

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN
OBJECTIVE KEY FOR INTERMEDIATE ANNUAL EXAMINATION, 2022

Name of Subject: **CHEMISTRY**

Session: **2020-2022**

Group: **1st**

Group: **2nd**

Q. Nos	Paper Code 4481	Paper Code 4483	Paper Code 4485	Paper Code 4487
1	C	B	D	C
2	D	B	D	A
3	C	D	D	D
4	C	D	C	B
5	D	C	A	B
6	C	D	D	D
7	C	C	B	D
8	D	C	B	C
9	D	D	D	D
10	D	C	D	C
11	C	C	C	C
12	A	D	D	D
13	D	D	C	C
14	B	D	C	C
15	B	C	D	D
16	D	A	C	D
17	D	D	C	D
18				
19				
20				

Q. Nos	Paper Code 4482	Paper Code 4484	Paper Code 4486	Paper Code 4488
1	A	B	A	B
2	A	A	B	C
3	C	A	A	D
4	B	C	A	D
5	C	B	B	C
6	D	C	C	A
7	D	D	B	B
8	C	D	D	A
9	A	C	B	A
10	B	A	A	B
11	A	B	A	C
12	A	A	C	B
13	B	A	B	D
14	C	B	C	B
15	B	C	D	A
16	D	B	D	A
17	B	D	C	C
18				
19				
20				

Key پرچہ / مارکنگ سکیم

ہم نے مضمون **کیمیائی** پرچہ **کیمیائی** گروپ **I/II** سکیم **نیا** انٹرمیڈیٹ سالانہ امتحان 2022 کا سوالیہ پرچہ انشائیہ و معروضی (Subjective & Objective) کو بنظر عمیق چیک کر لیا ہے یہ پرچہ Syllabus کے عین مطابق Set کیا گیا ہے۔ اس سوالیہ پرچہ میں کسی قسم کی کوئی غلطی نہ ہے۔ ہم نے سوالیہ پرچہ کا اردو اور انگریزی Version بھی چیک کر لیا ہے۔ یہ Version آپس میں مطابقت رکھتے ہیں۔ نیز اس پرچہ کی معروضی (MCQs) Key کی بابت تصدیق کی جاتی ہے کہ اس میں بھی کسی قسم کی کوئی غلطی نہ ہے۔ مزید یہ کہ ہم نے Key بنانے سے متعلق دفتر کی جانب سے تیار کردہ ہدایات وصول کر کے ان کا بغور مطالعہ کر لیا ہے اور ان کی روشنی میں Key بنائی ہے۔ نیز سب ایگزامینرز کیلئے تفصیلی مارکنگ ہدایات / مارکنگ سکیم / Rubrics بھی تیار کر دی گئی ہیں۔

Prepared & Checked By:

Dated: **25-06-2022**

S.#	Name	Designation	Institution	Mobile No	Signature
1	M. AWAIS SAEED	A. P.	Govt. Alimdar Hussain Islamia Associate College Multan	0333-6143457	
2	Sheraz Mehmood	A. P.	G.G. College of Science Multan	0332-7082646	
3	Farzana Suleman	A. P.	Govt. Associate college (w) Baran Road Multan	03000690273	
4	Memona Ramzan	A. P.	Govt. Associate College	03007321043	
5	Shahraz Agha	A. P.	G.A.C.W Chungi No. 6 Multan	03017411047	

Re-Checked By: ہم نے درج بالا سوالیہ پرچہ (انشائیہ + معروضی) "Key" اور ہدایات کے حوالہ سے مکمل طور پر چیک کر لی ہے۔ کسی قسم کی کوئی غلطی نہ ہے۔

