

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN.
OBJECTIVE KEY FOR INTERMEDIATE 1st ANNUAL EXAMINATION, 2025

Name of Subject: Chemistry - I

Group: I

Q. Nos	Paper Code 2481	Correct Answer	Paper Code 2483	Correct Answer	Paper Code 2485	Correct Answer	Paper Code 2487	Correct Answer
1	A	1	C	55.5	A	1/3	D	One sigma two pi
2	B	Reduction Potential	D	2.7	D	546K	C	CH ₄
3	C	55.5	A	Egg	B	Is cooled -	D	n=2, l=1
4	D	2.7	B	Product is more reacted	A	Properties -	A	He
5	A	Egg	D	one sigma two pi	D	24g	C	Molecular crystal
6	B	Prod > Reactant	C	CH ₄	A	1	B	Molecules of solid I ₂
7	D	one sigma two pi	D	n=2, l=1	B	Reduction Potential	A	1/3
8	C	CH ₄	A	He	C	55.5	D	546K
9	D	n=2 l=1	C	Molecular crystal	D	2.7	B	Is cooled at
10	A	He	B	Molecules of solid I ₂	A	Egg	A	Properties of mass
11	C	Molecular crystals	A	1/3	B	Product is	D	24g
12	B	Molecules of solid iodine	D	546K	D	one sigma two pi	A	1
13	A	1/3	B	is cooled at moderate rate	C	CH ₄	B	Reduction Potential
14	D	546K	A	Properties of mass	D	n=2, l=1	C	55.5
15	B	cooled at medium rate	D	24g	A	He	D	2.7
16	A	properties depend mass	A	1	C	Molecular crystal	A	Egg
17	D	24g	B	Reduction Potential	B	Molecules of solid I ₂	B	Product is -
18	/	/	/	/	/	/	/	/
19	/	/	/	/	/	/	/	/
20	/	/	/	/	/	/	/	/
Cross Check	A B C D		A B C D		A B C D		A B C D	
Total	5435		5435		5435		5435	

Key تفیصلیات کے مطابق سوالات پر مارک لگائیے

ہم نے مشن کیسٹری (Subjective & Objective) کو بنظر تحقیق 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 سرکاری Key (MCQs) کی درست 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 بحال کر کے ان کا بغور مطالعہ کیا ہے اور ان کی روشنی میں Key بنائی ہے۔ نیز سب ایگزامینرز کیلئے تفصیلی مارک لگ ہدایات / مارک لگ کلیم / Rubrics بھی تیار کر دی گئی ہیں۔

Prepared & Checked By:

Dated: 3.6.25

S.#	Name	Designation	Institution	Mobile No	Signature
1	M. AWAIS SAEED	Assistant Professor	Govt; Alamdar Hussain Islamia Graduate College Multan	0333-6143457	
2	Dr. Nadia Arif	Asst. Prof.	Govt. Graduate College of Science Multan	03007189257	
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Re-Checked By: ہمارے درج بالا سوالیہ پرچہ (انشائیہ + معروضی) کی سرکاری Key "اور ہدایات کے حوالے سے مکمل طور پر مشق کر لی ہے۔ کسی قسم کی کوئی غلطی نہ ہے۔

1	AZHAR HUSSAIN	Assoc. P	Govt. graduate College Civil Lines Multan	0303-0232304	
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BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN.
OBJECTIVE KEY FOR INTERMEDIATE 1st ANNUAL EXAMINATION, 2025

Name of Subject: **CHEMISTRY - I** Group: **II**

Q. Nos	Paper Code 2482	Correct Answer	Paper Code 2484	Correct Answer	Paper Code 2486	Correct Answer	Paper Code 2488	Correct Answer
1	A	6.02×10^{23} atoms of S	D	$55.6 \times 6.02 \times 10^{23}$	B	N_2^{2-}	C	More than water
2	B	1.12 dm^3	A	-10° Satm	D	BF_3	B	Reduction Pot.
3	C	Distribution law	C	b/w 760 torr and 1200 torr	C	4.184J	D	decreases as
4	D	$55.6 \times 6.02 \times 10^{23}$	B	Glass	B	4.0	A	6.02×10^{23} atoms of S
5	A	$-10^\circ \text{ and } 5 \text{ atm}$	D	500nm	A	1.41×10^{-5}	B	1.12 dm^3
6	C	B/w 760 torr and 1200 torr	A	$n=2, l=1$	C	more than water	C	Distribution law
7	B	Glass	B	N_2^{2-}	B	Reduction Potential	D	$55.6 \times 6.02 \times 10^{23}$
8	D	500nm	D	BF_3	D	Decreases as	A	-10° Satm
9	A	$n=2, l=1$	C	4.184J	A	6.02×10^{23} atoms of S	C	B/w 760 torr and 1200 torr
10	B	N_2^{2-}	B	4.0	B	1.12 dm^3	B	Glass
11	D	BF_3	A	1.41×10^{-5}	C	Distribution Law	D	500nm
12	C	4.184J	C	More than water	D	$55.6 \times 6.02 \times 10^{23}$	A	$n=2, l=1$
13	B	4.0	B	Reduction Pot.	A	$-10^\circ \text{ and } 5 \text{ atm}$	B	N_2^{2-}
14	A	$1.41 \times 10^{-5} \text{ mol}$	D	decreases as	C	B/w 760 torr and 1200 torr	D	BF_3
15	C	More than water	A	6.02×10^{23} atoms of S	B	Glass	C	4.184J
16	B	Reduction Potential	B	1.12 dm^3	D	500nm	B	4.0
17	D	Decreases as	C	Distribution law	A	$n=2, l=1$	A	1.41×10^{-5}
18	/	/	/	/	/	/	/	/
19	/	/	/	/	/	/	/	/
20	/	/	/	/	/	/	/	/
Cross Check	A B C D		A B C D		A B C D		A B C D	
Total	4544		4544		4544		4544	

