

(54)

Name of Subject: Chemistry

Q. Nos	Paper Code 4481	Correct Answer	Paper Code 4483	Correct Answer	Paper Code 4485	Correct Answer	Paper Code 4487	Correct Answer
1	A	Na ⁺ is smaller than Cl ⁻ atom	D	Mg ²⁺	D	95%	C	Acrylic fibre
2	D	Mg ²⁺	B	Al ₂ O ₃ · 2H ₂ O	B	Sec-Alcohol	B	6-200g
3	B	Al ₂ O ₃ · 2H ₂ O	B	N ₂ O	B	Fermentator	D	Biosphere
4	B	N ₂ O	D	58	C	Acrylic fibre	D	5
5	D	58	D	Cl ₂ O ₇	B	6-200g	A	Na ⁺ is smaller than Na
6	D	Cl ₂ O ₇	A	SP	D	Biosphere	D	Mg ²⁺
7	A	SP	B	Hydrogenator	D	5	B	Al ₂ O ₃ · 2H ₂ O
8	B	Hydrogenator	D	Eliminator	A	Na ⁺ is smaller than Na	B	N ₂ O
9	D	Elimination	C	BF ₃	D	Mg ²⁺	D	58
10	C	BF ₃	D	95%	B	Al ₂ O ₃ · 2H ₂ O	D	Cl ₂ O ₇
11	D	95%	B	Sec-Alcohol	B	N ₂ O	A	SP
12	B	Sec-Alcohol	B	Fermentator	D	58	B	Hydrogenator
13	B	Fermentation	C	Acrylic fibre	D	Cl ₂ O ₇	D	Eliminator
14	C	Acrylic fibre	B	6-200g	A	SP	C	BF ₃
15	B	6-200g	D	Biosphere	B	Hydrogenator	D	95%
16	D	Biosphere	D	5	D	Eliminator	B	Sec-Alcohol
17	D	5	A	Na ⁺ is smaller than Na	C	BF ₃	B	Fermentator
18	/	/	/	/	/	/	/	/
19	/	/	/	/	/	/	/	/
20	/	/	/	/	/	/	/	/

سرٹیفکیٹ بابت صحیح سوالیہ پرچہ مارکنگ Key

ہم نے مضمون Chemistry پرچہ II گروپ I انٹرمیڈیٹ 2nd A سالانہ امتحان 2022ء کا سوالیہ پرچہ انشائیہ و معروضی (Subjective & Objective) کو بنظر مہتمم 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 اسکیم / Rubrics بھی تیار کر دی گئی ہیں۔

Prepared & Checked By:

Dated: 07/12/2022

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INTERMEDIATE PART-II (12th CLASS)**CHEMISTRY PAPER-II**

TIME ALLOWED: 2.40 Hours

MAXIMUM MARKS: 68

SUBJECTIVE

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 the second value of Electron affinity of an element is usually shown with positive sign?
 - Write down the two points of similarity between Hydrogen and members of Carbon family.
 - Write down the formula of (i) Dolomite (ii) Epsom salt
 - Discuss the role for Gypsum in agriculture.
 - What is Chemical Garden?
 - Why the aqueous solution of Borax is alkaline?
 - Give the two reactions for the formation of Laughing gas (N_2O).
 - What is Aqua Regia? How does it dissolve gold?
 - What are typical and non-typical transition elements?
 - What is chromyl chloride test? Give its reactions.
 - Define Cement. Give the names of argillaceous materials.
 - Write two equations for the manufacture of Urea.
- 3. Attempt any eight parts.** **8 × 2 = 16**
- Discuss the peculiar Behaviour of Fluorine (any 4 points). 2
 - Discuss the oxidizing power of Halogens. Give its order also. 1 + 1
 - Define Carbonization. Give the products of Carbonization of coal. 1 + 1
 - Discuss the importance of organic chemistry in daily life. 2
 - Convert ethene into ethyne by giving reactions. 1 + 1
 - Write down the names and skeleton of all possible isomers of C_4H_{10} . 1 + 1
 - How ethene is converted into ethyl alcohol? Also give conditions of reaction. 1 + 1
 - Give IUPAC names of: (a) $(CH_3CH_2)_3CBr$ (b) CBr_4 1 + 1
 - Convert ethene into 1-Butanol. 1 + 1
 - Differentiate between Thermoplastic and Thermosetting plastic. 1 + 1
 - Define degree of polymerization by giving one example. 1 + 1
 - Give the reaction of hydrolysis of fats. 2
- 4. Attempt any six parts.** **6 × 2 = 12**
- Write objections to Kekule's formula of benzene.
 - What are metadirecting groups? Give examples.
 - How is ethanol converted to methanol?
 - Why is phenol acidic?
 - What is Iodoform test? Give its uses.
 - Write note on reduction of acetic acid.
 - Discuss strecker synthesis.
 - What are Leachates?
 - Briefly explain the terms BOD and COD.

