FBD-12-18

Roll No. : _____

Objective
Paper Code
8481

Intermediate Part Second (New Scheme)
CHEMISTRY (Objective)
Time: 20 Minutes Marks: 17

Q.No.1 **You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill the relevant circle in front of that question number on computerized answer sheet. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero marks in that question. Attempt as many questions as given in objective type question paper and leave other circles blank.**

S.#	Questions	A	B	C	D
1	Which statement is incorrect?	All the metals are good conductor of electricity	All the metals are good conductor of heat	All the metals form positive ions	All the metals form acidic oxides
2	Which does not belong to alkaline-earth metals?	Be	Ra	Ba	Rn
3	Chemical composition of colemanite is:	A $Ca_2B_6O_{11} \cdot 5H_2O$		C $Na_2B_4O_7 \cdot 4H_2O$	
		B $CaB_4O_7 \cdot 4H_2O$		D $CaNaB_5O_9 \cdot 8H_2O$	
4	Laughing gas is chemically:	NO	N_2O	NO_2	N_2O_4
5	Which is the strongest acid:	$HC\ell O$	$HC\ell O_2$	$HC\ell O_3$	$HC\ell O_4$
6	Which is a typical transition metal?	Sc	Y	Ra	Co
7	The state of hybridization of carbon in methane is:	sp^3	sp^2	sp	dsp^2
8	Synthetic rubber is made by polymerization of:	Chloroform	Acetylene	Divinyl acetylene	Chloroprene
9	The electrophile in aromatic sulphonation is:	H_2SO_4	HSO_4^-	SO_3	SO_3^+
10	Which is not a nucleophile?	H_2O	H_2S	BF_3	NH_3
11	Rectified spirit contains alcohol about:	80%	85%	90%	95%
12	Which compounds will not give iodoform test?	Acetaldehyde	Acetone	Butanone	3-Pentanone
13	Which reagent is used to reduce a carboxylic acid to an alcohol?	$LiA\ell H_4$	HI/P	H_2/Ni	H_2/Pt
14	The reaction between a fat and NaOH is called:	Esterification	Hydrogenolysis	Fermentation	Saponification
15	Which three elements are needed for the healthy growth of plants?	N, S, P	Na, Ca, P	N, P, K	N, K, C
16	Ecosystem is a smaller unit of:	Lithosphere	Biosphere	Atmosphere	Hydrosphere
17	A single chloride free radical can destroy how many ozone molecules?	100	100000	10000	1000

FBD-12-18

Intermediate Part Second (New Scheme) Roll No. _____

CHEMISTRY (Subjective)

Time: 02:40 Hours Marks: 68

SECTION – I

2. **Write short answers to any EIGHT parts.** 16
   (i) Why Na_2O is basic and P_2O_5 is acidic in character although both Na and P belong to same period?
   (ii) Why second electron affinity value of an electron has positive sign?
   (iii) What is milk of magnesia? Give its use.
   (iv) Give any four uses of sodium silicate.
   (v) How "$A\ell$" (Aluminum) reacts with hydrogen and halogen?
   (vi) Give four uses of Boric acid.
   (vii) Why is SO_3 dissolved in H_2SO_4 and not in H_2O in contact process?
   (viii) What is aqua regia? How it dissolves gold?
   (ix) Give four dissimilarities between sulphur and oxygen.
   (x) How detergents are threat to aquatic animal life?
   (xi) What is COD? How it is measured?
   (xii) What is a functional group? Name functional group present in alcohol and ether.

3. **Write short answers to any EIGHT parts.** 16
   (i) What are typical and non-typical transition elements?
   (ii) What is coordination sphere? Give one example.
   (iii) What is Clemmensen reduction? Give one example.
   (iv) Convert propyne into acetone.
   (v) Benzene is polymer of acetylene. Justify.
   (vi) Explain Wurtz synthesis with one example.
   (vii) Explain Williamsons synthesis of ether.
   (viii) Ethanol has higher boiling point than diethyl ether. Give reason.
   (ix) Explain Fehling's solution test.
   (x) Write two uses of formaldehyde.
   (xi) What is Zwitter ion? Give example.
   (xii) Write mechanism for the reaction between acetic acid and NH_3?

4. **Write short answers to any SIX parts.** 12
   (i) Define saponification number with a suitable example.
   (ii) Write two points of difference between a fat and an oil.
   (iii) Differentiate with at least two points between amylose and amylopectin.
   (iv) Name woody and non-woody raw materials for production of pulp (two each).
   (v) Describe the term setting of a cement.
   (vi) Write formula for (a) Calcium super phosphate (b) Diammonium phosphate.
   (vii) What is iodized salt?
   (viii) Why iodine has metallic luster? Justify.
   (ix) Name any two methods to manufacture bleaching powder. Also give reaction for this.

SECTION – II Attempt any THREE questions. Each question carries 08 marks.

5. (a) Write a brief note on oxidation state of elements in groups of modern periodic table? 04
   (b) Describe the role of lime in industry. Write eight points. 04

6. (a) How is $KMnO_4$ prepared by (i) Stadeler's process (ii) Electrolytic oxidation process. 04
   (b) How is oil spillage affecting the marine life? 04

7. (a) Discuss cis-trans isomerism giving two examples. 04
   (b) Describe the stability of benzene on the basis of heat of hydrogenation. 04

8. (a) How is ethyne prepared by Kolbe's electrolytic method? Write its mechanism. 04
   (b) How is ethanol prepared from molasses and starch by fermentation? 04

9. (a) Write the reactions of Grignard reagent with: (i) Alcohol (ii) CO_2 (iii) $C\ell - CN$ (iv) $CH_3 - \overset{O}{\overset{\|}{C}} - H$ 04
   (b) Write the reactions of acetaldehyde with: 04
   (i) $NaBH_4/H_2O$ (ii) H_2/Pd (iii) Dry $HC\ell/C_2H_5OH$ (iv) $I_2/NaOH$