برقیکیٹ ایبٹ سولہ پرچہ مارکنگ Key

مرتبہ: **یکمتری** پرچہ: **کروپ سیلنڈ** انٹرمیڈیٹ پہلا سالانہ امتحان 2025
 سوال پرچہ انشائیہ و موضوعی (Subjective & Objective) کو نظر ثانی چیک کر لیا ہے یہ پرچہ Syllabus کے عین مطابق Set کیا گیا ہے۔ اس سوال پرچہ میں کسی قسم کی کوئی غلطی نہ ہے۔ ہم نے مالیہ پانچہ کارڈ اور انگریزی Version بھی چیک کر لیا ہے۔ یہ Version آپس میں مطابقت رکھتے ہیں۔ نیز اس پرچہ کی امریشی (MCQs) کی بات تصدیق کی جاتی ہے کہ اس میں کسی قسم کی کوئی غلطی نہ ہے۔ مزید یہ کہ ہم نے Key بنانے سے متعلق دفتر کی جانب سے تیار کردہ ہدایات (مقبول کر کے اس کے بغور مطالعہ کیا ہے اور ان کی روشنی میں Key بنائی ہے۔ نیز سب ایگزامینرز کیسے تفصیلی مارکنگ ہدایات / مارکنگ کلیر / Rubrics بھی تیار کروائی گئی ہیں۔

Prepared & Checked By:

Dated: **03-06-25**

S.#	Name	Designation	Institution	Mobile No	Signature
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2	Adnan Khan	Asst. Prof	Govt. Graduate College Khaneja	0300-9497448	
3	Dr. Tahira Saleem	Asst. Prof.	Govt. Graduate College (w) Muzaffargarh Multan	0331-7262796	
4	Dr. Nadia Anjum	Asst. Prof.	Govt. Graduate College of Science Multan	03007189257	
5					

ہم نے اس پرچہ کے مالیہ پانچہ کارڈ (انشائیہ + موضوعی) کی امریشی "Key" اور ہدایات کے حوالے سے مکمل طور پر تصدیق کر لیا ہے۔ کسی قسم کی کوئی غلطی نہ ہے۔

1	AZHAR HUSSAIN	Asst. P	Govt. Graduate College Civil Lines Multan	0303-0232304	
2	SHAHNAZ ACHAM	AP	Govt Graduate College (w) Bosan Road Multan	03017411047	

2025 (1 st -A)		Roll No:
INTERMEDIATE PART-I (11 th Class)		
CHEMISTRY PAPER-I GROUP-I		
TIME ALLOWED: 2.40 Hours	SUBJECTIVE	MAXIMUM MARKS: 68
NOTE: Write same question number and its parts number on answer book, as given in the question paper.		
SECTION-I		
2. Attempt any eight parts.		8 × 2 = 16
(i)	Calculate mass in grams of 2.74 mol of $KMnO_4$.	2
(ii)	Explain that many chemical reactions taking place in our surrounding involve the limiting reactants.	2
(iii)	Why actual yield is always less than theoretical yield?	2
(iv)	Write any four characteristics of a good solvent for crystallization of a compound.	2
(v)	Define sublimation. Name any two sublimates.	2
(vi)	Explain Linde's method of liquefaction of gases.	2
(vii)	Why real gases deviate from ideal behaviour?	2
(viii)	Differentiate between diffusion and effusion of gases.	2
(ix)	Calculate the oxidation number of Cr (Chromium) in (a) K_2CrO_4 (b) $K_2Cr_2O_7$	1+1
(x)	What are redox reactions? Give example.	1+1
(xi)	What is reaction Kinetics?	2
(xii)	Differentiate between average and instantaneous rate of reaction.	2
3. Attempt any eight parts.		8 × 2 = 16
(i)	Justify that ionic crystals are highly brittle.	2
(ii)	Define (a) Anisotropy (b) Cleavage of crystal	2
(iii)	What do you know about transition temperature?	2
(iv)	Water is liquid at room temperature but H_2S is a gas. Give reason.	2
(v)	The $\frac{e}{m}$ ratio for positive rays is 1836 times less than that of cathode rays. Justify.	2
(vi)	How the emission spectrum is obtained?	2
(vii)	State the Heisenberg's uncertainty principle.	2
(viii)	Write down the electronic configuration of: (a) Cobalt(27) (b) Bromine(35)	2
(ix)	What are the buffer solutions? Give one example.	1+1
(x)	What is Lowry-Bronsted idea of acids and bases?	2
(xi)	How do buffers act?	2
(xii)	Define the solubility product.	2
4. Attempt any six parts.		6 × 2 = 12
(i)	How electronegativity values of elements help us in understanding the nature of chemical bond?	2
(ii)	The size of the cation is always smaller than its parent atom. Justify with example.	1+1
(iii)	Pi (π) bond is more diffused than Sigma (σ) bond. Why?	2
(iv)	Define coordinate covalent bond. Give two examples.	1+1
(v)	Define enthalpy of formation. Give one example.	1+1
(vi)	Burning of coal is spontaneous process. Justify.	2
(vii)	What are hydrates? How are they formed?	1+1
(viii)	Boiling points of the solvents increase due to the presence of solutes. Justify.	2
(ix)	What is the molality of the solution prepared by dissolving 5g of glucose in 250g of water?	2
SECTION-II		
NOTE: Attempt any three questions.		3 × 8 = 24
5.(a)	When limestone ($CaCO_3$) is roasted, quick lime (CaO) is produced according to the following equation. The actual yield of CaO is 2.5 kg, when 4.5 kg of limestone is roasted. What is the percentage yield of this reaction. $CaCO_3 \rightarrow CaO + CO_2$	4
(b)	What is Plasma? Give its any four applications.	4
6.(a)	Define Covalent solids. Give its types. Also write down any two properties of these solids.	1+3=4
(b)	Define sp^3 hybridization. Explain the shape of NH_3 molecule.	1+3=4
7.(a)	Write down the four defects of Bohr's atomic model.	4
(b)	Describe Bomb Calorimeter method for calculation of enthalpy of a substance.	4
8.(a)	The solubility of PbF_2 at $25^\circ C$ is $0.64 g/dm^3$. Calculate K_{sp} of PbF_2 .	4
(b)	Describe half-life method and method of large excess for the finding of the order of reaction.	4
9.(a)	What are continuous and discontinuous solubility curves? Explain with graphs.	2+2=4
(b)	Define electrode potential. Write down the measurement of electrode potential of Zn (Zinc) with diagram.	1+2+1=4

