

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN.
OBJECTIVE KEY FOR INTERMEDIATE 2nd ANNUAL EXAMINATION, 2024'

Name of Subject: CHEMISTRY P-I

Group: Science

Q. Nos	Paper Code 2481	Correct Answer	Paper Code 2483	Correct Answer	Paper Code 2485	Correct Answer	Paper Code 2487	Correct Answer
1	D	Atomic masses are average mass of isotopes of an element.	C	1.4 V	A	Heisenberg's principle	C	Distribution Law
2	B	58.5 gm	B	mole fraction of solute	D	Degenerated orbitals	D	NaCl
3	C	Distribution Law	A	Zero	B	BF ₃	C	546 K
4	D	NaCl	D	D	C	OD	B	116 Torr
5	C	546 K	B	58.5 gm	A	Work	C	monoclinic
6	B	116 Torr	C	Distribution Law	D	14	B	Glass
7	C	monoclinic	D	NaCl	C	1.4 V	A	Heisenberg's principle
8	B	Glass	C	546 K	B	mole-fraction of solute	D	Degenerated orbitals
9	A	Heisenberg's principle	B	116 Torr	A	Zero	B	BF ₃
10	D	Degenerated orbital	C	monoclinic	D	D	C	OD
11	B	BF ₃	B	Glass	B	58.5 gm	A	Work
12	C	OD	A	Heisenberg's principle	C	Distribution Law	D	14
13	A	Work	D	Degenerated orbitals	D	NaCl	C	1.4 V
14	D	14	B	BF ₃	C	546 K	B	mole-fraction of solute
15	C	1.4 V	C	OD	B	116 Torr	A	Zero
16	B	mole-fraction of solute	A	Work	C	monoclinic	D	D
17	A	Zero	D	14	B	Glass	B	58.5 gm
18	/	/	/	/	/	/	/	/
19	/	/	/	/	/	/	/	/
20	/	/	/	/	/	/	/	/
Cross Check	A B C D		A B C D		A B C D		A B C D	
Total	3 5 5 4		3 5 5 4		3 5 5 4		3 5 5 4	

سرٹیفکٹ بابت تصحیح سوالیہ پرچہ مارکنگ Key

ہم نے مضمون کیمیائی پرچہ فرسٹ انٹرمیڈیٹ گروپ I انٹرمیڈیٹ دوسرا سالانہ امتحان 2024 کا سوالیہ پرچہ انشائیہ و معروضی (Subjective & Objective) کو بنظر عمیق چیک کر لیا ہے یہ پرچہ Syllabus کے عین مطابق Set کیا گیا ہے۔ اس سوالیہ پرچہ میں کسی قسم کی کوئی غلطی نہ ہے۔ ہم نے سوالیہ پرچہ کا اردو اور انگریزی Version بھی چیک کر لیا ہے۔ یہ Version آپس میں مطابقت رکھتے ہیں۔ نیز اس پرچہ کی معروضی (MCQs) Key کی بابت تصدیق کی جاتی ہے کہ اس میں بھی کسی قسم کی کوئی غلطی نہ ہے۔ مزید یہ کہ ہم نے Key بنانے سے متعلق دفتر کی جانب سے تیار کردہ ہدایات وصول کر کے ان کا بغور مطالعہ کر لیا ہے اور ان کی روشنی میں Key بنائی ہے۔ نیز سب ایگزامینرز کیلئے تفصیلی مارکنگ ہدایات / مارکنگ سیم / Rubrics بھی تیار کر دی گئی ہیں۔

Prepared & Checked By:

