2019 (A) Roll No: _____

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I (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) Why do the isotopes have same chemical but different physical properties?
(ii) Define gram formula. Give two examples.
(iii) What is Stoichiometry? Give its two assumptions.
(iv) Why is there a need to crystallize the crude product?
(v) What do you mean by solvent extraction? Which law does control it?
(vi) How is absolute zero explained by drawing graph?
(vii) Calculate the value of gas constant "R" in S.I units.
(viii) Derive Avogadro's Law from Kinetic molecular theory of gases.
(ix) Lighter gases diffuse more rapidly than heavier gases. Give reasons.
(x) One molal solution of urea is more dilute than one molar solution. Why?
(xi) Define Raoult's Law. Give one of its mathematical expression
(xii) What is discontinuous solubility curve? Give one example.

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

(i) Why do fish and plants in ponds survive under blanket of ice during cold winters?
(ii) Define Polymorphism. Give one example.
(iii) Freshly cut metals show the property of metallic luster. Comment on the statement.
(iv) Write down any two properties of Molecular Solids.
(v) Calculate the mass of electron from its e/m value.
(vi) Justify the statement that angular momentum of an electron revolving in orbit is quantized.
(vii) How was dual nature of electron verified by Davisson and Germer?
(viii) State Aufbau principle. Write electronic configuration of Sodium $({}_{11}Na)$ following this principle.
(ix) Define the given terms: (a) common ion effect (b) solubility product
(x) What is the difference between heat and temperature?
(xi) Define pseudo first order reaction. Given one example.
(xii) Write down two examples to explain the activation of catalyst.

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

(i) Differentiate between exothermic and endothermic reactions.
(ii) Define Ionization energy. How does it vary in periodic table?
(iii) Ionic radii of anions are greater than their parent atoms. Why?
(iv) CO_2 is non-polar whereas H_2O is polar molecule. Give reason.
(v) Define Dipole Moment. Give its various units.
(vi) State 1st law of thermodynamics.
(vii) Define oxidation number. Calculate oxidation number of 'Mn" in $KMnO_4$.
(viii) Differentiate between a primary cell and a secondary cell.
(ix) Write electrochemical reactions taking place in Alkaline battery.

SECTION-II

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

5.(a) Describe combustion analysis to determine mass percentages of C, H and O in an organic compound. 4

(b) What is meant by Hydrogen Bonding? How it explains the helix structure of proteins? 4

6.(a) Write defects in Bohr's model of an atom. 4

(b) One mole of methane gas is maintain at 300K its volume is $250 Cm^3$. Calculate the pressure exerted by the gas. 4

7.(a) What is Electron Affinity? How does it show variation along groups and periods in the periodic table? 4

(b) Describe the Hess's Law of Constant Heat Summation and give one example to explain it. 4

8.(a) $N_{2(g)}$ and $H_{2(g)}$ combine to give $NH_{3(g)}$. The value of K_C in this reaction at 500^oC is 6.0×10^{-2}. Calculate the value of K_P for this reaction. 4

(b) How does Arrhenius equation help us to calculate the energy of activation of a reaction? 4

9.(a) Write Landsberger's method for determination of elevation of boiling point. 4

(b) Define voltaic of Galvanic cell. Write its function with chemical equations. 4

Paper Code Number: 2481	2019 (A)	Roll No._____

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I (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 largest number of molecules are present in:
(A) $3.6g$ of H_2O (B) $4.8g$ of C_2H_5OH (C) $12.8g$ of CO (D) $5.4g$ of N_2O_5

(2) One mole of SO_2 contains: (A) 6.02×10^{23} atoms of Oxygen
(B) 18.1×10^{23} molecules of SO_2 (C) 6.02×10^{23} atoms of S (D) 4 gram atoms of SO_2

(3) The comparative rates at which the solutes move in paper chromatography depend on:
(A) The size of paper (B) R_f values of solutes
(C) Temperature of the experiment (D) Size of the chromatographic tank used

(4) The deviation of a gas from ideal behaviour is maximum at:
(A) -10^oC and 5.0 atm (B) -10^oC and 2.0 atm (C) 100^oC and 2.0 atm (D) 0^oC and 2.0 atm

(5) The order of rate of diffusion of gases NH_3, SO_2, $C\ell_2$ and CO_2 is:
(A) $NH_3 > SO_2 > C\ell_2 > CO_2$ (B) $NH_3 > CO_2 > SO_2 > C\ell_2$
(C) $C\ell_2 > SO_2 > CO_2 > NH_3$ (D) $NH_3 > CO_2 > C\ell_2 > SO_2$

(6) Amorphous solids:
(A) Have sharp melting points (B) Undergo clean cleavage when cut with knife
(C) Have perfect arrangement of atoms (D) Can possess small regions of orderly arrangement

(7) Diamond is a bad conductor because: (A) It has a tight structure (B) It has a high density
(C) There are no free electrons present in the crystal of diamond to conduct electricity
(D) Is transparent to light

(8) In the ground state of an atom, the electron is present:
(A) In the nucleus (B) In the second shell (C) Nearest to the nucleus (D) Farthest from the nucleus

(9) Quantum number values for 2P orbitals are:
(A) $n = 2 \quad \ell = 1$ (B) $n = 1 \quad \ell = 2$ (C) $n = 1 \quad \ell = 0$ (D) $n = 2 \quad \ell = 0$

(10) The number of bonds in Nitrogen molecule is:
(A) One σ and one π (B) One σ and two π (C) Three sigma only (D) Two σ and one π

(11) Which of the Hydrogen halides has the highest percentage of ionic character?
(A) $HC\ell$ (B) HBr (C) HF (D) HI

(12) The change in heat energy of a chemical reaction, at constant temperature and pressure is called:
(A) Enthalpy change (B) Heat of combustion (C) Bond energy (D) Internal energy change

