  $C_2H_2$ ,  $N_2O$

D.  $SnCl_4$  and  $NO_2$

**Answer: A**



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4. Molarity , normality and molality of the solution containing 22% of

$Al_2(SO_4)_3$  {  $d = 1.253g/mL$  } by weight are

A.  $0.825M$ ,  $48.3N$ ,  $0.825m$

B.  $0.805M$ ,  $4.83N$ ,  $0.825m$

C.  $4.83M$ ,  $M$ ,  $4.83N$ ,  $4.83m$

D. None

**Answer: B**



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5. How many molecules are there in the unit cell of sodium chloride?

A. 2

B. 4

C. 6

D. 8

**Answer: B**



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6. At constant volume, for a fixed number of moles of a gas, the pressure of the gas increases with the rise in temperature due to

- A. decreased rate of collision amongst molecules
- B. Increase in molecular attraction
- C. Increase in the average molecular speed
- D. Decrease in mean free path

**Answer: C**



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7. Calculate the average life (in minutes) , if the half - life of a radionuclide is 69.3 . Minutes

A. 100

B.  $1/100$

C.  $69.3 \times 14.4$

D.  $0.693 \times 69.3$

**Answer: A**



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8. In a reaction



The formation of  $AB_4$  is not favoured by

A. High temperature , high pressure

B. High temperature , low pressure

C. Low temperature , low pressure

D. Low temperature ,high pressure

**Answer: D**



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9. The aqueous solution of sodium cyanide is basic in nature. This is due to the hydrolysis of

A. natural

B. amphoteric

C. acidic

D. basic

**Answer: D**



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10. Enthalpy is equal to

A. Work (W) done by a system

B. Product of pressure (P) and volume (V)  
of gas

C. Internal energy (E) +PV

D. Internal energy (E)

**Answer: C**



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11. For the reaction  $N_2 + 3H_2 \rightarrow 2NH_3$  if

$\frac{\Delta[NH_3]}{\Delta t} = 2 \times 10^{-4} \text{ mol L}^{-1} \text{ s}^{-1}$ , the value  
of  $\frac{-\Delta[H_2]}{\Delta t}$  would be

A.  $1.5 \times 10^{-4} \text{ mol L}^{-1} \text{ s}^{-1}$

B.  $3 \times 10^{-4} \text{ mol L}^{-1} \text{ s}^{-1}$

C.  $4 \times 10^{-4} \text{ mol L}^{-1} \text{ s}^{-1}$

D.  $6.5 \times 10^{-4} \text{ mol L}^{-1} \text{ s}^{-1}$

**Answer: B**



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12. Identify the incorrect statement among the following ?

A. A salt bridge is used to eliminate liquid junction potential in a galvanic cell

B. The Gibbs free energy change ,  $\Delta G$  is related with electromotive force (E), as

$$\Delta G = - nFE$$

C. Nernst equation for single electrode potential is given by

$$E = E^\circ - \frac{RT}{nF} \ln [M^{n+}]$$

D. The maximum theoretical efficiency of a hydrogen oxygen fuel cell is 33%

**Answer: D**



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**13.** Oxidation state of chlorine in perchloric acid is

A. +5

B.  $-1$

C.  $-7$

D.  $+7$

**Answer: D**



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**14.** Which is not correct for physical adsorption?

- A. Involves the weak attractive interaction between the adsorbent and adsorbate
- B. Increase with increase of temperature
- C. Is irreversible in nature
- D. Involves the chemical interactions between the adsorbent and adsorbate

**Answer: A**



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15. In the periodic table from left to right in a period, the atomic volume

A. Decrease

B. Increase

C. Remain same

D. None of these is correct

**Answer: D**



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**16.** Which of the given below is not an ore of metal

A. Zinc blende

B. Bauxite

C. Malachite

D. Pig iron

**Answer: D**



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17. In Bosch's process, which gas is utilised for the production of hydrogen gas

