

INTERMEDIATE PART-II (12th CLASS)

CHEMISTRY PAPER-II (NEW SCHEME) (SESSION 2015-2017) 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
- Define Hydration Energy. Give one example.
 - Why diamond is non-conductor of electricity while graphite is a good conductor?
 - What happens when the following compounds are heated? (a) $LiOH$ (b) $Mg(NO_3)_2$
 - Which two major problems are faced during working of diaphragm cell?
 - Write down chemical formula of Colemanite and Bauxite.
 - Why are liquid Silicones preferred over Ordinary Petroleum Oil?
 - Give two chemical reactions to prove that NO_2 is an Oxidizing Agent.
 - Write two precipitation reactions of Sulphuric Acid.
 - Why group IIB elements are called Non-typical Transition elements?
 - What are Ligands? Give two examples.
 - What is Ecosystem?
 - How does increasing concentration of detergents affect the aquatic life?
3. **Attempt any eight parts.** 8 × 2 = 16
- What is Teflon? Give its uses.
 - Why the Oxyacids of Chlorine are stronger than Oxyacids of Bromine?
 - 1 - Butene does not show Cis-trans isomerism but 2 - Butene does. Justify this statement.
 - Define the terms:- (a) Fractional distillation (b) Hybridization
 - Write chemical equations for preparation of propene from:-
 (a) $CH_3CH_2CH_2Br$ (b) $CH_3CH_2CH_2OH$
 - What is Polymerization? How high quality polyethylene is obtained from Ethene?
 - Define Resonance and Resonance Energy.
 - What are objections to Kekule's formula?
 - Justify the given order of reactivity on the basis of bond energy $R-I > R-Br > R-Cl > R-F$
 - Complete the following reactions:-
 (a) $CH_3CH_2-Br + CH_3O^- \longrightarrow$ (b) $CH_3CH_2-Br + CH_3COO^- Na^+ \longrightarrow$
 - What is meant by denaturing of Alcohol?
 - Give reactions of Phenol with:- (a) Bromine water (b) Conc H_2SO_4
4. **Attempt any six parts.** 6 × 2 = 12
- Convert Acetaldehyde to 1, 1 - Diethoxyethane.
 - Convert Acetone to Acetic Acid.
 - Draw the structural formula of (a) Epichlorohydrin (b) Diphenylol Propane
 - What is condensation polymerization? Give a reaction.
 - Draw the structural formulas of (a) Valeric acid (b) Phthalic acid
 - What are Amino Acids? Give two examples.
 - What are Carbohydrates? How are they classified?
 - What are Fertilizers? Why are they needed?
 - What is the composition of Lime and Silica of good Cement?

SECTION-II

NOTE: - Attempt any three questions.

- 5.(a) Explain the position of Hydrogen in 1st A group of periodic table with two similarities and two differences. 2 + 2
- (b) Describe four peculiar behaviour of Beryllium. 4
- 6.(a) Explain Bessemer's Process for manufacturing of Steel with the help of diagram. 1 + 3
- (b) Where does Ozone exist in atmosphere? What is Ozone hole?
 Write role of CFCs in destroying ozone. 1 + 1 + 2
- 7.(a) Define sp^2 hybridization. Explain the structure of Ethene on the basis of sp^2 hybridization. 4
- (b) What are S_N reactions? Explain S_N2 reactions in detail. 4
- 8.(a) How will you make the following conversions? 4
- n - propyl bromide into propane
 - Propanoic acid into Ethane
 - Ethane into Methane
 - 2 - Butyne into Cis - 2 - Butene
- (b) What types of Aldehydes give Cannizzaro's reaction? Give its mechanism. 4
- 9.(a) Describe Nitration and Sulphonation of Benzene with Mechanism. 4
- (b) Explain the following terms using Ethyl Alcohol as an example:- 4
- Oxidation
 - Dehydration
 - Esterification
 - Ether formation

CHEMISTRY PAPER-II (NEW SCHEME) (SESSION 2015-2017) 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 circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles 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, _____ order is correct one.
 (A) $Mg > Sr$ (B) $Ba > Mg$ (C) $Lu > Ce$ (D) $Cl > I$
- (2) The mineral $CaSO_4 \cdot 2H_2O$ has the general name:-
 (A) Gypsum (B) Dolomite (C) Calcite (D) Epsom salt
- (3) _____ element 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) Coordination 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) _____ acid 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, ethers behave 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 is manufactured by:-
 (A) Distillation (B) Fermentation (C) Ozonolysis (D) Esterification
- (14) _____ is used in the manufacture of synthetic fibre.
 (A) Formic acid (B) Oxalic acid (C) Amino acid (D) Acetic acid
- (15) The reaction between fat and $NaOH$ is called:-
 (A) Esterification (B) Hydrogenolysis (C) Fermentation (D) Saponification
- (16) Phosphorus helps the growth of:-
 (A) Root (B) Leave (C) Stem (D) Seed
- (17) _____ is a secondary pollutant.
 (A) Carbonic acid (B) CO_2 (C) SO_2 (D) CO