(13) The solubility product of $AgC\ell$ is $2.0 \times 10^{-10}\ mol^2 dm^{-6}$. The maximum concentration of Ag^+ ions in the solution is: (A) $2.0 \times 10^{-10}\ mol\ dm^{-3}$
(B) $1.41 \times 10^{-5}\ mol\ dm^{-3}$ (C) $1.0 \times 10^{-10}\ mol\ dm^{-3}$ (D) $4.0 \times 10^{-20}\ mol\ dm^{-3}$

(14) Which of the following solutions has the highest boiling point?
(A) 5.85 % solution of Sodium Chloride (B) 18.0% solution of Glucose
(C) 6.0 % solution of Urea (D) All have he same boiling point

(15) 18g of Glucose is dissolved in 90g of water. The relative lowering of vapour pressure is equal to:
(A) $\frac{1}{5}$ (B) 5.1 (C) $\frac{1}{51}$ (D) 6

(16) If the salt bridge is not used between the two half cells, then the voltage:
(A) Decreases rapidly (B) Decreases slowly (C) Does not change (D) Drops to zero

(17) If the rate equation of a reaction $2A + B \rightarrow$ products is, rate = $K[A]^2[B]$, and A is present in large excess, then the order of reaction is: (A) 1 (B) 2 (C) 3 (D) None of these

Paper Code Number: 2483	2019 (A)	Roll No._____

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I (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) In the ground state of an atom, the electron is present:
(A) In the nucleus (B) In the second shell (C) Nearest to the nucleus (D) Farthest from the nucleus

(2) Quantum number values for 2P orbitals are:
(A) $n = 2 \quad \ell = 1$ (B) $n = 1 \quad \ell = 2$ (C) $n = 1 \quad \ell = 0$ (D) $n = 2 \quad \ell = 0$

(3) The number of bonds in Nitrogen molecule is:
(A) One σ and one π (B) One σ and two π (C) Three sigma only (D) Two σ and one π

(4) Which of the Hydrogen halides has the highest percentage of ionic character?
(A) $HC\ell$ (B) HBr (C) HF (D) HI

(5) The change in heat energy of a chemical reaction, at constant temperature and pressure is called:
(A) Enthalpy change (B) Heat of combustion (C) Bond energy (D) Internal energy change

(6) The solubility product of $AgC\ell$ is $2.0 \times 10^{-10}\ mol^2 dm^{-6}$. The maximum concentration of Ag^+ ions in the solution is: (A) $2.0 \times 10^{-10}\ mol\ dm^{-3}$
(B) $1.41 \times 10^{-5}\ mol\ dm^{-3}$ (C) $1.0 \times 10^{-10}\ mol\ dm^{-3}$ (D) $4.0 \times 10^{-20}\ mol\ dm^{-3}$

(7) Which of the following solutions has the highest boiling point?
(A) 5.85 % solution of Sodium Chloride (B) 18.0% solution of Glucose
(C) 6.0 % solution of Urea (D) All have he same boiling point

(8) 18g of Glucose is dissolved in 90g of water. The relative lowering of vapour pressure is equal to:
(A) $\frac{1}{5}$ (B) 5.1 (C) $\frac{1}{51}$ (D) 6

(9) If the salt bridge is not used between the two half cells, then the voltage:
(A) Decreases rapidly (B) Decreases slowly (C) Does not change (D) Drops to zero

(10) If the rate equation of a reaction $2A + B \rightarrow$ products is, rate $= K[A]^2[B]$, and A is present in large excess, then the order of reaction is: (A) 1 (B) 2 (C) 3 (D) None of these

(11) The largest number of molecules are present in:
(A) $3.6g$ of H_2O (B) $4.8g$ of C_2H_5OH (C) $12.8g$ of CO (D) $5.4g$ of N_2O_5

(12) One mole of SO_2 contains: (A) 6.02×10^{23} atoms of Oxygen
(B) 18.1×10^{23} molecules of SO_2 (C) 6.02×10^{23} atoms of S (D) 4 gram atoms of SO_2

(13) The comparative rates at which the solutes move in paper chromatography depend on:
(A) The size of paper (B) R_f values of solutes
(C) Temperature of the experiment (D) Size of the chromatographic tank used

(14) The deviation of a gas from ideal behaviour is maximum at:
(A) -10^oC and 5.0 atm (B) -10^oC and 2.0 atm (C) 100^oC and 2.0 atm (D) 0^oC and 2.0 atm

(15) The order of rate of diffusion of gases NH_3, SO_2, $C\ell_2$ and CO_2 is:
(A) $NH_3 > SO_2 > C\ell_2 > CO_2$ (B) $NH_3 > CO_2 > SO_2 > C\ell_2$
(C) $C\ell_2 > SO_2 > CO_2 > NH_3$ (D) $NH_3 > CO_2 > C\ell_2 > SO_2$

(16) Amorphous solids:
(A) Have sharp melting points (B) Undergo clean cleavage when cut with knife
(C) Have perfect arrangement of atoms (D) Can possess small regions of orderly arrangement

(17) Diamond is a bad conductor because: (A) It has a tight structure (B) It has a high density
(C) There are no free electrons present in the crystal of diamond to conduct electricity
(D) Is transparent to light

Paper Code Number: 2485	2019 (A)	Roll No._____

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I (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) Amorphous solids:
(A) Have sharp melting points (B) Undergo clean cleavage when cut with knife
(C) Have perfect arrangement of atoms (D) Can possess small regions of orderly arrangement

(2) Diamond is a bad conductor because: (A) It has a tight structure (B) It has a high density
(C) There are no free electrons present in the crystal of diamond to conduct electricity
(D) Is transparent to light

(3) In the ground state of an atom, the electron is present:
(A) In the nucleus (B) In the second shell (C) Nearest to the nucleus (D) Farthest from the nucleus

(4) Quantum number values for 2P orbitals are:
(A) $n = 2 \quad \ell = 1$ (B) $n = 1 \quad \ell = 2$ (C) $n = 1 \quad \ell = 0$ (D) $n = 2 \quad \ell = 0$

(5) The number of bonds in Nitrogen molecule is:
(A) One σ and one π (B) One σ and two π (C) Three sigma only (D) Two σ and one π

