

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

- (i) Define Atomic Radius. Why Atomic Radius of Alkali metals increases in group of Periodic table?
- (ii) What are Halides? Give their types.
- (iii) What is function of *Ca* in plant growth?
- (iv) What is the formula of Red Lead? Give its principle uses.
- (v) What is the effect of heat on the Orthoboric Acid?
- (vi) What is the Chemistry of the Borax-bead Test?
- (vii) Orthophosphoric acid is a weak tribasic acid. Prove it giving reactions with *NaOH*.
- (viii) Complete the following chemical equations:-
 - (a) $H_2S + NO_2 \longrightarrow$
 - (b) $KI + NO_2 \longrightarrow$
- (ix) Concentrated H_2SO_4 act as a dehydrating agent. Give two examples.
- (x) What is meant by Biochemical Oxygen Demand?
- (xi) Define Smog. Give the composition of Photochemical Smog.
- (xii) What is an Oil Refinery? Mention oil refineries in Pakistan.

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

- (i) Name the following complexes according to IUPAC System:-
 - (a) $[Cr(OH)_3(H_2O)_3]$
 - (b) $K_2[Pt(Cl)_6]$
- (ii) Define the term coordination number with an example.
- (iii) How Ethylene is converted into? (a) Ethylene Oxide (b) Ethylene glycol
- (iv) How will you convert 1 – propanol into 1 – chloro – 2 – propanol?
- (v) Write down the structural formulae of following compounds:-
 - (a) Benzophenone
 - (b) Acetophenone
- (vi) Which method is more useful for the preparation of ethyl chloride? Give its chemical reaction.
- (vii) Write down the structural formulae of following compounds:-
 - (a) Glycerol
 - (b) Lactic acid
- (viii) Ethyl alcohol is a liquid while methylchloride is a gas? Justify.
- (ix) How will you distinguish between Acetaldehyde and Benzaldehyde?
- (x) Discuss the reaction of an aldehyde with Tollen's reagent.
- (xi) What are Zwitter Ions?
- (xii) What is a Peptide Bond? Write down formula of a dipeptide?

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

- (i) What are Thermosetting Polymers? Give an example.
- (ii) Define Saponification number with an example.
- (iii) Write four importances of Lipids.
- (iv) What are Micronutrients?
- (v) Describe the composition of a good Portland cement.
- (vi) How is the wet sheet of paper dried in paper industry?
- (vii) Why is *HF* a weaker acid than *HCl*?
- (viii) Write the reactions of bleaching powder with (a) NH_3 (b) CO_2
- (ix) Give two uses of Argon.

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

- 5.(a) Explain the position of Hydrogen in 1 A and VII A groups and explain its similarities and dissimilarities with those groups. 4
- (b) What is the role of Gypsum in Agriculture and Industry? 4
- 6.(a) Explain the following properties of Transition metals:- 4
 - (i) Paramagnetism (ii) Colour
- (b) Explain the process of incineration of industrial waste. 4
- 7.(a) Define Alicyclic compounds and Aromatic compounds with one example in each case. 4
- (b) Predict the major products of bromination of the following compounds:- 4
 - (i) Toluene (ii) Benzoic acid (iii) Benzaldehyde (iv) Phenol
- 8.(a) How will you bring about the following conversions? 4
 - (i) Methane to Ethane (ii) Acetic acid to Ethane
- (b) How is Methyl alcohol obtained on large scale from water gas? Draw diagram also. 4
- 9.(a) Write reactions of ethyl magnesium bromide with:- 4
 - (i) Water (ii) Ammonia (iii) Alcohol (iv) CO_2
- (b) Explain Cannizzaro's reaction with suitable examples and mechanism. 4

CHEMISTRY PAPER-II (NEW SCHEME) GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Keeping in view the size of atoms, the correct order is:-
 (A) $Mg > Sr$ (B) $Ba > Mg$ (C) $Lu > Ce$ (D) $Cl > I$
- (2) The mineral $CaSO_4 \cdot 2H_2O$ has general name of:-
 (A) Gypsum (B) Dolomite (C) Calcite (D) Epsom Salt
- (3) _____ elements is not present abundantly in earth's crust.
 (A) Silicon (B) Aluminium (C) Sodium (D) Oxygen
- (4) Oxidation of NO in air produces:-
 (A) N_2O (B) N_2O_3 (C) N_2O_4 (D) N_2O_5
- (5) The anhydride of $HClO_4$ is:-
 (A) ClO (B) ClO_2 (C) ClO_3 (D) Cl_2O_7
- (6) Co-ordination number of Pt in $[PtCl(NO_2)(NH_3)_4]^{2-}$ is:-
 (A) 2 (B) 4 (C) 1 (D) 6
- (7) Ether shows the phenomenon of:-
 (A) Position isomerism (B) Functional group isomerism (C) Metamerism (D) Cis-trans isomerism
- (8) Vinyl acetylene combines with HCl to form:-
 (A) Polyacetylene (B) Benzene (C) Chloroprene (D) Divinyl acetylene
- (9) _____ can be used as a catalyst in Friedel-Craft's reactions.
 (A) $AlCl_3$ (B) HNO_3 (C) $BeCl_2$ (D) $NaCl$
- (10) _____ is not a nucleophile.
 (A) H_2O (B) H_2S (C) BF_3 (D) NH_3
- (11) According to Lewis concept; ether behaves as:-
 (A) Acid (B) Base (C) Acid as well as a base (D) Electrophile
- (12) The Carbon atom of a Carbonyl group is:-
 (A) sp hybridized (B) sp^2 hybridized (C) sp^3 hybridized (D) dsp^2 hybridized
- (13) Acetic acid can be manufactured by:-
 (A) Distillation (B) Fermentation (C) Ozonolysis (D) Esterification
- (14) The main pollutant of leather tanneries in the waste water is due to the salt of:-
 (A) Lead (B) Chromium (VI) (C) Copper (D) Chromium (III)
- (15) The reaction between a fat and $NaOH$ is:-
 (A) Esterification (B) Hydrogenolysis (C) Fermentation (D) Saponification
- (16) Phosphorus helps in the growth of:-
 (A) Root (B) Leave (C) Stem (D) Seed
- (17) _____ is secondary pollutant.
 (A) Carbonic acid (B) CO_2 (C) SO_2 (D) CO

CHEMISTRY PAPER-II (NEW SCHEME) GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) The main pollutant of leather tanneries in the waste water is due to the salt of:-
(A) Lead (B) Chromium (VI) (C) Copper (D) Chromium (III)
- (2) The reaction between a fat and NaOH is:-
(A) Esterification (B) Hydrogenolysis (C) Fermentation (D) Saponification
- (3) Phosphorus helps in the growth of:-
(A) Root (B) Leave (C) Stem (D) Seed
- (4) _____ is secondary pollutant.
(A) Carbonic acid (B) CO_2 (C) SO_2 (D) CO
- (5) Keeping in view the size of atoms, the correct order is:-
(A) $\text{Mg} > \text{Sr}$ (B) $\text{Ba} > \text{Mg}$ (C) $\text{Lu} > \text{Ce}$ (D) $\text{Cl} > \text{I}$
- (6) The mineral $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ has general name of:-
(A) Gypsum (B) Dolomite (C) Calcite (D) Epsom Salt
- (7) _____ elements is not present abundantly in earth's crust.
(A) Silicon (B) Aluminium (C) Sodium (D) Oxygen
- (8) Oxidation of NO in air produces:-
(A) N_2O (B) N_2O_3 (C) N_2O_4 (D) N_2O_5
- (9) The anhydride of HClO_4 is:-
(A) ClO (B) ClO_2 (C) ClO_3 (D) Cl_2O_7
- (10) Co-ordination number of Pt in $[\text{PtCl}(\text{NO}_2)(\text{NH}_3)_4]^{2-}$ is:-
(A) 2 (B) 4 (C) 1 (D) 6
- (11) Ether shows the phenomenon of:-
(A) Position isomerism (B) Functional group isomerism (C) Metamerism (D) Cis-trans isomerism
- (12) Vinyl acetylene combines with HCl to form:-
(A) Polyacetylene (B) Benzene (C) Chloroprene (D) Divinyl acetylene
- (13) _____ can be used as a catalyst in Friedel-Craft's reactions.
(A) AlCl_3 (B) HNO_3 (C) BeCl_2 (D) NaCl
- (14) _____ is not a nucleophile.
(A) H_2O (B) H_2S (C) BF_3 (D) NH_3
- (15) According to Lewis concept; ether behaves as:-
(A) Acid (B) Base (C) Acid as well as a base (D) Electrophile
- (16) The Carbon atom of a Carbonyl group is:-
(A) sp hybridized (B) sp^2 hybridized (C) sp^3 hybridized (D) dsp^2 hybridized
- (17) Acetic acid can be manufactured by:-
(A) Distillation (B) Fermentation (C) Ozonolysis (D) Esterification