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CHEMISTRY PAPER-II (NEW SCHEME) (SESSION 2015-2017) 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
- Define Atomic Radius. Why atomic radii of I A group elements increases in a group?
 - Hydration energies of the following ions are in order. Explain $Al^{+3} > Mg^{+2} > Na^+$
 - What is the importance of Sulphur for Plants?
 - Why NaOH aqueous solution is more basic than LiOH?
 - Aluminium sheets are said to be corrosion free. Why?
 - Give peculiar behavior of Carbon with IVA group elements. Give two points of differences.
 - What is the effect of Temperature on N_2O_4 ?
 - Mention allotropic forms of VIA group elements.
 - What are Substitutional Alloys?
 - Under what conditions does Aluminium corrode?
 - How recycling of plastic is done by a process transformation?
 - What are harmful effects of Chlorination of Water?
3. **Attempt any eight parts.** 8 × 2 = 16
- Why HF is weaker acid than HI?
 - What are Disproportionation Reactions? Give an example.
 - 2-Butene shows Geometrical isomerism but 1-Butene does not show. Why?
 - What are Alicyclic Compounds? Give two examples.
 - How Alkane can be prepared by Wolf Kishner's Reaction?
 - How Ethene can be converted into Ethylene Glycol?
 - What happens when Benzene is heated with conc. H_2SO_4 at $80^\circ C$?
 - Give Mechanism of Nitration of Benzene.
 - How tetraethyl lead can be prepared from Alkyl Halides?
 - Which factor decides the reactivity of Alkyl Halides?
 - Write the structural formulas of (a) Lactic Acid (b) Tartaric Acid
 - What is meant by Denaturing of Alcohol?
4. **Attempt any six parts.** 6 × 2 = 12
- How will you distinguish between Methanol and Ethanol?
 - Write general mechanism of the reactions of Ammonia derivatives with carbonyl Compounds.
 - Write the structural formula of Phthalic Acid and Malonic acid.
 - Define essential and Non-essential Amino Acids.
 - Define Copolymers with one example.
 - How are Proteins denatured?
 - What is the effect of temperature on Enzyme Activity?
 - What are Macro-nutrients? Write their names.
 - What are the reactions taking place between one to seven days in setting of Cement?

SECTION-II

NOTE: - Attempt any three questions.

- 5.(a) Explain Sixth and 7th period of Periodic Table. 2 + 2
- (b) How & why Beryllium differs from its group members? 1 + 3
- 6.(a) Explain open hearth process for the manufacture of Steel. 4
- (b) Why is Ozone layer depleting? What will happen when concentration of Ozone will be decreased? 4
- 7.(a) Write a short note on Reforming? 4
- (b) Give two chemical reactions which are used for increasing Carbon Chain? 4
- 8.(a) How does Propyne react with following reagents? 4
- (i) $AgNO_3 / NH_4OH$ (ii) Cu_2Cl_2 / NH_4OH (iii) H_2O / H_2SO_4 $HgSO_4$ (iv) $NaNH_2$
- (b) What are Condensation Reactions? Explain Aldol condensation with three examples. 4
- 9.(a) Discuss the stability of benzene in detail with reference to 1, 3, 5 cyclohexatriene. 4
- (b) What is Fermentation? How Ethyl Alcohol can be prepared by this method from Molasses? 4

CHEMISTRY PAPER-II (NEW SCHEME) (SESSION 2015-2017) GROUP-II

TIME ALLOWED: 20 Minutes

OBJECTIVE

MAXIMUM MARKS: 17

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Q.No.1

- (1) Mark the correct statement:-
 (A) Metallic Character decreases along a period
 (B) Metallic Character increases along a period (C) Metallic Character increases down the group
 (D) Metallic Character remains the same down the group
- (2) ____ element is deposited at the Cathode during the electrolysis of brine in Nelson Cell.
 (A) H_2 (B) Na (C) Cl_2 (D) O_2
- (3) Aluminium Oxide is:-
 (A) Acidic Oxide (B) Basic Oxide (C) Amphoteric Oxide (D) None of these
- (4) ____ Catalyst is used in the Contact Process.
 (A) Fe_2O_3 (B) V_2O_5 (C) SO_3 (D) Ag_2O
- (5) ____ is the strongest acid.
 (A) $HClO$ (B) $HClO_2$ (C) $HClO_3$ (D) $HClO_4$
- (6) ____ is a typical transition element.
 (A) Sc (B) Y (C) Ra (D) Co
- (7) A double bond consists of:-
 (A) Two Sigma bond
 (B) One Sigma and one pi bond (C) One Sigma and two pi bond (D) Two pi bonds
- (8) $\beta - \beta'$ - dichloro Ethyl Sulphide is commonly known as:-
 (A) Mustard gas (B) Laughing gas (C) Phosgene gas (D) Bio - gas
- (9) Benzene cannot undergo:-
 (A) Substitution reactions (B) Addition reactions (C) Oxidation reactions (D) Elimination reactions
- (10) Elimination bimolecular reactions involve:-
 (A) First order kinetics (B) Second order kinetics (C) 3rd order kinetics (D) Zero order kinetics
- (11) Alcohol obtained by fermentation never exceeds:-
 (A) 14 % (B) 10 % (C) 16 % (D) 95 %
- (12) Ketones are prepared by Oxidation of:-
 (A) Primary Alcohol (B) Secondary Alcohol (C) Tertiary Alcohol (D) All of these
- (13) Acetamide is prepared by:- (A) Heating Ammonium Acetate
 (B) Heating Methyl Cyanide (C) Heating of Phthalic Acid (D) Heating Ethyl Acetate
- (14) Polypeptide has molecular mass up to:-
 (A) 10,000 (B) 20,000 (C) 1000 (D) 10
- (15) ____ polymers is a synthetic polymer.
 (A) Animal fat (B) Starch (C) Cellulose (D) Polyester
- (16) Ammonium Nitrate fertilizer is not used for ____ crop.
 (A) Cotton (B) Wheat (C) Sugar cane (D) Paddy Rice
- (17) Newspaper can be recycled again and again by ____ times.
 (A) 2 (B) 5 (C) 4 (D) 3

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MULTAN**

OBJECTIVE KEY FOR INTER (PART-I / II) Annual Examination, 2017.

Name of Subject CHEMISTRY

Session 2015-2017

Group: 1st

Group: 2nd

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

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

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