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

P-I 07 07 22

Name of Subject: Chemistry. Session: A/ 2022

Group : 1st Group: 2nd (M)

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

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

سرٹیفکیٹ بابت تصحیح سوالیہ پرچہ/مارکنگ Key

ہم نے مضمون کیمسٹری پرچہ کیمسٹری I گروپ I, II سکیم نیو انٹرمیڈیٹ سالانہ امتحان 2022 کا سوالیہ پرچہ انشائیہ ومعروضی (Subjective&Objective) کو بنظرِ 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 کرکے 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 کردی گئی ہیں۔

Prepared & Checked By: **Dated:**

S.#	Name	Designation	Institution	Mobile No	Signature
1	M. IQBAL	SSS	Govt HSS Ailampur	0300632 6296697	M Iqbal
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3	Farzana Suleman.	AP.	Govt. Associate college(W) Multan	03000690273	Farzana
4	Dr. M. Tariq Shehzad	AP	Emerson University, Multan	0334-6070969	
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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	Shiraz Mehmood	A.P	G.G. College of Science Multan	03327082646	
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3					

تاریخ

2022 (A) Roll No: _____ (24)

INTERMEDIATE PART-I (11th CLASS)

...ISTRY PAPER-I GROUP-I TIME ALLOWED: 2.40 Hours

SUBJECTIVE MAXIMUM MARKS: 68

...TE: - 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 is stoichiometry? Which laws are obeyed during stoichiometric calculations? 1 + 1

(ii) What is Molar volume? Give example. 1 + 1

(iii) Calculate the gram atoms in 0.1g of Sodium. 02

(iv) What is Gooch crucible? 02

(v) How crystals are dried in vacuum desiccator? 02

(vi) What is ether extraction? 02

(vii) Calculate the value of R in S.I units. 02

(viii) Give difference between effusion and diffusion. 1 + 1

(ix) Why gases are ideal at low pressure and high temperature? 1 + 1

(x) What is law of Mass action? 02

(xi) What is relationship between K_P and K_C? 02

(xii) What is Kw? How does its value change with increase in temperature? 1 + 1

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

(i) Why HF is weaker acid than $HC\ell$? 02

(ii) Define Molar heat of sublimation. 02

(iii) Differentiate between Amorphous and Crystalline solids. 1 + 1

(iv) What is meant by Habit of Crystal? 02

(v) Differentiate between orbit and orbital. 1 + 1

(vi) Define frequency and wave number. 1 + 1

(vii) Write down any two postulates of Plank's quantum theory. 02

(viii) Write down electronic configuration of Cu -29 , Cr -24 1 + 1

(ix) What is meant by hydration energy? 02

(x) Define molality. Also write its units. 1 + 1

(xi) What is activation of catalyst? Give example. 1 + 1

(xii) Differentiate between Average and Instantaneous rate. 1 + 1

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

(i) Define ionization energy. Why is the second ionization energy higher than that of first? 02

(ii) Define electronegativity. How do the electronegativity values vary in the periodic table? 02

(iii) Write down two postulates of VSEPR Theory. 02

(iv) Why is CS_2 molecule linear while SO_2 molecule is bent or angular? 02

(v) Define standard enthalpy of combustion. Give an example. 02

(vi) Give two examples of exothermic reactions. 02

(vii) What is the difference between heat and temperature? 02

(viii) Calculate the oxidation number of Cr in $K_2Cr_2O_7$ and $CrC\ell_3$. 02

(ix) Write down the electrode reactions in silver oxide battery. 02

SECTION-II

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

5.(a) Define and explain limiting reactant with the help of two examples. 1 + 1½ + 1½ = 04

(b) Derive the equation to calculate the radius of revolving electron in nth orbit. 04

6.(a) Calculate the mass of $1dm^3$ of NH_3 gas at 30^oC and 1000mm Hg pressure, considering that NH_3 is behaving ideally. 1 + 1 + 1 + 1 = 04

(b) Describe a galvanic cell explaining the function of electrodes and the salt bridge. 2 + 2 = 04

7.(a) Describe postulates of valence shell electron pair repulsion theory (VSEPR). 04

(b) State Hess's law of constant heat summation. Explain this law with the help of two examples. 1 + 3 = 04

8.(a) Explain manometric method for measurement of vapour pressure. 04

(b) The solubility of CaF_2 in water at 25^oC is found to be $2.05 \times 10^{-4}\ mol\ dm^{-3}$. What is the value of K_{sp} at this temperature? 04