(6) Which of the Hydrogen halides has the highest percentage of ionic character?
(A) $HC\ell$ (B) HBr (C) HF (D) HI

(7) The change in heat energy of a chemical reaction, at constant temperature and pressure is called:
(A) Enthalpy change (B) Heat of combustion (C) Bond energy (D) Internal energy change

(8) The solubility product of $AgC\ell$ is $2.0 \times 10^{-10}\ mol^2 dm^{-6}$. The maximum concentration of Ag^+ ions in the solution is: (A) $2.0 \times 10^{-10}\ mol\ dm^{-3}$
(B) $1.41 \times 10^{-5}\ mol\ dm^{-3}$ (C) $1.0 \times 10^{-10}\ mol\ dm^{-3}$ (D) $4.0 \times 10^{-20}\ mol\ dm^{-3}$

(9) Which of the following solutions has the highest boiling point?
(A) 5.85 % solution of Sodium Chloride (B) 18.0% solution of Glucose
(C) 6.0 % solution of Urea (D) All have he same boiling point

(10) 18g of Glucose is dissolved in 90g of water. The relative lowering of vapour pressure is equal to:
(A) $\frac{1}{5}$ (B) 5.1 (C) $\frac{1}{51}$ (D) 6

(11) If the salt bridge is not used between the two half cells, then the voltage:
(A) Decreases rapidly (B) Decreases slowly (C) Does not change (D) Drops to zero

(12) If the rate equation of a reaction $2A + B \rightarrow$ products is, rate = $K[A]^2[B]$, and A is present in large excess, then the order of reaction is: (A) 1 (B) 2 (C) 3 (D) None of these

(13) The largest number of molecules are present in:
(A) $3.6g$ of H_2O (B) $4.8g$ of C_2H_5OH (C) $12.8g$ of CO (D) $5.4g$ of N_2O_5

(14) One mole of SO_2 contains: (A) 6.02×10^{23} atoms of Oxygen
(B) 18.1×10^{23} molecules of SO_2 (C) 6.02×10^{23} atoms of S (D) 4 gram atoms of SO_2

(15) The comparative rates at which the solutes move in paper chromatography depend on:
(A) The size of paper (B) R_f values of solutes
(C) Temperature of the experiment (D) Size of the chromatographic tank used

(16) The deviation of a gas from ideal behaviour is maximum at:
(A) -10^oC and 5.0 atm (B) -10^oC and 2.0 atm (C) 100^oC and 2.0 atm (D) 0^oC and 2.0 atm

(17) The order of rate of diffusion of gases NH_3, SO_2, $C\ell_2$ and CO_2 is:
(A) $NH_3 > SO_2 > C\ell_2 > CO_2$ (B) $NH_3 > CO_2 > SO_2 > C\ell_2$
(C) $C\ell_2 > SO_2 > CO_2 > NH_3$ (D) $NH_3 > CO_2 > C\ell_2 > SO_2$

Paper Code Number: 2487	2019 (A)	Roll No._____

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I (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 deviation of a gas from ideal behaviour is maximum at:
(A) $-10^{o}C$ and 5.0 atm (B) $-10^{o}C$ and 2.0 atm (C) $100^{o}C$ and 2.0 atm (D) $0^{o}C$ and 2.0 atm

(2) The order of rate of diffusion of gases NH_3, SO_2, $C\ell_2$ and CO_2 is:
(A) $NH_3 > SO_2 > C\ell_2 > CO_2$ (B) $NH_3 > CO_2 > SO_2 > C\ell_2$
(C) $C\ell_2 > SO_2 > CO_2 > NH_3$ (D) $NH_3 > CO_2 > C\ell_2 > SO_2$

(3) Amorphous solids:
(A) Have sharp melting points (B) Undergo clean cleavage when cut with knife
(C) Have perfect arrangement of atoms (D) Can possess small regions of orderly arrangement

(4) Diamond is a bad conductor because: (A) It has a tight structure (B) It has a high density
(C) There are no free electrons present in the crystal of diamond to conduct electricity
(D) Is transparent to light

(5) In the ground state of an atom, the electron is present:
(A) In the nucleus (B) In the second shell (C) Nearest to the nucleus (D) Farthest from the nucleus

(6) Quantum number values for 2P orbitals are:
(A) $n = 2 \quad \ell = 1$ (B) $n = 1 \quad \ell = 2$ (C) $n = 1 \quad \ell = 0$ (D) $n = 2 \quad \ell = 0$

(7) The number of bonds in Nitrogen molecule is:
(A) One σ and one π (B) One σ and two π (C) Three sigma only (D) Two σ and one π

(8) Which of the Hydrogen halides has the highest percentage of ionic character?
(A) $HC\ell$ (B) HBr (C) HF (D) HI

(9) The change in heat energy of a chemical reaction, at constant temperature and pressure is called:
(A) Enthalpy change (B) Heat of combustion (C) Bond energy (D) Internal energy change

(10) The solubility product of $AgC\ell$ is $2.0 \times 10^{-10}\ mol^2 dm^{-6}$. The maximum concentration of Ag^+ ions in the solution is: (A) $2.0 \times 10^{-10}\ mol\ dm^{-3}$
(B) $1.41 \times 10^{-5}\ mol\ dm^{-3}$ (C) $1.0 \times 10^{-10}\ mol\ dm^{-3}$ (D) $4.0 \times 10^{-20}\ mol\ dm^{-3}$

(11) Which of the following solutions has the highest boiling point?
(A) 5.85 % solution of Sodium Chloride (B) 18.0% solution of Glucose
(C) 6.0 % solution of Urea (D) All have he same boiling point

(12) 18g of Glucose is dissolved in 90g of water. The relative lowering of vapour pressure is equal to:
(A) $\frac{1}{5}$ (B) 5.1 (C) $\frac{1}{51}$ (D) 6

(13) If the salt bridge is not used between the two half cells, then the voltage:
(A) Decreases rapidly (B) Decreases slowly (C) Does not change (D) Drops to zero