CHEMISTRY PAPER-II (NEW SCHEME) GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Ether shows the phenomenon of:-
(A) Position isomerism (B) Functional group isomerism (C) Metamerism (D) Cis-trans isomerism
- (2) Vinyl acetylene combines with HCl to form:-
(A) Polyacetylene (B) Benzene (C) Chloroprene (D) Divinyl acetylene
- (3) _____ can be used as a catalyst in Friedel-Craft's reactions.
(A) $AlCl_3$ (B) HNO_3 (C) $BeCl_2$ (D) $NaCl$
- (4) _____ is not a nucleophile.
(A) H_2O (B) H_2S (C) BF_3 (D) NH_3
- (5) According to Lewis concept; ether behaves as:-
(A) Acid (B) Base (C) Acid as well as a base (D) Electrophile
- (6) The Carbon atom of a Carbonyl group is:-
(A) sp hybridized (B) sp^2 hybridized (C) sp^3 hybridized (D) dsp^2 hybridized
- (7) Acetic acid can be manufactured by:-
(A) Distillation (B) Fermentation (C) Ozonolysis (D) Esterification
- (8) The main pollutant of leather tanneries in the waste water is due to the salt of:-
(A) Lead (B) Chromium (VI) (C) Copper (D) Chromium (III)
- (9) The reaction between a fat and $NaOH$ is:-
(A) Esterification (B) Hydrogenolysis (C) Fermentation (D) Saponification
- (10) Phosphorus helps in the growth of:-
(A) Root (B) Leave (C) Stem (D) Seed
- (11) _____ is secondary pollutant.
(A) Carbonic acid (B) CO_2 (C) SO_2 (D) CO
- (12) Keeping in view the size of atoms, the correct order is:-
(A) $Mg > Sr$ (B) $Ba > Mg$ (C) $Lu > Ce$ (D) $Cl > I$
- (13) The mineral $CaSO_4 \cdot 2H_2O$ has general name of:-
(A) Gypsum (B) Dolomite (C) Calcite (D) Epsom Salt
- (14) _____ elements is not present abundantly in earth's crust.
(A) Silicon (B) Aluminium (C) Sodium (D) Oxygen
- (15) Oxidation of NO in air produces:-
(A) N_2O (B) N_2O_3 (C) N_2O_4 (D) N_2O_5
- (16) The anhydride of $HClO_4$ is:-
(A) ClO (B) ClO_2 (C) ClO_3 (D) Cl_2O_7
- (17) Co-ordination number of Pt in $[PtCl(NO_2)(NH_3)_4]^{2-}$ is:-
(A) 2 (B) 4 (C) 1 (D) 6

CHEMISTRY PAPER-II (NEW SCHEME) GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Oxidation of NO in air produces:-
 (A) N_2O (B) N_2O_3 (C) N_2O_4 (D) N_2O_5
- (2) The anhydride of $HClO_4$ is:-
 (A) ClO (B) ClO_2 (C) ClO_3 (D) Cl_2O_7
- (3) Co-ordination number of Pt in $[PtCl(NO_2)(NH_3)_4]^{2-}$ is:-
 (A) 2 (B) 4 (C) 1 (D) 6
- (4) Ether shows the phenomenon of:-
 (A) Position isomerism (B) Functional group isomerism (C) Metamerism (D) Cis-trans isomerism
- (5) Vinyl acetylene combines with HCl to form:-
 (A) Polyacetylene (B) Benzene (C) Chloroprene (D) Divinyl acetylene
- (6) _____ can be used as a catalyst in Friedel-Craft's reactions.
 (A) $AlCl_3$ (B) HNO_3 (C) $BeCl_2$ (D) $NaCl$
- (7) _____ is not a nucleophile.
 (A) H_2O (B) H_2S (C) BF_3 (D) NH_3
- (8) According to Lewis concept; ether behaves as:-
 (A) Acid (B) Base (C) Acid as well as a base (D) Electrophile
- (9) The Carbon atom of a Carbonyl group is:-
 (A) sp hybridized (B) sp^2 hybridized (C) sp^3 hybridized (D) dsp^2 hybridized
- (10) Acetic acid can be manufactured by:-
 (A) Distillation (B) Fermentation (C) Ozonolysis (D) Esterification
- (11) The main pollutant of leather tanneries in the waste water is due to the salt of:-
 (A) Lead (B) Chromium (VI) (C) Copper (D) Chromium (III)
- (12) The reaction between a fat and $NaOH$ is:-
 (A) Esterification (B) Hydrogenolysis (C) Fermentation (D) Saponification
- (13) Phosphorus helps in the growth of:-
 (A) Root (B) Leave (C) Stem (D) Seed
- (14) _____ is secondary pollutant.
 (A) Carbonic acid (B) CO_2 (C) SO_2 (D) CO
- (15) Keeping in view the size of atoms, the correct order is:-
 (A) $Mg > Sr$ (B) $Ba > Mg$ (C) $Lu > Ce$ (D) $Cl > I$
- (16) The mineral $CaSO_4 \cdot 2H_2O$ has general name of:-
 (A) Gypsum (B) Dolomite (C) Calcite (D) Epsom Salt
- (17) _____ 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 (NEW SCHEME) 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 are the ionic radius of negative ions larger than the size of their parent atoms?
- (ii) Zinc oxide is amphoteric in nature. Explain with reactions.
- (iii) How is Gypsum converted into plaster of Paris? Write chemical equation.
- (iv) Write the formula of (a) Bauxite (b) Cryolite
- (v) Write the Chemistry of Borax Bead test with an example.
- (vi) Why are Silicones preferred to petroleum products as lubricant?
- (vii) Write two reactions of NO with (a) $FeSO_4$ (b) H_2S
- (viii) Write two reactions of P_2O_5 as dehydrating agent.
- (ix) Write two similarities of Oxygen and Sulphur.
- (x) What is the role of Chlorofluorocarbons in destroying ozone? Write reactions.
- (xi) How is the quality of water determined by chemical Oxygen demand?
- (xii) Define Heterocyclic compounds with two examples.