1	Dr. M. Tariq Shehzad	A. P.	Emerson University, Multan	0334-6070969	
2					
3					

تاریخ **25-06-2022**

CHEMISTRY PAPER-II GROUP-II

TIME ALLOWED: 20 Minutes

MAXIMUM MARKS: 17

OBJECTIVE

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Mark the correct statement:
☒ (A) Na^+ is smaller than Na atom
☐ (B) Na^+ is larger than Na atom
☐ (C) Cl^- is smaller than Cl atom
☐ (D) Cl^- (ion) and Cl (atom) are equal in size
- (2) Chile saltpetre has the chemical formula:
☒ (A) $NaNO_3$
☐ (B) KNO_3
☐ (C) $Na_2B_4O_7$
☐ (D) $Na_2CO_3 \cdot H_2O$
- (3) Which of the following elements is not present abundantly in earth's crust?
☐ (A) Silicon
☐ (B) Aluminium
☒ (C) Sodium
☐ (D) Oxygen
- (4) Which catalyst is used in contact process?
☐ (A) Fe_2O_3
☒ (B) V_2O_5
☐ (C) SO_3
☐ (D) Ag_2O
- (5) Chlorine heptaoxide (Cl_2O_7) reacts with water to form:
☐ (A) Hypochlorous acid
☐ (B) Chloric acid
☒ (C) Perchloric acid
☐ (D) Chlorine and oxygen
- (6) Group VI B of transition elements contains:
☐ (A) Zn, Cd, Hg
☐ (B) Fe, Ru, Os
☐ (C) Mn, Te, Re
☒ (D) Cr, Mo, W
- (7) The chemist who synthesized urea from ammonium cyanate was:
☐ (A) Berzelius
☐ (B) Kolbe
☐ (C) Lavoisier
☒ (D) Wholer
- (8) Vinyl acetylene combines with HCl to form:
☐ (A) Polyacetylene
☐ (B) Benzene
☒ (C) Chloroprene
☐ (D) Divinylacetylene
- (9) Aromatic compounds burn with sooty flame because:
☒ (A) They have high percentage of carbon
☐ (B) They have high percentage of Hydrogen
☐ (C) They have a ring structure
☐ (D) They resist reaction with air
- (10) Elimination bimolecular reactions involve:
☐ (A) First order kinetics
☒ (B) Second order kinetics
☐ (C) Third order kinetics
☐ (D) Zero order kinetics
- (11) Which compound will have the maximum repulsion with H_2O ?
☒ (A) C_6H_6
☐ (B) C_2H_5OH
☐ (C) $CH_3CH_2CH_2OH$
☐ (D) CH_3-O-CH_3
- (12) Which of the following reagents will react with both aldehydes and ketones?
☒ (A) Grignard reagent
☐ (B) Tollen's reagent
☐ (C) Fehling's reagent
☐ (D) Benedict's reagent
- (13) The solution of which acid is used for seasoning of food?
☐ (A) Formic acid
☒ (B) Acetic acid
☐ (C) Benzoic acid
☐ (D) Butanoic acid
- (14) The fibre which is made from acrylonitrile as monomer?
☐ (A) PVC
☐ (B) Rayon fibre
☒ (C) Acrylic fibre
☐ (D) Polyester fibre
- (15) Which is not a calcareous material?
☐ (A) Lime
☒ (B) Clay
☐ (C) Marble
☐ (D) Marine shell
- (16) Newspaper can be recycled again and again by how many times?
☐ (A) 2
☐ (B) 3
☐ (C) 4
☒ (D) 5
- (17) The normal amount of overhead ozone is about:
☐ (A) 300 DU
☒ (B) 350 DU
☐ (C) 400 DU
☐ (D) 450 DU

CHEMISTRY PAPER-II

GROUP-II

TIME ALLOWED: 20 Minutes

MAXIMUM MARKS: 17

OBJECTIVE

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) The normal amount of overhead ozone is about:
 (A) 300 DU (B) 350 DU (C) 400 DU (D) 450 DU
- (2) Mark the correct statement:
 (A) Na^+ is smaller than Na atom (B) Na^+ is larger than Na atom
 (C) Cl^- is smaller than Cl atom (D) Cl^- (ion) and Cl (atom) are equal in size
- (3) Chile saltpetre has the chemical formula:
 (A) $NaNO_3$ (B) KNO_2 (C) $Na_2B_4O_7$ (D) $Na_2CO_3 \cdot H_2O$
- (4) Which of the following elements is not present abundantly in earth's crust?
 (A) Silicon (B) Aluminium (C) Sodium (D) Oxygen
- (5) Which catalyst is used in contact process?
 (A) Fe_2O_3 (B) V_2O_5 (C) SO_3 (D) Ag_2O
- (6) Chlorine heptaoxide (Cl_2O_7) reacts with water to form:
 (A) Hypochlorous acid (B) Chloric acid (C) Perchloric acid (D) Chlorine and oxygen
- (7) Group VI B of transition elements contains:
 (A) Zn, Cd, Hg (B) Fe, Ru, Os (C) Mn, Te, Re (D) Cr, Mo, W
- (8) The chemist who synthesized urea from ammonium cyanate was:
 (A) Berzelius (B) Kolbe (C) Lavoisier (D) Wholer
- (9) Vinyl acetylene combines with HCl to form:
 (A) Polyacetylene (B) Benzene (C) Chloroprene (D) Divinylacetylene
- (10) Aromatic compounds burn with sooty flame because:
 (A) They have high percentage of carbon (B) They have high percentage of Hydrogen
 (C) They have a ring structure (D) They resist reaction with air
- (11) Elimination bimolecular reactions involve:
 (A) First order kinetics (B) Second order kinetics (C) Third order kinetics (D) Zero order kinetics
- (12) Which compound will have the maximum repulsion with H_2O ?
 (A) C_6H_6 (B) C_2H_5OH (C) $CH_3CH_2CH_2OH$ (D) $CH_3 - O - CH_3$
- (13) Which of the following reagents will react with both aldehydes and ketones?
 (A) Grignard reagent (B) Tollen's reagent (C) Fehling's reagent (D) Benedict's reagent
- (14) The solution of which acid is used for seasoning of food?
 (A) Formic acid (B) Acetic acid (C) Benzoic acid (D) Butanoic acid
- (15) The fibre which is made from acrylonitrile as monomer?
 (A) PVC (B) Rayon fibre (C) Acrylic fibre (D) Polyester fibre
- (16) Which is not a calcareous material?
 (A) Lime (B) Clay (C) Marble (D) Marine shell
- (17) Newspaper can be recycled again and again by how many times?
 (A) 2 (B) 3 (C) 4 (D) 5