(14) If the rate equation of a reaction $2A + B \rightarrow$ products is, rate = $K[A]^2[B]$, and A is present in large excess, then the order of reaction is: (A) 1 (B) 2 (C) 3 (D) None of these

(15) The largest number of molecules are present in:
(A) $3.6g$ of H_2O (B) $4.8g$ of C_2H_5OH (C) $12.8g$ of CO (D) $5.4g$ of N_2O_5

(16) One mole of SO_2 contains: (A) 6.02×10^{23} atoms of Oxygen
(B) 18.1×10^{23} molecules of SO_2 (C) 6.02×10^{23} atoms of S (D) 4 gram atoms of SO_2

(17) The comparative rates at which the solutes move in paper chromatography depend on:
(A) The size of paper (B) R_f values of solutes
(C) Temperature of the experiment (D) Size of the chromatographic tank used

2019 (A) Roll No: _____

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I (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) 23g of Sodium and 238g of Uranium have equal number of atoms in them. Justify.
(ii) Calculate mass in grams of 2.78×10^{21} molecules of $CrO_2C\ell_2$.
(iii) What is Avogadro's number? Give equation to relate Avogadro's number and mass of an element.
(iv) How can you do decolourization of undesirable colours during crystallization?
(v) Give differences between partition chromatography and adsorption chromatography.
(vi) Define diffusion and effusion of gases.
(vii) Write expression for Kinetic equation and root mean square velocity of gases.
(viii) Derive Boyle's Law from Kinetic molecular theory of gases.
(ix) Explain Joule-Thomson effect.
(x) The sum of mole fractions of all the components is always equal to unity for any solution. Justify.
(xi) Freezing points of a solution are depressed due to the presence of solutes. Explain it.
(xii) Write any two properties of ideal solution.

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

(i) Define Polarizibility. How it affects London dispersion forces?
(ii) Why water is liquid and H_2S is a gas?
(iii) Why ice floats on surface of water?
(iv) Vapour pressure of solids are far less than liquids, justify it.
(v) Why positive rays are called Cannal rays?
(vi) Write two defect of Bohr's atomic model.
(vii) Describe Heisenberg Uncertainity Principle.
(viii) Why it is necessary to decrease pressure in discharge tube to get cathode rays?
(ix) Why water is a weak electrolyte?
(x) What is the effect of catalyst on equilibrium?
(xi) Differentiate between Homogenous and Heterogenous catalysis.
(xii) How half life method is used to determine order of Reaction?

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

(i) Define Ionic bond with example.
(ii) Write down any two postulates of VSEPR theory.
(iii) Define dipole moment. Give its various units.
(iv) Why π (Pi) bonds are more diffused than sigma (σ) bond?
(v) Prove $q_v = \Delta E$
(vi) Differentiate Enthalpy of Neutralizaton and Enthalpy of combustion.
(vii) Draw the diagram of S.H.E.
(viii) Write down the chemical reaction involved in the Nickel Cadmium Cell.
(ix) Give any two applications of electrochemical series.

SECTION-II

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

5.(a) Differentiate between actual yield and theoretical yield. Why is actual yield usually less than theoretical yield? 4
(b) Define liquid crystals. Give their three applications in daily life. 4

6.(a) 1.00 mole of Methane (CH_4) gas is enclosed in a container of volume $250cm^3$ at 300k. Calculate the pressure of the gas, assuming it to be ideal. 4
(b) Describe J. J. Thomson's experiment to measure charge to mass ratio of electron. 4

7.(a) Define atomic orbital hybridization. Explain the structure of Ethene molecule. 4
(b) Define Enthalpy of reaction. How is enthalpy of reaction (ΔH) measured by glass calorimeter? 4

8.(a) N_2 and H_2 combine to give NH_3. The value of K_C in this reaction at 500^oC is 6.0×10^{-2}. Calculate value of K_P for this reaction. 4
(b) How will you determine the order of reaction with the help of Large Excess Method? 4

9.(a) Explain measurement of Freezing point depression by Beckman's Method. 4
(b) Describe the Electrolysis of aqueous salt of KNO_3. 4

Paper Code Number: 2482

2019 (A)

Roll No._____

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I (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) 27g of $A\ell$ will reacts completely with how much mass of O_2 to produce $A\ell_2O_3$?

(A) 8 g of Oxygen (B) 16 g of Oxygen (C) 32 g of Oxygen (D) 24 g of Oxygen

(2) The number of moles of CO_2 which contain 8.0g of Oxygen:

(A) 0.25 (B) 0.50 (C) 1.0 (D) 1.50

(3) Solvent extraction is an equilibrium process and is controlled by: (A) Law of mass action

(B) Distribution Law (C) Amount of the solvent used (D) The amount of the solute

(4) A real gas obeying Van der Waal's Equation will resemble ideal gas if:

(A) Both 'a' and 'b' are large (B) Both 'a' and 'b' are small

(C) 'a' is small and 'b' is large (D)) 'a' is large and 'b' is small

(5) The molar volume of CO_2 is maximum at:

(A) STP (B) 127^oC and 1atm (C) 0^oC and 2atm (D) 273^oC and 1atm

(6) Acetone and chloroform are soluble in each other due to: (A) Intermolecular hydrogen bonding

(B) Ion-dipole interaction (C) Instantaneous dipole (D) All these

(7) London dispersion forces are the only forces present among the:

(A) Molecules of Water in liquid state (B) Atoms of Helium in gaseous state at high temperature

(C) Molecules of solid Iodine (D) Molecules of Hydrogen Chloride gas

(8) The nature of positive rays depend on:

(A) The nature of the electrode (B) The nature of the discharge tube

(C) The nature of the residual gas (D) All these

(9) When 6d orbital is complete, the entering electron goes into: (A) 7f (B) 7s (C) 7p (D) 7d

(10) Which of the following molecules has zero dipole moment?