9.(a) Differentiate between ideal and non-ideal solutions. 04

(b) How does Arrhenius equation help us to calculate the energy of activation of a reaction? 04

Paper: 2481

2022 (A)

INTERMEDIATE PART-I (11th CLASS)

Roll No. _____ (25)

CHEMISTRY PAPER-I 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, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) How many times Na atom is heavier than H – atom?
(A) 11 times (B) 46 times (C) 32 times (D) 23 times

(2) Mass of one mole of chlorine ($C\ell_2$) gas is:
(A) 35.5g (B) 71g (C) 23g (D) 44g

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

(4) The comparative rates at which solute moves in paper chromatography depends upon:
(A) The size of paper used (B) The R_f values of solute
(C) Temperature of experiment (D) Size of chromatographic tank used

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

(6) Number of molecules in one dm^3 of H_2O is close to:
(A) $N_A \times \frac{1}{22.4}$ (B) $2 \times N_A \times \frac{1}{22.4}$ (C) $3 \times N_A \times \frac{1}{22.4}$ (D) $55.6 \times N_A$

(7) Which one is pseudo solid?
(A) CaF_2 (B) Glass (C) $NaC\ell$ (D) All these

(8) The molecules of CO_2 in dry ice form:
(A) Ionic crystal (B) Molecular crystal (C) Covalent crystal (D) Mettalic crystal

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

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

(11) Which one has unpaired electron in antibonding molecular orbital?
(A) O_2^{+2} (B) N_2^{-2} (C) B_2 (D) F_2

(12) Which one has zero dipole moment?
(A) NH_3 (B) $CHC\ell_3$ (C) H_2O (D) BF_3

(13) Caloric is equivalent to:
(A) $0.4184J$ (B) $41.84J$ (C) $4.184J$ (D) $418.4J$

(14) The pH of $10^{-3}M$ of an aqueous solution of H_2SO_4 is:
(A) 3.0 (B) 2.7 (C) 2.0 (D) 1.5

(15) Molarity of pure water is:
(A) 1 (B) 18 (C) 55.5 (D) 6

(16) Stronger the reducing agent greater is the:
(A) Oxidization potential (B) Reduction potential (C) Redox potential (D) E.M.F of cell

(17) In zero order reaction the rate is independent of:
(A) Temperature of reaction (B) Concentration of reactants
(C) Concentration of products (D) None of these

: 2483

2022 (A)

Roll No.______________

INTERMEDIATE PART-I (11th CLASS)

EMISTRY   PAPER-I   GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

MAXIMUM MARKS: 17

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(3) Mass of one mole of chlorine $(C\ell_2)$ gas is:
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(A) Law of mass action (B) The amount of solvent used
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(A) The size of paper used (B) The R_f values of solute
(C) Temperature of experiment (D) Size of chromatographic tank used

(6) 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

(7) Number of molecules in one dm^3 of H_2O is close to:
(A) $N_A \times \frac{1}{22.4}$ (B) $2 \times N_A \times \frac{1}{22.4}$ (C) $3 \times N_A \times \frac{1}{22.4}$ (D) $55.6 \times N_A$

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(16) Molarity of pure water is:
(A) 1 (B) 18 (C) 55.5 (D) 6

(17) Stronger the reducing agent greater is the:
(A) Oxidization potential (B) Reduction potential (C) Redox potential (D) E.M.F of cell

2485

2022 (A)

Roll No. _____

97

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I GROUP-I

TIME ALLOWED: 20 Minutes
MAXIMUM MARKS: 17

OBJECTIVE

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

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

(5) Number of molecules in one dm^3 of H_2O is close to:
(A) $N_A \times \frac{1}{22.4}$ (B) $2 \times N_A \times \frac{1}{22.4}$ (C) $3 \times N_A \times \frac{1}{22.4}$ (D) $55.6 \times N_A$

(6) Which one is pseudo solid?
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(7) The molecules of CO_2 in dry ice form:
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(11) Which one has zero dipole moment?
(A) NH_3 (B) $CHC\ell_3$ (C) H_2O (D) BF_3

(12) Caloric is equivalent to:
(A) 0.4184J (B) 41.84J (C) 4.184J (D) 418.4J

(13) The pH of 10^{-3} M of an aqueous solution of H_2SO_4 is:
(A) 3.0 (B) 2.7 (C) 2.0 (D) 1.5