CHEMISTRY PAPER-II

GROUP-II

OBJECTIVE

TIME ALLOWED: 20 Minutes

MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Aromatic compounds burn with sooty flame because:

☒ (A) They have high percentage of carbon	☐ (B) They have high percentage of Hydrogen
☐ (C) They have a ring structure	☐ (D) They resist reaction with air
- (2) Elimination bimolecular reactions involve:

☐ (A) First order kinetics	☒ (B) Second order kinetics	☐ (C) Third order kinetics	☐ (D) Zero order kinetics
--	--	--	---
- (3) Which compound will have the maximum repulsion with H_2O ?

☒ (A) C_6H_6	☐ (B) C_2H_5OH	☐ (C) $CH_3CH_2CH_2OH$	☐ (D) $CH_3 - O - CH_3$
---	--------------------------------------	--	---
- (4) Which of the following reagents will react with both aldehydes and ketones?

☒ (A) Grignard reagent	☐ (B) Tollen's reagent	☐ (C) Fehling's reagent	☐ (D) Benedict's reagent
---	--	---	--
- (5) The solution of which acid is used for seasoning of food?

☐ (A) Formic acid	☒ (B) Acetic acid	☐ (C) Benzoic acid	☐ (D) Butanoic acid
---------------------------------------	--	--	---
- (6) The fibre which is made from acrylonitrile as monomer?

☐ (A) PVC	☐ (B) Rayon fibre	☒ (C) Acrylic fibre	☐ (D) Polyester fibre
-------------------------------	---------------------------------------	--	---
- (7) Which is not a calcareous material?

☐ (A) Lime	☒ (B) Clay	☐ (C) Marble	☐ (D) Marine shell
--------------------------------	---	----------------------------------	--
- (8) Newspaper can be recycled again and again by how many times?

☐ (A) 2	☐ (B) 3	☐ (C) 4	☒ (D) 5
-----------------------------	-----------------------------	-----------------------------	--
- (9) The normal amount of overhead ozone is about:

☐ (A) 300 DU	☒ (B) 350 DU	☐ (C) 400 DU	☐ (D) 450 DU
----------------------------------	---	----------------------------------	----------------------------------
- (10) Mark the correct statement:

☒ (A) Na^+ is smaller than Na atom	☐ (B) Na^+ is larger than Na atom
☐ (C) Cl^- is smaller than Cl atom	☐ (D) Cl^- (ion) and Cl (atom) are equal in size
- (11) Chile saltpetre has the chemical formula:

☒ (A) $NaNO_3$	☐ (B) KNO_3	☐ (C) $Na_2B_4O_7$	☐ (D) $Na_2CO_3 \cdot H_2O$
---	-----------------------------------	--	---
- (12) Which of the following elements is not present abundantly in earth's crust?

☐ (A) Silicon	☐ (B) Aluminium	☒ (C) Sodium	☐ (D) Oxygen
-----------------------------------	-------------------------------------	---	----------------------------------
- (13) Which catalyst is used in contact process?

