

Inter (Part-II) Lahore Board 2011

Chemistry

Paper II (Objective Type)

Time Allowed: 20 Minutes

Max. Marks: 17

Note: Write answers to the questions on the objective answer sheet provided. Four possible answers A, B, C and D to each, question are given. Which answer you consider correct, fill the circle in front of A, B, C or D with Marker or Pen ink to each question on the answer sheet provided.

- The decrease in atomic sizes is not much prominent across rows containing elements of :
(A) s-Block (B) p-Block (C) d-Block (D) f-Block
- One of the following is applied on walls as white wash:
(A) Lime water
(B) Milk of lime
(C) Milk of magnesia
(D) Lime stone
- Following is used in making fire proof clothes :
(A) Water glass
(B) Borax glass
(C) Kaolin
(D) Asbestos
- The element whose inorganic minerals are not much abundant in earth crust:
(A) Li (B) N (C) Na (D) O
- The element which causes burn to skin that heels slowly :
(A) F₂ (B) Cl₂ (C) Br₂ (D) Acid
- Carbon atom in following is Sp²-hybridized :
(A) CH₃CN (B) CH \equiv CH (C) HCOOH (D) CH₂Cl₂
- Following property of transition elements does not vary with a regular pattern:
(A) Binding energy
(B) Melting point
(C) Covalent radius
(D) Cationic radius
- The isomerism shown by alkanes is:
(A) Skeletal
(B) Position
(C) Geometric
(D) Metamerism
- Ortho, Para derivatives are obtained by halogenations of:
(A) Nitrobenzene
(B) Toluene
(C) Benzaldehyde

- (D) Benzene
10. Reaction of following with Grignard 's reagent can give p-alcohol :
- (A) Epoxide
 - (B) Peroxide
 - (C) Super oxide
 - (D) Hydrogenoxide
11. Methanol can be prepared from hydrogenation of:
- (A) CH_3CN
 - (B) CH_3Br
 - (C) HCHO
 - (D) CH_3CHO
12. Addition of alcohol in carbonyl compounds gives acetal; the geometry of acetal is:
- (A) Linear
 - (B) Trigonal
 - (C) Tetrahedral
 - (D) Planar
13. Molar mass of CH_3COOH obtained by elevation of boiling point method is :
- (A) 30
 - (B) 60
 - (C) 120
 - (D) 180
14. Starch is a polymer of:
- (A) Alpha -D- glucose
 - (B) Beta-D-glucose
 - (C) Alpha-D-fructose
 - (D) Beta-D- fructose
15. The nitrogenous fertilizer easily taken up by plants is :
- (A) Urea
 - (B) Ammonium nitrate
 - (C) Ammonia gas
 - (D) Ammonia liquid
16. Following is better to disinfect water :
- (A) Cl_2
 - (B) O_2
 - (C) O_3
 - (D) KMnO_4
17. The residual ash after incineration of industrial waste is disposed off in a landfill, which is lined with :
- (A) Portland cement
 - (B) Clay and plastic
 - (C) Methyl silicone
 - (D) Stone-ware

Inter (Part-II) Lahore Board 2011

(SECTION – I)

Chemistry

Time Allowed: 2.40 Hours

Paper II (Essay Type)

Max. Marks: 68

Note: Out of Q. No. 1, 2, 3 and 4 write any Twenty-Two (22) short answers. While writing answer write question No and its part carefully. Each part carries two marks. 44

1.
 - (i) Write name and symbol of an element from S-block that has zero oxidation state. Also write its electronic configuration.
 - (ii) Why melting and boiling points of elements belonging to groups VA-VIIA are lower?
 - (iii) Solution of Na_2O in water is alkaline. Justify the statement.
 - (iv) Define metalloid. Give reaction of a metalloid of group IIIA with oxygen.
 - (v) Give uses of lead sub oxide.
 - (vi) Show that H_3BO_3 is monobasic acid.
 - (vii) How Al finds its uses in metallurgy and photoflash bulbs?
 - (viii) Write formulas of chromate and dichromate ions. In which colour they usually exist?
2.
 - (i) Name three allotropic forms of phosphorous.
 - (ii) How does aqua-regia dissolves gold?
 - (iii) The elements of VIIIA group are called noble gases. Comment
 - (iv) How halogen acids are ionized in water?
 - (v) Define homocyclic compounds. Give example.
 - (vi) Give shapes and angles of following compounds using hybridization approach:
(a) $\text{CH}_2 = \text{CH}_2$ (b) $\text{HC} \equiv \text{CH}$
 - (vii) What are fused rings aromatic compound? Give examples.
 - (viii) Predict major product of bromination of nitrobenzene. Also give equation.
3.
 - (i) Mention four uses of ethane.
 - (ii) Sigma bonds are inert in alkanes. Justify.
 - (iii) Discuss E2 mechanism.
 - (iv) Write two uses of each of methanol and ethanol.
 - (v) How will you distinguish between methanol and ethanol?
 - (vi) Picric acid is a phenol which behaves like an acid. Justify.
 - (vii) Ethers belong to an inert class of organic compounds. Discuss.
 - (viii) Differentiate between acidic and basic amino acids.
4.
 - (i) Explain one method of formation of formaldehyde from methyl alcohol.
(Diagram not needed)

- (ii) Give one reaction for formation of an acetal.
- (iii) Define iodine number.
- (iv) In what way fats and oils are different?
- (v) Define enzyme. Name their two properties.
- (vi) Classify elements essential for plant growth.
- (vii) Enlist steps involved in the manufacturing of urea.
- (viii) Write a note on diammonium phosphate.
- (ix) What is acid rain? Give one of its harm to building.

(SECTION – II)

Note: Attempt any THREE questions

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| 5. | (a) | Explain periodic trends in the following physical properties:
(i) Atomic radius. (ii) Electron affinity. | 4 |
| | (b) | Describe eight points to discuss role of lime in industries. | 4 |
| 6. | (a) | Explain reforming of petroleum with the help of suitable example. | 4 |
| | (b) | What are S_N reactions? Differentiate between S_N1 and S_N2 reactions. | 4 |
| 7. | (a) | Convert the following :
(i) Propyne into acetone (ii) Ethyne into oxalic acid | 4 |
| | (b) | Discuss the reaction of ethanal and propanone with:
(i) Hydroxylamine (ii) Phenyl hydrazine | 4 |
| 8. | (a) | Define Friedel Craft's reactions. Give mechanism with an example of Friedel Craft's acylation reaction. | 4 |
| | (b) | Define Zwitter ion. Discuss effect of acidic and basic medium on the dipole ion structure of amino acid. | 4 |
| 9. | (a) | How steel can be manufactured by Bessemer's process? | 4 |
| | (b) | Explain the process of incineration of industrial waste. | 4 |