(14) Molarity of pure water is:
(A) 1 (B) 18 (C) 55.5 (D) 6

(15) Stronger the reducing agent greater is the:
(A) Oxidization potential (B) Reduction potential (C) Redox potential (D) E.M.F of cell

(16) In zero order reaction the rate is independent of:
(A) Temperature of reaction (B) Concentration of reactants
(C) Concentration of products (D) None of these

(17) How many times Na atom is heavier than H – atom?
(A) 11 times (B) 46 times (C) 32 times (D) 23 times

ber: 2487

2022 (A)

INTERMEDIATE PART-I (11th CLASS)

Roll No._____

CHEMISTRY PAPER-I GROUP-I

TIME ALLOWED: 20 Minutes
MAXIMUM MARKS: 17

OBJECTIVE

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

Q.No.1

(1) The pH of $10^{-3}\,M$ of an aqueous solution of H_2SO_4 is:
(A) 3.0 (B) 2.7 (C) 2.0 (D) 1.5

(2) Molarity of pure water is:
(A) 1 (B) 18 (C) 55.5 (D) 6

(3) Stronger the reducing agent greater is the:
(A) Oxidization potential (B) Reduction potential (C) Redox potential (D) E.M.F of cell

(4) In zero order reaction the rate is independent of:
(A) Temperature of reaction (B) Concentration of reactants
(C) Concentration of products (D) None of these

(5) How many times Na atom is heavier than H – atom?
(A) 11 times (B) 46 times (C) 32 times (D) 23 times

(6) Mass of one mole of chlorine $(C\ell_2)$ gas is:
(A) 35.5g (B) 71g (C) 23g (D) 44g

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(17) Caloric is equivalent to:
(A) $0.4184J$ (B) $41.84J$ (C) $4.184J$ (D) $418.4J$

2022 (A) Roll No: (29)

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I 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) How the limiting reactant can be identified? 02

(ii) What is percentage yield? 02

(iii) Define stoichiometry and give its assumptions. 1 + 1 = 02

(iv) What are the uses of chromatography? 02

(v) How the R_f values of components can be determined? 02

(vi) What is the difference between stationary and mobile phase? 1 + 1 = 02

(vii) What is Joule Thomson effect? 02

(viii) Write two causes for deviation from ideality. 1 + 1 = 02

(ix) Throw some light on the factor $1/273$ in Charles's Law. 02

(x) How the acidic buffer can be prepared? 02

(xi) Define common ion effect. Give an example. 1 + 1 = 02

(xii) What is the effect of common ion on solubility? 02

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

(i) What is London dispersion forces? In which type of molecules these forces are present? 02

(ii) What are the advantages of vacuum distillation? 02

(iii) How the rate of evaporation depends upon the surface area? 02

(iv) Write two properties of ionic solids. 02

(v) Write two properties of neutrons. 02

(vi) What are defects of Rutherford Atomic Model? 02

(vii) Calculate the mass of electron by using its value of charge and e/m values. 02

(viii) What is the origin of hydrogen spectrum? 02

(ix) Boiling points of the solvents increase due to the presence of solute. Justify. 02

(x) Define consulate temperature. Give one example. 02

(xi) What is promoter or activator? 02

(xii) Define catalytic poisoning with example. 02

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

(i) Define chemical bond and give cause of chemical combination of elements. 1 + 1 = 02

(ii) What is meant by electron affinity? Give a suitable example. 1 + 1 = 02

(iii) What do you mean by co-ordinate covalent bond, give example. 1 + 1 = 02

(iv) Differentiate between bonding and antibonding molecular orbitals. 02

(v) How is aluminium anodized in an electrolytic cell? 02

(vi) What are secondary cells? Write names of any two such cells. 1 + 1 = 02

(vii) State 1st law of thermodynamics. Also write its equation. 1 + 1 = 02

(viii) Define enthalpy of combustion with a suitable example. 1 + 1 = 02

(ix) Burning of natural gas is a spontaneous process, justify. 02

SECTION-II

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

5.(a) Explain concept of mole in four different ways, with examples for each case. 04

(b) Discuss defects of Bohr's atomic model. 04

6.(a) $250cm^3$ of the sample of hydrogen effuses four times as rapidly as $250cm^3$ of an unknown gas. Calculate the molar mass of unknown gas. 04

(b) Describe the electrolysis of molten $NaCl$. 04

7.(a) Explain the geometry of CH_4 using hybridization. 04

(b) How do you measure the heat of combustion of a substance by Bomb calorimeter? 04