☐ (A) Fe_2O_3	☒ (B) V_2O_5	☐ (C) SO_3	☐ (D) Ag_2O
-------------------------------------	---	----------------------------------	-----------------------------------
- (14) Chlorine heptaoxide (Cl_2O_7) reacts with water to form:

☐ (A) Hypochlorous acid	☐ (B) Chloric acid	☒ (C) Perchloric acid	☐ (D) Chlorine and oxygen
---	--	--	---
- (15) Group VI B of transition elements contains:

☐ (A) Zn, Cd, Hg	☐ (B) Fe, Ru, Os	☐ (C) Mn, Te, Re	☒ (D) Cr, Mo, W
--	--	--	--
- (16) The chemist who synthesized urea from ammonium cyanate was:

☐ (A) Berzelius	☐ (B) Kolbe	☐ (C) Lavoisier	☒ (D) Wholer
-------------------------------------	---------------------------------	-------------------------------------	---
- (17) Vinyl acetylene combines with HCl to form:

☐ (A) Polyacetylene	☐ (B) Benzene	☒ (C) Chloroprene	☐ (D) Divinylacetylene
---	-----------------------------------	--	--

CHEMISTRY PAPER-II

GROUP-II

TIME ALLOWED: 20 Minutes

MAXIMUM MARKS: 17

OBJECTIVE

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Which catalyst is used in contact process?
 (A) Fe_2O_3 (B) V_2O_5 (C) SO_3 (D) Ag_2O
- (2) Chlorine heptaoxide (Cl_2O_7) reacts with water to form:
 (A) Hypochlorous acid (B) Chloric acid (C) Perchloric acid (D) Chlorine and oxygen
- (3) Group VI B of transition elements contains:
 (A) Zn, Cd, Hg (B) Fe, Ru, Os (C) Mn, Te, Re (D) Cr, Mo, W
- (4) The chemist who synthesized urea from ammonium cyanate was:
 (A) Berzelius (B) Kolbe (C) Lavoisier (D) Wholer
- (5) Vinyl acetylene combines with HCl to form:
 (A) Polyacetylene (B) Benzene (C) Chloroprene (D) Divinylacetylene
- (6) Aromatic compounds burn with sooty flame because:
 (A) They have high percentage of carbon (B) They have high percentage of Hydrogen
 (C) They have a ring structure (D) They resist reaction with air
- (7) Elimination bimolecular reactions involve:
 (A) First order kinetics (B) Second order kinetics (C) Third order kinetics (D) Zero order kinetics
- (8) Which compound will have the maximum repulsion with H_2O ?
 (A) C_6H_6 (B) C_2H_5OH (C) $CH_3CH_2CH_2OH$ (D) CH_3-O-CH_3
- (9) Which of the following reagents will react with both aldehydes and ketones?
 (A) Grignard reagent (B) Tollen's reagent (C) Fehling's reagent (D) Benedict's reagent
- (10) The solution of which acid is used for seasoning of food?
 (A) Formic acid (B) Acetic acid (C) Benzoic acid (D) Butanoic acid
- (11) The fibre which is made from acrylonitrile as monomer?
 (A) PVC (B) Rayon fibre (C) Acrylic fibre (D) Polyester fibre
- (12) Which is not a calcarious material?
 (A) Lime (B) Clay (C) Marble (D) Marine shell
- (13) Newspaper can be recycled again and again by how many times?
 (A) 2 (B) 3 (C) 4 (D) 5
- (14) The normal amount of overhead ozone is about:
 (A) 300 DU (B) 350 DU (C) 400 DU (D) 450 DU
- (15) Mark the correct statement:
 (A) Na^+ is smaller than Na atom (B) Na^+ is larger than Na atom
 (C) Cl^- is smaller than Cl atom (D) Cl^- (ion) and Cl (atom) are equal in size
- (16) Chile saltpetre has the chemical formula:
 (A) $NaNO_3$ (B) KNO_2 (C) $Na_2B_4O_7$ (D) $Na_2CO_3 \cdot H_2O$
- (17) Which of the following elements is not present abundantly in earth's crust?
 (A) Silicon (B) Aluminium (C) Sodium (D) Oxygen

INTERMEDIATE PART-II (12th CLASS)**CHEMISTRY PAPER-II GROUP-II**

TIME ALLOWED: 2.40 Hours

SUBJECTIVE

MAXIMUM MARKS: 68

NOTE: Write same question number and its part number on answer book, as given in the question paper.

