

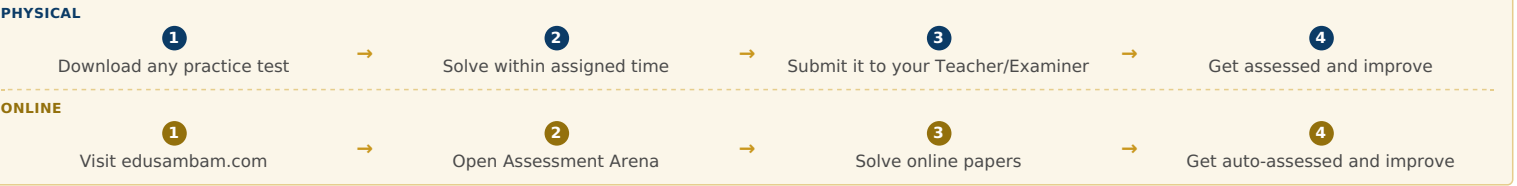
EDUSAMBAM ASSESSMENT SERIES

Chemistry Comprehensive Practice Test 3

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 3	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. A solution with pH 3 is:

A. Strongly acidic

B. Neutral

C. Weakly basic

D. Strongly basic

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

2. Which method is most suitable for separating an insoluble solid from a liquid?

A. Filtration

B. Distillation

C. Chromatography

D. Sublimation

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

3. One mole contains approximately:

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

Basic • 2 pts

4. Oxidation at an electrode occurs at the:

A. Cathode

B. Anode

C. Salt bridge only

D. Electrolyte surface only

Answer: ☐A ☐B ☐C ☐D

Basic • 2 pts

5. Which property is typical of metals?

A. Poor electrical conductivity

B. Brittleness in all forms

C. Malleability

D. Lack of lustre

Answer: ☐A ☐B ☐C ☐D

Intermediate • 2 pts

6. Which functional group identifies an alcohol? A. -COOH C. -CHO Answer: ☐ A ☐ B ☐ C ☐ D	B. -OH D. -CO-	Intermediate • 2 pts
7. 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
8. If 2 mol of H ₂ react completely with O ₂ according to 2H ₂ + O ₂ → 2H ₂ O, how many moles of H ₂ O form? A. 1 C. 3 Answer: ☐ A ☐ B ☐ C ☐ D	B. 2 D. 4	Intermediate • 2 pts
9. Which statement best explains why catalysts speed many reactions? A. They permanently increase product energy C. They change the equilibrium constant in every reaction Answer: ☐ A ☐ B ☐ C ☐ D	B. They provide an alternative pathway with lower activation energy D. They are consumed as reactants	Intermediate • 2 pts
10. Which salt is formed when hydrochloric acid reacts with sodium hydroxide? A. Sodium sulfate C. Sodium carbonate Answer: ☐ A ☐ B ☐ C ☐ D	B. Sodium chloride D. Sodium nitrate	Intermediate • 2 pts
11. Which element has the electron configuration 2,8,1? A. Sodium C. Chlorine Answer: ☐ A ☐ B ☐ C ☐ D	B. Magnesium D. Neon	Intermediate • 2 pts
12. A covalent bond involves: A. Sharing of electron pairs C. Sharing of protons Answer: ☐ A ☐ B ☐ C ☐ D	B. Transfer of neutrons D. Loss of the nucleus	Advanced • 2 pts
13. Which factor generally increases the rate of a reaction? A. Lower temperature C. Higher temperature Answer: ☐ A ☐ B ☐ C ☐ D	B. Lower concentration D. Removing all collisions	Advanced • 2 pts
14. Which technique separates coloured substances based on different movement through a medium? A. Filtration C. Decantation Answer: ☐ A ☐ B ☐ C ☐ D	B. Chromatography D. Evaporation	Advanced • 2 pts
15. In a redox reaction, reduction can be described as: A. Loss of electrons C. Gain of neutrons Answer: ☐ A ☐ B ☐ C ☐ D	B. Gain of electrons D. Loss of protons from the nucleus	Advanced • 2 pts