2025 (1 st -A) INTERMEDIATE PART-I (11 th Class)		Roll No:
CHEMISTRY PAPER-I GROUP-II		
TIME ALLOWED: 2.40 Hours	SUBJECTIVE	MAXIMUM MARKS: 68
NOTE: Write same question number and its parts number on answer book, as given in the question paper.		
SECTION-I		
2. Attempt any eight parts.		8 × 2 = 16
(i)	N_2 and CO have the same number of electrons, protons and neutrons. Justify.	02
(ii)	Law of conservation of mass has to be obeyed during stoichiometric calculations. Why?	02
(iii)	No individual Neon (Ne) atom in the sample of element has a mass of 20.18 a.m.u. Why?	02
(iv)	Why sintered glass crucible is preferred over Gooch Crucible?	02
(v)	Name four important features of solvents chosen for crystallization.	02
(vi)	State Charle's Law and write its mathematical form.	1+1
(vii)	Define Graham's law of diffusion and write its mathematical form.	1+1
(viii)	Define critical temperature and pressure.	1+1
(ix)	Define oxidation state with two examples.	1 + ½ + ½
(x)	Calculate oxidation number of P in (a) H_2PO_3 (b) Na_3PO_4	1+1
(xi)	Differentiate between rate and rate constant of a reaction.	02
(xii)	Justify that the radioactive decay is always a first order reaction.	02
3. Attempt any eight parts.		8 × 2 = 16
(i)	Boiling needs a constant supply of heat. Give reason.	02
(ii)	Why heat of sublimation is greater than heat of vapourization?	02
(iii)	Metals are malleable and ductile. Justify.	02
(iv)	Define isomorphism with example.	1+1
(v)	Whichever the gas is used in the discharge tube, the nature of the cathode rays remains the same. Why?	02
(vi)	What is $(n + \ell)$ rule?	02
(vii)	Write two points of importance of Moseley law.	1+1
(viii)	What is Plank's Quantum theory?	2
(ix)	What are K_c and K_p and how these are related?	1+1
(x)	During the synthesis of NH_3 , the temperature is kept low. Why?	2
(xi)	What are buffer solutions? How an acidic buffer is prepared?	1+1
(xii)	What is common ion effect? Give an example.	1+1
4. Attempt any six parts.		6 × 2 = 12
(i)	Define ionization energy and electron affinity.	02
(ii)	How do you compare the bond strength of polar and non-polar molecule?	02
(iii)	Why is electron affinity of uninegative ion positive?	02
(iv)	How %age of ionic character can be calculated?	02
(v)	What is spontaneous process? Give an example.	02
(vi)	Define first law of thermodynamics.	02
(vii)	Freezing point of solvents is depressed due to the presence of solute. Justify.	02
(viii)	Define homogenous and non-homogenous phase.	02
(ix)	Molality is independent of temperature but molarity depends upon temperature. Justify it.	02
SECTION-II		
NOTE: Attempt any three questions.		3 × 8 = 24
5.(a)	NH_3 gas can be produced by heating together two solids NH_4Cl and $Ca(OH)_2$. If a mixture containing 100g of each solid is heated then calculate the number of grams of NH_3 produced.	4
(b)	Write down any eight postulates of Kinetic Molecular theory.	4
6.(a)	Describe Manometric method for determination of vapour pressure of a liquid.	4
(b)	Define sp^2 - Hybridization. Explain the structure of ethene ($CH_2 = CH_2$)	1+3=4
7.(a)	Discuss Heisenberg uncertainty principle in detail.	4
(b)	Explain Born-Haber cycle in detail with example.	4
8.(a)	$Ca(OH)_2$ is sparingly soluble compound. Its solubility product is 6.5×10^{-6} . Calculate the solubility of $Ca(OH)_2$.	4
(b)	Explain Homogeneous and Heterogeneous catalysis with at least two examples of each.	2+2=4
9.(a)	State and explain Raoult's Law in three different forms.	4
(b)	Describe the fuel cells in detail with diagram and chemical equations.	4