SECTION-I

2. **Attempt any eight parts.**

8 × 2 = 16

- (i) Why the ionic radii of negative ions are larger than the size of parent atom?
- (ii) Justify the variation in melting point along the short period.
- (iii) Give the formula of the following (a) Natron (b) Fluorite
- (iv) Why 2% gypsum is added in the cement?
- (v) What is fuming Nitric acid?
- (vi) Give two methods for the preparation of Phosphorus acid.
- (vii) Write the formula of four basic acid.
- (viii) How Aluminum react with (a) Acid (HCl) (b) Alkali ($NaOH$)
- (ix) Write the composition of commercial form of iron.
- (x) What do you know about the Ligands?
- (xi) What are the macro nutrients? Give examples in fertilizer.
- (xii) What steps are involved in the preparation of Urea?

3. **Attempt any eight parts.**

8 × 2 = 16

- (i) Write four peculiar behaviour of fluorine. $\frac{1}{2} \times 4 = 2$
- (ii) How does H_2SO_4 react with (a) Ba_2XeO_6 (b) Na_4XeO_6 $1 + 1$
- (iii) Write names of any four fractions obtained from petroleum. $\frac{1}{2} \times 4 = 2$
- (iv) Draw isomers of C_4H_{10} . $1 + 1$
- (v) Differentiate between alicyclic hydrocarbons and aromatic hydrocarbons with examples. $1 + 1$
- (vi) Give two examples of Sabatier-Sendern's reaction. $1 + 1$
- (vii) How you will prepare cis and trans alkene? $1 + 1$
- (viii) Write names and formulas of two antiknocking agents. $1 + 1$
- (ix) Write four differences between S_N1 and S_N2 reactions. $\frac{1}{2} \times 4 = 2$
- (x) Differentiate between iodine number and acid number. $1 + 1$
- (xi) What is hardening of oils? Give an example. $1 + 1$
- (xii) What is condensation polymerization? Give an example for its preparation $1 + 1$

4. **Attempt any six parts.**

6 × 2 = 12

- (i) Write down the objections to the Kekule's structure of Benzene.
- (ii) Give the Wurtz-Fittig reaction for the synthesis of alkyl aromatic Hydro Carbons.
- (iii) Prepare Diethyl ether from Williamsons Synthesis.
- (iv) How ethanol is prepared from molasses by fermentation?
- (v) Write down the four uses of formaldehyde.
- (vi) Differentiate between essential and non-essential amino acids.
- (vii) What is Zwitter ion? Give its structural formula.
- (viii) Define the term Dissolved Oxygen(DO).
- (ix) Write down the four components of environment.

SECTION-II

NOTE: Attempt any three questions.

- 5.(a) What are Oxides? Explain their types along the short periods. **8 × 3 = 24**
- (b) What are Silicones? Give the properties and uses of Silicones. $1 + 3 = 4$
- 6.(a) Write note on commercial preparation of Sodium hydroxide by Diaphragm Cell. $1 + 3 = 4$
- (b) Write note on following properties of transition elements. **4**
 - (i) Binding Energies
 - (ii) Paramagnetism
- 7.(a) Explain Geometrical isomerism with the help of any two suitable examples. **4**
- (b) Write down the reactions of $C_2H_5 - Mg - Br$ with (i) Acetaldehyde (ii) Acetone **4**
- 8.(a) How will you synthesize following compound from ethyne? (i) Acetaldehyde (ii) Glyoxal **4**
- (b) Explain any four methods for the identification of carbonyl compounds. **4**
- 9.(a) Explain with mechanism the following electrophilic reaction of Benzene. **2 + 2 = 4**
 - (i) Sulphonation
 - (b) Nitration
- (b) How will you obtain secondary and tertiary alcohols by reacting Grignard's Reagent with suitable Carbonyl compounds. **2 + 2 = 4**