Dated: 07-11-2024

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

Re-Checked By	Name	Designation	Institution	Mobile No	Signature
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Paper Code Number: 2481		2024 (2 nd -A) INTERMEDIATE PART-I (11 th Class)		Roll No: _____	
CHEMISTRY PAPER-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	Many elements have fractional atomic masses, this is because:	The mass of an atom is itself fractional	Atomic masses are average masses of isobars	Atomic masses are average masses of isotopes	Atomic masses are average masses of isotopes proportional to their relative abundance
2	1 gram formula of $NaCl$ is equal to:	35.5 gm	58.5 gm	12.5 gm	23 gm
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	Which is not a drying agent?	$CaCl_2$	Silica gel	P_2O_5	$NaCl$
5	Pressure remaining constant, at which temperature the volume of the gas will become twice of what it is at $0^\circ C$?	$546^\circ C$	$200^\circ C$	$546K$	$273K$
6	The partial pressure of oxygen in lungs is:	159 torr	116 torr	100 torr	90 torr
7	Bond angles $\alpha = \gamma = 90^\circ$; $\beta \neq 90^\circ$ and axes $a \neq b \neq c$ is for crystal system:	Tetragonal	Hexagonal	Monoclinic	Triclinic
8	Which is a pseudo solids?	CaF_2	Glass	$NaCl$	KNO_3
9	Bohr's model is contradicted by:	Heisenberg's uncertainty principle	Pauli's exclusion	Hunds rule	Plank's theory
10	Orbitals have same energy are called:	Hybrid orbitals	d-orbitals	Valence orbitals	Degenerated orbitals
11	Which has bond order of $120^\circ C$?	$BeCl_2$	BF_3	CH_4	NH_3
12	The dipolemoment of CO_2 is:	0.95 D	1.85 D	0 D	1.61 D
13	The term that is not a state function:	Work	Internal energy	Enthalpy	Volume
14	Sum of pK_a and pK_b is equal to:	7	9	11	14
15	The voltage of Nickel Cadmium cell is:	1V	1.2V	1.4V	1.6V
16	Relative lowering of vapour pressure is equal.to:	Mole fraction of solvent	Mole fraction of solute	Molarity	Molality
17	The unit of rate reaction is same as that of rate of reaction having order:	Zero	One	Fractional	Two

Paper Code Number: 2483		2024 (2 nd -A) INTERMEDIATE PART-I (11 th Class)		Roll No: _____	
CHEMISTRY PAPER-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 voltage of Nickel Cadmium cell is:	1V	1.2V	1.4V	1.6V
2	Relative lowering of vapour pressure is equal to:	Mole fraction of solvent	Mole fraction of solute	Molarity	Molality
3	The unit of rate reaction is same as that of rate of reaction having order:	Zero	One	Fractional	Two
4	Many elements have fractional atomic masses, this is because:	The mass of an atom is itself fractional	Atomic masses are average masses of isobars	Atomic masses are average masses of isotopes	Atomic masses are average masses of isotopes proportional to their relative abundance
5	1 gram formula of $NaCl$ is equal to:	35.5 gm	58.5 gm	12.5 gm	23 gm
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	Which is not a drying agent?	$CaCl_2$	Silica gel	P_2O_5	$NaCl$
8	Pressure remaining constant, at which temperature the volume of the gas will become twice of what it is at $0^\circ C$?	$546^\circ C$	$200^\circ C$	$546K$	$273K$
9	The partial pressure of oxygen in lungs is:	159 torr	116 torr	100 torr	90 torr
10	Bond angles $\alpha = \gamma = 90^\circ$; $\beta \neq 90^\circ$ and axes $a \neq b \neq c$ is for crystal system:	Tetragonal	Hexagonal	Monoclinic	Triclinic
11	Which is a pseudo solids?	CaF_2	Glass	$NaCl$	KNO_3
12	Bohr's model is contradicted by:	Heisenberg's uncertainty principle	Pauli's exclusion	Hunds rule	Plank's theory
13	Orbitals have same energy are called:	Hybrid orbitals	d-orbitals	Valence orbitals	Degenerated orbitals
14	Which has bond order of $120^\circ C$?	$BeCl_2$	BF_3	CH_4	NH_3
15	The dipolemoment of CO_2 is:	0.95 D	1.85 D	0 D	1.61 D
16	The term that is not a state function:	Work	Internal energy	Enthalpy	Volume
17	Sum of pK_a and pK_b is equal to:	7	9	11	14