Paper Code Number: 2481		2025 (1 st -A) INTERMEDIATE PART-I (11 th Class)		Roll No:	
CHEMISTRY PAPER-I GROUP-I					
TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM MARKS: 17	
Q.No.1	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.				
S.#	QUESTIONS	A	B	C	D
1	If the rate equation of the reaction $2A + B \rightarrow$ products is, $\text{rate} = K[A]^2[B]$, and A is present in large excess, then order of reaction is:	1	2	3	None of these
2	Stronger the oxidizing agent, greater is the:	Oxidation potential	Reduction potential	Redox potential	E.M.F. of the cell
3	Molarity of pure water is:	1	18	55.5	6
4	The pH of $10^{-3} \text{ mol dm}^{-3}$ of an aqueous solution of H_2SO_4 is:	3.0	2.0	1.5	2.7
5	_____ has pH value more than 7.	Eggs	Milk	Vinegar	Lemons
6	In endothermic reactions, the heat content of the:	Reactants is more than that of products	Products is more than that of reactants	Reactants and products is equal	Both A and B
7	The number of bonds in nitrogen molecule:	One sigma, one pi	Two sigma, one pi	Three sigma only	One sigma, two pi
8	_____ has tetrahedron geometry.	SO_2	$SnCl_2$	CH_4	BF_3
9	Quantum number values for 2p orbitals are:	$n = 2, \ell = 0$	$n = 1, \ell = 2$	$n = 1, \ell = 0$	$n = 2, \ell = 1$
10	Bohr's model can not explain the spectrum of:	He	He^{+1}	H	Li^{+2}
11	The molecules of CO_2 in dry ice form the:	Ionic crystals	Covalent crystals	Molecular crystals	Metallic crystals
12	London dispersion forces are the only forces present among the:	Molecules of water in liquid state	Molecules of solid iodine	Atoms of helium in gaseous state at high temperature	Molecules of hydrogen chloride gas
13	Equal masses of methane and oxygen are mixed in an empty container at $25^\circ C$, the fraction of total pressure exerted by oxygen is:	$\frac{1}{3}$	$\frac{8}{9}$	$\frac{1}{9}$	$\frac{16}{17}$
14	Pressure remaining constant, at which temperature the volume of the gas will become twice of what it is at $0^\circ C$:	$546^\circ C$	$200^\circ C$	$273K$	$546K$
15	During the process of crystallization, the hot saturated solution:	Is cooled very slowly to get large sized crystals	Is cooled at moderate rate to get medium sized crystals	Is evaporated to get crystals of product	Is mixed with an immiscible liquid to get crystals
16	Isotopes differ in:	Properties which depend upon mass	Arrangement of electrons in orbitals	Chemical properties	Position in the periodic table
17	27g of Al will react completely with how much mass of oxygen to produce Al_2O_3 ?	8g oxygen	16g oxygen	32g oxygen	24g oxygen

Paper Code Number: 2483		2025 (1 st -A) INTERMEDIATE PART-I (11 th Class)		Roll No:	
CHEMISTRY PAPER-I GROUP-I					
TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM MARKS: 17	
Q.No.1	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.				
S.#	QUESTIONS	A	B	C	D
1	Molarity of pure water is:	1	18	55.5	6
2	The pH of $10^{-3} \text{ mol dm}^{-3}$ of an aqueous solution of H_2SO_4 is:	3.0	2.0	1.5	2.7
3	_____ has pH value more than 7.	Eggs	Milk	Vinegar	Lemons
4	In endothermic reactions, the heat content of the:	Reactants is more than that of products	Products is more than that of reactants	Reactants and products is equal	Both A and B
5	The number of bonds in nitrogen molecule:	One sigma, one pi	Two sigma, one pi	Three sigma only	One sigma, two pi
6	_____ has tetrahedron geometry.	SO_2	$SnCl_2$	CH_4	BF_3
7	Quantum number values for 2p orbitals are:	$n = 2, \ell = 0$	$n = 1, \ell = 2$	$n = 1, \ell = 0$	$n = 2, \ell = 1$
8	Bohr's model can not explain the spectrum of:	He	He^{+1}	H	Li^{+2}
9	The molecules of CO_2 in dry ice form the:	Ionic crystals	Covalent crystals	Molecular crystals	Metallic crystals
10	London dispersion forces are the only forces present among the:	Molecules of water in liquid state	Molecules of solid iodine	Atoms of helium in gaseous state at high temperature	Molecules of hydrogen chloride gas
11	Equal masses of methane and oxygen are mixed in an empty container at $25^\circ C$, the fraction of total pressure exerted by oxygen is:	$\frac{1}{3}$	$\frac{8}{9}$	$\frac{1}{9}$	$\frac{16}{17}$
12	Pressure remaining constant, at which temperature the volume of the gas will become twice of what it is at $0^\circ C$:	$546^\circ C$	$200^\circ C$	273K	546K
13	During the process of crystallization, the hot saturated solution:	Is cooled very slowly to get large sized crystals	Is cooled at moderate rate to get medium sized crystals	Is evaporated to get crystals of product	Is mixed with an immiscible liquid to get crystals
14	Isotopes differ in:	Properties which depend upon mass	Arrangement of electrons in orbitals	Chemical properties	Position in the periodic table
15	27g of Al will react completely with how much mass of oxygen to produce Al_2O_3 ?	8g oxygen	16g oxygen	32g oxygen	24g oxygen
16	If the rate equation of the reaction $2A + B \rightarrow \text{products}$ is, $\text{rate} = K[A]^2[B]$, and A is present in large excess, then order of reaction is:	1	2	3	None of these
17	Stronger the oxidizing agent, greater is the:	Oxidation potential	Reduction potential	Redox potential	E.M.F. of the cell

