

EDUSAMBAM ASSESSMENT SERIES

Chemistry Comprehensive Practice Test 2

PRINTABLE PRACTICE WORKSHEET

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YOUR PHYSICAL & ONLINE SELF-ASSESSMENT ROADMAP

PHYSICAL

**ONLINE**

Candidate Name:		Roll No.:	
Class / Grade:		Date:	
School / Institution:		Test Centre:	

Subject	Chemistry	Topic	Chemistry Comprehensive Practice Test 2	Total Marks	100
Total Questions	45	Time Allowed	1 Hour (60 minutes)	Version	A

GENERAL INSTRUCTIONS

1. Read each question carefully before answering.
2. For Section A and Section B, mark one answer only.
3. For Sections C and E, write your answer clearly in the space provided.
4. For Section D, write the correct letter from Column B against each item in Column A.
5. Do not use correction fluid. Keep all answers clear and legible.
6. This worksheet is prepared from the EDUSAMBAM practice assessment supplied for this paper.

PAPER PATTERN

Section	Questions	Marks Each	Total
Section A — Multiple Choice	15	2	30
Section B — True / False	10	2	20
Section C — Fill in the Blank	10	2	20
Section D — Matching	5 pairs	2	10
Section E — Short Answer	5	4	20
Total	45	—	100

Section A — Multiple Choice

30 marks

1. Which type of bond is formed mainly by transfer of electrons?	Basic • 2 pts
A. Ionic	B. Covalent
C. Metallic	D. Hydrogen
Answer: ☐ A ☐ B ☐ C ☐ D	
2. A balanced chemical equation must have the same number of each type of:	Basic • 2 pts
A. Molecule	B. Compound
C. Atom	D. Reaction
Answer: ☐ A ☐ B ☐ C ☐ D	
3. A solution with pH 3 is:	Basic • 2 pts
A. Strongly acidic	B. Neutral
C. Weakly basic	D. Strongly basic
Answer: ☐ A ☐ B ☐ C ☐ D	
4. Which method is most suitable for separating an insoluble solid from a liquid?	Basic • 2 pts
A. Filtration	B. Distillation
C. Chromatography	D. Sublimation
Answer: ☐ A ☐ B ☐ C ☐ D	
5. One mole contains approximately:	Intermediate • 2 pts
A. 6.02×10^{23} particles	B. 9.81×10^2 particles
C. 3.00×10^8 particles	D. 1.60×10^{-19} particles
Answer: ☐ A ☐ B ☐ C ☐ D	

6. Oxidation at an electrode occurs at the: A. Cathode C. Salt bridge only Answer: ☐ A ☐ B ☐ C ☐ D	B. Anode D. Electrolyte surface only	Intermediate • 2 pts
7. Which property is typical of metals? A. Poor electrical conductivity C. Malleability Answer: ☐ A ☐ B ☐ C ☐ D	B. Brittleness in all forms D. Lack of lustre	Intermediate • 2 pts
8. Which functional group identifies an alcohol? A. -COOH C. -CHO Answer: ☐ A ☐ B ☐ C ☐ D	B. -OH D. -CO-	Intermediate • 2 pts
9. At constant pressure, heating a liquid generally causes its particles to: A. Lose all motion C. Become neutrons Answer: ☐ A ☐ B ☐ C ☐ D	B. Gain kinetic energy D. Stop colliding	Intermediate • 2 pts
10. Which acid is naturally present in vinegar? A. Hydrochloric acid C. Sulfuric acid Answer: ☐ A ☐ B ☐ C ☐ D	B. Ethanoic acid D. Nitric acid	Intermediate • 2 pts
11. Isotopes of an element have the same number of: A. Neutrons C. Nucleons Answer: ☐ A ☐ B ☐ C ☐ D	B. Protons D. Mass units	Intermediate • 2 pts
12. A molecule of water contains: A. One H atom and two O atoms C. Two H atoms and two O atoms Answer: ☐ A ☐ B ☐ C ☐ D	B. Two H atoms and one O atom D. One H atom and one O atom	Advanced • 2 pts
13. Which change is usually physical rather than chemical? A. Rusting iron C. Melting ice Answer: ☐ A ☐ B ☐ C ☐ D	B. Burning methane D. Reacting acid with metal	Advanced • 2 pts
14. What happens to the boiling point of a pure liquid when external pressure decreases? A. It usually decreases C. It becomes zero Answer: ☐ A ☐ B ☐ C ☐ D	B. It always increases D. It cannot change	Advanced • 2 pts
15. For a fixed amount of gas at constant temperature, pressure increases when volume: A. Increases C. Stays unrelated Answer: ☐ A ☐ B ☐ C ☐ D	B. Decreases D. Becomes infinite	Advanced • 2 pts

