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# REVISION TEST, APRIL - 2021

## STANDARD - XII

Time : 3.00 hrs

CHEMISTRY

Marks: 70

Part - I

Choose the correct answer.

15×1=15

- 1) Which one of the following reaction represents calcination?
  - a)  $2Zn + O_2 \rightarrow 2ZnO$
  - b)  $2ZnS + 3O_2 \rightarrow 2ZnO + 2SO_2$
  - c)  $MgCO_3 \rightarrow MgO + CO_2$
  - d) Both (a) and (c)
- 2) An aqueous solution of borax is
  - a) Neutral
  - b) Acidic
  - c) Basic
  - d) Amphoteric
- 3) Which of the following is not  $sp^2$  hybridised?
  - a) Graphite
  - b) Graphene
  - c) Fullerene
  - d) dry ice
- 4) Among the following which is the strongest Oxidizing agent?
  - a)  $Cl_2$
  - b)  $F_2$
  - c)  $Br_2$
  - d)  $I_2$
- 5) Which of the following compounds is colourless?
  - a)  $Fe^{3+}$
  - b)  $Ti^{4+}$
  - c)  $Co^{2+}$
  - d)  $Ni^{2+}$
- 6) IUPAC name of the complex  $K_3[Al(C_2O_4)_3]$  is
  - a) Potassium trioxalato aluminium (III)
  - b) Potassium trioxalato aluminate (II)
  - c) Potassium trioxalato aluminate (III)
  - d) Potassium trioxalato aluminated (III)
- 7) In calcium fluoride having the fluorite structure the coordination number of  $Ca^{2+}$  ion and  $F^-$  ion are
  - a) 4 and 2
  - b) 6 and 6
  - c) 8 and 4
  - d) 4 and 8
- 8) Assertion: Rate of reaction doubles when the concentration of the reactant is doubles if it is a first order reaction.  
Reason: Rate constant also doubles.
  - a) Both assertion and reason are true and reason is the correct explanation of assertion.
  - b) Both assertion and reason are true but reason is not the correct explanation of assertion.
  - c) Assertion is true but reason is false.
  - d) Both assertion and reason are false.
- 9) Which of these is not likely to act as Lewis base?
  - a)  $BF_3$
  - b)  $PF_3$
  - c) Co
  - d)  $F^-$
- 10) Which of the following electrolytic solution has the least specific conductance.
  - a) 2N
  - b) 0.002N
  - c) 0.02N
  - d) 0.2N
- 11) Match the following:-
 

A) Pure nitrogen	i) Chlorine
B) Haber process	ii) Sulphuric acid
C) Contact process	iii) Ammonia
D) Deacon process	iv) Sodium azide

  - a) A-i, B-ii, C-iii, D-iv
  - b) A-ii, B-iv, C-i, D-iii
  - c) A-iii, B-iv, C-ii, D-i
  - d) A-iv, B-iii, C-ii, D-i
- 12) In Victor Meyer's test isobutyl alcohol gives \_\_\_\_\_ colour.
  - a) Red
  - b) Blue
  - c) Yellow
  - d) Colourless
- 13) Which one of the following reaction is an example of disproportionation reaction.
  - a) Aldol condensation
  - b) Cannizzaro reaction
  - c) Benzoin condensation
  - d) None of these

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- 14) The product formed by the reaction an aldehyde with a primary amine  
 a) Carboxylic acid b) Aromatic acid c) Schiff's base d) Ketone
- 15) In a protein, various amino acids linked together by  
 a) Peptide bond b) Dative bond c)  $\alpha$ -Glycosidic bond d)  $\beta$ - Glycosidic bond

## Part - II

II. Answer any six questions. Question No. 19 is compulsory:- 6×2=12

- 16) Which type of ores can be concentrated by froth floatation method? Give two examples for such ores?
- 17) What is inert pair effect?
- 18) What are interhalogen compounds? Give examples.
- 19) Which is more stable?  $Fe^{2+}$  (or)  $Fe^{3+}$  - explain.
- 20) What are the characteristics of ionic crystals.
- 21) Give examples for first order reaction?
- 22) What is common ion effect?
- 23) Write short note on Coupling reaction?
- 24) Write Gomberg reaction.

## Part - III

III. Answer any six questions. Question No. 33 is compulsory:- 6×3=18

- 25) How Titanium is refined by Van-Arkel method?
- 26) Give the uses of Borax
- 27) What transition elements forms Complex compounds?
- 28) What are the limitation of VB theory?
- 29) What are the difference between order and molecularity of a reaction?
- 30) Write Faradays Law of electrolysis?
- 31) What is peptisation? Give example.
- 32) Explain the reducing nature of formic acid?
- 33) Write note on Gabriel Phthalimide reaction.

## Part - IV

Answer all the questions:-

- 34) a) How will you identify Borate radical? (3) 5×5=25  
 b) What are the uses of Helium? (2) [or]  
 What is Lanthanide contraction? Write its consequences of lanthanide contraction.
- 35) Write the postulates of Werner's theory of Coordination compounds. [or]  
 a) What are the difference between Crystalline solids and Amorphous solids? (3)  
 b) What is 'F' Center? (2)
- 36) Derive the integrated rate equation for first order reaction? [or]  
 Define and derive an expression for Ostwald's dilution law.
- 37) Derive Nernst equation. [or]  
 Write the mechanism of Aldol condensation.
- 38) Write short note on i) Carbylamine reaction ii) Hoffmann's degradation reaction. [or]  
 Elucidate the structure of Fructose.

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