

INTERMEDIATE PART-II (12th CLASS) (SPECIAL EXAMINATION)**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

- (i) Why first electron affinity (E.A) is negative but second electron affinity is positive?
- (ii) Write names and formula of any two minerals of Sodium.
- (iii) How does Mg react with O₂ and Sulphur?
- (iv) Write any two functions of Calcium in plant growth.
- (v) Describe the Chemistry of Borax Bead test.
- (vi) Why aqueous solution of borax is alkaline in nature?
- (vii) Draw structures of CO and CO₂.
- (viii) Write down any four uses of H₂SO₄.
- (ix) Write names and formula of two phosphatic fertilizers.
- (x) Write the names of raw materials used for the manufacture of cement.
- (xi) Write down the names of natural and artificial sources of hydrocarbon pollutant.
- (xii) Describe two functions of aeration in purification of water.

3. Attempt any eight parts.

8 × 2 = 16

- (i) Why is HF weaker acid than HCl?
- (ii) Give any two important uses of Helium.
- (iii) What happens when bleaching powder reacts with NH₃ and CO₂?
- (iv) Why does damaged tin plated iron get rusted quickly?
- (v) What is Carbonization of Coal?
- (vi) How would you convert ethyne into acetaldehyde?
- (vii) What is Raney Nickel? Give its application.
- (viii) Give one laboratory method for the preparation of acetaldehyde.
- (ix) Convert acetone into 2-propanol.
- (x) Give four uses of acetic acid.
- (xi) How would you prepare acetamide from acetic acid? Also give reactions.
- (xii) Write down the mechanism between acetic acid and Thionyl chloride.

4. Attempt any six parts.

6 × 2 = 12

- (i) Define Nitration of benzene. Give reaction.
- (ii) How does side-chain of benzene undergo nitration? Give two examples.
- (iii) Prepare alkyl chloride by the reaction of alcohol with SOCl₂ and PCl₅.
- (iv) How does CH₃CH₂MgBr react with formaldehyde?
- (v) Prepare ethanol from starch.
- (vi) How is ethanol distinguished from methanol?
- (vii) What is condensation polymerization?
- (viii) Write the open-chain and cyclic structure of glucose.
- (ix) Define the term saponification. Give chemical equation.

SECTION-II**NOTE:** Attempt any three questions.

8 × 3 = 24

- 5.(a) Discuss the position of Hydrogen over VII A group with four similarities and two points of difference. 4
- (b) Sulphuric acid is said to act as oxidizing agent & dehydrating agent. Describe two reactions in each case. 4
- 6.(a) Explain manufacturing of steel by Bessemer's Process. 4
- (b) (i) Explain the process of incineration of industrial waste. 2 + 2 = 4
- (ii) What do you mean by term Ecosphere?
- 7.(a) What is Cracking? Give its different types. 4
- (b) What is aldol condensation? Write down its mechanism with suitable example. 4
- 8.(a) State Markownikov's rule. Give the reactions of HBr with: 4
- (i) Propene (ii) 1-Butene (iii) 2-Butene
- (b) Give the reactions of Grignard's Reagent with: 4
- (i) Ethylene epoxide (ii) Methanol (iii) Acetone (iv) Water
- 9.(a) Discuss the concept of atomic orbital treatment of benzene. 4
- (b) What is Lucas test and how it is used to differentiate between primary, secondary and tertiary alcohol by giving the chemical reactions. 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 one of the following ions has the highest value of heat of hydration?
 (A) Na^+ (B) Mg^{+2} (C) Al^{+3} (D) Ca^{+2}
- (2) Which element is deposited at cathode during the electrolysis of brine in diaphragm cell?
 (A) H_2 (B) Na (C) Cl_2 (D) O_2
- (3) Which one of the following is the formula of asbestos?
 (A) $CaMg_3(SiO_3)_4$ (B) $Ca_3Mg(SiO_3)_4$ (C) $Ca_3Mg(SiO_3)_3$ (D) $H_2Mg_3(SiO_3)_4$
- (4) The brown gas formed, when metal reduces HNO_3 to:
 (A) N_2O_5 (B) N_2O_3 (C) NO_2 (D) NO
- (5) The anhydride of $HClO_4$ is:
 (A) ClO_3 (B) ClO_2 (C) Cl_2O_5 (D) Cl_2O_7
- (6) Which of the following is a non-typical transition element?
 (A) Cr (B) Mn (C) Zn (D) Fe
- (7) A double bond consists of:
 (A) Two sigma bonds (B) One sigma and one p_i bond
 (C) One sigma and two p_i bonds (D) Two p_i bonds
- (8) Preparation of vegetable ghee involves:
 (A) Halogenation (B) Hydrogenation (C) Hydroxylation (D) Dehydrogenation
- (9) During nitration of benzene, the active nitrating agent is:
 (A) NO_2^+ (B) NO_3 (C) NO_2^- (D) HNO_3
- (10) Which of the following is not a nucleophile?
 (A) H_2O (B) H_2S (C) BF_3 (D) HN_3
- (11) Which compound will have maximum repulsion with water?
 (A) C_6H_6 (B) C_2H_5OH (C) $CH_3-CH_2-CH_2-OH$ (D) CH_3-O-CH_3
- (12) Which one of the following reacts with $NaHSO_3$?
 (A) 3-pentanone (B) Benzophenone (C) Ethyl alcohol (D) Acetaldehyde
- (13) The solution of which acid is used for seasoning of food?
 (A) Formic acid (B) Acetic acid (C) Benzoic acid (D) Butanoic acid
- (14) Which one of the following elements is not present in all proteins?
 (A) Carbon (B) Hydrogen (C) Nitrogen (D) Sulphur
- (15) Which one of the following nitrogenous bases is not present in RNA?
 (A) Cytosine (B) Adenine (C) Thiamine (D) Uracil
- (16) Micro-nutrients are required in quantity ranging from:
 (A) 4-40 g (B) 6-200 g (C) 6-200 kg (D) 4-40 kg
- (17) Peroxyacetylnitrate (PAN) is an irritant to human beings and it affects:
 (A) Eyes (B) Ears (C) Stomach (D) Nose