Paper Code Number: 2485		2025 (1 st -A) INTERMEDIATE PART-I (11 th Class)		Roll No: _____	
CHEMISTRY PAPER-I GROUP-I					
TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM MARKS: 17	
Q.No.1	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.				
S.#	QUESTIONS	A	B	C	D
1	Equal masses of methane and oxygen are mixed in an empty container at 25°C, the fraction of total pressure exerted by oxygen is:	$\frac{1}{3}$	$\frac{8}{9}$	$\frac{1}{9}$	$\frac{16}{17}$
2	Pressure remaining constant, at which temperature the volume of the gas will become twice of what it is at 0°C :	546°C	200°C	273K	546K
3	During the process of crystallization, the hot saturated solution:	Is cooled very slowly to get large sized crystals	Is cooled at moderate rate to get medium sized crystals	Is evaporated to get crystals of product	Is mixed with an immiscible liquid to get crystals
4	Isotopes differ in:	Properties which depend upon mass	Arrangement of electrons in orbitals	Chemical properties	Position in the periodic table
5	27g of Al will react completely with how much mass of oxygen to produce Al ₂ O ₃ ?	8g oxygen	16g oxygen	32g oxygen	24g oxygen
6	If the rate equation of the reaction 2A + B → products is, rate = K[A] ² [B], and A is present in large excess, then order of reaction is:	1	2	3	None of these
7	Stronger the oxidizing agent, greater is the:	Oxidation potential	Reduction potential	Redox potential	E.M.F. of the cell
8	Molarity of pure water is:	1	18	55.5	6
9	The pH of 10 ⁻³ mol dm ⁻³ of an aqueous solution of H ₂ SO ₄ is:	3.0	2.0	1.5	2.7
10	_____ has pH value more than 7.	Eggs	Milk	Vinegar	Lemons
11	In endothermic reactions, the heat content of the:	Reactants is more than that of products	Products is more than that of reactants	Reactants and products is equal	Both A and B
12	The number of bonds in nitrogen molecule:	One sigma, one pi	Two sigma, one pi	Three sigma only	One sigma, two pi
13	_____ has tetrahedron geometry.	SO ₂	SnCl ₂	CH ₄	BF ₃
14	Quantum number values for 2p orbitals are:	n = 2, ℓ = 0	n = 1, ℓ = 2	n = 1, ℓ = 0	n = 2, ℓ = 1
15	Bohr's model can not explain the spectrum of:	He	He ⁺¹	H	Li ⁺²
16	The molecules of CO ₂ in dry ice form the:	Ionic crystals	Covalent crystals	Molecular crystals	Metallic crystals
17	London dispersion forces are the only forces present among the:	Molecules of water in liquid state	Molecules of solid iodine	Atoms of helium in gaseous state at high temperature	Molecules of hydrogen chloride gas