A. Coal gas

B. Water gas

C. Producer gas

D. None of these

**Answer: B**



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**18.** If two compounds have the same empirical formula but different molecular formulae they must have

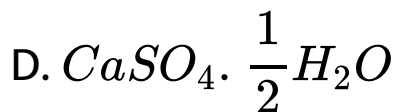
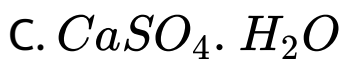
- A. Same viscosity
- B. Different percentage composition
- C. Different molecular weight
- D. Some vapour density

**Answer: C**



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19. Plaster of paris is

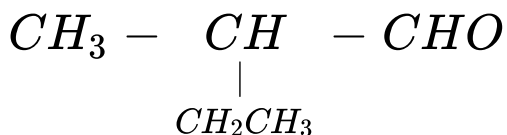


**Answer: D**



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20. The IUPAC name of given compound is



- A. Butan -2- aldehyde
- B. 2- methylbutanal
- C. 3 - methyl isobutyraldehyde
- D. 2 - ethylpropanal

**Answer: B**



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21. Solder is an alloy of :

A. Sn + Zn

B. Pb + Zn

C. Pb + Sn

D. Pb + Zn + Sn

**Answer: C**



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22. Which among the following is most stable carbonation

A. iso - propyl

B. Triphenylmethyl cation

C. Ethyl cation

D. t - Butyl cation

**Answer: B**



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23. Which of the following is most polarised among noble gases ?

A. Kr

B. He

C. Ar

D. Xe

**Answer: D**



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24. Which of the following statements is not correct about the electronic configuration of gaseous chromium atom

A. It has 5 electrons in 3d and one electron in 4s orbitals

B. The principal quantum numbers of its valence electrons are 3 and 4

C. It has 6 electrons in 3d orbital

D. Its valence electrons have quantum number  $l = 0$

**Answer: C**



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**25.** Which of the following octahedral complex does not show geometrical isomerism ( $A$  and  $B$  are monodentate ligands) ?



**Answer: A**



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**26.** Addition of a solution of oxalate to an aqueous solution of mixture of  $Ba^{2+}$ ,  $Sr^{2+}$  and  $Ca^{2+}$  will precipitate

A.  $Ca^{2+}$

B.  $Ca^{2+}$  and  $Sr^{2+}$

C.  $Ba^{2+}$  and  $Sr^{2+}$

D. All the three

**Answer: D**



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27. When alcoholic solution of ethylene dibromide is heated with granulated zinc, the compound formed is

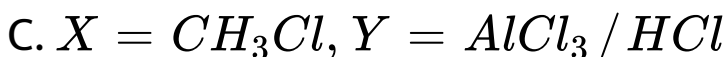
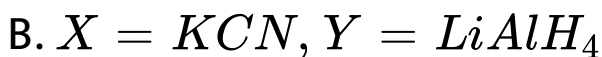
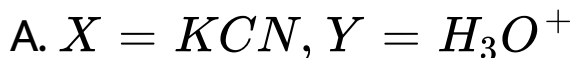
- A. Ethylene
- B. Cyclobutane
- C. Butane
- D. Ethyne

**Answer: A**



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**28.** Alkyl halide undergoes sequence of reaction to form primary amine. Identify X and Y in the following sequence





**Answer: B**



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**29.** What is obtained when chlorine is passed in boiling toluene and the product is hydrolysed?

