

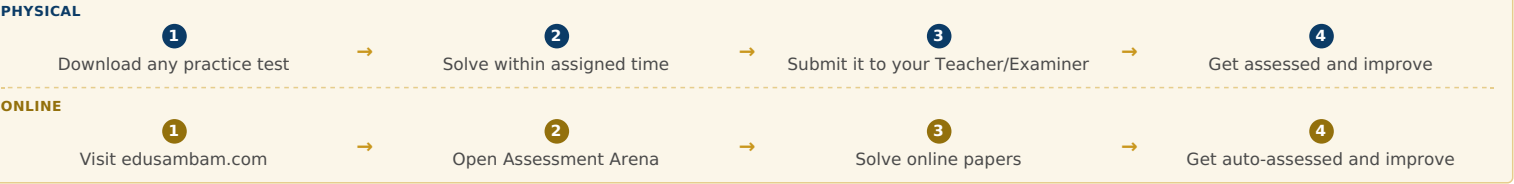
EDUSAMBAM ASSESSMENT SERIES

Chemistry Comprehensive Practice Test 6

PRINTABLE PRACTICE WORKSHEET

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YOUR PHYSICAL & ONLINE SELF-ASSESSMENT ROADMAP



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

Subject	Chemistry	Topic	Chemistry Comprehensive Practice Test 6	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. At constant pressure, heating a liquid generally causes its particles to:

A. Lose all motion

B. Gain kinetic energy

C. Become neutrons

D. Stop colliding

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

2. If 2 mol of H₂ react completely with O₂ according to 2H₂ + O₂ → 2H₂O, how many moles of H₂O form?

A. 1

B. 2

C. 3

D. 4

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

3. Which statement best explains why catalysts speed many reactions?

A. They permanently increase product energy

B. They provide an alternative pathway with lower activation energy

C. They change the equilibrium constant in every reaction

D. They are consumed as reactants

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

4. In a galvanic cell, chemical energy is primarily converted into:

A. Electrical energy

B. Sound energy

C. Nuclear energy

D. Gravitational energy

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

5. Which pair is most likely to form a covalent molecular compound?

A. Sodium and chlorine

B. Magnesium and oxygen

C. Carbon and oxygen

D. Potassium and bromine

Answer: ☐A ☐B ☐C ☐D

Intermediate • 2 pts

6. Which particle has a positive charge?	Intermediate • 2 pts
A. Electron C. Neutron Answer: ☐ A ☐ B ☐ C ☐ D	B. Proton D. Photon
7. The atomic number of an element equals the number of:	Intermediate • 2 pts
A. Neutrons only C. Protons plus neutrons Answer: ☐ A ☐ B ☐ C ☐ D	B. Protons only D. Electrons plus neutrons
8. Which type of bond is formed mainly by transfer of electrons?	Intermediate • 2 pts
A. Ionic C. Metallic Answer: ☐ A ☐ B ☐ C ☐ D	B. Covalent D. Hydrogen
9. A balanced chemical equation must have the same number of each type of:	Intermediate • 2 pts
A. Molecule C. Atom Answer: ☐ A ☐ B ☐ C ☐ D	B. Compound D. Reaction
10. Which of the following is a mixture?	Intermediate • 2 pts
A. Oxygen C. Air Answer: ☐ A ☐ B ☐ C ☐ D	B. Distilled water D. Sodium chloride crystal
11. The mass number of an atom is the total number of:	Intermediate • 2 pts
A. Protons and neutrons C. Electrons and neutrons Answer: ☐ A ☐ B ☐ C ☐ D	B. Protons and electrons D. Valence electrons only
12. Which molecule is non-polar overall because of its symmetrical linear shape?	Advanced • 2 pts
A. CO ₂ C. NH ₃ Answer: ☐ A ☐ B ☐ C ☐ D	B. H ₂ O D. HCl
13. Why is a chemical equation balanced?	Advanced • 2 pts
A. To obey conservation of atoms C. To increase reaction speed Answer: ☐ A ☐ B ☐ C ☐ D	B. To make products heavier D. To make all coefficients equal
14. Which metal is commonly protected by a thin oxide layer that prevents further corrosion?	Advanced • 2 pts
A. Aluminium C. Potassium Answer: ☐ A ☐ B ☐ C ☐ D	B. Sodium D. Calcium
15. In electrochemistry, the salt bridge primarily helps maintain:	Advanced • 2 pts
A. Electrical neutrality and ion flow C. Zero ion movement Answer: ☐ A ☐ B ☐ C ☐ D	B. Higher temperature only D. The mass of electrodes