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

- (a) Explain variation of Melting and Boiling points along the group and period. 4
(b) Write down the any four Peculiar Behaviour of Boron with the members of its own group. 4
- (a) Explain preparation of Sodium by Down's cell on commercial scale. 4
(b) Write a note on these properties of transition elements: (i) Paramagnetism (ii) Colour 4
- (a) Discuss coal as a source of organic compounds. 4
(b) Write a comprehensive note on Nucleophilic (S_N1) Unimolecular reaction. 4
- (a) How does ethyne react with:
(i) Halogen acid (ii) Hydrogen (iii) Alkaline $KMnO_4$ (iv) $AgNO_3 / NH_4OH$ 4
(b) Define aldol condensation with an example. Give its mechanism. 4
- (a) What is resonance? Explain the structure of benzene on the basis of resonance method. 4
(b) Explain acidic nature of phenol. 4

CHEMISTRY PAPER-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) Which statement is correct?
 (A) Na^+ is smaller than Na atom (B) Na^+ is larger than Na atom
 (C) Cl^- is smaller than Cl atom (D) Cl^- (ion) and Cl (atom) are equal in size
- (2) Which ion will have the maximum value of heat of hydration?
 (A) Na^+ (B) Ca^{2+} (C) Ba^{2+} (D) Mg^{+2}
- (3) The chief ore of aluminum is:
 (A) Na_3AlF_6 (B) $Al_2O_3 \cdot 2H_2O$ (C) Al_2O_3 (D) $Al_2O_3 \cdot H_2O$
- (4) Laughing gas is chemically:
 (A) NO (B) N_2O (C) NO_2 (D) N_2O_4
- (5) Total number of transition elements are:
 (A) 10 (B) 14 (C) 40 (D) 58
- (6) The anhydride of $HClO_4$ is:
 (A) ClO_3 (B) ClO_2 (C) Cl_2O_5 (D) Cl_2O_7
- (7) Linear shape is associated with which set of hybrid orbitals?
 (A) sp (B) sp^2 (C) sp^3 (D) dsp^2
- (8) Preparation of vegetable ghee involves:
 (A) Halogenation (B) Hydrogenation (C) Hydroxylation (D) Dehydrogenation
- (9) Benzene can not undergo:
 (A) Substitution reactions (B) Addition reactions (C) Oxidation reactions (D) Elimination reactions
- (10) Which of the following is not a nucleophile?
 (A) H_2O (B) H_2S (C) BF_3 (D) NH_3
- (11) Rectified spirit contains ethyl alcohol about:
 (A) 80% (B) 85% (C) 90% (D) 95%
- (12) Ketones are prepared by the oxidation of:
 (A) Primary alcohol (B) Secondary alcohol (C) Tertiary alcohol (D) All of these
- (13) Acetic acid is manufactured by:
 (A) Distillation (B) Fermentation (C) Ozonolysis (D) Esterification
- (14) The fibre which is made from acrylonitrile as monomer:
 (A) PVC (B) Rayon fibre (C) Acrylic fibre (D) Polyester fibre
- (15) Micro-nutrients are required in quantity ranging from:
 (A) 4-40 g (B) 6-200 g (C) 6-200 kg (D) 4-40 kg
- (16) Ecosystem is a smaller unit of:
 (A) Lithosphere (B) Hydrosphere (C) Atmosphere (D) Biosphere
- (17) Newspaper can be recycled again and again by how many times?
 (A) 2 (B) 3 (C) 4 (D) 5

CHEMISTRY PAPER-II

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