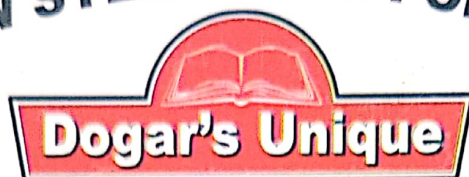


NEW SYLLABUS & POLICY



UP-TO-DATE

Objective MCQs

LECTURER

Asstt./Associate Professor

Subject Specialist

Guide

For **CHEMISTRY**



Selection Procedure & Fully Solved Up-To-Date MCQs Papers.

Ph.D Scholars & MCQs Experts
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Study Material

Subject Based Test (80 Marks)

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General Ability Test (20 Marks)

With Expected Questions For Coming Exams.

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FULLY SOLVED MODEL PAPER-2020

Paper Code

A

PUNJAB PUBLIC SERVICE COMMISSION
WRITTEN TEST OF RECRUITMENT TO THEPOST OF
LECTURER CHEMISTRY (BS-17)

IN THE PUNJAB HIGHER EDUCATION

DEPARTMENT

Time Allowed: Two Hours

Maximum Marks: 100

ROLL NO.

INSTRUCTIONS

① Write your allotted Roll No. in the top right corner of QUESTION PAPER and in the specified place of ANSWER SHEET. ② Write PAPER CODE on your ANSWER SHEET carefully. ③ Read QUESTION PAPER carefully and mark your answer on the ANSWER SHEET. ④ Each question has four options. Fill only one box that you think is the correct answer. Each question carries 1 mark. ⑤ Instructions for filling box have been given on the Answer Sheet. Read them carefully before you attempting Question Paper.

⑥ Read the instructions for filling your ROLL NO. and marking your answer on the ANSWER SHEET before starting to answer. ⑦ Sign the Answer Sheet in the box provided at the bottom corner. ⑧ Return both Question Paper & Answer Sheet, to the Staff, at the end of the test.

Signature of the
Candidate

Every question contains four choices in the form of A, B, C and D. Only one out of them is correct. Your answer sheet has four boxes A B C and D for each question. Select the correct answer and blacken box of the corresponding letter completely and darkly. For example:

Q. Which is the World's Oldest Railway Station?

(A) Osaka (B) Liverpool (C) Leningrad (D) Victoria

The correct answer is B, so shade the answer in this manner.

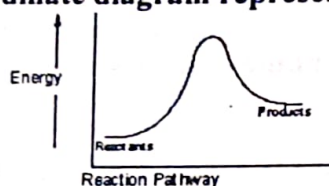
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Subject Based Questions (80%)

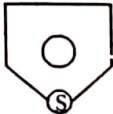
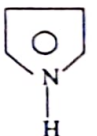



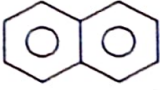


- An ion bearing positive charge is called:
 - Cation
 - Positron
 - Anion
 - None of the above
- An ion having negative charge is called:
 - Anion
 - Photon
 - Electron
 - Cation
- Formation of a cation is a process based upon energy contents:
 - Exothermic process
 - Non-endothermic process
 - Endothermic process
 - None of the above
- Which property of gas affects the rate at which it spreads throughout a laboratory?
 - Boiling point
 - Molecular mass
 - Reactivity
 - Solubility in water
- A liquid boils at a temperature of 100°C. Which other property of the liquid proves that it is pure water?
 - It does not leave a residue when boiled.
 - It freezes at 0°C.
 - It is neither acidic nor alkaline.
 - It turns white anhydrous copper (II) sulphate blue.
- Which one of the following particles has a mass 1/1836 time, that of hydrogen?
 - Neutron
 - Proton
 - Electron
 - Positron

not dependent on the temperature.