Paper Code Number: 2485		2024 (2 nd -A) INTERMEDIATE PART-I (11 th Class)		Roll No: _____	
CHEMISTRY PAPER-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	Bohr's model is contradicted by:	Heisenberg's uncertainty principle	Pauli's exclusion	Hunds rule	Plank's theory
2	Orbitals have same energy are called:	Hybrid orbitals	d-orbitals	Valence orbitals	Degenerated orbitals
3	Which has bond order of $120^{\circ}C$?	$BeCl_2$	BF_3	CH_4	NH_3
4	The dipolemoment of CO_2 is:	0.95 D	1.85 D	0 D	1.61 D
5	The term that is not a state function:	Work	Internal energy	Enthalpy	Volume
6	Sum of pK_a and pK_b is equal to:	7	9	11	14
7	The voltage of Nickel Cadmium cell is:	1V	1.2V	1.4V	1.6V
8	Relative lowering of vapour pressure is equal to:	Mole fraction of solvent	Mole fraction of solute	Molarity	Molality
9	The unit of rate reaction is same as that of rate of reaction having order:	Zero	One	Fractional	Two
10	Many elements have fractional atomic masses, this is because:	The mass of an atom is itself fractional	Atomic masses are average masses of isobars	Atomic masses are average masses of isotopes	Atomic masses are average masses of isotopes proportional to their relative abundance
11	1 gram formula of $NaCl$ is equal to:	35.5 gm	58.5 gm	12.5 gm	23 gm
12	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
13	Which is not a drying agent?	$CaCl_2$	Silica gel	P_2O_5	$NaCl$
14	Pressure remaining constant, at which temperature the volume of the gas will become twice of what it is at $0^{\circ}C$?	$546^{\circ}C$	$200^{\circ}C$	$546K$	$273K$
15	The partial pressure of oxygen in lungs is:	159 torr	116 torr	100 torr	90 torr
16	Bond angles $\alpha = \gamma = 90^{\circ}$; $\beta \neq 90^{\circ}$ and axes $a \neq b \neq c$ is for crystal system:	Tetragonal	Hexagonal	Monoclinic	Triclinic
17	Which is a pseudo solids?	CaF_2	Glass	$NaCl$	KNO_3

Paper Code Number: 2487		2024 (2 nd -A) INTERMEDIATE PART-I (11 th Class)		Roll No: _____	
CHEMISTRY PAPER-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	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
2	Which is not a drying agent?	$CaCl_2$	Silica gel	P_2O_5	$NaCl$
3	Pressure remaining constant, at which temperature the volume of the gas will become twice of what it is at $0^\circ C$?	$546^\circ C$	$200^\circ C$	$546K$	$273K$
4	The partial pressure of oxygen in lungs is:	159 torr	116 torr	100 torr	90 torr
5	Bond angles $\alpha = \gamma = 90^\circ$; $\beta \neq 90^\circ$ and axes $a \neq b \neq c$ is for crystal system:	Tetragonal	Hexagonal	Monoclinic	Triclinic
6	Which is a pseudo solids?	CaF_2	Glass	$NaCl$	KNO_3
7	Bohr's model is contradicted by:	Heisenberg's uncertainty principle	Pauli's exclusion	Hunds rule	Plank's theory
8	Orbitals have same energy are called:	Hybrid orbitals	d-orbitals	Valence orbitals	Degenerated orbitals
9	Which has bond order of $120^\circ C$?	$BeCl_2$	BF_3	CH_4	NH_3
10	The dipolemoment of CO_2 is:	0.95 D	1.85 D	0 D	1.61 D
11	The term that is not a state function:	Work	Internal energy	Enthalpy	Volume
12	Sum of pK_a and pK_b is equal to:	7	9	11	14
13	The voltage of Nickel Cadmium cell is:	1V	1.2V	1.4V	1.6V
14	Relative lowering of vapour pressure is equal to:	Mole fraction of solvent	Mole fraction of solute	Molarity	Molality
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17	1 gram formula of $NaCl$ is equal to:	35.5 gm	58.5 gm	12.5 gm	23 gm