8.(a) Define liquid crystal. Also give its three applications. 04

(b) $Ca(OH)_2$ is sparingly soluble compound its solubility product is 6.5×10^{-6}. Calculate the solubility of $Ca(OH)_2$. 04

9.(a) Explain graphically elevation of boiling point. Also write down its mathematical form. 04

(b) Write down any four characteristics of enzyme catalysis. 04

Roll No. 30

2022 (A)

Number: 2482

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I GROUP-II

TIME ALLOWED: 20 Minutes
MAXIMUM MARKS: 17

OBJECTIVE

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

Q.No.1

(1) Stronger the oxidizing agent, greater is the:
(A) Reduction potential (B) emf of the cell (C) Oxidation potential (D) Redox potential

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

(3) Molarity of pure water is:
(A) 1 (B) 6 (C) 55.5 (D) 18

(4) An excess of aqueous silver nitrate is added to aqueous barium chloride and precipitate is removed by filtration. What are the main ions in the filtrate? (A) Ag^{+1} and NO_3^{-1} only
(B) Ba^{2+} and NO_3^{-1} only (C) Ba^{2+} and NO_3^{-1} and $C\ell^{-1}$ (D) Ag^{+1} and Ba^{2+} and NO_3^{-1}

(5) 27g of $A\ell$ will react completely with how much mass of O_2 to produce $A\ell_2O_3$?
(A) 32g of oxygen (B) 24g of oxygen (C) 16g of oxygen (D) 8g of oxygen

(6) Solvent extraction method is a particularly useful technique for separation when the product to be separated is:
(A) Volatile or thermally unstable (B) Non-volatile or thermally stable
(C) Volatile or thermally stable (D) Non-volatile or thermally unstable

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

(8) The number of moles of CO_2 which contains 8.0g of oxygen is:
(A) 0.50 (B) 0.25 (C) 1.0 (D) 1.50

(9) Which of the following compounds has the highest percentage of ionic character?
(A) $HC\ell$ (B) HI (C) HBr (D) HF

(10) Which pair of the following can be separated by sublimation?
(A) $NaC\ell$ and sand (B) I_2 and Naphthalene (C) Naphthalene and sand (D) $KC\ell$ and $NaC\ell$

(11) Quantum number values for 3d orbitals are:
(A) $n = 3,\ \ell = 2$ (B) $n = 2,\ \ell = 3$ (C) $n = 3,\ \ell = 3$ (D) $n = 3,\ \ell = 0$

(12) Which of the following species has unpaired electrons in antibonding molecular orbitals?
(A) O_2^{2+} (B) O_2 (C) F_2 (D) B_2

(13) When water freezes at 0^oC, its density decreases due to:
(A) Cubic structure of ice (B) Change of bond lengths
(C) Change of bond angles (D) Empty spaces present in the structure of ice

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

(15) Splitting of spectral lines when atoms are subjected to strong electric field is called:
(A) Photoelectric effect (B) Zeeman effect (C) Stark effect (D) Compton effect

(16) Which of the following will have the same number of molecules at S.T.P?
(A) $280cm^3$ of CO_2 and $280cm^3$ of NO_2 (B) $11.2dm^3$ of O_2 and $32g$ of O_2
(C) $44g$ of CO_2 and $11.2dm^3$ of CO (D) $28g$ of N_2 and $5.6dm^3$ of oxygen

(17) In order to keep the boiling point of water at 110^oC, the external pressure should be:
(A) Between 760 torr and 1200 torr (B) Between 200 torr and 760 torr
(C) 765 torr (D) Any value of pressure

2484

(31)

2022 (A)

Roll No.______________

INTERMEDIATE PART-I (11th CLASS)

EMISTRY PAPER-I GROUP-II

TIME ALLOWED: 20 Minutes

MAXIMUM MARKS: 17

OBJECTIVE

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

Q.No.1

(1) Quantum number values for 3d orbitals are:
(A) $n = 3,\ \ell = 2$ (B) $n = 2,\ \ell = 3$ (C) $n = 3,\ \ell = 3$ (D) $n = 3,\ \ell = 0$

(2) Which of the following species has unpaired electrons in antibonding molecular orbitals?
(A) O_2^{2+} (B) O_2 (C) F_2 (D) B_2

(3) When water freezes at 0^oC, its density decreases due to:
(A) Cubic structure of ice (B) Change of bond lengths
(C) Change of bond angles (D) Empty spaces present in the structure of ice