21. The following reaction coordinate diagram represents...



- (a) an endothermic reaction.
 (b) an exothermic reaction.
 (c) a reaction that is neither endothermic nor exothermic.
 (d) a reaction in which a catalyst is used.
22. The smaller size of cations in Lanthanides is called:
 a) Lanthanide contraction
 b) Lanthanides oxidation state
 c) Lanthanides expansion
 d) Lanthanides valency
23. The size of atom in positive ion decreases because:
 a) outermost shell loses b) imbalance number of protons
 c) a & b d) shielding effect increases
24. Below the following statements about chemical behaviour of metallic elements which is incorrect?
 A) Metals are reducing agents
 B) They form basic oxide
 C) They exhibit higher electro-negativities than non-metals
 D) They generally have one to five electrons in their outermost shell
25. Which of the following metals is not found in Roses's metal?
 A) Sn B) Bi
 C) Pb D) Cu
26. Hybridization in oxygen is:
 (a) sp (b) sp^2
 (c) sp^3 (d) dsp^3
27. About 25% of earth crust mass is made up of element:
 (a) Carbon (b) Silicon (c) Germanium (d) Tin
28. Which carbonate decomposes on heating to give a black solid and colourless gas?
 A) Calcium carbonate B) Copper (II) carbonate
 C) Sodium carbonate D) Zinc carbonate
29. What is a disadvantage of recycling metals?
 A) Collection and transportation costs money.
 B) Metal ores are a finite resource.
 C) Most metals are corroding slowly in the environment.
 D) Scrap metal melts when heated.
30. Caesium is a metal that is more reactive than aluminium. Which reaction would produce caesium?
 A) Electrolyzing aqueous caesium chloride.
 B) Electrolyzing molten caesium chloride
 C) Heating caesium carbonate
 D) Heating caesium oxide with carbon
31. Ethers show the phenomenon of:
 (a) Position isomerism (b) Functional group isomerism
 (c) Metamerism (d) Cis-trans isomerism

32. Select from the following which one is alcohol?
 (a) $\text{CH}_3\text{-CH}_2\text{-OH}$ (b) $\text{CH}_3\text{-O-CH}_3$
 (c) CH_3COOH (d) $\text{CH}_2\text{-CH}_2\text{-Br}$
33. Major component of natural gas is:
 (a) Ethane (b) Ethene
 (c) Propane (d) Methane
34. Cracking products are:
 (a) Only alkanes (b) Only alkenes
 (c) Alkanes and alkenes (d) Alkynes
35. Tetraethyl lead causes disease:
 (a) Typhoid (b) Respiratory
 (c) Stomach (d) Muscular
36. General formula of carboxylic acids is:
 (a) RCOH (b) RCOR
 (c) RCOOR (d) R-OH
37. Which gasoline is better?
 (a) of low boiling point (b) of low molecular mass
 (c) of high octane (d) All of these
38. Formula of thiophene is:
 (a)  (b) 
 (c)  (d) 
39. Formula of furan is:
 (a)  (b) 
 (c)  (d) 
40. Self linkage of carbon to produce long chains is called:
 (a) isomerism (b) polymorphism
 (c) polymerization (d) catenation
41. Iso-octane burns smoothly having arbitrarily value of octane number:
 (a) 0 (b) 25
 (c) 50 (d) 100
42. $\text{CH}_3\text{-O-CH}_3$ and $\text{CH}_3\text{CH}_2\text{OH}$ is example of isomerism:
 (a) chain isomerism (b) position isomerism
 (c) functional group isomerism (d) metamerism
43. F. Wohler prepared compound from ammonium cyanate:
 a) protein b) lipids
 c) carbohydrates d) urea
44. A property in which a compound have same molecular formula but different structural formula:
 a) polymerization b) polymorphism
 c) isomerism d) metamerism
45. About 80% of coal is used in:
 a) agriculture b) industry
 c) domestic purpose (d) to bake bricks in lime kilns
46. Fractional distillation of petroleum yields gasoline:

- A) They both reduce heated iron (III) oxide to iron.
B) They have different crystalline structure.
C) Equal masses of the substance give equal masses of carbon dioxide and no other product when completely burnt in oxygen.
D) None of these
61. What is the definition of nucleon number?
A) The mass in grams of an atom.
B) The number of electrons in an atom.
C) The number of nuclei in a molecule.
D) The total number of protons and neutrons in an atom.
62. Which pair of elements will combine to form an ionic compound?
A) Carbon and chlorine
B) Fluorine and sodium
C) Hydrogen and oxygen
D) Oxygen and carbon
63. Which of the following contains the same number of electrons as an atom of neon?
A) Cl^-
B) Li
C) Li^+
D) O^{2-}
64. The atoms $^{31}_{15}\text{P}$ and $^{32}_{16}\text{S}$ have the same:
A) Nucleon number
B) Number of electrons
C) Number of neutrons
D) Number of protons
65. What is the ratio of the volume of 2 g of hydrogen to the volume of 16 g of methane, both volumes at r.t.p?
A) 1 to 1
B) 1 to 2
C) 1 to 8
D) 2 to 1
66. Every atom consists of electrons, protons and neutrons except:
A) Helium atom
B) Ordinary hydrogen atom
C) Boron atom
D) Calcium atom
67. Which of the following is true for isotopes of an element?
A) They are atoms of same atomic number but different atomic masses.
B) The only difference in composition between isotopes of same element is in the number of neutrons present in nucleus.
C) The atomic weight of an element is an average of the weight of isotopes of element in proportion in which they occur in nature.
D) All above
68. Natural chlorine occurs as a mixture of isotopes. If a mixture contains 75% $^{35}_{17}\text{Cl}$ and 25% $^{37}_{17}\text{Cl}$, determine its molecular weight:
A) 34.50
B) 35.50
C) 72.50
D) 72.10
69. Which representation of dilute sulphuric acid is correct?
A) $\text{H}_2 + \text{SO}_4^{-2}$
B) $2\text{H}^+ + \text{SO}_4^{2-}$
C) $2\text{H}^+ + \text{SO}_4^-$
D) H_2SO_4
70. Which of the following represents the same net reaction as electrolysis of aqueous sulfuric acid?
A) Electrolysis of water
B) Electrolysis of molten NaCl
C) Electrolysis of aqueous HCl
D) All of these
71. The weakness in the Bohr model of an atom is:
A) The electron was treated as a wave rather than a particle.
B) The model only worked for hydrogen atom.
C) The neutron was not considered.
D) None of these
72. We would like to calculate the momentum of an electron, which of the following formula below be most appropriate?

90. (a) Maldives ✓ (b) India
(c) China (d) Pakistan
"Lake Titicaca" is located in:
(a) Argentina (b) Bolivia
(c) Peru ✓ (d) None of these

BASIC MATHEMATICS

91. In one kilometer race, A beats B by 28 meters or 7 seconds. Find out the time taken by A to finish the race.
(A) 4 mins 20 secs (B) 4 mins 3 secs ✓
(C) 3 min 4 secs (D) 5 mins
92. Imran made a profit of 20 percent in the first year. Next year, he had a loss of 25 percent on the capital he had at the beginning of second year. What was his overall loss?
(A) No loss (B) 12 percent
(C) 10 percent (D) 5 percent ✓

ENGLISH

93. Eminent means:
(A) Hardworking (B) Clever
(C) Famous ✓ (D) Ambitious
94. Which word is wrongly spelt in the following set of words?
(A) Gratitude (B) Confusion
(C) Priveous ✓ (D) Companion

EVERYDAY SCIENCE

95. Which of the following gases is used for refrigeration?
(A) Chlorine (B) Ammonia ✓
(C) Phosphine (D) Carbon Dioxide
96. Cytology is the:
(A) Study of living cells ✓
(B) Study of hormones (C) Study of seeds
(D) Study of surface tension

BASIC COMPUTER STUDIES

97. What is the largest font size available in the font size tool on formatting toolbar?
(A) 78 (B) 72 ✓
(C) 75 (D) 68
98. Selecting text means selecting _____ entire sentence.
(A) A word (B) An
(C) Whole document ✓ (D) None of these

URDU

99. "پایاں اردو" کسے کہا جاتا ہے؟
(A) سر سید احمد خان
(B) ٹیٹی نذیر احمد
(C) مولانا ظفر علی خان
(D) مولوی عبدالحق ✓
100. "توبتے کو تکیے کا سہارا" قواعد کی رو سے کیا ہے؟
(A) قول
(B) ضرب المثل
(C) کہاوت
(D) محاورہ ✓