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

- (i) Give systematic names to following complexes:- (a) $[Fe(CO)_5]$ (b) $[Co(NH_3)_6]Cl_3$
- (ii) Give the uses of $KMnO_4$.
- (iii) What happens when ter-butyl alcohol is treated with conc. H_2SO_4 ?
- (iv) How will you distinguish acetylene and ethene?
- (v) How will you prepare the following compound from Benzene in two steps?
m - chloronitro benzene
- (vi) Give the reaction of Ethylene epoxide with ethyl-magnesium bromide.
- (vii) Give the four uses of Ethanol.
- (viii) How phenol is prepared from Chlorobenzene (Dow's Method)?
- (ix) What does happen when Alkaline Sodium nitroprusside solution is added to Ketones?
- (x) How does an Aldehyde react with (a) hydroxylamine (b) Hydrazine
- (xi) Write down the four uses of Acetic Acid.
- (xii) What are essential and non-essential Amino Acids?

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

- (i) Write reactions of H_2SO_4 with $NaCl_{(s)}$ and $NaBr_{(s)}$.
- (ii) Justify that Cl_2O_7 is the anhydride of perchloric acid.
- (iii) Write important uses of Radon.
- (iv) Write note on Polyester resins.
- (v) What is the effect of pH on Enzymes?
- (vi) Point out the difference between Glucose and Fructose?
- (vii) Write importance of Nitrogen for growth of plant.
- (viii) Define Lignin, write its effect on paper.
- (ix) Write names of two woody and two non-woody raw materials used for manufacturing of paper.

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

- 5.(a) What are Hydrides? Give classification of Hydrides with Periodic Trend. 4
- (b) Describe with diagram the manufacture of Sodium by Down's cell. 4
- 6.(a) Give two methods for the preparation of $K_2Cr_2O_7$, also give its two uses. 4
- (b) What is Acid Rain? How does it affect our environment? 4
- 7.(a) Define Hybridization and explain the structure of Ethyne according to Hybridization concept. 4
- (b) What are Friedel-Crafts' reactions? Explain by giving two examples with mechanism. 4
- 8.(a) How will you prepare following from Ethyne (Equations only):- 4
- (i) Acetaldehyde (ii) Benzene (iii) Ethane (iv) Oxalic acid
- (b) Write two methods for the preparation of Phenol. 4
- 9.(a) What is β - Elimination? Explain briefly the two possible mechanisms of β - Elimination reactions. 4
- (b) What type of Aldehydes give Cannizzaro's reaction? Give its Mechanism. 4

CHEMISTRY PAPER-II (NEW SCHEME) GROUP-II

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) The ionization energy of Calcium is:-
 (A) Lower than that of Barium (B) Lower than that of Magnesium
 (C) Higher than that of Beryllium (D) Lower than that of Strontium
- (2) _____ does not belong to Alkaline Earth Metal.
 (A) *Rn* (B) *Ba* (C) *Ra* (D) *Be*
- (3) The chief ore of Aluminium is:-
 (A) Na_3AlF_6 (B) $Al_2O_3 \cdot H_2O$ (C) $Al_2O_3 \cdot 2H_2O$ (D) Al_2O_3
- (4) The brown gas formed, when metal reduces HNO_3 to:-
 (A) N_2O_3 (B) N_2O_5 (C) NO (D) NO_2
- (5) _____ is the strongest acid in water.
 (A) $HClO$ (B) $HClO_2$ (C) $HClO_3$ (D) $HClO_4$
- (6) The strength of binding energy of transition elements depends upon:-
 (A) Number of neutrons (B) Number of protons
 (C) Number of unpaired electrons (D) Number of electron pairs
- (7) Linear shape is associated with which set of hybrid orbitals:-
 (A) dsp^2 (B) sp^3 (C) sp^2 (D) sp
- (8) Vinyl acetylene combines with HCl to form:-
 (A) Polyacetylene (B) Benzene (C) Chloroprene (D) Divinylacetylene
- (9) _____ compound is the most reactive one.
 (A) Ethene (B) Benzene (C) Ethane (D) Ethyne
- (10) _____ is not a nucleophile.
 (A) H_2S (B) H_2O (C) BF_3 (D) NH_3
- (11) Ethanol can be converted into Ethanoic Acid by:-
 (A) Hydration (B) Hydrogenation (C) Fermentation (D) Oxidation
- (12) _____ have the highest boiling point.
 (A) 2 - Hexanone (B) Propanal (C) Ethanal (D) Methanal
- (13) _____ reagent is used to reduce a Carboxylic group to an alcohol.
 (A) $NaBH_4$ (B) H_2 / pt (C) $LiAlH_4$ (D) H_2 / Ni
- (14) _____ element is not present in all proteins.
 (A) Sulphur (B) Hydrogen (C) Carbon (D) Nitrogen
- (15) Phosphorus helps the growth of:-
 (A) Leave (B) Root (C) Seed (D) Stem
- (16) The main pollutant of leather tanneries in the waste water is due to the salt of:-
 (A) Chromium (III) (B) Lead (C) Chromium(VI) (D) Copper
- (17) Peroxyacetylnitrate(PAN) is an irritant to human beings and it affects:-
 (A) Eyes (B) Ears (C) Stomach (D) Nose

CHEMISTRY PAPER-II (NEW SCHEME) GROUP-II

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) _____ element is not present in all proteins.
 (A) Sulphur (B) Hydrogen (C) Carbon (D) Nitrogen
- (2) Phosphorus helps the growth of:-
 (A) Leave (B) Root (C) Seed (D) Stem
- (3) The main pollutant of leather tanneries in the waste water is due to the salt of:-
 (A) Chromium (III) (B) Lead (C) Chromium(VI) (D) Copper
- (4) Peroxyacetylnitrate(PAN) is an irritant to human beings and it affects:-
 (A) Eyes (B) Ears (C) Stomach (D) Nose
- (5) The ionization energy of Calcium is:-
 (A) Lower than that of Barium (B) Lower than that of Magnesium
 (C) Higher than that of Beryllium (D) Lower than that of Strontium
- (6) _____ does not belong to Alkaline Earth Metal.
 (A) Rn (B) Ba (C) Ra (D) Be
- (7) The chief ore of Aluminium is:-
 (A) Na_3AlF_6 (B) $Al_2O_3 \cdot H_2O$ (C) $Al_2O_3 \cdot 2H_2O$ (D) Al_2O_3
- (8) The brown gas formed, when metal reduces HNO_3 to:-
 (A) N_2O_3 (B) N_2O_5 (C) NO (D) NO_2
- (9) _____ is the strongest acid in water.
 (A) $HClO$ (B) $HClO_2$ (C) $HClO_3$ (D) $HClO_4$
- (10) The strength of binding energy of transition elements depends upon:-
 (A) Number of neutrons (B) Number of protons
 (C) Number of unpaired electrons (D) Number of electron pairs
- (11) Linear shape is associated with which set of hybrid orbitals:-
 (A) dsp^2 (B) sp^3 (C) sp^2 (D) sp
- (12) Vinyl acetylene combines with HCl to form:-
 (A) Polyacetylene (B) Benzene (C) Chloroprene (D) Divinylacetylene
- (13) _____ compound is the most reactive one.
 (A) Ethene (B) Benzene (C) Ethane (D) Ethyne
- (14) _____ is not a nucleophile.
 (A) H_2S (B) H_2O (C) BF_3 (D) NH_3
- (15) Ethanol can be converted into Ethanoic Acid by:-
 (A) Hydration (B) Hydrogenation (C) Fermentation (D) Oxidation
- (16) _____ have the highest boiling point.
 (A) 2 - Hexanone (B) Propanal (C) Ethanal (D) Methanal
- (17) _____ reagent is used to reduce a Carboxylic group to an alcohol.
 (A) $NaBH_4$ (B) H_2/pt (C) $LiAlH_4$ (D) H_2/Ni