CHEMISTRY PAPER-II

GROUP-I

OBJECTIVE

TIME ALLOWED: 20 Minutes

MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Mark the correct statement.
 (A) All lanthanides are present in the same group (B) All halogens are present in the same period
☒ (C) All alkali metals are present in the same group (D) All noble gases are present in the same period
- (2) Which of the following sulphates is not soluble in water?
 (A) Sodium sulphate (B) Potassium sulphate (C) Zinc sulphate ☒ (D) Barium sulphate
- (3) Which element belongs to group IVA of periodic table?
 (A) Ba (B) I ☒ (C) Pb (D) O
- (4) The brown gas formed, when metal reduces HNO_3 to:
 (A) N_2O_5 (B) N_2O_3 ☒ (C) NO_2 (D) NO
- (5) Which is the strongest acid?
 (A) $HClO$ (B) $HClO_2$ (C) $HClO_3$ ☒ (D) $HClO_4$
- (6) Group VIB of transition elements contains:
 (A) Zn, Cd, Hg (B) Fe, Ru, Os ☒ (C) Cr, Mo, W (D) Mn, Te, Re
- (7) Ethers show the phenomenon of:
 (A) Position isomerism (B) Functional group isomerism ☒ (C) Metamerism (D) Cis-trans Isomerism
- (8) Synthetic rubber is made by the polymerization of:
 (A) Chloroform (B) Acetylene (C) Divinylacetylene ☒ (D) Chloroprene
- (9) Benzene can not undergo:
 (A) Substitution (B) Addition (C) Oxidation ☒ (D) Elimination
- (10) For which mechanisms, the first step involved is the same:
 (A) E_1 and E_2 (B) E_2 and S_N2 (C) S_N1 and E_2 ☒ (D) E_1 and S_N1
- (11) Ethanol can be converted to ethanoic acid by:
 (A) Hydrogenation (B) Hydration ☒ (C) Oxidation (D) Fermentation
- (12) Which of following will react with both aldehydes and ketones?
☒ (A) Grignard reagent (B) Tollen's reagent (C) Fehling's reagent (D) Benedict's reagent
- (13) Which reagent reduces carboxylic acid to an alcohol?
 (A) H_2/Ni (B) H_2/Pt (C) $NaBH_4$ ☒ (D) $LiAlH_4$
- (14) Which of these polymers is an addition polymer?
 (A) Nylon-6, 6 ☒ (B) Polystyrene (C) Terylene (D) Epoxy resin
- (15) Which is not calcareous material?
 (A) Lime ☒ (B) Clay (C) Marble (D) Marine shell
- (16) Stratosphere region has range of:
 (A) 0 - 15 km (B) 15 - 20 km (C) 0 - 5 km ☒ (D) 15 - 40 km
- (17) Residence time of NO in atmosphere is:
 (A) 1 day (B) 2 days (C) 3 days ☒ (D) 4 days

CHEMISTRY PAPER-II

GROUP-I

OBJECTIVE

TIME ALLOWED: 20 Minutes

MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Which of these polymers is an addition polymer?
 (A) Nylon-6, 6 (B) Polystyrene (C) Terylene (D) Epoxy resin
- (2) Which is not calcareous material?
 (A) Lime (B) Clay (C) Marble (D) Marine shell
- (3) Stratosphere region has range of:
 (A) 0 – 15 km (B) 15 – 20 km (C) 0 – 5 km (D) 15 – 40 km
- (4) Residence time of NO in atmosphere is:
 (A) 1 day (B) 2 days (C) 3 days (D) 4 days
- (5) Mark the correct statement.
 (A) All lanthanides are present in the same group (B) All halogens are present in the same period
 (C) All alkali metals are present in the same group (D) All noble gases are present in the same period
- (6) Which of the following sulphates is not soluble in water?
 (A) Sodium sulphate (B) Potassium sulphate (C) Zinc sulphate (D) Barium sulphate
- (7) Which element belongs to group IVA of periodic table?
 (A) Ba (B) I (C) Pb (D) O
- (8) The brown gas formed, when metal reduces HNO_3 to:
 (A) N_2O_5 (B) N_2O_3 (C) NO_2 (D) NO
- (9) Which is the strongest acid?
 (A) $HClO$ (B) $HClO_2$ (C) $HClO_3$ (D) $HClO_4$
- (10) Group VIB of transition elements contains:
 (A) Zn, Cd, Hg (B) Fe, Ru, Os (C) Cr, Mo, W (D) Mn, Te, Re
- (11) Ethers show the phenomenon of:
 (A) Position isomerism (B) Functional group isomerism (C) Metamerism (D) Cis-trans Isomerism
- (12) Synthetic rubber is made by the polymerization of:
 (A) Chloroform (B) Acetylene (C) Divinylacetylene (D) Chloroprene
- (13) Benzene can not undergo:
 (A) Substitution (B) Addition (C) Oxidation (D) Elimination
- (14) For which mechanisms, the first step involved is the same:
 (A) E_1 and E_2 (B) E_2 and S_N2 (C) S_N1 and E_2 (D) E_1 and S_N1
- (15) Ethanol can be converted to ethanoic acid by:
 (A) Hydrogenation (B) Hydration (C) Oxidation (D) Fermentation
- (16) Which of following will react with both aldehydes and ketones?
 (A) Grignard reagent (B) Tollen's reagent (C) Fehling's reagent (D) Benedict's reagent
- (17) Which reagent reduces carboxylic acid to an alcohol?
 (A) H_2/Ni (B) H_2/Pt (C) $NaBH_4$ (D) $LiAlH_4$