(A) NH_3 (B) $CHC\ell_3$ (C) H_2O (D) BF_3

(11) The Bond order of N_2 molecule is: (A) 0 (B) 1 (C) 2 (D) 3

(12) For a given process, the heat changes at constant pressure q_p and at constant volume q_v are related to each other as:

(A) $q_p = q_v$ (B) $q_p < q_v$ (C) $q_p > q_v$ (D) $q_p = \frac{q_v}{2}$

(13) An excess of aqueous Silver nitrate is added to the aqueous Barium chloride and precipitate is removed by filtration. What are the main ions in the filtrate?

(A) Ag^+ and NO_3^- only (B) Ag^+ and Ba^{++} and NO_3^-

(C) Ba^{++} and NO_3^- (D) Ba^{++} and NO_3^- and $C\ell^-$

(14) The molal boiling point constant is the ratio of the elevation in boiling point to:

(A) Molarity (B) Molality (C) Mole fraction of solvent (D) Mole fraction of solute

(15) Which of the following solutions has the highest boiling point?

(A) 5.85 % solution of Sodium Chloride (B) 18.0 % solution of Glucose

(C) 6.0 % solution of Urea (D) all have the same boiling point

(16) The unit of the rate constant is the same as that of the rate of reaction in:

(A) First order reaction (B) Second order reaction (C) Zero order reaction (D) Third order reaction

(17) Which of the following statements is not correct about Galvanic cell?

(A) Anode is negatively charged (B) Reduction occurs at anode

(C) Cathode is positively charged (D) Reduction occurs at Cathode

Paper Code Number: 2484	2019 (A)	Roll No._____

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I (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 molar volume of CO_2 is maximum at:

(A) STP (B) 127^oC and 1atm (C) 0^oC and 2atm (D) 273^oC and 1atm

(2) Acetone and chloroform are soluble in each other due to: (A) Intermolecular hydrogen bonding

(B) Ion-dipole interaction (C) Instantaneous dipole (D) All these

(3) London dispersion forces are the only forces present among the:

(A) Molecules of Water in liquid state (B) Atoms of Helium in gaseous state at high temperature

(C) Molecules of solid Iodine (D) Molecules of Hydrogen Chloride gas

(4) The nature of positive rays depend on:

(A) The nature of the electrode (B) The nature of the discharge tube

(C) The nature of the residual gas (D) All these

(5) When 6d orbital is complete, the entering electron goes into: (A) 7f (B) 7s (C) 7p (D) 7d

(6) Which of the following molecules has zero dipole moment?

(A) NH_3 (B) $CHC\ell_3$ (C) H_2O (D) BF_3

(7) The Bond order of N_2 molecule is: (A) 0(B) 1 (C) 2 (D) 3

(8) For a given process, the heat changes at constant pressure q_p and at constant volume q_v are related to each other as:

(A) $q_p = q_v$ (B) $q_p < q_v$ (C) $q_p > q_v$ (D) $q_p = \frac{q_v}{2}$

(9) An excess of aqueous Silver nitrate is added to the aqueous Barium chloride and precipitate is removed by filtration. What are the main ions in the filtrate?

(A) Ag^+ and NO_3^- only (B) Ag^+ and Ba^{++} and NO_3^-

(C) Ba^{++} and NO_3^- (D) Ba^{++} and NO_3^- and $C\ell^-$

(10) The molal boiling point constant is the ratio of the elevation in boiling point to:

(A) Molarity (B) Molality (C) Mole fraction of solvent (D) Mole fraction of solute

(11) Which of the following solutions has the highest boiling point?

(A) 5.85 % solution of Sodium Chloride (B) 18.0 % solution of Glucose

(C) 6.0 % solution of Urea (D) all have the same boiling point

(12) The unit of the rate constant is the same as that of the rate of reaction in:

(A) First order reaction (B) Second order reaction (C) Zero order reaction (D) Third order reaction

(13) Which of the following statements is not correct about Galvanic cell?

(A) Anode is negatively charged (B) Reduction occurs at anode

(C) Cathode is positively charged (D) Reduction occurs at Cathode

(14) 27g of $A\ell$ will reacts completely with how much mass of O_2 to produce $A\ell_2O_3$?

(A) 8 g of Oxygen (B) 16 g of Oxygen (C) 32 g of Oxygen (D) 24 g of Oxygen

(15) The number of moles of CO_2 which contain 8.0g of Oxygen:

(A) 0.25 (B) 0.50 (C) 1.0 (D) 1.50

(16) Solvent extraction is an equilibrium process and is controlled by: (A) Law of mass action

(B) Distribution Law (C) Amount of the solvent used (D) The amount of the solute

(17) A real gas obeying Van der Waal's Equation will resemble ideal gas if:

(A) Both 'a' and 'b' are large (B) Both 'a' and 'b' are small

(C) 'a' is small and 'b' is large (D)) 'a' is large and 'b' is small

Paper Code Number: 2486	2019 (A)	Roll No._____

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I (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) An excess of aqueous Silver nitrate is added to the aqueous Barium chloride and precipitate is removed by filtration. What are the main ions in the filtrate?

(A) Ag^+ and NO_3^- only (B) Ag^+ and Ba^{++} and NO_3^-

(C) Ba^{++} and NO_3^- (D) Ba^{++} and NO_3^- and $C\ell^-$

(2) The molal boiling point constant is the ratio of the elevation in boiling point to:

(A) Molarity (B) Molality (C) Mole fraction of solvent (D) Mole fraction of solute

(3) Which of the following solutions has the highest boiling point?

(A) 5.85 % solution of Sodium Chloride (B) 18.0 % solution of Glucose

(C) 6.0 % solution of Urea (D) all have the same boiling point

(4) The unit of the rate constant is the same as that of the rate of reaction in:

(A) First order reaction (B) Second order reaction (C) Zero order reaction (D) Third order reaction

(5) Which of the following statements is not correct about Galvanic cell?

(A) Anode is negatively charged (B) Reduction occurs at anode

(C) Cathode is positively charged (D) Reduction occurs at Cathode

(6) 27g of $A\ell$ will reacts completely with how much mass of O_2 to produce $A\ell_2O_3$?