CHEMISTRY PAPER-II

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MAXIMUM MARKS: 17

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Q.No.1

- (1) Which compound will have maximum repulsion with water?
☒ (A) C_6H_6 (B) C_2H_5OH (C) $CH_3-CH_2-CH_2-OH$ (D) CH_3-O-CH_3
- (2) Which one of the following reacts with $NaHSO_3$?
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- (8) Which one of the following ions has the highest value of heat of hydration?
 (A) Na^+ (B) Mg^{+2} ☒ (C) Al^{+3} (D) Ca^{+2}
- (9) Which element is deposited at cathode during the electrolysis of brine in diaphragm cell?
☒ (A) H_2 (B) Na (C) Cl_2 (D) O_2
- (10) Which one of the following is the formula of asbestos?
☒ (A) $CaMg_3(SiO_3)_4$ (B) $Ca_3Mg(SiO_3)_4$ (C) $Ca_3Mg(SiO_3)_3$ (D) $H_2Mg_3(SiO_3)_4$
- (11) The brown gas formed, when metal reduces HNO_3 to:
 (A) N_2O_5 (B) N_2O_3 ☒ (C) NO_2 (D) NO
- (12) The anhydride of $HClO_4$ is:
 (A) ClO_3 (B) ClO_2 (C) Cl_2O_5 ☒ (D) Cl_2O_7
- (13) Which of the following is a non-typical transition element?
 (A) Cr (B) Mn ☒ (C) Zn (D) Fe
- (14) A double bond consists of:
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- (3) Which one of the following nitrogenous bases is not present in RNA?
 (A) Cytosine (B) Adenine (C) Thiamine (D) Uracil
- (4) Micro-nutrients are required in quantity ranging from:
 (A) 4 – 40 g (B) 6 – 200 g (C) 6 -200 kg (D) 4 – 40 kg
- (5) Peroxyacetyl nitrate (PAN) is an irritant to human beings and it affects:
 (A) Eyes (B) Ears (C) Stomach (D) Nose
- (6) Which one of the following ions has the highest value of heat of hydration?
 (A) Na^+ (B) Mg^{+2} (C) Al^{+3} (D) Ca^{+2}
- (7) Which element is deposited at cathode during the electrolysis of brine in diaphragm cell?
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BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN.
OBJECTIVE KEY FOR INTERMEDEAT SPECIAL PART-II EXAMINATION, 2020
 Name of Subject: Chemistry Session: _____

Q. Nos.	Paper Code 4481	Paper Code 4483	Paper Code 4485	Paper Code 4487
1	C	A	B	C
2	A	D	D	B
3	A	B	C	A
4	C	D	B	C
5	D	C	A	A
6	C	B	C	A
7	B	A	A	C
8	B	C	A	D
9	A	A	C	C
10	C	A	D	B
11	A	C	C	B
12	D	D	B	A
13	B	C	B	C
14	D	B	A	A
15	C	B	C	D
16	B	A	A	B
17	A	C	D	D
18	/	/	/	/
19	/	/	/	/
20	/	/	/	/

سرٹیفکیٹ بابت صحیح سوال پرچہ مارکنگ Key

ہم نے مضمون کیمیسٹری پرچہ II گروپ امینہ نسیم انٹر میڈیٹ ایڈیشن امتحان 2020 کا سوالیہ پرچہ انشائیہ و معروضی (Subjective & Objective) کو بنظر عین 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 اور Syllabus کی مطابق بھی ہیں۔ نیز اس پرچہ کی معروضی (MCQs) Key کی بابت بھی تصدیق کی جاتی ہے کہ اس میں بھی کسی قسم کی کوئی غلطی نہ ہے۔ MCQs کی "Key" کو دوبارہ بھی بغور چیک کر لیا گیا 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 ہدایات / مارکنگ سکیم / Rubrics بھی تیار کر دی گئی ہیں۔

Prepared & Checked By:

S.#	Name	Designation	Institution	Mobile No	Signature
1	Muhammad Latif	Professor	Govt. College Vehari	0300 772155	
2	Dr. M. Ramzan	AP	Govt. Emerson College Multan	0334-6027542	
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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 کر لی ہے۔ کسی قسم کی کوئی غلطی نہ ہے۔

S.#	Name	Designation	Institution	Mobile No	Signature
1	Mian M. Nawaz	Professor	GEC- Multan	0300-6382621	
2					
3					