CHEMISTRY PAPER-II (NEW SCHEME) GROUP-II

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Linear shape is associated with which set of hybrid orbitals:-
 (A) dsp^2 (B) sp^3 (C) sp^2 (D) sp
- (2) Vinyl acetylene combines with HCl to form:-
 (A) Polyacetylene (B) Benzene (C) Chloroprene (D) Divinylacetylene
- (3) _____ compound is the most reactive one.
 (A) Ethene (B) Benzene (C) Ethane (D) Ethyne
- (4) _____ is not a nucleophile.
 (A) H_2S (B) H_2O (C) BF_3 (D) NH_3
- (5) Ethanol can be converted into Ethanoic Acid by:-
 (A) Hydration (B) Hydrogenation (C) Fermentation (D) Oxidation
- (6) _____ have the highest boiling point.
 (A) 2 - Hexanone (B) Propanal (C) Ethanal (D) Methanal
- (7) _____ reagent is used to reduce a Carboxylic group to an alcohol.
 (A) $NaBH_4$ (B) H_2/pt (C) $LiAlH_4$ (D) H_2/Ni
- (8) _____ element is not present in all proteins.
 (A) Sulphur (B) Hydrogen (C) Carbon (D) Nitrogen
- (9) Phosphorus helps the growth of:-
 (A) Leave (B) Root (C) Seed (D) Stem
- (10) The main pollutant of leather tanneries in the waste water is due to the salt of:-
 (A) Chromium (III) (B) Lead (C) Chromium(VI) (D) Copper
- (11) Peroxyacetylnitrate(PAN) is an irritant to human beings and it affects:-
 (A) Eyes (B) Ears (C) Stomach (D) Nose
- (12) The ionization energy of Calcium is:-
 (A) Lower than that of Barium (B) Lower than that of Magnesium
 (C) Higher than that of Beryllium (D) Lower than that of Strontium
- (13) _____ does not belong to Alkaline Earth Metal.
 (A) Rn (B) Ba (C) Ra (D) Be
- (14) The chief ore of Aluminium is:-
 (A) Na_3AlF_6 (B) $Al_2O_3 \cdot H_2O$ (C) $Al_2O_3 \cdot 2H_2O$ (D) Al_2O_3
- (15) The brown gas formed, when metal reduces HNO_3 to:-
 (A) N_2O_3 (B) N_2O_5 (C) NO (D) NO_2
- (16) _____ is the strongest acid in water.
 (A) $HClO$ (B) $HClO_2$ (C) $HClO_3$ (D) $HClO_4$
- (17) The strength of binding energy of transition elements depends upon:-
 (A) Number of neutrons (B) Number of protons
 (C) Number of unpaired electrons (D) Number of electron pairs

CHEMISTRY PAPER-II (NEW SCHEME) GROUP-II

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) The brown gas formed, when metal reduces HNO_3 to:-
 (A) N_2O_3 (B) N_2O_5 (C) NO (D) NO_2
- (2) _____ is the strongest acid in water.
 (A) $HClO$ (B) $HClO_2$ (C) $HClO_3$ (D) $HClO_4$
- (3) The strength of binding energy of transition elements depends upon:-
 (A) Number of neutrons (B) Number of protons
 (C) Number of unpaired electrons (D) Number of electron pairs
- (4) Linear shape is associated with which set of hybrid orbitals:-
 (A) dsp^2 (B) sp^3 (C) sp^2 (D) sp
- (5) Vinyl acetylene combines with HCl to form:-
 (A) Polyacetylene (B) Benzene (C) Chloroprene (D) Divinylacetylene
- (6) _____ compound is the most reactive one.
 (A) Ethene (B) Benzene (C) Ethane (D) Ethyne
- (7) _____ is not a nucleophile.
 (A) H_2S (B) H_2O (C) BF_3 (D) NH_3
- (8) Ethanol can be converted into Ethanoic Acid by:-
 (A) Hydration (B) Hydrogenation (C) Fermentation (D) Oxidation
- (9) _____ have the highest boiling point.
 (A) 2 - Hexanone (B) Propanal (C) Ethanal (D) Methanal
- (10) _____ reagent is used to reduce a Carboxylic group to an alcohol.
 (A) $NaBH_4$ (B) H_2/Pt (C) $LiAlH_4$ (D) H_2/Ni
- (11) _____ element is not present in all proteins.
 (A) Sulphur (B) Hydrogen (C) Carbon (D) Nitrogen
- (12) Phosphorus helps the growth of:-
 (A) Leave (B) Root (C) Seed (D) Stem
- (13) The main pollutant of leather tanneries in the waste water is due to the salt of:-
 (A) Chromium (III) (B) Lead (C) Chromium (VI) (D) Copper
- (14) Peroxyacetyl nitrate (PAN) is an irritant to human beings and it affects:-
 (A) Eyes (B) Ears (C) Stomach (D) Nose
- (15) The ionization energy of Calcium is:-
 (A) Lower than that of Barium (B) Lower than that of Magnesium
 (C) Higher than that of Beryllium (D) Lower than that of Strontium
- (16) _____ does not belong to Alkaline Earth Metal.
 (A) Rn (B) Ba (C) Ra (D) Be
- (17) The chief ore of Aluminium is:-
 (A) Na_3AlF_6 (B) $Al_2O_3 \cdot H_2O$ (C) $Al_2O_3 \cdot 2H_2O$ (D) Al_2O_3

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN
OBJECTIVE KEY FOR INTERMEDIATE ANNUAL/TERM EXAMINATION, 2018

Name of Subject: Chemistry

Session: 2016-18

Group: 1st

Group: 2nd

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

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

سرٹیفکیٹ بابت صحیح سوالیہ پرچہ امارنگ Key

ہم نے مضمون کیمسٹری پرچہ II گروپ II سکیم New انٹر سالانہ امتحان 2018 کا سوالیہ پرچہ انشائیہ و معروضی (Subjective & Objective) کو بنظر عینیت 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:

S.#	Name	Designation	Institution	Mobile No	Signature
1	Mirza Saleem Bang	Asst. Prof.	Govt. H. J. College Multan	0334-639724	
2	Muhammad Naeem Arshed	Asso. prof	Govt. Emerson College Multan	0334-6030916	
3	Abdul Rauf	SSS Chem.	GHS/S. Sameratal Multan	0300-6354713	
4	Dr. Muhammad Ramzan	Asst. Prof.	Govt. Emerson College Multan	03346027542	
5					

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

1	Mian. M. Nawaz	Professor	GEC. Multan.	0300-6382621	
2					

تاریخ

CHEMISTRY PAPER-II (OLD SCHEME) GROUP-I

TIME ALLOWED: 3.10 Hours

SUBJECTIVE

MAXIMUM MARKS: 83

**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) What are Periods and Groups of the Periodic table?
- (ii) Why the second value of electron affinity of an element is usually shown with a positive sign?
- (iii) Write reactions which shows the amphoteric nature of BeO .
- (iv) How Gypsum is converted into Plaster of Paris?
- (v) How Boric Acid is prepared from borax, mention the chemical equation?
- (vi) What is Asbestos? Also write its uses.
- (vii) Write reaction of HNO_3 with Mg and Mn .
- (viii) Describe Ring test for the confirmation of the presence of Nitrate ion in solution.
- (ix) Write the reaction which shows the preparation of bleaching Powder.
- (x) Name the gas which is used for earthquake prediction.
- (xi) What are non-typical and typical transition elements?
- (xii) What is Sacrificial corrosion?