(A) 8 g of Oxygen (B) 16 g of Oxygen (C) 32 g of Oxygen (D) 24 g of Oxygen

(7) The number of moles of CO_2 which contain 8.0g of Oxygen:

(A) 0.25 (B) 0.50 (C) 1.0 (D) 1.50

(8) Solvent extraction is an equilibrium process and is controlled by: (A) Law of mass action

(B) Distribution Law (C) Amount of the solvent used (D) The amount of the solute

(9) A real gas obeying Van der Waal's Equation will resemble ideal gas if:

(A) Both 'a' and 'b' are large (B) Both 'a' and 'b' are small

(C) 'a' is small and 'b' is large (D)) 'a' is large and 'b' is small

(10) The molar volume of CO_2 is maximum at:

(A) STP (B) 127^oC and 1atm (C) 0^oC and 2atm (D) 273^oC and 1atm

(11) Acetone and chloroform are soluble in each other due to: (A) Intermolecular hydrogen bonding

(B) Ion-dipole interaction (C) Instantaneous dipole (D) All these

(12) London dispersion forces are the only forces present among the:

(A) Molecules of Water in liquid state (B) Atoms of Helium in gaseous state at high temperature

(C) Molecules of solid Iodine (D) Molecules of Hydrogen Chloride gas

(13) The nature of positive rays depend on:

(A) The nature of the electrode (B) The nature of the discharge tube

(C) The nature of the residual gas (D) All these

(14) When 6d orbital is complete, the entering electron goes into: (A) 7f (B) 7s (C) 7p (D) 7d

(15) Which of the following molecules has zero dipole moment?

(A) NH_3 (B) $CHC\ell_3$ (C) H_2O (D) BF_3

(16) The Bond order of N_2 molecule is: (A) 0 (B) 1 (C) 2 (D) 3

(17) For a given process, the heat changes at constant pressure q_p and at constant volume q_v are related to each other as:

(A) $q_p = q_v$ (B) $q_p < q_v$ (C) $q_p > q_v$ (D) $q_p = \frac{q_v}{2}$

Paper Code Number: 2488	2019 (A)	Roll No._____

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I (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) Which of the following solutions has the highest boiling point?
(A) 5.85 % solution of Sodium Chloride (B) 18.0 % solution of Glucose
(C) 6.0 % solution of Urea (D) all have the same boiling point

(2) The unit of the rate constant is the same as that of the rate of reaction in:
(A) First order reaction (B) Second order reaction (C) Zero order reaction (D) Third order reaction

(3) Which of the following statements is not correct about Galvanic cell?
(A) Anode is negatively charged (B) Reduction occurs at anode
(C) Cathode is positively charged (D) Reduction occurs at Cathode

(4) 27g of $A\ell$ will reacts completely with how much mass of O_2 to produce $A\ell_2O_3$?
(A) 8 g of Oxygen (B) 16 g of Oxygen (C) 32 g of Oxygen (D) 24 g of Oxygen

(5) The number of moles of CO_2 which contain 8.0g of Oxygen:
(A) 0.25 (B) 0.50 (C) 1.0 (D) 1.50

(6) Solvent extraction is an equilibrium process and is controlled by: (A) Law of mass action
(B) Distribution Law (C) Amount of the solvent used (D) The amount of the solute

(7) A real gas obeying Van der Waal's Equation will resemble ideal gas if:
(A) Both 'a' and 'b' are large (B) Both 'a' and 'b' are small
(C) 'a' is small and 'b' is large (D)) 'a' is large and 'b' is small

(8) The molar volume of CO_2 is maximum at:
(A) STP (B) 127^oC and 1atm (C) 0^oC and 2atm (D) 273^oC and 1atm

(9) Acetone and chloroform are soluble in each other due to: (A) Intermolecular hydrogen bonding
(B) Ion-dipole interaction (C) Instantaneous dipole (D) All these

(10) London dispersion forces are the only forces present among the:
(A) Molecules of Water in liquid state (B) Atoms of Helium in gaseous state at high temperature
(C) Molecules of solid Iodine (D) Molecules of Hydrogen Chloride gas

(11) The nature of positive rays depend on:
(A) The nature of the electrode (B) The nature of the discharge tube
(C) The nature of the residual gas (D) All these

(12) When 6d orbital is complete, the entering electron goes into: (A) 7f (B) 7s (C) 7p (D) 7d

(13) Which of the following molecules has zero dipole moment?
(A) NH_3 (B) $CHC\ell_3$ (C) H_2O (D) BF_3

(14) The Bond order of N_2 molecule is: (A) 0 (B) 1 (C) 2 (D) 3

(15) For a given process, the heat changes at constant pressure q_p and at constant volume q_v are related to each other as:
(A) $q_p = q_v$ (B) $q_p < q_v$ (C) $q_p > q_v$ (D) $q_p = \frac{q_v}{2}$

(16) An excess of aqueous Silver nitrate is added to the aqueous Barium chloride and precipitate is removed by filtration. What are the main ions in the filtrate?
(A) Ag^+ and NO_3^- only (B) Ag^+ and Ba^{++} and NO_3^-
(C) Ba^{++} and NO_3^- (D) Ba^{++} and NO_3^- and $C\ell^-$

(17) The molal boiling point constant is the ratio of the elevation in boiling point to:
(A) Molarity (B) Molality (C) Mole fraction of solvent (D) Mole fraction of solute

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION,MULTAN
OBJECTIVE KEY FOR INTERMEDIATE ANNUAL EXAMINATION,2019

Name of Subject: Chemistry Session: New Scheme

Group : 1st Group: 2nd

Q. Nos	Paper Code 2481	Paper Code 2483	Paper Code 2485	Paper Code 2487
1	C	C	D	A
2	C	A	C	B
3	B	B	C	D
4	A	C	A	C
5	B	A	B	C
6	D	B	C	A
7	C	A	A	B
8	C	C	B	C
9	A	D	A	A
10	B	A	C	B
11	C	C	D	A
12	A	C	A	C
13	B	B	C	D
14	A	A	C	A
15	C	B	B	C
16	D	D	A	C
17	A	C	B	B
18				
19				
20				