Section B — True / False		20 marks
16. The periodic table arranges elements by increasing atomic number. A. True ☐ B. False ☐		Basic • 2 pts
17. A chemical equation may be balanced by changing subscripts in formulas. A. True ☐ B. False ☐		Basic • 2 pts
18. Evaporation occurs only at the boiling point. A. True ☐ B. False ☐		Basic • 2 pts
19. A solute is the substance that is dissolved in a solution. A. True ☐ B. False ☐		Basic • 2 pts
20. Reduction can involve gain of electrons. A. True ☐ B. False ☐		Intermediate • 2 pts
21. The anode is always negatively charged in every type of electrochemical cell. A. True ☐ B. False ☐		Intermediate • 2 pts

22. Diamond and graphite are forms of carbon with different structures and properties.

Intermediate · 2 pts

A. True ☐ **B.** False ☐

23. A physical change does not normally create a new substance.

Intermediate · 2 pts

A. True ☐ **B.** False ☐

24. A strong acid is necessarily concentrated.

Intermediate · 2 pts

A. True ☐ **B.** False ☐

25. Reaction rate can be affected by concentration and temperature.

Intermediate · 2 pts

A. True ☐ **B.** False ☐

Section C — Fill in the Blank

20 marks

26. A solution with pH 7 at 25 °C is approximately ____.

Basic · 2 pts

Answer: _____

27. The vertical columns in the periodic table are called ____.

Basic · 2 pts

Answer: _____

28. A substance made of two or more elements chemically combined is a ____.

Basic · 2 pts

Answer: _____

29. The starting substances in a chemical reaction are called ____.

Basic · 2 pts

Answer: _____

30. The minimum energy needed for an effective reaction is called ____ energy.

Intermediate · 2 pts

Answer: _____

31. A homogeneous mixture of solute and solvent is a ____.

Intermediate · 2 pts

Answer: _____

32. The formula relating amount of substance to molar mass is $n = m /$ ____.

Intermediate · 2 pts

Answer: _____

33. In a galvanic cell, electrons travel through the external circuit from the ____ to the cathode.

Intermediate · 2 pts

Answer: _____

34. The simplest saturated hydrocarbons are called ____.

Intermediate · 2 pts

Answer: _____

35. The direct change from gas to solid is called ____.

Intermediate · 2 pts

Answer: _____

Section D — Matching

10 marks

36. Match each term to its correct definition.

Column A	Answer	Column B
Atomic number	_____	A. Activation energy
Filtration	_____	B. Oxidation
Activation energy	_____	C. Saturated solution
Oxidation	_____	D. Atomic number
Saturated solution	_____	E. Filtration

Section E — Short Answer

20 marks

41. What is meant by a balanced chemical equation?

Advanced · 4 pts

42. Describe one difference between ionic and covalent bonding.

Advanced · 4 pts

43. How does filtration differ from distillation?

Advanced · 4 pts

44. Why is the mole useful in chemical calculations?

Advanced · 4 pts

45. Explain why a strong acid is not necessarily a concentrated acid.

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 3 — 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. A | 10. B |
| 3. A | 11. A |
| 4. B | 12. A |
| 5. C | 13. C |
| 6. B | 14. B |
| 7. B | 15. B |
| 8. B | |

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. neutral | 31. solution |
| 27. groups | 32. molar mass |
| 28. compound | 33. anode |
| 29. reactants | 34. alkanes |
| 30. activation | 35. deposition |

Section D — Matching

- | | |
|---------------------------|----------------------------|
| 36. Atomic number — D | 39. Oxidation — B |
| 37. Filtration — E | 40. Saturated solution — C |
| 38. Activation energy — A | |

Section E — Short Answer (Model Answers)

- 41.** same number of each type of atom on both sides; conservation of atoms
- 42.** ionic involves electron transfer and electrostatic attraction; covalent involves shared electrons
- 43.** filtration separates insoluble solid from fluid; distillation separates liquids/solvent using boiling points
- 44.** connects microscopic particles to measurable amount; 6.02×10^{23} particles per mole
- 45.** strength describes degree of ionization; concentration describes amount per volume