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

(5) Splitting of spectral lines when atoms are subjected to strong electric field is called:
(A) Photoelectric effect (B) Zeeman effect (C) Stark effect (D) Compton effect

(6) Which of the following will have the same number of molecules at S.T.P?
(A) $280cm^3$ of CO_2 and $280cm^3$ of NO_2 (B) $11.2dm^3$ of O_2 and $32g$ of O_2
(C) $44g$ of CO_2 and $11.2dm^3$ of CO (D) $28g$ of N_2 and $5.6dm^3$ of oxygen

(7) In order to keep the boiling point of water at 110^oC, the external pressure should be:
(A) Between 760 torr and 1200 torr (B) Between 200 torr and 760 torr
(C) 765 torr (D) Any value of pressure

(8) Stronger the oxidizing agent, greater is the:
(A) Reduction potential (B) emf of the cell (C) Oxidation potential (D) Redox potential

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

(10) Molarity of pure water is:
(A) 1 (B) 6 (C) 55.5 (D) 18

(11) An excess of aqueous silver nitrate is added to aqueous barium chloride and precipitate is removed by filtration. What are the main ions in the filtrate? (A) Ag^{+1} and NO_3^{-1} only
(B) Ba^{2+} and NO_3^{-1} only (C) Ba^{2+} and NO_3^{-1} and $C\ell^{-1}$ (D) Ag^{+1} and Ba^{2+} and NO_3^{-1}

(12) 27g of $A\ell$ will react completely with how much mass of O_2 to produce $A\ell_2O_3$?
(A) 32g of oxygen (B) 24g of oxygen (C) 16g of oxygen (D) 8g of oxygen

(13) Solvent extraction method is a particularly useful technique for separation when the product to be separated is:
(A) Volatile or thermally unstable (B) Non-volatile or thermally stable
(C) Volatile or thermally stable (D) Non-volatile or thermally unstable

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

(15) The number of moles of CO_2 which contains 8.0g of oxygen is:
(A) 0.50 (B) 0.25 (C) 1.0 (D) 1.50

(16) Which of the following compounds has the highest percentage of ionic character?
(A) $HC\ell$ (B) HI (C) HBr (D) HF

(17) Which pair of the following can be separated by sublimation?
(A) $NaC\ell$ and sand (B) I_2 and Naphthalene (C) Naphthalene and sand (D) $KC\ell$ and $NaC\ell$

2486

2022 (A)

Roll No. 32

INTERMEDIATE PART-I (11th CLASS)

MISTRY PAPER-I 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, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

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

(2) The number of moles of CO_2 which contains 8.0g of oxygen is:
(A) 0.50 (B) 0.25 (C) 1.0 (D) 1.50

(3) Which of the following compounds has the highest percentage of ionic character?
(A) $HC\ell$ (B) HI (C) HBr (D) HF

(4) Which pair of the following can be separated by sublimation?
(A) $NaC\ell$ and sand (B) I_2 and Naphthalene (C) Naphthalene and sand (D) $KC\ell$ and $NaC\ell$

(5) Quantum number values for 3d orbitals are:
(A) $n = 3,\ \ell = 2$ (B) $n = 2,\ \ell = 3$ (C) $n = 3,\ \ell = 3$ (D) $n = 3,\ \ell = 0$

(6) Which of the following species has unpaired electrons in antibonding molecular orbitals?
(A) O_2^{2+} (B) O_2 (C) F_2 (D) B_2

(7) When water freezes at 0^oC, its density decreases due to:
(A) Cubic structure of ice (B) Change of bond lengths
(C) Change of bond angles (D) Empty spaces present in the structure of ice

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

(9) Splitting of spectral lines when atoms are subjected to strong electric field is called:
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(10) Which of the following will have the same number of molecules at S.T.P?
(A) $280cm^3$ of CO_2 and $280cm^3$ of NO_2 (B) $11.2dm^3$ of O_2 and $32g$ of O_2
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(11) In order to keep the boiling point of water at 110^oC, the external pressure should be:
(A) Between 760 torr and 1200 torr (B) Between 200 torr and 760 torr
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(17) Solvent extraction method is a particularly useful technique for separation when the product to be separated is:
(A) Volatile or thermally unstable (B) Non-volatile or thermally stable
(C) Volatile or thermally stable (D) Non-volatile or thermally unstable

2488

2022 (A)

Roll No. (33)

INTERMEDIATE PART-I (11th CLASS)

CHEMISTRY PAPER-I 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, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

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