3. Attempt any Eight parts.

8 × 2 = 16

- (i) Write a note on Thermal cracking and Catalytic cracking of Petroleum.
- (ii) What do you know about Alicyclic and Aromatic compounds?
- (iii) What do you know about reactivity of Alkanes?
- (iv) Write a note on Ozonolysis and Polymerization of Alkenes.
- (v) What happens when Cl_2 is passed through Benzene in sunlight?
- (vi) Give reactions of Benzene Sulphonic acid with Water and Benzene with SO_3 in presence of H_2SO_4 .
- (vii) How Ethene is converted into 1 – Butanol and 1 – Chloropropane into Propene?
- (viii) Give reactions of Ethyl Magnesium bromide with CH_3CHO and $HCHO$.
- (ix) How Ethanol is converted into Ethanoic acid?
- (x) Write a note on Sodium Bisulphite test.
- (xi) What are effects of Dumping wastes in sea and rivers?
- (xii) Define Biochemical Oxygen demand (BOD) and Chemical Oxygen Demand (COD).

4. Attempt any Six parts.

6 × 2 = 12

- (i) Prepare Ether by Williamsons Synthesis.
- (ii) Convert Phenol into Bakelite.
- (iii) Write four uses of acetic Acid.
- (iv) Write a reaction of Amino acid with Alcohol.
- (v) What is importance of Protein?
- (vi) What is Iodine number? Explain briefly.

(2)

- (vii) Write main difference between DNA and RNA.
- (viii) What is setting of cement? Explain briefly.
- (ix) Write name of woody and non-woody raw materials for pulp making.

SECTION-II

NOTE: - Attempt any three questions.

$$8 \times 3 = 24$$

- 5.(a) What are Oxides? How they are classified? Explain. 4
(b) Explain commercial preparation of Sodium Hydroxide by Nelson cell. 4
- 6.(a) What is Corrosion? Describe different ways for prevention from corrosion with special reference to cathode and anode coating. 4
(b) What is Acid Rain? How does it affect our Environment? 4
- 7.(a) Give any four important features of Organic Compounds. 4
(b) How will you convert ethyl bromide into:- 4
(i) *n* - Butane (ii) Ethyl alcohol (iii) Ethane (iv) Ethene
- 8.(a) Give mechanism and example of Friediel - crafts Acylation. 4
(b) How does ethyl alcohol reacts with:- 4
(i) *Na* - Metal (ii) $SOCl_2$ (iii) Conc. H_2SO_4 at $180^\circ C$ (iv) $\frac{CH_3COOH}{H^+}$
- 9.(a) How does Ethyne react with:- 4
(i) Alkaline $KMnO_4$ (ii) Ammonical Cuprous chloride
(iii) 10 % H_2SO_4 in the presence of $HgSO_4$ (iv) Hydrogen
(b) Discuss structure and reactivity of Carbonyl compounds. 4

SECTION-III (PRACTICAL)

10. Attempt any three parts.

- | | | |
|-------|---|---|
| (i) | Write material required, equation and procedure to prepare Copper Ammine Complex. | 5 |
| (ii) | Write identification and confirmation of Phenolic group. | 5 |
| (iii) | Write complete qualitative analysis of CO_3^{2-} radical in systematic manner. | 5 |
| (iv) | Write complete qualitative analysis of Zn^{+2} radical in systematic manner. | 5 |
| (v) | Write complete qualitative analysis of K^+ radical in systematic manner. | 5 |

INTERMEDIATE PART-II (12th CLASS)

CHEMISTRY PAPER-II (OLD SCHEME) GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. 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) _____ oxide is more basic in nature.
(A) BeO (B) MgO (C) CaO (D) BaO
- (2) The ore $CaSO_4 \cdot 2H_2O$ has the general name.
(A) Gypsum (B) Dolomite (C) Calcite (D) Epsom salt
- (3) _____ element forms an ion with charge 3^+ .
(A) Be (B) Al (C) C (D) Si
- (4) The brown gas formed when metal reduces HNO_3 is:-
(A) N_2O_5 (B) N_2O_3 (C) NO_2 (D) NO
- (5) The anhydride of $HClO_4$ is:-
(A) ClO_3 (B) ClO_2 (C) Cl_2O_5 (D) Cl_2O_7
- (6) _____ is a typical transition metal.
(A) Sc (B) Y (C) Ra (D) Co
- (7) The state of hybridization of Carbon atom in Methane:-
(A) sp^3 (B) sp^2 (C) sp (D) dsp^2
- (8) Synthetic rubber is made by polymerization of:-
(A) Chloroform (B) Acetylene (C) Divinyl acetylene (D) Chloroprene
- (9) The Benzene Molecule contains:-
(A) Three double bonds (B) Two double bonds
(C) One double bond (D) Delocalized π - electron charge
- (10) Elimination bimolecular reactions involve:-
(A) First order Kinetics (B) Second order Kinetics (C) Third order Kinetics (D) Zero order Kinetics
- (11) _____ compound shows hydrogen bonding.
(A) C_6H_6 (B) C_2H_5Cl (C) $CH_3 - O - CH_3$ (D) C_2H_5OH
- (12) Cannizzaro's reaction is not given by:-
(A) Formaldehyde (B) Acetaldehyde (C) Benzaldehyde (D) Trimethylacetaldehyde
- (13) Acetic acid is manufactured by:-
(A) Distillation (B) Fermentation (C) Ozonolysis (D) Esterification
- (14) _____ is not a fatty acid.
(A) Propanoic acid (B) Acetic acid (C) Phthalic acid (D) Butanoic acid
- (15) The reaction between fat and $NaOH$ is called:-
(A) Esterification (B) Hydrogenolysis (C) Fermentation (D) Saponification
- (16) _____ is the macro-nutrient for plants.
(A) Boron (B) Zinc (C) Chlorine (D) Nitrogen
- (17) The main pollutant of leather tanneries in the waste water is due to the salt of:-
(A) Lead (B) Chromium (VI) (C) Copper (D) Chromium(III)

INTERMEDIATE PART-II (12th CLASS)

CHEMISTRY PAPER-II (OLD SCHEME) GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. 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 Benzene Molecule contains:-
 (A) Three double bonds (B) Two double bonds
 (C) One double bond (D) Delocalized π - electron charge
- (2) Elimination bimolecular reactions involve:-
 (A) First order Kinetics (B) Second order Kinetics (C) Third order Kinetics (D) Zero order Kinetics
- (3) _____ compound shows hydrogen bonding.
 (A) C_6H_6 (B) C_2H_5Cl (C) $CH_3 - O - CH_3$ (D) C_2H_5OH
- (4) Cannizzaro's reaction is not given by:-
 (A) Formaldehyde (B) Acetaldehyde (C) Benzaldehyde (D) Trimethylacetaldehyde
- (5) Acetic acid is manufactured by:-
 (A) Distillation (B) Fermentation (C) Ozonolysis (D) Esterification
- (6) _____ is not a fatty acid.
 (A) Propanoic acid (B) Acetic acid (C) Phthalic acid (D) Butanoic acid
- (7) The reaction between fat and $NaOH$ is called:-
 (A) Esterification (B) Hydrogenolysis (C) Fermentation (D) Saponification
- (8) _____ is the macro-nutrient for plants.
 (A) Boron (B) Zinc (C) Chlorine (D) Nitrogen
- (9) The main pollutant of leather tanneries in the waste water is due to the salt of:-
 (A) Lead (B) Chromium (VI) (C) Copper (D) Chromium(III)
- (10) _____ oxide is more basic in nature.
 (A) BeO (B) MgO (C) CaO (D) BaO
- (11) The ore $CaSO_4 \cdot 2H_2O$ has the general name.
 (A) Gypsum (B) Dolomite (C) Calcite (D) Epsom salt
- (12) _____ element forms an ion with charge 3^+ .
 (A) Be (B) Al (C) C (D) Si
- (13) The brown gas formed when metal reduces HNO_3 is:-
 (A) N_2O_5 (B) N_2O_3 (C) NO_2 (D) NO
- (14) The anhydride of $HClO_4$ is:-
 (A) ClO_3 (B) ClO_2 (C) Cl_2O_5 (D) Cl_2O_7
- (15) _____ is a typical transition metal.
 (A) Sc (B) Y (C) Ra (D) Co
- (16) The state of hybridization of Carbon atom in Methane:-
 (A) sp^3 (B) sp^2 (C) sp (D) dsp^2
- (17) Synthetic rubber is made by polymerization of:-
 (A) Chloroform (B) Acetylene (C) Divinyl acetylene (D) Chloroprene