Paper Code Number: 2487		2025 (1 st -A) INTERMEDIATE PART-I (11 th Class)		Roll No:	
CHEMISTRY PAPER-I GROUP-I					
TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM MARKS: 17	
Q.No.1	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.				
S.#	QUESTIONS	A	B	C	D
1	The number of bonds in nitrogen molecule:	One sigma, one pi	Two sigma, one pi	Three sigma only	One sigma, two pi
2	_____ has tetrahedron geometry.	SO ₂	SnCl ₂	CH ₄	BF ₃
3	Quantum number values for 2p orbitals are:	$n = 2, \ell = 0$	$n = 1, \ell = 2$	$n = 1, \ell = 0$	$n = 2, \ell = 1$
4	Bohr's model can not explain the spectrum of:	He	He ⁺	H	Li ⁺
5	The molecules of CO ₂ in dry ice form the:	Ionic crystals	Covalent crystals	Molecular crystals	Metallic crystals
6	London dispersion forces are the only forces present among the:	Molecules of water in liquid state	Molecules of solid iodine	Atoms of helium in gaseous state at high temperature	Molecules of hydrogen chloride gas
7	Equal masses of methane and oxygen are mixed in an empty container at 25°C, the fraction of total pressure exerted by oxygen is:	$\frac{1}{3}$	$\frac{8}{9}$	$\frac{1}{9}$	$\frac{16}{17}$
8	Pressure remaining constant, at which temperature the volume of the gas will become twice of what it is at 0°C:	546°C	200°C	273K	546K
9	During the process of crystallization, the hot saturated solution:	Is cooled very slowly to get large sized crystals	Is cooled at moderate rate to get medium sized crystals	Is evaporated to get crystals of product	Is mixed with an immiscible liquid to get crystals
10	Isotopes differ in:	Properties which depend upon mass	Arrangement of electrons in orbitals	Chemical properties	Position in the periodic table
11	27g of Al will react completely with how much mass of oxygen to produce Al ₂ O ₃ ?	8g oxygen	16g oxygen	32g oxygen	24g oxygen
12	If the rate equation of the reaction $2A + B \rightarrow \text{products}$ is, $\text{rate} = K[A]^2[B]$, and A is present in large excess, then order of reaction is:	1	2	3	None of these
13	Stronger the oxidizing agent, greater is the:	Oxidation potential	Reduction potential	Redox potential	E.M.F. of the cell
14	Molarity of pure water is:	1	18	55.5	6
15	The pH of 10 ⁻³ mol dm ⁻³ of an aqueous solution of H ₂ SO ₄ is:	3.0	2.0	1.5	2.7
16	_____ has pH value more than 7.	Eggs	Milk	Vinegar	Lemons
17	In endothermic reactions, the heat content of the:	Reactants is more than that of products	Products is more than that of reactants	Reactants and products is equal	Both A and B

Paper Code Number: 2482		2025 (1 st -A) INTERMEDIATE PART-I (11 th Class)		Roll No: _____	
CHEMISTRY PAPER-I GROUP-II					
TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM MARKS: 17	
Q.No.1	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.				
S.#	QUESTIONS	A	B	C	D
1	One mole of SO_2 contains:	6.02×10^{23} atoms of sulphur	18.1×10^{23} molecules of SO_2	6.02×10^{23} atoms of oxygen	4 grams atoms of SO_2
2	The volume occupied by 1.4g of N_2 at S.T.P is:	2.24 dm^3	1.12 dm^3	22.4 dm^3	112 cm^3
3	Solvent extraction is an equilibrium process and it is controlled by:	Law of mass action	The amount of solvent used	Distribution law	The amount of solute
4	Number of molecules in one dm^3 of water is close to:	$\frac{6.02}{22.4} \times 10^{23}$	$\frac{12.04}{22.4} \times 10^{23}$	$\frac{18}{22.4} \times 10^{23}$	$55.6 \times 6.02 \times 10^{23}$
5	The deviation of a gas from ideal behaviour is maximum:	-10°C and 5.0 atm	-10°C and 2.0 atm	100°C and 2.0 atm	0°C and 2.0 atm
6	In order to raise the boiling point of water upto 110°C the external pressure should be:	765 torr	Between 200 torr and 760 torr	Between 760 torr and 1200 torr	Any value of pressure
7	_____ is pseudo solid.	CaF_2	Glass	$NaCl$	KCl
8	The wave number of light emitted by a certain source is $2 \times 10^6 \text{ m}^{-1}$. The wave length of this light will be:	$5 \times 10^7 \text{ m}$	500 m	200 nm	500 nm
9	Quantum number values for $2p$ orbitals are:	$n = 2, \ell = 1$	$n = 1, \ell = 2$	$n = 1, \ell = 0$	$n = 2, \ell = 0$
10	_____ species has unpaired electrons in antibonding molecular orbital.	O_2^{2-}	N_2^{2-}	B_2	F_2
11	_____ molecule has planer triangular shape with respect to VSEPR theory.	CH_4	$BeCl_2$	NH_3	BF_3
12	Caloric is equivalent to:	0.4184 J	41.84 J	4.184 J	418.4 J
13	The pH of $10^{-4} \text{ mol dm}^{-3}$ of HCl is:	3.0	4.0	3.7	5.0
14	The solubility product of $AgCl$ is $2.0 \times 10^{-10} \text{ mole}^2 \cdot \text{dm}^{-6}$. The maximum concentration of Ag^+ ion in the solution is:	$1.41 \times 10^{-5} \text{ mole} \cdot \text{dm}^{-3}$	$2.0 \times 10^{-10} \text{ mole} \cdot \text{dm}^{-3}$	$1.0 \times 10^{-10} \text{ mole} \cdot \text{dm}^{-3}$	$4.0 \times 10^{-20} \text{ mole} \cdot \text{dm}^{-3}$
15	An aqueous solution of ethanol in water may have vapour pressure:	Equal to that of water	Equal to that of ethanol	More than that of water	Less than that of water
16	Stronger the oxidizing agent, greater is the:	Oxidation potential	Reduction potential	Redox potential	E.M.F of cell
17	The rate of reaction:	Increases as the reaction proceeds	May decrease or increase as the reaction proceeds	Remains the same as the reaction proceeds	Decreases as the reaction proceeds