Q. Nos	Paper Code 2482	Paper Code 2484	Paper Code 2486	Paper Code 2488
1				
2				
3				
4				D
5				A
6	A			B
7	C			B
8	C			B
9	C			A
10	D			C
11	D			C
12	C			C
13				
14				
15				
16				
17	D	B	C	B
18				
19				
20				

See Revised Key

سرٹیفکیٹ بابت صحیح سوالیہ پرچہ/مارکنگ Key

ہم نے مضمون کیمسٹری پرچہ _____ گروپ 1st سکیم New I, II سالانہ امتحان 2019 کا

سوالیہ پرچہ انشائیہ ومعروضی(Subjective & Objective) کو بنظر عمیق چیک کرلیا 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 کرلیا 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 کرلیا 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:** 27-05-2019

S.#	Name	Designation	Institution	Mobile No	Signature
1	Ch. M. Afzal	SSS	GHSS comprehensive Multan	03336249622	
2	Nadia Arif	Assist. Prof.	Govt. College of Science Multan	03007189257	
3	M. Tariq Shehzad	A.P	G.E.C, Multan	0334-6070969	
4	MUHAMMAD NAEEM AHMAD	Associate Prof.	G.D.C Multan	0334-6030916	
5	Abdul Rauf	SSS	GHS/S Barmeet abad Multan	0300-6354713	

Re-Checked By ہم نے درج بالا سوالیہ پرچہ(انشائیہ+معروضی)،معروضی "Key" اور ہدایات کے حوالے سے مکمل طور پر تسلی کرلی ہے۔ کسی قسم کی کوئی غلطی نہ ہے۔

1	Khalid Mateen (Retd)	Associate Prof.	Govt. Emerson College Multan	0322 6114846	
2	KHAIR. M. KHAWAR	SSS	Govt Nusrat-ul-Islam HSS Multan Cantt.	03016951952	
3					

تاریخ _____

Revised Key

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION,MULTAN

OBJECTIVE KEY FOR ITERMEDEAT ANNUAL/~~SUPPLY~~ EXAMINATION,2019'

Name of Subject: Chemistry - I ✓ Session: 2015 - 2017 onward.

Q.Nos	Paper Code 2482	Paper Code 2484	Paper Code 2486	Paper Code 2488
1	D	D	B	A
2	A	A	B	C
3	B	C	A	B
4	B	C	C	D
5	D	C	B	A
6	A	D	D	B
7	C	D	A	B
8	C	C	B	D
9	C	B	B	A
10	D	B	D	C
11	D	A	A	C
12	C	C	C	C
13	B	B	C	D
14	B	D	C	D
15	A	A	D	C
16	C	B	D	B
17	B	B	C	B
18				
19				
20				

سرٹیفکیٹ بابت تصحیح سوالیہ پرچہ/مارکنگ Key

ہم نے مضمون Chemistry پرچہ I^st. گروپ II^nd. سکیم New انٹرسالانہ امتحان 2019ء کا سوالیہ پرچہ انشائیہ ومعروضی(Subjective & Objective) کو بنظر عمیق چیک کرلیا 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 کرلیا 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 کرلیا 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:** 11-7-2019.

S.#	Name	Designation	Institution	Mobile No	Signature
1	Khalid Mateen	Rtd. Associate Prof.	Govt. Emerson College Multan	0322-6114844	
2	Mian M. Nawaz	Prof. of Chemistry	G.E.C. Multan.	0300-53	
3					

2019 (A) Roll No: _____

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I (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) Define molecular ion. Give two examples.

(ii) What is Stoichiometry?

(iii) Calculate the number of atoms in 0.1 Kg of Silicon.

(iv) What is the basic principle of crystallization?

(v) State Partition Law.

(vi) What is Chromatography?

(vii) Give two properties of gases.

(viii) Define critical temperature.

(ix) State Avogadro's law.

(x) How acidic buffers are formed? Give an example.

(xi) State Le-Chatlier's Principle.

(xii) Define Reversible Reactions. Give an example.

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

(i) Define Isomorphism. Give an example.

(ii) What are dipole-induced dipole forces?

(iii) Define Lattice Energy. Give an example.

(iv) Explain the Cubic system of crystals.

(v) What is importance of Moseley's Law.

(vi) How the dual nature of matter was verified by Davison and Germer.

(vii) State Hund's rule. Give an example.

(viii) Differentiate between Orbit and Orbital.

(ix) What is Mole fraction? Give its formula.

(x) What is critical solution temperature? Give an example.

(xi) What is the function of Salt Bridge?

(xii) Explain the difference between electrolytic cell and voltaic cell.

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

(i) Why the radius of an atom can not be determined precisely?

(ii) Define Electronegativity. Which element is the most electronegative?

(iii) *No* bond in Chemistry is 100% ionic. Justify it.

(iv) *CO* has a dipole moment while CO_2 does not have any. Give reason.

(v) Define 'State' and 'State function'.

(vi) Burning of coal is a spontaneous process. Justify it.

(vii) Define Rate of a reaction. Give its units.

(viii) What is Catalytic Poisoning? Give an example.

(ix) The radioactive decay is always a first order reaction. Justify it.