A. o - Cresol

B. p - Cresol

C. 2,4 - Dihydroxytoluene

D. Benzyl alcohol

**Answer: D**



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**30.** To distinguish between formaldehyde and acetaldehyde, we require

A. Tollen's reagent

B. Fehling's Solution

C. Schiff's reagent



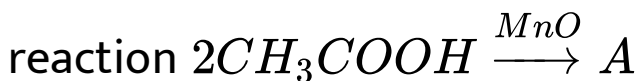
## D. Caustic soda Solution

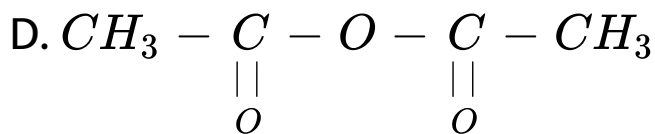
**Answer: D**



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**31.** Identify the product 'A' in the given





**Answer: C**



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**32.** Starting from propanoic acid, the following

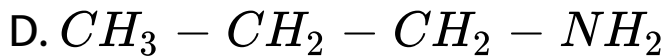
reaction were carried acid



What is the

compound?





**Answer: B**



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**33.** Which of the following is a step-growth polymer?

A. Polyisoprene

B. Polythene

C. Nylon

D. Polyacrylonitrile

**Answer: C**



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**34.** Artificial sweeteners.

A. Sucrose add to calorie intake and therefore many people prefer to use

artificial sweeteners.

B. Ortho - sulphobenzimide , also called

saccharin is the first popular artificial

sweetening agent

C. Saccharin is about 550 times as sweet as

cane sugar

D. All the above .

**Answer: D**



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**35.** The value of Planck's constant is  $6.63 \times 10^{-34} \text{ J}\cdot\text{s}$ . The velocity of light is  $3.0 \times 10^8 \text{ m}\cdot\text{s}^{-1}$ . Which value is closest to the wavelength in nanometers of a quantum of light with frequency  $8 \times 10^{15} \text{ s}^{-1}$ ?

A.  $5 \times 10^{-18}$

B.  $5 \times 10^{-18}$

C.  $5 \times 10^{-18}$

D. 40

**Answer: D**



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36. Calculate the pH of  $0.05M$  sodium acetate solution, if the  $pK_a$  of acetic acid is 4.74.

A. 3.37

B. 4.37

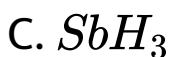
C. 7.74

D. 0.474

**Answer: A**



37. Which of the following hydrides has the lowest melting point



**Answer: B**





**38.** The Gibbs free energy ( $\Delta G$ ) is related with cell potential (  $E$  ) by  $\Delta G = -nFE$  , the cell reaction will be spontaneous if

A.  $G$  is negative

B.  $G$  is positive

C.  $E$  is negative

D.  $E$  is positive

**Answer: D**



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39. Which of the following statements about zero order reaction is not true

A. Its unit is  $\text{molL}^{-1}\text{time}^{-1}$

B. The graph between  $\log(\text{reactant})$  versus rate of reaction is a straight line

C. The half for zero order reaction is independent of initial concentration.

D. Rate of reaction is independent of concentration of reactants

**Answer: C**



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**40.** What is the equivalent mass of  $IO_4^-$  when it is converted into  $I_2$  in acid medium ?

A.  $M/14$

B.  $M/7$

C.  $M/5$

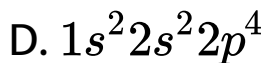
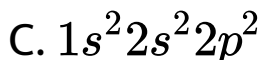
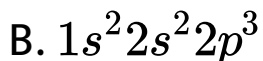
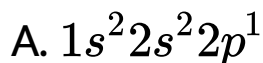
D.  $M/3$

**Answer: B**



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**41.** Which one of the following elements has the highest ionisation energy?



**Answer: B**



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**42.** EAN of iron in  $K_4[Fe(CN)_6]$  is

A. 33

B. 35

C. 36

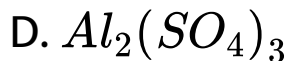
D. 26

**Answer: C**



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43. White vitriol is



Answer: C



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44. Which statement about ribose is incorrect?

A. It is polyhydroxy compound

B. It is an aldoses sugar

C. It has six carbon atoms

D. It exhibits optical activity

**Answer: C**



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**45.** A broad spectrum antibiotic is :

A. kills the antibodies

B. acts on a specific antigen

C. acts on different antigens

D. acts on both the antigens and  
antibodies

**Answer: C**



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