INTERMEDIATE PART-II (12th CLASS)

CHEMISTRY PAPER-II (OLD SCHEME) GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. 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 polymerization of:-
 (A) Chloroform (B) Acetylene (C) Divinyl acetylene (D) Chloroprene
- (2) The Benzene Molecule contains:-
 (A) Three double bonds (B) Two double bonds
 (C) One double bond (D) Delocalized π - electron charge
- (3) Elimination bimolecular reactions involve:-
 (A) First order Kinetics (B) Second order Kinetics (C) Third order Kinetics (D) Zero order Kinetics
- (4) _____ compound shows hydrogen bonding.
 (A) C_6H_6 (B) C_2H_5Cl (C) $CH_3 - O - CH_3$ (D) C_2H_5OH
- (5) Cannizzaro's reaction is not given by:-
 (A) Formaldehyde (B) Acetaldehyde (C) Benzaldehyde (D) Trimethylacetaldehyde
- (6) Acetic acid is manufactured by:-
 (A) Distillation (B) Fermentation (C) Ozonolysis (D) Esterification
- (7) _____ is not a fatty acid.
 (A) Propanoic acid (B) Acetic acid (C) Phthalic acid (D) Butanoic acid
- (8) The reaction between fat and $NaOH$ is called:-
 (A) Esterification (B) Hydrogenolysis (C) Fermentation (D) Saponification
- (9) _____ is the macro-nutrient for plants.
 (A) Boron (B) Zinc (C) Chlorine (D) Nitrogen
- (10) The main pollutant of leather tanneries in the waste water is due to the salt of:-
 (A) Lead (B) Chromium (VI) (C) Copper (D) Chromium(III)
- (11) _____ oxide is more basic in nature.
 (A) BeO (B) MgO (C) CaO (D) BaO
- (12) The ore $CaSO_4 \cdot 2H_2O$ has the general name.
 (A) Gypsum (B) Dolomite (C) Calcite (D) Epsom salt
- (13) _____ element forms an ion with charge 3^+ .
 (A) Be (B) Al (C) C (D) Si
- (14) The brown gas formed when metal reduces HNO_3 is:-
 (A) N_2O_5 (B) N_2O_3 (C) NO_2 (D) NO
- (15) The anhydride of $HClO_4$ is:-
 (A) ClO_3 (B) ClO_2 (C) Cl_2O_5 (D) Cl_2O_7
- (16) _____ is a typical transition metal.
 (A) Sc (B) Y (C) Ra (D) Co
- (17) The state of hybridization of Carbon atom in Methane:-
 (A) sp^3 (B) sp^2 (C) sp (D) dsp^2

INTERMEDIATE PART-II (12th CLASS)

CHEMISTRY PAPER-II (OLD SCHEME) GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. 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) _____ is a typical transition metal.
(A) Sc (B) Y (C) Ra (D) Co
- (2) The state of hybridization of Carbon atom in Methane:-
(A) sp^3 (B) sp^2 (C) sp (D) dsp^2
- (3) Synthetic rubber is made by polymerization of:-
(A) Chloroform (B) Acetylene (C) Divinyl acetylene (D) Chloroprene
- (4) The Benzene Molecule contains:-
(A) Three double bonds (B) Two double bonds
(C) One double bond (D) Delocalized π - electron charge
- (5) Elimination bimolecular reactions involve:-
(A) First order Kinetics (B) Second order Kinetics (C) Third order Kinetics (D) Zero order Kinetics
- (6) _____ compound shows hydrogen bonding.
(A) C_6H_6 (B) C_2H_5Cl (C) $CH_3 - O - CH_3$ (D) C_2H_5OH
- (7) Cannizzaro's reaction is not given by:-
(A) Formaldehyde (B) Acetaldehyde (C) Benzaldehyde (D) Trimethylacetaldehyde
- (8) Acetic acid is manufactured by:-
(A) Distillation (B) Fermentation (C) Ozonolysis (D) Esterification
- (9) _____ is not a fatty acid.
(A) Propanoic acid (B) Acetic acid (C) Phthalic acid (D) Butanoic acid
- (10) The reaction between fat and $NaOH$ is called:-
(A) Esterification (B) Hydrogenolysis (C) Fermentation (D) Saponification
- (11) _____ is the macro-nutrient for plants.
(A) Boron (B) Zinc (C) Chlorine (D) Nitrogen
- (12) The main pollutant of leather tanneries in the waste water is due to the salt of:-
(A) Lead (B) Chromium (VI) (C) Copper (D) Chromium(III)
- (13) _____ oxide is more basic in nature.
(A) BeO (B) MgO (C) CaO (D) BaO
- (14) The ore $CaSO_4 \cdot 2H_2O$ has the general name.
(A) Gypsum (B) Dolomite (C) Calcite (D) Epsom salt
- (15) _____ element forms an ion with charge 3^+ .
(A) Be (B) Al (C) C (D) Si
- (16) The brown gas formed when metal reduces HNO_3 is:-
(A) N_2O_5 (B) N_2O_3 (C) NO_2 (D) NO
- (17) The anhydride of $HClO_4$ is:-
(A) ClO_3 (B) ClO_2 (C) Cl_2O_5 (D) Cl_2O_7

2018 (A) Roll No: _____

INTERMEDIATE PART-II (12th CLASS)

CHEMISTRY PAPER-II (OLD SCHEME) GROUP-II

TIME ALLOWED: 3.10 Hours

SUBJECTIVE

MAXIMUM MARKS: 83

**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) Alkali metals give Ionic Hydrides. Give brief reason.
- (ii) What are Polymeric Halides?
- (iii) How lime mortar is prepared?
- (iv) How Gypsum is converted to plaster of Paris?
- (v) What is Borax? Give its two uses.
- (vi) What is Talc? Give its uses.
- (vii) What is meant by Fuming Nitric Acid?
- (viii) Give Chemistry of Contact Process.
- (ix) Why HF can not be stored in glass containers?
- (x) What is Available Chlorine?
- (xi) What is Coordination Sphere?
- (xii) What is Mild Steel? Give its uses.

3. Attempt any Eight parts.

8 × 2 = 16

- (i) Define Functional Group. Give formulas of two functional groups containing Oxygen atoms.
- (ii) What is meant by Reforming of Petroleum?
- (iii) Give Mechanism of Bromination of Ethene.
- (iv) Give two uses of Ethyne.
- (v) What is Wurtz-Fittig reaction? Give an example.
- (vi) Draw structures of Anthracene and Phenanthrene.
- (vii) What is Wurtz Synthesis? Give an example.
- (viii) Why do S_N2 reactions give inverted product? Show by means of chemical equation.
- (ix) Give any two uses of Acetaldehyde.
- (x) Give equation to show Catalytic reduction of Acetone.
- (xi) Give names of components of Environment.
- (xii) What conditions are required for Smog formation?

4. Attempt any Six parts.

6 × 2 = 12

- (i) Why Ethanol has higher boiling point than Diethyl ether?
- (ii) Differentiate between Methanol and Ethanol.
- (iii) What is Glacial Acetic Acid?
- (iv) What is Ninhydrin Test?
- (v) Describe composition of a good Portland cement.
- (vi) Differentiate between Micronutrients and Macronutrients.