Paper Code Number: 2484		2025 (1 st -A) INTERMEDIATE PART-I (11 th Class)		Roll No: _____	
CHEMISTRY PAPER-I GROUP-II					
TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM MARKS: 17	
Q.No.1	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.				
S.#	QUESTIONS	A	B	C	D
1	Number of molecules in one dm^3 of water is close to:	$\frac{6.02}{22.4} \times 10^{23}$	$\frac{12.04}{22.4} \times 10^{23}$	$\frac{18}{22.4} \times 10^{23}$	$55.6 \times 6.02 \times 10^{23}$
2	The deviation of a gas from ideal behaviour is maximum:	$-10^\circ C$ and 5.0 atm	$-10^\circ C$ and 2.0 atm	$100^\circ C$ and 2.0 atm	$0^\circ C$ and 2.0 atm
3	In order to raise the boiling point of water upto $110^\circ C$ the external pressure should be:	765 torr	Between 200 torr and 760 torr	Between 760 torr and 1200 torr	Any value of pressure
4	_____ is pseudo solid.	CaF_2	Glass	$NaCl$	KCl
5	The wave number of light emitted by a certain source is $2 \times 10^6 m^{-1}$. The wave length of this light will be:	$5 \times 10^7 m$	500 m	200 nm	500 nm
6	Quantum number values for $2p$ orbitals are:	$n = 2, \ell = 1$	$n = 1, \ell = 2$	$n = 1, \ell = 0$	$n = 2, \ell = 0$
7	_____ species has unpaired electrons in antibonding molecular orbital.	O_2^{2-}	N_2^{2-}	B_2	F_2
8	_____ molecule has planer triangular shape with respect to VSEPR theory.	CH_4	$BeCl_2$	NH_3	BF_3
9	Calorie is equivalent to:	0.4184 J	41.84 J	4.184 J	418.4 J
10	The pH of $10^{-4} \text{ mol } dm^{-3}$ of HCl is:	3.0	4.0	3.7	5.0
11	The solubility product of $AgCl$ is $2.0 \times 10^{-10} \text{ mole}^2 \cdot dm^{-6}$. The maximum concentration of Ag^+ ion in the solution is:	$1.41 \times 10^{-5} \text{ mole} \cdot dm^{-3}$	$2.0 \times 10^{-10} \text{ mole} \cdot dm^{-3}$	$1.0 \times 10^{-10} \text{ mole} \cdot dm^{-3}$	$4.0 \times 10^{-20} \text{ mole} \cdot dm^{-3}$
12	An aqueous solution of ethanol in water may have vapour pressure:	Equal to that of water	Equal to that of ethanol	More than that of water	Less than that of water
13	Stronger the oxidizing agent, greater is the:	Oxidation potential	Reduction potential	Redox potential	E.M.F of cell
14	The rate of reaction:	Increases as the reaction proceeds	May decrease or increase as the reaction proceeds	Remains the same as the reaction proceeds	Decreases as the reaction proceeds
15	One mole of SO_2 contains:	6.02×10^{23} atoms of sulphur	18.1×10^{23} molecules of SO_2	6.02×10^{23} atoms of oxygen	4 grams atoms of SO_2
16	The volume occupied by 1.4g of N_2 at S.T.P is:	$2.24 dm^3$	$1.12 dm^3$	$22.4 dm^3$	$112 cm^3$
17	Solvent extraction is an equilibrium process and it is controlled by:	Law of mass action	The amount of solvent used	Distribution law	The amount of solute