P.T.O

SECTION-II

NOTE: - Attempt any three questions of the following: **3 × 8 = 24**

5.(a) Describe combustion analysis for determination of percentage of C, H and O in an organic compound. 4

(b) What are covalent solids? Give their properties. 4

6.(a) Calculate the mass of $1\,dm^3$ of NH_3 gas at 30^oC and $1000\,mm\,Hg$ pressure, considering that NH_3 is Behaving Ideally. 4

(b) Explain Millikan's oil drop method to determine the charge of an electron. 4

7.(a) What is Co-ordinate Covalent Bond? Explain with two examples. 4

(b) How heat of reaction is determined by bomb calorimeter? 4

8.(a) The solubility of PbF_2 at 25^oC is $0.64\,g\,dm^{-3}$. Calculate its solubility product (K_{SP}). Molecular mass of PbF_2 is $245.2\,g\,mol^{-1}$. 4

(b) Describe enzyme catalysis and give its four characteristics. 4

9.(a) Give graphical explanation for elevation in boiling point of a solution. 4

(b) Describe the electrolysis of molten $NaC\ell$ and aqueous solution of $NaC\ell$. 4

SECTION-III (PRACTICAL PART)

10. NOTE: (i) Attempt any three parts. **(3 x 5 = 15)**

(ii) Write down material required, diagram and procedure for part A & B. **(1 + 1 + 3) = 5**

(iii) Write down standard solution, chemical equation with mole ratio, indicator with end point, procedure and supposed readings with calculations for part C, D & E. **(1 + 1 + 1 + 1 + 1) = 5**

(A) Separate the given mixture of various inks by paper chromatography.

(B) Purify the given sample of commercial $NaC\ell$ by passing $HC\ell$ gas.

(C) 6.0g of caustic soda have been dissolved per dm^3 of the solution. Find out the percentage purity of the sample.

(D) 39.2g of $FeSO_4.(NH_4)_2SO_4.xH_2O$ are dissolved per dm^3 of solution. Determine the value of x (water of crystallization) volumetrically.

(E) The given solution contains 24.8g of $M_2S_2O_3.5H_2O$ per dm^3. Determine the atomic weight of M volumetrically.

Paper Code Number: 6481	2019 (A) INTERMEDIATE PART-I (11th CLASS)	Roll No._____

CHEMISTRY PAPER-I (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 questions on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) The mass of one mole of electrons is:

(A) 1.008mg (B) 0.55mg (C) 0.184mg (D) 1.673mg

(2) The element having eleven isotopes is:

(A) Carbon (B) Oxygen (C) Cadmium (D) Tin

(3) Which substance acts as a drying agent?

(A) Silica gel (B) $KMnO_4$ (C) $K_2Cr_2O_7$ (D) Quartz

(4) The SI unit of pressure is:

(A) Nm^{-2} (B) Nm^2 (C) Nm^{-3} (D) Nm^3

(5) The molar volume of CO_2 is maximum at:

(A) STP (B) 127^oC and 1atm (C) 0^oC and 2atm (D) 273^oC and 2atm

(6) Hydrogen bonds are present in:

(A) Petrol (B) Diamond (C) DNA (D) Iodine

(7) Which of the following is a pseudo solid?

(A) CaF_2 (B) Glass (C) $NaC\ell$ (D) Diamond

(8) The nature of β – particle is similar to that of:

(A) Electron (B) Proton (C) Neutron (D) Helium

(9) The unit of Planck's constant (h) is:

(A) Js^{-1} (B) ms^{-1} (C) Js (D) mC

(10) Which of the following molecules has zero dipole moment?

(A) NH_3 (B) $CHC\ell_3$ (C) H_2O (D) BF_3

(11) The unit of dipole moment is:

(A) Debye (B) Coulomb (C) Joule (D) Watt

(12) Calorie is equivalent to:

(A) $0.418J$ (B) $41.84J$ (C) $4.184J$ (D) $418.4J$

(13) The pH of human blood is:

(A) 7.00 (B) 7.35 (C) 8.00 (D) 8.35

(14) Molarity of pure water is:

(A) 1 (B) 18 (C) 55.5 (D) 6

(15) Discontinuous solubility curve is obtained for:

(A) KNO_3 (B) $CaC\ell_2.6H_2O$ (C) $NaC\ell$ (D) $KC\ell O_3$

(16) Oxidation number of oxygen is +2 in:

(A) OF_2 (B) Na_2O (C) Na_2O_2 (D) KO_2

(17) Substances which inactivate the catalyst are called:

(A) Enzymes (B) Activators (C) Poisons (D) Mediators

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION,MULTAN
OBJECTIVE KEY FOR ITERMEDEAT ANNUAL EXAMINATION,2019

Name of Subject: Chemistry Session: Old Scheme

Q.Nos	Paper Code 6481	Paper Code	Paper Code	Paper Code
1	B			
2	D			
3	A			
4	A			
5	B			
6	C			
7	B			
8	A			
9	C			
10	D			
11	A			
12	C			
13	B			
14	C			
15	B			
16	A			
17	C			
18				
19				
20				

سرٹیفکیٹ بابت تصحیح سوالیہ پرچہ/مارکنگ Key

ہم نے مضمون Chemistry پرچہ I گروپ I سکیم old انٹرسالانہ امتحان 2019ء کا سوالیہ پرچہ انشائیہ ومعروضی(Subjective & Objective) کو بنظرعمیق چیک کرلیا 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 کرلیا 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 کرلیا ہے اوران کی روشنی میں Key بنائی ہے۔ نیز سب ایگزامینرز کیلئے تفصیلی مارکنگ ہدایات/مارکنگ سکیم/Rubrics بھی تیار کردی گئی ہیں۔

Prepared & Checked By: Dated: 27-05-2019

S.#	Name	Designation	Institution	Mobile No	Signature
1	M. Tariq Shehzad	AP	G.E.C, Multan	0334-6076969	
2	Ch. M. Afzal	SSS	GHSS Comprehensive Multan	03336249502	
3	Nadia Arif	AP	Govt. College of Science Multan	03007189257	
4	Muhammad Naeem Arshad	Associate Prof. (Chem)	G.E.C Multan	0334-6034916	
5	Abdul Rauf.	SS.S (Ch)	G. HS/S Samee Abad Multan.	0300-6254713	

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

1	Khalid Mateen (Phd)	Associate Prof.	Govt. Emerson College Multan	0322-6114846	
2	KHAIR. M. KHAGWAR	SSS	Govt Nusrat-ul-Islam HISS Multan Cantt.	03016951952	
3					

تاریخ