- (vii) Define Saponification number. Give an example.
 (viii) Differentiate between Oil and Fat.
 (ix) What are Polyamide Resins?

SECTION-II

NOTE: - Attempt any three questions.

8 × 3 = 24

- 5.(a) Discuss position of Hydrogen over group IV-A and VII-A. 4
 (b) How Sodium is prepared on Commercial scale? 4
- 6.(a) Explain Tin Plating and Zinc Coating of Iron. 4
 (b) Explain Lithosphere and Biosphere. 4
- 7.(a) What is Orbital Hybridization? Explain sp^3 hybridization with special reference to CH_4 molecule. 4
 (b) What is Grignard Reagent? How you can prepare primary, secondary and tertiary alcohol from Grignard reagent? 4
- 8.(a) Write a note on Stability of Benzene. 4
 (b) Write down reactions of Phenol with:- 4
- $$\begin{array}{c} O \\ || \\ CH_3 - C - Cl \end{array}$$

$$\begin{array}{c} O \\ || \\ CH_3 - C - Cl \end{array}$$
- (i) $NaOH$ (ii) Zn (iii) dilute HNO_3
- 9.(a) Explain Hydroxylation and Ozonolysis of Alkene. 4
 (b) How does Acetaldehyde react with the following reagents:- 4
- (i) C_2H_5MgI (ii) HCN (iii) dilute $NaOH$ (iv) $I_2/NaOH$

SECTION-III (PRACTICAL)

10. Attempt any three parts.

- (i) Write material required, equation and procedure to prepare Aspirin. 5
- (ii) Write identification and confirmation of Aldehyde group. 5
- (iii) Write complete qualitative analysis of S^{-2} radical in Systematic Manner. 5
- (iv) Write complete qualitative analysis of Cu^{+2} radical in Systematic Manner. 5
- (v) Write complete qualitative analysis of Ba^{+2} radical in Systematic Manner. 5

INTERMEDIATE PART-II (12th CLASS)

CHEMISTRY PAPER-II (OLD SCHEME) GROUP-II

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. 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) Keeping in view the size of atoms, the correct order is:-
 (A) $Mg > Sr$ (B) $Ba > Mg$ (C) $Lu > Ce$ (D) $Cl > I$
- (2) _____ does not belong to Alkaline-earth metals.
 (A) B (B) Ra (C) Ba (D) Rn
- (3) _____ metal is used in the Thermite process because of its activity.
 (A) Iron (B) Copper (C) Aluminium (D) Zinc
- (4) Out of all the elements of group VA, the highest ionization energy is possessed by:-
 (A) N (B) P (C) Sb (D) Bi
- (5) Of the following hydrogen halide, _____ is the weakest acid in solution.
 (A) HF (B) HBr (C) HI (D) HCl
- (6) _____ is a non typical transition element.
 (A) Cr (B) Mn (C) Zn (D) Fe
- (7) _____ set of hybrid orbitals has planar triangular shape.
 (A) sp^3 (B) sp (C) sp^2 (D) dsp^2
- (8) Preparation of vegetable ghee involves:-
 (A) Halogenation (B) Hydrogenation (C) Hydroxylation (D) Dehydrogenation
- (9) _____ acid can be used as a catalyst in a Friedel-Crafts reactions.
 (A) $AlCl_3$ (B) HNO_3 (C) $BeCl_2$ (D) $NaCl$
- (10) Grignard reagent is reactive due to:-
 (A) The presence of Halogen atom (B) The presence of Mg atom
 (C) The polarity of $C - Mg$ bond (D) None of these
- (11) _____ compound shows Hydrogen bonding.
 (A) C_2H_6 (B) C_2H_5Cl (C) $CH_3 - O - CH_3$ (D) C_2H_5OH
- (12) The carbon atom of a carbonyl group is:-
 (A) sp hybridized (B) sp^2 hybridized (C) sp^3 hybridized (D) None of these
- (13) A carboxylic acid contains:-
 (A) Hydroxyl group (B) Carboxyl group
 (C) Hydroxyl & Carboxyl group (D) Carboxyl & Aldehydic group
- (14) _____ acid is used in the manufacture of synthetic fibre.
 (A) Formic acid (B) Oxalic acid (C) Carbonic acid (D) Acetic Acid
- (15) Of the following polymers _____ is an addition polymer.
 (A) Nylon 6, 6 (B) Polystyrene (C) Terylene (D) Epoxy resin
- (16) _____ woody raw material is used for the manufacture of paper pulp.
 (A) Cotton (B) Bagasse (C) Poplar (D) Rice straw
- (17) The pH range of the acid rain is:-
 (A) 7-6.5 (B) 6.5-6 (C) 6-5.6 (D) Less than 5

INTERMEDIATE PART-II (12th CLASS)

CHEMISTRY PAPER-II (OLD SCHEME) GROUP-II

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) A carboxylic acid contains:-
 (A) Hydroxyl group (B) Carboxyl group
 (C) Hydroxyl & Carboxyl group (D) Carboxyl & Aldehydic group
- (2) _____ acid is used in the manufacture of synthetic fibre.
 (A) Formic acid (B) Oxalic acid (C) Carbonic acid (D) Acetic Acid
- (3) Of the following polymers _____ is an addition polymer.
 (A) Nylon 6, 6 (B) Polystyrene (C) Terylene (D) Epoxy resin
- (4) _____ woody raw material is used for the manufacture of paper pulp.
 (A) Cotton (B) Bagasse (C) Poplar (D) Rice straw
- (5) The pH range of the acid rain is:-
 (A) 7 – 6.5 (B) 6.5 – 6 (C) 6 – 5.6 (D) Less than 5
- (6) Keeping in view the size of atoms, the correct order is:-
 (A) $Mg > Sr$ (B) $Ba > Mg$ (C) $Lu > Ce$ (D) $C\ell > I$
- (7) _____ does not belong to Alkaline-earth metals.
 (A) B (B) Ra (C) Ba (D) Rn
- (8) _____ metal is used in the Thermite process because of its activity.
 (A) Iron (B) Copper (C) Aluminium (D) Zinc
- (9) Out of all the elements of group VA, the highest ionization energy is possessed by:-
 (A) N (B) P (C) Sb (D) Bi
- (10) Of the following hydrogen halide, _____ is the weakest acid in solution.
 (A) HF (B) HBr (C) HI (D) HCl
- (11) _____ is a non typical transition element.
 (A) Cr (B) Mn (C) Zn (D) Fe
- (12) _____ set of hybrid orbitals has planar triangular shape.
 (A) sp^3 (B) sp (C) sp^2 (D) dsp^2
- (13) Preparation of vegetable ghee involves:-
 (A) Halogenation (B) Hydrogenation (C) Hydroxylation (D) Dehydrogenation
- (14) _____ acid can be used as a catalyst in a Friedel-Crafts reactions.
 (A) $AlCl_3$ (B) HNO_3 (C) $BeCl_2$ (D) $NaCl$
- (15) Grignard reagent is reactive due to:-
 (A) The presence of Halogen atom (B) The presence of Mg atom
 (C) The polarity of $C - Mg$ bond (D) None of these
- (16) _____ compound shows Hydrogen bonding.
 (A) C_2H_6 (B) C_2H_5Cl (C) $CH_3 - O - CH_3$ (D) C_2H_5OH
- (17) The carbon atom of a carbonyl group is:-
 (A) sp hybridized (B) sp^2 hybridized (C) sp^3 hybridized (D) None of these

INTERMEDIATE PART-II (12th CLASS)