Paper Code Number: 2486		2025 (1 st -A) INTERMEDIATE PART-I (11 th Class)		Roll No: _____	
CHEMISTRY PAPER-I GROUP-II					
TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM MARKS: 17	
Q.No.1	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.				
S.#	QUESTIONS	A	B	C	D
1	_____ species has unpaired electrons in antibonding molecular orbital.	O_2^{2-}	N_2^{2-}	B_2	F_2
2	_____ molecule has planer triangular shape with respect to VSEPR theory.	CH_4	$BeCl_2$	NH_3	BF_3
3	Calorie is equivalent to:	0.4184 J	41.84 J	4.184 J	418.4 J
4	The pH of $10^{-4} \text{ mol dm}^{-3}$ of HCl is:	3.0	4.0	3.7	5.0
5	The solubility product of $AgCl$ is $2.0 \times 10^{-10} \text{ mole}^2 \cdot \text{dm}^{-6}$. The maximum concentration of Ag^+ ion in the solution is:	$1.41 \times 10^{-5} \text{ mole} \cdot \text{dm}^{-3}$	$2.0 \times 10^{-10} \text{ mole} \cdot \text{dm}^{-3}$	$1.0 \times 10^{-10} \text{ mole} \cdot \text{dm}^{-3}$	$4.0 \times 10^{-20} \text{ mole} \cdot \text{dm}^{-3}$
6	An aqueous solution of ethanol in water may have vapour pressure:	Equal to that of water	Equal to that of ethanol	More than that of water	Less than that of water
7	Stronger the oxidizing agent, greater is the:	Oxidation potential	Reduction potential	Redox potential	E.M.F of cell
8	The rate of reaction:	Increases as the reaction proceeds	May decrease or increase as the reaction proceeds	Remains the same as the reaction proceeds	Decreases as the reaction proceeds
9	One mole of SO_2 contains:	6.02×10^{23} atoms of sulphur	18.1×10^{23} molecules of SO_2	6.02×10^{23} atoms of oxygen	4 grams atoms of SO_2
10	The volume occupied by 1.4g of N_2 at S.T.P is:	2.24 dm^3	1.12 dm^3	22.4 dm^3	112 cm^3
11	Solvent extraction is an equilibrium process and it is controlled by:	Law of mass action	The amount of solvent used	Distribution law	The amount of solute
12	Number of molecules in one dm^3 of water is close to:	$\frac{6.02}{22.4} \times 10^{23}$	$\frac{12.04}{22.4} \times 10^{23}$	$\frac{18}{22.4} \times 10^{23}$	$55.6 \times 6.02 \times 10^{23}$
13	The deviation of a gas from ideal behaviour is maximum:	-10°C and 5.0 atm	-10°C and 2.0 atm	100°C and 2.0 atm	0°C and 2.0 atm
14	In order to raise the boiling point of water upto 110°C the external pressure should be:	765 torr	Between 200 torr and 760 torr	Between 760 torr and 1200 torr	Any value of pressure
15	_____ is pseudo solid.	CaF_2	Glass	$NaCl$	KCl
16	The wave number of light emitted by a certain source is $2 \times 10^6 \text{ m}^{-1}$. The wave length of this light will be:	$5 \times 10^7 \text{ m}$	500 m	200 nm	500 nm
17	Quantum number values for $2p$ orbitals are:	$n = 2, \ell = 1$	$n = 1, \ell = 2$	$n = 1, \ell = 0$	$n = 2, \ell = 0$

Paper Code Number: 2488		2025 (1 st -A) INTERMEDIATE PART-I (11 th Class)		Roll No:	
CHEMISTRY PAPER-I GROUP-II					
TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM MARKS: 17	
Q.No.1	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.				
S.#	QUESTIONS	A	B	C	D
1	An aqueous solution of ethanol in water may have vapour pressure:	Equal to that of water	Equal to that of ethanol	More than that of water	Less than that of water
2	Stronger the oxidizing agent, greater is the:	Oxidation potential	Reduction potential	Redox potential	E.M.F of cell
3	The rate of reaction:	Increases as the reaction proceeds	May decrease or increase as the reaction proceeds	Remains the same as the reaction proceeds	Decreases as the reaction proceeds
4	One mole of SO_2 contains:	6.02×10^{23} atoms of sulphur	18.1×10^{23} molecules of SO_2	6.02×10^{23} atoms of oxygen	4 grams atoms of SO_2
5	The volume occupied by 1.4g of N_2 at S.T.P is:	$2.24 dm^3$	$1.12 dm^3$	$22.4 dm^3$	$112 cm^3$
6	Solvent extraction is an equilibrium process and it is controlled by:	Law of mass action	The amount of solvent used	Distribution law	The amount of solute
7	Number of molecules in one dm^3 of water is close to:	$\frac{6.02}{22.4} \times 10^{23}$	$\frac{12.04}{22.4} \times 10^{23}$	$\frac{18}{22.4} \times 10^{23}$	$55.6 \times 6.02 \times 10^{23}$
8	The deviation of a gas from ideal behaviour is maximum:	$-10^\circ C$ and $5.0 atm$	$-10^\circ C$ and $2.0 atm$	$100^\circ C$ and $2.0 atm$	$0^\circ C$ and $2.0 atm$
9	In order to raise the boiling point of water upto $110^\circ C$ the external pressure should be:	765 torr	Between 200 torr and 760 torr	Between 760 torr and 1200 torr	Any value of pressure
10	_____ is pseudo solid.	CaF_2	Glass	$NaCl$	KCl
11	The wave number of light emitted by a certain source is $2 \times 10^6 m^{-1}$. The wave length of this light will be:	$5 \times 10^7 m$	$500 m$	$200 nm$	$500 nm$
12	Quantum number values for $2p$ orbitals are:	$n = 2, \ell = 1$	$n = 1, \ell = 2$	$n = 1, \ell = 0$	$n = 2, \ell = 0$
13	_____ species has unpaired electrons in antibonding molecular orbital.	O_2^{2-}	N_2^{2-}	B_2	F_2
14	_____ molecule has planer triangular shape with respect to VSEPR theory.	CH_4	$BeCl_2$	NH_3	BF_3
15	Calorie is equivalent to:	$0.4184 J$	$41.84 J$	$4.184 J$	$418.4 J$
16	The pH of $10^{-4} mol dm^{-3}$ of HCl is:	3.0	4.0	3.7	5.0
17	The solubility product of $AgCl$ is $2.0 \times 10^{-10} mole^2 \cdot dm^{-6}$. The maximum concentration of Ag^+ ion in the solution is:	$1.41 \times 10^{-5} mole \cdot dm^{-3}$	$2.0 \times 10^{-10} mole \cdot dm^{-3}$	$1.0 \times 10^{-10} mole \cdot dm^{-3}$	$4.0 \times 10^{-20} mole \cdot dm^{-3}$