2024 (2 nd -A)		Roll No:
INTERMEDIATE PART-I (11 th Class)		
CHEMISTRY PAPER-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)	23g of 'Na' and 238g of 'U' have equal number of atoms in them. Justify it.	
(ii)	Define (a) Mole (b) Stoichiometry	
(iii)	How efficiency of a chemical reaction be checked?	
(iv)	Which major steps are involved in complete quantitative analysis of a compound?	
(v)	Write two methods for drying crystallized substances.	
(vi)	Differentiate between adsorption and partition chromatography.	
(vii)	Define (a) Joule Thomson effect (b) Aqueous tension	
(viii)	Water vapours do not behave ideally at 273K. Why?	
(ix)	What is critical temperature of a gas? What is its importance for liquefaction of gases?	
(x)	State Law of mass action.	
(xi)	Ionic product of water increases with increase in temperature. Justify it.	
(xii)	Calculate the pH of 10 ⁻⁴ mole dm ⁻³ of HCl.	
3. Attempt any eight parts.		8 × 2 = 16
(i)	Heat of sublimation of a substance is greater than that of heat of vapourization. Give the reason.	
(ii)	One feels sense of cooling under the fan after bath. Give the reason.	
(iii)	The electrical conductivity of metals decreases by increasing temperature. Give the reason	
(iv)	Why is HF a weaker acid than HCl?	
(v)	How is atomic emission spectrum obtained?	
(vi)	State Pauli Exclusion Principle and Hund's rule.	
(vii)	How was the dual nature of electron proved by Devisson and Germer?	
(viii)	How are X – rays produced?	
(ix)	Why do the boiling points of solvents increase due to presence of non-volatile solutes?	
(x)	What are hydrates? How are they formed?	
(xi)	What are zero order reactions? Give an example.	
(xii)	A finely divided catalyst may prove more effective. Give two examples.	
4. Attempt any six parts.		6 × 2 = 12
(i)	Write the name of type of hybridization in ethene and water molecules.	
(ii)	How does ionization energy change in groups and periods of periodic table?	
(iii)	Justify that ionization energy is an index of metallic character.	
(iv)	Define bond energy. Give its units.	
(v)	Define system and surrounding.	
(vi)	Justify that burning of coal is spontaneous process.	
(vii)	Calculate heat of enthalpy of formation for CO by using Hess's law during combustion of graphite.	
(viii)	Calculate oxidation number of carbon atom in Na ₂ CO ₃ .	
(ix)	What is Anodized Aluminium?	
SECTION-II		
NOTE: Attempt any three questions.		3 × 8 = 24
5.(a)	Define Limiting reactant. Explain by giving any two examples.	1+3=4
(b)	What is Vacuum distillation? Explain its application in detail.	2+2=4
6.(a)	250Cm ³ of sample of hydrogen effuses four times as rapidly as 250Cm ³ of an unknown gas. Calculate molar mass of unknown gas.	4
(b)	How charge on electron is measured by Millikan's oil drop method.	4
7.(a)	Justify N ₂ is diamagnetic while O ₂ is paramagnetic on the basis of MOT.	4
(b)	Calculate pH of a buffer solution containing 1mol dm ⁻³ CH ₃ COONa and 0.1mol. dm ⁻³ of acetic acid. (PK _a of CH ₃ COOH = 4.74)	4
8.(a)	Write down measurement of enthalpy of reaction with glass calorimeter with diagram.	3+1=4
(b)	Elaborate the measurement of electrode potential of copper with reference to standard hydrogen electrode.	3+1=4
9.(a)	Differentiate between Hydration and Hydrolysis with one example each.	2+2=4
(b)	Discuss how surface area and light affect rate of reaction.	2+2=4