CHEMISTRY PAPER-II (OLD SCHEME) GROUP-II

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) _____ set of hybrid orbitals has planar triangular shape.
(A) sp^3 (B) sp (C) sp^2 (D) dsp^2
- (2) Preparation of vegetable ghee involves:-
(A) Halogenation (B) Hydrogenation (C) Hydroxylation (D) Dehydrogenation
- (3) _____ acid can be used as a catalyst in a Friedel-Crafts reactions.
(A) $AlCl_3$ (B) HNO_3 (C) $BeCl_2$ (D) $NaCl$
- (4) Grignard reagent is reactive due to:-
(A) The presence of Halogen atom (B) The presence of Mg atom
(C) The polarity of $C - Mg$ bond (D) None of these
- (5) _____ compound shows Hydrogen bonding.
(A) C_2H_6 (B) C_2H_5Cl (C) $CH_3 - O - CH_3$ (D) C_2H_5OH
- (6) The carbon atom of a carbonyl group is:-
(A) sp hybridized (B) sp^2 hybridized (C) sp^3 hybridized (D) None of these
- (7) A carboxylic acid contains:-
(A) Hydroxyl group (B) Carboxyl group
(C) Hydroxyl & Carboxyl group (D) Carboxyl & Aldehydic group
- (8) _____ acid is used in the manufacture of synthetic fibre.
(A) Formic acid (B) Oxalic acid (C) Carbonic acid (D) Acetic Acid
- (9) Of the following polymers _____ is an addition polymer.
(A) Nylon 6, 6 (B) Polystyrene (C) Terylene (D) Epoxy resin
- (10) _____ woody raw material is used for the manufacture of paper pulp.
(A) Cotton (B) Bagasse (C) Poplar (D) Rice straw
- (11) The pH range of the acid rain is:-
(A) 7 - 6.5 (B) 6.5 - 6 (C) 6 - 5.6 (D) Less than 5
- (12) Keeping in view the size of atoms, the correct order is:-
(A) $Mg > Sr$ (B) $Ba > Mg$ (C) $Lu > Ce$ (D) $Cl > I$
- (13) _____ does not belong to Alkaline-earth metals.
(A) B (B) Ra (C) Ba (D) Rn
- (14) _____ metal is used in the Thermite process because of its activity.
(A) Iron (B) Copper (C) Aluminium (D) Zinc
- (15) Out of all the elements of group VA, the highest ionization energy is possessed by:-
(A) N (B) P (C) Sb (D) Bi
- (16) Of the following hydrogen halide, _____ is the weakest acid in solution.
(A) HF (B) HBr (C) HI (D) HCl
- (17) _____ is a non typical transition element.
(A) Cr (B) Mn (C) Zn (D) Fe

INTERMEDIATE PART-II (12th CLASS)

CHEMISTRY PAPER-II (OLD SCHEME) GROUP-II

TIME ALLOWED: 20 Minutes

OBJECTIVE

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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Of the following hydrogen halide, _____ is the weakest acid in solution.
(A) HF (B) HBr (C) HI (D) HCl
- (2) _____ is a non typical transition element.
(A) Cr (B) Mn (C) Zn (D) Fe
- (3) _____ set of hybrid orbitals has planar triangular shape.
(A) sp^3 (B) sp (C) sp^2 (D) dsp^2
- (4) Preparation of vegetable ghee involves:-
(A) Halogenation (B) Hydrogenation (C) Hydroxylation (D) Dehydrogenation
- (5) _____ acid can be used as a catalyst in a Friedel-Crafts reactions.
(A) $AlCl_3$ (B) HNO_3 (C) $BeCl_2$ (D) $NaCl$
- (6) Grignard reagent is reactive due to:-
(A) The presence of Halogen atom (B) The presence of Mg atom
(C) The polarity of $C - Mg$ bond (D) None of these
- (7) _____ compound shows Hydrogen bonding.
(A) C_2H_6 (B) C_2H_5Cl (C) $CH_3 - O - CH_3$ (D) C_2H_5OH
- (8) The carbon atom of a carbonyl group is:-
(A) sp hybridized (B) sp^2 hybridized (C) sp^3 hybridized (D) None of these
- (9) A carboxylic acid contains:-
(A) Hydroxyl group (B) Carboxyl group
(C) Hydroxyl & Carboxyl group (D) Carboxyl & Aldehydic group
- (10) _____ acid is used in the manufacture of synthetic fibre.
(A) Formic acid (B) Oxalic acid (C) Carbonic acid (D) Acetic Acid
- (11) Of the following polymers _____ is an addition polymer.
(A) Nylon 6, 6 (B) Polystyrene (C) Terylene (D) Epoxy resin
- (12) _____ woody raw material is used for the manufacture of paper pulp.
(A) Cotton (B) Bagasse (C) Poplar (D) Rice straw
- (13) The pH range of the acid rain is:-
(A) 7 - 6.5 (B) 6.5 - 6 (C) 6 - 5.6 (D) Less than 5
- (14) Keeping in view the size of atoms, the correct order is:-
(A) $Mg > Sr$ (B) $Ba > Mg$ (C) $Lu > Ce$ (D) $Cl > I$
- (15) _____ does not belong to Alkaline-earth metals.
(A) B (B) Ra (C) Ba (D) Rn
- (16) _____ metal is used in the Thermite process because of its activity.
(A) Iron (B) Copper (C) Aluminium (D) Zinc
- (17) Out of all the elements of group VA, the highest ionization energy is possessed by:-
(A) N (B) P (C) Sb (D) Bi

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN
OBJECTIVE KEY FOR INTERMEDIATE ANNUAL/SEMESTER EXAMINATION, 2018

Name of Subject: Chemistry Paper-II

Session: Old Scheme

Group: 1st

Group: 2nd

Q.	Paper Code	Paper Code	Paper Code	Paper Code
Nos	8481	8483	8485	8487
1	D	D	D	D
2	A	B	D	A
3	B	D	B	D
4	C	B	D	D
5	D	B	B	B
6	D	C	B	D
7	A	D	C	B
8	D	D	D	B
9	D	B	D	C
10	B	D	B	D
11	D	A	D	D
12	B	B	A	B
13	B	C	B	D
14	C	D	C	A
15	D	D	D	B
16	D	A	D	C
17	B	D	A	D
18				
19				
20				

Q.	Paper Code	Paper Code	Paper Code	Paper Code
Nos	8482	8484	8486	8488
1	B	B	C	A
2	D	D	B	C
3	C	B	A	C
4	A	C	C	B
5	A	D	D	A
6	C	B	B	C
7	C	D	B	D
8	B	C	D	B
9	A	A	B	B
10	C	A	C	D
11	D	C	D	B
12	B	C	B	C
13	B	B	D	D
14	D	A	C	B
15	B	C	A	D
16	C	D	A	C
17	D	B	C	A
18				
19				
20				

سرٹیفکیٹ بابت صحیح سوالیہ پرچہ مارکنگ Key

ہم نے مضمون Chemistry پرچہ II گروپ I & II سکیم old انٹر سالانہ امتحان 2018 کا سوالیہ پرچہ انشائیہ و معروضی (Subjective & Objective) کو بنظر عین 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: 16-5-18

S.#	Name	Designation	Institution	Mobile No	Signature
1	Mian M. Nawaz	Professor	Govt. Emerson College Multan	0300-6382621	
2	SBAKIL UR RAHMAN	Asso. prof	G. C T sc. Multan	0333-605011	
3	M. Tariq/Shehzad	A. P	Govt. Emerson College Multan	0334-6070969	

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

Re-Checked By	Name	Designation	Institution	Mobile No	Signature
1	Muhammad Naeem Arshad	Asso. prof	Govt. Emerson College Multan	0334-6030916	
2	Khair, Muhammad Khawar	SSS	Govt. Nusrat-ul-Islam HSS Multan	03016951952	
3					