Section B — True / False		20 marks
16. An element is made of atoms with the same number of protons. A. True ☐ B. False ☐		Basic • 2 pts
17. Isotopes of an element necessarily have the same number of neutrons. A. True ☐ B. False ☐		Basic • 2 pts
18. A covalent bond involves attraction associated with shared electrons. A. True ☐ B. False ☐		Basic • 2 pts
19. Increasing temperature generally increases the average kinetic energy of particles. A. True ☐ B. False ☐		Basic • 2 pts
20. A solution is always a heterogeneous mixture. A. True ☐ B. False ☐		Intermediate • 2 pts
21. At constant temperature, decreasing gas volume can increase pressure. A. True ☐ B. False ☐		Intermediate • 2 pts

22. The atomic number changes when an atom becomes an ion.

Intermediate · 2 pts

A. True ☐ B. False ☐
23. Neutralization commonly produces water and a salt.

Intermediate · 2 pts

A. True ☐ B. False ☐
24. Metal atoms generally tend to form positive ions.

Intermediate · 2 pts

A. True ☐ B. False ☐
25. Endothermic processes absorb energy from their surroundings.

Intermediate · 2 pts

A. True ☐ B. False ☐

Section C — Fill in the Blank

20 marks

26. The central part of an atom is the _____.
Answer: _____

Basic · 2 pts
27. Atoms of the same element with different numbers of neutrons are called _____.
Answer: _____

Basic · 2 pts
28. A bond formed by sharing electrons is a _____ bond.
Answer: _____

Basic · 2 pts
29. The change from liquid to gas at the surface of a liquid is _____.
Answer: _____

Basic · 2 pts
30. The substance that dissolves another substance is the _____.
Answer: _____

Intermediate · 2 pts
31. The maximum amount of solute that can dissolve under specified conditions is related to _____.
Answer: _____

Intermediate · 2 pts
32. A reaction that absorbs heat from its surroundings is _____.
Answer: _____

Intermediate · 2 pts
33. The electrode where oxidation occurs is the _____.
Answer: _____

Intermediate · 2 pts
34. A substance that speeds a reaction without being permanently consumed is a _____.
Answer: _____

Intermediate · 2 pts
35. The functional group -OH is called the _____ group.
Answer: _____

Intermediate · 2 pts

Section D — Matching

10 marks

36. Match each term to its correct definition.

Column A	Answer	Column B
Isotope	_____	A. Covalent bond
Solvent	_____	B. Cathode
Covalent bond	_____	C. Exothermic
Cathode	_____	D. Isotope
Exothermic	_____	E. Solvent

Section E — Short Answer

20 marks

41. What is the difference between an atom and an ion?

Advanced · 4 pts
42. Why can isotopes have different masses but similar chemical behaviour?

Advanced · 4 pts

43. Explain the difference between a solution and a suspension.

Advanced · 4 pts

44. What is activation energy and why does a catalyst matter?

Advanced · 4 pts

45. Explain why decreasing the volume of a gas at constant temperature can increase its pressure.

Advanced · 4 pts

Candidate Signature: _____ **Invigilator Signature:** _____

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Marks Obtained: _____ / 100

Checked By: _____

Result / Grade: _____

Date Checked: _____

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Chemistry Comprehensive Practice Test 2 — Answer Key

Teacher reference: equivalent grammatically correct wording is acceptable for open-ended items when the meaning is preserved.

Section A — Multiple Choice

- | | |
|------|-------|
| 1. A | 9. B |
| 2. C | 10. B |
| 3. A | 11. B |
| 4. A | 12. B |
| 5. A | 13. C |
| 6. B | 14. A |
| 7. C | 15. B |
| 8. B | |

Section B — True / False

- | | |
|-----------|-----------|
| 16. False | 21. False |
| 17. True | 22. True |
| 18. False | 23. False |
| 19. False | 24. False |
| 20. True | 25. False |

Section C — Fill in the Blank

- | | |
|-----------------|-----------------|
| 26. nucleus | 31. solubility |
| 27. isotopes | 32. endothermic |
| 28. covalent | 33. anode |
| 29. evaporation | 34. catalyst |
| 30. solvent | 35. hydroxyl |

Section D — Matching

- | | |
|-----------------------|--------------------|
| 36. Isotope — D | 39. Cathode — B |
| 37. Solvent — E | 40. Exothermic — C |
| 38. Covalent bond — A | |

Section E — Short Answer (Model Answers)

- 41.** ion has gained or lost electrons; atom is neutral while ion is charged
- 42.** same number of protons/electron arrangement; different neutrons cause mass difference
- 43.** solution is homogeneous; suspension contains larger particles that can settle
- 44.** minimum energy for effective reaction; catalyst lowers activation energy via alternative pathway
- 45.** particles collide with container walls more frequently; same particles in smaller volume