CHEMISTRY PAPER-II GROUP-I

OBJECTIVE

TIME ALLOWED: 20 Minutes
MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Synthetic rubber is made by the polymerization of:
(A) Chloroform (B) Acetylene (C) Divinylacetylene (D) Chloroprene
- (2) Benzene can not undergo:
(A) Substitution (B) Addition (C) Oxidation (D) Elimination
- (3) For which mechanisms, the first step involved is the same:
(A) E_1 and E_2 (B) E_2 and S_N2 (C) S_N1 and E_2 (D) E_1 and S_N1
- (4) Ethanol can be converted to ethanoic acid by:
(A) Hydrogenation (B) Hydration (C) Oxidation (D) Fermentation
- (5) Which of following will react with both aldehydes and ketones?
(A) Grignard reagent (B) Tollen's reagent (C) Fehling's reagent (D) Benedict's reagent
- (6) Which reagent reduces carboxylic acid to an alcohol?
(A) H_2/Ni (B) H_2/Pt (C) $NaBH_4$ (D) $LiAlH_4$
- (7) Which of these polymers is an addition polymer?
(A) Nylon-6, 6 (B) Polystyrene (C) Terylene (D) Epoxy resin
- (8) Which is not calcarious material?
(A) Lime (B) Clay (C) Marble (D) Marine shell
- (9) Stratosphere region has range of:
(A) 0 - 15 km (B) 15 - 20 km (C) 0 - 5 km (D) 15 - 40 km
- (10) Residence time of NO in atmosphere is:
(A) 1 day (B) 2 days (C) 3 days (D) 4 days
- (11) Mark the correct statement.
(A) All lanthanides are present in the same group (B) All halogens are present in the same period
(C) All alkali metals are present in the same group (D) All noble gases are present in the same period
- (12) Which of the following sulphates is not soluble in water?
(A) Sodium sulphate (B) Potassium sulphate (C) Zinc sulphate (D) Barium sulphate
- (13) Which element belongs to group IVA of periodic table?
(A) Ba (B) I (C) Pb (D) O
- (14) The brown gas formed, when metal reduces HNO_3 to:
(A) N_2O_5 (B) N_2O_3 (C) NO_2 (D) NO
- (15) Which is the strongest acid?
(A) $HClO$ (B) $HClO_2$ (C) $HClO_3$ (D) $HClO_4$
- (16) Group VIB of transition elements contains:
(A) Zn, Cd, Hg (B) Fe, Ru, Os (C) Cr, Mo, W (D) Mn, Te, Re
- (17) Ethers show the phenomenon of:
(A) Position isomerism (B) Functional group isomerism (C) Metamerism (D) Cis-trans Isomerism

Number: 4487

INTERMEDIATE PART-II (12th CLASS)

CHEMISTRY PAPER-II

GROUP-I

OBJECTIVE

TIME ALLOWED: 20 Minutes
MAXIMUM MARKS: 17

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Ethanol can be converted to ethanoic acid by:
 (A) Hydrogenation (B) Hydration (C) Oxidation (D) Fermentation
- (2) Which of following will react with both aldehydes and ketones?
 (A) Grignard reagent (B) Tollen's reagent (C) Fehling's reagent (D) Benedict's reagent
- (3) Which reagent reduces carboxylic acid to an alcohol?
 (A) H_2/Ni (B) H_2/Pt (C) $NaBH_4$ (D) $LiAlH_4$
- (4) Which of these polymers is an addition polymer?
 (A) Nylon-6, 6 (B) Polystyrene (C) Terylene (D) Epoxy resin
- (5) Which is not calcarious material?
 (A) Lime (B) Clay (C) Marble (D) Marine shell
- (6) Stratosphere region has range of:
 (A) 0 - 15 km (B) 15 - 20 km (C) 0 - 5 km (D) 15 - 40 km
- (7) Residence time of NO in atmosphere is:
 (A) 1 day (B) 2 days (C) 3 days (D) 4 days
- (8) Mark the correct statement.
 (A) All lanthanides are present in the same group (B) All halogens are present in the same period
 (C) All alkali metals are present in the same group (D) All noble gases are present in the same period
- (9) Which of the following sulphates is not soluble in water?
 (A) Sodium sulphate (B) Potassium sulphate (C) Zinc sulphate (D) Barium sulphate
- (10) Which element belongs to group IVA of periodic table?
 (A) Ba (B) I (C) Pb (D) O
- (11) The brown gas formed, when metal reduces HNO_3 to:
 (A) N_2O_5 (B) N_2O_3 (C) NO_2 (D) NO
- (12) Which is the strongest acid?
 (A) $HClO$ (B) $HClO_2$ (C) $HClO_3$ (D) $HClO_4$
- (13) Group VIB of transition elements contains:
 (A) Zn, Cd, Hg (B) Fe, Ru, Os (C) Cr, Mo, W (D) Mn, Te, Re
- (14) Ethers show the phenomenon of:
 (A) Position isomerism (B) Functional group isomerism (C) Metamerism (D) Cis-trans Isomerism
- (15) Synthetic rubber is made by the polymerization of:
 (A) Chloroform (B) Acetylene (C) Divinylacetylene (D) Chloroprene
- (16) Benzene can not undergo:
 (A) Substitution (B) Addition (C) Oxidation (D) Elimination
- (17) For which mechanisms, the first step involved is the same:
 (A) E_1 and E_2 (B) E_2 and S_N2 (C) S_N1 and E_2 (D) E_1 and S_N1

