

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN.
OBJECTIVE KEY FOR INTERMEDIATE Part-I, ANNUAL EXAMINATION, 2022

263

Name of Subject: Chemistry

(2nd Annual)

Q. Nos	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer
	2481		2483		2485		2487	
1	A	0.25	B	$1.41 \times 10^5 \text{ mol dm}^{-3}$	D	$55.6 \times 6.02 \times 10^{23}$	D	gives the min amount of product
2	D	gives the min. amount	B	1.8 dm^3	A	$-10^\circ\text{C} \& \text{Satm}$	A	Distribution Law
3	A	Distribution Law	D	Drops to zero	C	molecules of Solid iodine	A	NaCl
4	A	NaCl	B	decreases as the reaction	C	there are no free electron	D	$55.6 \times 6.02 \times 10^{23}$
5	D	$55.6 \times 6.02 \times 10^{23}$	A	0.25	C	the nature of residual gas	A	$-10^\circ\text{C} \& \text{Satm}$
6	A	$-10^\circ\text{C} \& \text{Satm}$	D	gives the min amount	C	Nearest to the nucleus	C	molecules of Solid Iodine
7	C	molecules of Solid Iodine	A	Distribution Law	A	SnCl_2	C	there are no free electron
8	C	there are no free electrons	A	NaCl	D	BF_3	C	the nature of the residual gas
9	C	The nature of residual gas	D	$55.6 \times 6.02 \times 10^{23}$	C	$q_p > q_v$	C	Nearest to the nucleus
10	C	Nearest to the nucleus	A	$-10^\circ\text{C} \& \text{Satm}$	B	$1.41 \times 10^5 \text{ mol dm}^{-3}$	A	SnCl_2
11	A	SnCl_2	C	molecules of Solid Iodine	B	1.8 dm^3	D	BF_3
12	D	BF_3	C	There are no free electron	D	drops to zero	C	$q_p > q_v$
13	C	$q_p > q_v$	C	nature of residual gas	B	decreases as the reaction	B	$1.41 \times 10^5 \text{ mol dm}^{-3}$
14	B	$1.41 \times 10^5 \text{ mol dm}^{-3}$	C	Nearest to the nucleus	A	0.25	B	1.8 dm^3
15	B	1.8 dm^3	A	SnCl_2	D	gives the min amount of product	D	drops to zero
16	D	Drops to zero	D	BF_3	A	Distribution Law	B	decreases as the reaction
17	B	decreases as the reaction	C	$q_p > q_v$	A	NaCl	A	0.25
18								
19								
20								

برقیات بابت صحیح سوالیہ پرچہ امارت کل

ہم نے موضوع Chemistry پرچہ I - - - - - گروپ - - - - - انٹرمیڈیٹ - - - - - سالانہ امتحان 2022ء کا سوالیہ پرچہ انتہائی 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 سکیم / Rubrics بھی تیار کر دی گئی ہیں۔

Prepared & Checked By:

Dated: 21-12-2022

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CHEMISTRY PAPER-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 number of moles of CO_2 which contain 8.0 g of oxygen:
(A) 0.25 (B) 0.50 (C) 1.0 (D) 1.50
- (2) A limiting reactant is the one which:
(A) is taken in lesser quantity in grams as compared to other reactants
(B) is taken in lesser quantity in volume as compared to the other reactants
(C) gives the maximum amount of the product which is required
(D) gives the minimum amount of the product under consideration
- (3) Which law is applied in Solvent extraction?
(A) Distribution law (B) Dalton's law (C) Raoult's law (D) Avogadro's law
- (4) Which one is not used as a drying agent in vacuum desiccator?
(A) NaCl (B) CaCl_2 (C) Silica gel (D) P_2O_5
- (5) Number of molecules in one dm^3 of water is close to:
(A) $\frac{6.02}{22.4} \times 10^{23}$ (B) $\frac{12.04}{22.4} \times 10^{23}$ (C) $\frac{18}{22.4} \times 10^{23}$ (D) $55.6 \times 6.02 \times 10^{23}$
- (6) The deviation of a gas from ideal behaviour is maximum at:
(A) -10°C and 5 atm (B) -10°C and 2 atm (C) 100°C and 2 atm (D) 0°C and 2 atm
- (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) Diamond is a bad conductor because:
(A) it has a tight structure (B) it has a high density
(C) there are no free electron present in the crystal of diamond to conduct electricity
(D) is transparent to light
- (9) The nature of the positive rays depends on:
(A) the nature of the electrode (B) the nature of the discharge tube
(C) the nature of the residual gas (D) All of these
- (10) 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
- (11) Which one has distorted triangular structure in vapour phase?
(A) SnCl_2 (B) BF_3 (C) SO_3 (D) CH_4
- (12) Which of the following molecules have zero dipole moment?
(A) NH_3 (B) CHCl_3 (C) H_2O (D) BF_3
- (13) 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) $q_p = \frac{q_v}{2}$
- (14) The solubility product of AgCl is $2 \times 10^{-10} \text{ mol}^2 \text{ dm}^{-6}$.
The maximum concentration of Ag^+ ions in the solution is:
(A) $2 \times 10^{-10} \text{ mol dm}^{-3}$ (B) $1.41 \times 10^{-5} \text{ mol dm}^{-3}$ (C) $1 \times 10^{-10} \text{ mol dm}^{-3}$ (D) $4 \times 10^{-20} \text{ mol dm}^{-3}$
- (15) A solution of glucose is 10% w/v . The volume in which 1g mole of it is dissolved will be:
(A) 1 dm^3 (B) 1.8 dm^3 (C) 200 cm^3 (D) 900 cm^3
- (16) If the salt bridge is not used between two half cells, then the voltage:
(A) Decreases rapidly (B) Decreases slowly (C) Does not change (D) Drops to zero
- (17) The rate of reaction:
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CHEMISTRY PAPER-I