Section B — True / False	20 marks
16. Bases can neutralize acids.	Basic • 2 pts
A. True ☐ B. False ☐	
17. Electrons are found in the nucleus of an ordinary atom.	Basic • 2 pts
A. True ☐ B. False ☐	
18. The mass number includes electrons.	Basic • 2 pts
A. True ☐ B. False ☐	
19. Gas particles are generally farther apart than particles in a liquid.	Basic • 2 pts
A. True ☐ B. False ☐	
20. A solution can contain more than one solute.	Intermediate • 2 pts
A. True ☐ B. False ☐	
21. A primary cell is designed to be easily recharged repeatedly.	Intermediate • 2 pts
A. True ☐ B. False ☐	

22. Oxidation state is a useful bookkeeping idea in redox chemistry.

Intermediate · 2 pts

A. True ☐ **B.** False ☐

23. Carbon can form four covalent bonds in many organic compounds.

Intermediate · 2 pts

A. True ☐ **B.** False ☐

24. The products of a reaction always have exactly the same properties as the reactants.

Intermediate · 2 pts

A. True ☐ **B.** False ☐

25. A salt bridge can help complete the internal ionic circuit of a galvanic cell.

Intermediate · 2 pts

A. True ☐ **B.** False ☐

Section C — Fill in the Blank

20 marks

26. The positively charged ion is called a ____.

Basic · 2 pts

Answer: _____

27. The negatively charged ion is called an ____.

Basic · 2 pts

Answer: _____

28. The total number of protons and neutrons is the ____ number.

Basic · 2 pts

Answer: _____

29. The process by which a gas changes to a liquid is ____.

Basic · 2 pts

Answer: _____

30. A mixture that has uniform composition throughout is ____.

Intermediate · 2 pts

Answer: _____

31. A substance that conducts electricity in aqueous solution by producing ions is an ____.

Intermediate · 2 pts

Answer: _____

32. In an electrochemical cell, chemical energy may be converted to ____ energy.

Intermediate · 2 pts

Answer: _____

33. A molecule with a carbon-carbon double bond is an ____.

Intermediate · 2 pts

Answer: _____

34. The pH scale is commonly used to describe the acidity or ____ of an aqueous solution.

Intermediate · 2 pts

Answer: _____

35. At equilibrium, the forward and reverse reaction rates are ____.

Intermediate · 2 pts

Answer: _____

Section D — Matching

10 marks

36. Match each term to its correct definition.

Column A	Answer	Column B
Mass number	_____	A. Salt bridge
Neutralization	_____	B. Alkane
Salt bridge	_____	C. Condensation
Alkane	_____	D. Mass number
Condensation	_____	E. Neutralization

Section E — Short Answer

20 marks

41. Define an acid and a base using a simple aqueous description.

Advanced · 4 pts

42. What is the difference between mass number and atomic number?

Advanced · 4 pts

43. Explain why evaporation can occur below the boiling point.

Advanced · 4 pts

44. How does concentration affect collision frequency in many reactions?

Advanced · 4 pts

45. Explain why corrosion of iron is considered an electrochemical process.

Advanced · 4 pts

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

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Marks Obtained: _____ / 100

Checked By: _____

Result / Grade: _____

Date Checked: _____

EDUSAMBAM ASSESSMENT SERIES

Chemistry Comprehensive Practice Test 6 — Answer Key

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

Section A — Multiple Choice

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

Section B — True / False

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

Section C — Fill in the Blank

- | | |
|------------------|-----------------|
| 26. cation | 31. electrolyte |
| 27. anion | 32. electrical |
| 28. mass | 33. alkene |
| 29. condensation | 34. alkalinity |
| 30. homogeneous | 35. equal |

Section D — Matching

- | | |
|------------------------|----------------------|
| 36. Mass number — D | 39. Alkane — B |
| 37. Neutralization — E | 40. Condensation — C |
| 38. Salt bridge — A | |

Section E — Short Answer (Model Answers)

- 41.** acid produces/increases H^+ in water; base produces OH^- or accepts H^+
- 42.** mass number protons plus neutrons; atomic number protons
- 43.** some surface particles have enough kinetic energy to escape
- 44.** more particles per volume; more frequent collisions
- 45.** oxidation of iron; reduction reaction also occurs; electron/ion movement involved