INTERMEDIATE PART-II (12th CLASS)**CHEMISTRY PAPER-II GROUP-I**

TIME ALLOWED: 2.40 Hours

SUBJECTIVE

MAXIMUM MARKS: 68

NOTE: Write same question number and its part number on answer book,
as given in the question paper.

SECTION-I**2. Attempt any eight parts.****8 × 2 = 16**

- Why Ionization energy decreases down the group?
- Why is the 2nd – electron affinity of an element positive?
- Give any two uses of lime in industry.
- Write down the chemical formulas of minerals. (a) Chile Saltpetre (b) Barite
- Write down the chemical reaction of Aluminium with (a) HCl (b) Cl_2
- Describe Borax bead Test.
- Why is SO_3 dissolved in H_2SO_4 and not in water?
- How does Nitrogen differ from other elements of its own group?
- Why oxidation state of transition elements are variable?
- What are typical and non-typical transition elements?
- What are macronutrients and micronutrients?
- What are potassium fertilizers? Give one example.

3. Attempt any eight parts.**8 × 2 = 16**

- Give two uses of chlorine.
- Why solubility of noble gases increases in water?
- Define Cis and trans Isomerism.
- What is meant by hybridization? Mention its types.
- Why alkanes are called paraffin?
- How will you differentiate between ethane and ethene chemically by one test?
- How does ethyne react with (a) Alkaline $KMnO_4$ (b) 10% H_2SO_4 in the presence of $HgSO_4$
- How would you prepare primary alcohol with the help of Grignard's reagent?
- Give two methods for the preparation of alkyl Halide from alcohol.
- What is rancidity of fat and oil?
- Describe condensation polymerization with example.
- Give open and close structure formula of Glucose.

4. Attempt any six parts.**6 × 2 = 12**

- Give the chemical equations for the conversion of Benzene into Maleic acid.
- Define resonance and write down resonance structure of Benzene.
- Explain esterification with example.
- How will you convert Ethanol into Isopropyl alcohol?
- How would you bring about the following conversion? Methanol into Ethanal
- Write down the structural formula for any two neutral amino acids.
- How acetic acid is prepared by Grignard's Reagent?
- How detergents cause water pollution?
- What are Leachates?

SECTION-II**NOTE: Attempt any three questions.****8 × 3 = 24**

- Define hydration energy with an example. Give its variation in periodic table. **4**
 - How does aluminium react with (i) Hydrogen (ii) Halogens (iii) Nitrogen (iv) HCl **4**
- Describe the preparation of sodium metal by Down's cell with diagram. **4**
 - Define Corrosion. Explain electrochemical theory of corrosion. **4**
- Define SP^3 and SP^2 hybridization. Give one example in each case. **4**
 - What are β – Elimination reactions? Discuss their types.
Write any three differences between E_2 and E_1 . **4**
- Prepare alkene from following classes of organic compounds:
(i) Alkyl Halide (ii) Alcohols (iii) Vicinal dihalide (iv) Alkynes **1 × 4 = 4**
 - How does acetaldehyde react with following compounds?
(i) $NaHSO_3$ (ii) HCN (iii) Iodine and $NaOH$ (iv) NH_2OH **1 × 4 = 4**
- What is sulphonation of Benzene? Give its mechanism. **4**
 - How will you distinguish between primary, secondary and tertiary alcohols by Lucas test?
Give the reactions. **4**