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MAXIMUM MARKS: 17

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

INTERMEDIATE PART-I (11th CLASS)**CHEMISTRY PAPER-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**

- Why actual yield is less than theoretical yield?
- Justify that molecular formula is a simple multiple of empirical formula.
- How many water molecules are there in 10g of H_2O (ice)?
- Give applications of Chromatography.
- Define (i) R_f value (ii) Sublimation
- What are the ways to dry out the crystal?
- Why pilot feels uncomfortable in breathing at high altitude?
- Find out density of an ideal gas from General Gas Equation.
- Why animals inhale O_2 and exhale CO_2 ?
- What is effect of temperature on solubility of KI ?
- How does K_w value changes with temperature?
- Justify that $pH + pOH = 14$ at $25^\circ C$.

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

- Why boiling point of halogens increases down the group?
- How Soaps and Detergents perform their Cleansing Action?
- How metals conduct heat?
- What is difference between Polymorphism and Allotropy?
- What is Stark Effect and Zeeman Effect?
- What is Moseley Law? Give its mathematical form.
- What is de Broglie idea about material particles?
- What is Hund's rule? Give examples.
- What is Molarity? Give its mathematical form?
- What is upper consolute temperature? Give example.
- How does temperature affect the role of catalyst?
- What is Half Life Period? Give example.

02

02

02

1 + 1

1 + 1

1 + 1

02

1 + 1

1 + 1

1 + 1

02

1 + 1

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

- He_2 molecule is not formed. How does MOT justify it?
- The size of cation is smaller than its parent neutral atom. Give the reason.
- The dipole moments of CO_2 and CS_2 are zero, but that of SO_2 is 1.61D. Give the reason.
- Define Electron Affinity. Name the factors affecting it.
- What is meant by standard enthalpy of atomization? Give an example.
- State First Law of Thermodynamics. Give its mathematical form.
- Determine the enthalpy of formation of CO using Hess's law.
- Write down the electrode reactions in alkaline battery.
- Calculate the oxidation number of Mn and $KMnO_4$.

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

5.(a) Define and explain mole in four different ways.

1 + 1 + 1 + 1 = 4

(b) Explain Rutherford's Model of Atom for discovery of Nucleus.

3 + 1 = 4

6.(a) A sample of nitrogen gas is enclosed in a vessel of volume 380 cm^3 at $120^\circ C$ and pressure of 101325 Nm^{-2} . This gas is transferred to a 10 dm^3 flask and cooled to $27^\circ C$.Calculate the pressure in Nm^{-2} exerted by the gas at $27^\circ C$.

1 + 1 + 1 + 1 = 4

(b) What is the difference between single electrode potential and standard electrode potential?

How can it be measured?

2 + 2 = 4

7.(a) What is VSEPR Theory? Give its postulates.

4

(b) Explain measurement of enthalpy of a reaction by bomb calorimeter.

4

8.(a) Define hydrogen bonding and explain any three applications of it.

1 + 3 = 4

(b) What is the percentage of ionization of acetic acid in a solution in which 0.1 moles of it has been dissolved per dm^3 of solution?

4

9.(a) Define Solubility Curves. Explain different types of solubility curves with the help of graphs.

1 + 3 = 4

(b) Explain Half Life Method for determining order of reaction.

4