Sample	Paper-Chemistry
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	Chemistry
	<u>enermotry</u>
1. pH of a substance is:	
A) log [H ⁺]	
BJ-109 [T] C) log [H ⁻]	
D)-log [H ⁻]	
/ /31]	
2. Which order has the identical unit of rat	e of reaction and rate constant?
A) Fractional Order Reaction	
b) Zero Urder Reaction	
D) Second Order Reaction	
3. Which of the following statement is corr	ect?
Ş	
A) (n-1)d subshell has lower energy than r	ns subshell
B) (n-1)d subshell has higher energy than	ns subshell
C) $(n+1)d$ subshell has lower energy than	nt subshell
וו Subshell has lesser energy than NS SU	
4. The specific conductance of an electroly	te is:
A) Increases with dilution	
B) Decrease with dilution	
C) Either may increase or decrease	
D) No change	
5. What happens to entropy in the evapora	ation of water?
A) It decreases	
B) It increases	
C) It does not change	
D) Remains zero	
6. Which is the correct option for subbur s	solution?
A) Lyophilic Colloid	
B) Lyophobic Colloid	
C) Gel	
D) Emulsion	

7. In the reduction of dichromate by Fe(II), the number of electrons involved per chromium atom is:

- A) 3
- B) 4
- C) 2
- D) 1

8. A real gas is expected to behave more or less ideally at:

- A) Low temperature and low pressure
- B) Low temperature and high pressure
- C) High temperature and low pressure
- D) High temperature and high pressure
- 9. Which of the following represents a multimolecular colloidal particles?
- A) Sol of sulphur
- B) Lipids
- C) Carbohydrate
- D) Proteins

10. Which one of the following molecule / ion shows regular tetrahedral structure?

- A) SO₂
- **B)** BF₄⁻
- C) XeF₆
- D) [Ni(CN)₄]²⁻
- 11. Which of the following statements is correct for carbon monoxide?
- A) A double bond between carbon and oxygen
- B) 1 σ , 1 π and 1 coordinate bond between carbon and oxygen
- C) One lone pair of electrons only on oxygen atom
- D) 1 σ & 2 π bonds between carbon and oxygen.

12. Which of the following is the Alicyclic Compounds?

- A) Aromatic Compounds
- B) Aliphatic Cyclic Compounds
- C) Heterocyclic Compounds
- D) Aliphatic compound

13. Which among the following is the Baeyer's reagent?

- A) Alkaline permanganate solution
- B) Acidified permanganate solution
- C) Neutral permanganate solution
- D) Aqueous bromine solution

14. Which of the following expressions gives the de Broglie relationship?

A) p = h/vB) $\Lambda = h/mv$ C) $h = mv/\Lambda$ D) $\Lambda = v/p$

15. At 25°C, the highest osmotic pressure is exhibited by 0.1M solution of:

A) Glucose B) $K_3[Fe(CN)_6]$ C) Ca(NO₃)₂ D) Al₂(SO₄)₃

16. Which of the following shows a negative deviation from Raoult's law?

- A) Acetone –Benzene
- B) Acetone Ethanol
- C) Acetone –Chloroform
- D) Benzene Methanol

17. AI^{3+} has lower ionic radius than Mg^{2+} ion because:

- A) Al atom has less number of neutrons than Mg
- B) Their electro negativities are different
- C) Mg has a higher ionization potential than Al
- D) Al³⁺ has a higher nuclear charge than Mg²⁺

18. Which of the following correctly represents Thermoplastics?

- A) Intermolecular forces are strong
- B) Intermolecular forces are weak
- C) They cannot be remoulded into any shape
- D) They have very high glass transition temperature

19. Lithium is the strongest reducing agent among alkali metals due to which of the following factors?

A) Ionisation energy

- B) Electron affinity
- C) Hydration energy
- D) Lattice energy

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20. Gallium doped with germanium is a:
A) n-type semiconductor
B) p-type semiconductor
C) p-n type semiconductor
D) p-n-p type semiconductor
21. The EAN of the complex $[Co(NH_3)_6Cl_3]$ is:
A) 33
B) 35
22. In K_4 [Fe(CN) ₆] complex. What is the hybridization of Fe?
$A) d^2 sn^2$
B) d^2sp^3
C) dsp^2
D sp ³
23. Which one is the correct IUPAC name of Iso butyl bromide?
A) 1-bromo butane
B) 2-bromo butane
C) 1-bromo-2-methyl propane
D) 2-bromo-2-mehtyl butane
24. What is the indication for the appearance of red colour in Victor Meyer's test?
A) 1º Alcohol
B) 2 ^o Alcohol
C) 3 ^o Alcohol
D) Phenol

25. Which catalyst is used in the equation, $C_6H_5CHO + CH_3COCH_3 \rightarrow C_6H_5CH = CHCOCH_3$?

A) NaOH

- B) KMNO₄
- C) $K_2Cr_2O_7$
- D) LiAlH₄

26. Which one of the following protein act as antibodies?

- A) Albumin
- B) Haemoglobin
- C) Actin
- D) Gamma globulins

27. What is a biochemical messenger called as?

- A) A transport protein
- B) A harmone
- C) An enzyme
- D) An antigen

28. The conversion of an amide to amine by reaction with Br_2 and KOH is called as:

- A) Carbyl amine reactionB) Hoffman's reaction
- C) Parkin's reaction
- D) Aldol reaction

29. $2SO_2 + O_2 \rightleftharpoons 2SO_3 + 185.2$ k According to Le Chatelier's principle, best yields of sulphur trioxide are obtained using:

A) High pressure and high temperature

- B) High pressure and low temperature
- C) Low pressure and high temperature
- D) Low pressure and low temperature

30. What is the electron configuration for Berkelium?

A) [Xe]7s²5f⁹

- B) $[Xe]7s^25f^96'd^1$
- C) [Rn]7s²5f⁹
- D) $[Rn]7s^25f^96d^1$