NOVA SCOTIA ADVANCED CHEMISTRY 11 · FINAL EXAM

Final Exam — Practice Test

Nova Scotia Advanced Chemistry 11 • 50 questions

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **An advanced preparation has theoretical yield 120 grams and actual yield 96 grams. The percent yield is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **An atom has atomic number 26 and mass number 56. Its neutrons number**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A branched alkane has 12 carbon atoms. The hydrogen count for the alkane formula is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A preparation has theoretical yield 160 grams and actual yield 128 grams. The percent yield is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **An ion has 16 protons and 18 electrons. Its charge is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **A cycloalkane has 8 carbon atoms. The hydrogen count is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **An empirical formula from percent composition starts by assuming a sample mass of**

- A 1 gram
- B 10 grams
- C 1000 grams
- D 100 grams

Understand It with Pulse | Flag a mistake

8 **A molecule has 8 bonding pairs around a central atom and no lone pairs. The number of electron domains is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **An alkene with two double bonds has 6 carbon atoms. The hydrogen count is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **A gas syringe measures the volume of gas**

- A dissolved in water
- B produced in a reaction
- C in a solid
- D absorbed by glass

Understand It with Pulse | Flag a mistake

11 **A molecule with three bonding pairs and one lone pair is**

- A tetrahedral
- B bent
- C trigonal pyramidal
- D linear

Understand It with Pulse | Flag a mistake

12 **A methyl group attached to a chain is a**

A functional group only

B substituent

C main chain

D product

Understand It with Pulse | Flag a mistake

13 **A reaction uses 6 moles of reactant to make 12 moles of product. Starting with 3 moles of reactant, the product, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **Lone pair lone pair repulsion is stronger than lone pair bonding pair repulsion, so bond angles in ammonia are**

A less than tetrahedral

B greater than tetrahedral

C exactly tetrahedral

D zero

Understand It with Pulse | Flag a mistake

15 **Cis but-2-ene has the two methyl groups on the**

A same side of the double bond

B opposite sides

C same carbon

D ring

Understand It with Pulse | Flag a mistake

16 **A solution of concentration 3 moles per litre has volume 4 litres. The amount, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **Carbon in methane uses hybrid orbitals described as**

A sp2

B sp

C sp3

D s only

Understand It with Pulse | Flag a mistake

18 **An addition reaction with bromine turns bromine water from orange to**

A blue

B green

C colourless

D black

Understand It with Pulse | Flag a mistake

19 **A balanced equation for a reaction in solution must also balance**

A colour

B temperature

C pressure

D charge

Understand It with Pulse | Flag a mistake

20 **A pi bond forms by**

- A head on overlap only
- B sideways overlap of p orbitals
- C ionic transfer
- D neutron sharing

Understand It with Pulse | Flag a mistake

21 **Oxidation of a primary alcohol first gives an**

- A ketone
- B aldehyde
- C acid only
- D ester only

Understand It with Pulse | Flag a mistake

22 **An advanced titration sample of mass 40 grams has molar mass 20 grams per mole. 2 moles of product form per mole of sample. The product amount, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **Metallic bonding explains electrical conductivity in metals through delocalised**

A protons

B neutrons

C ions

D electrons

Understand It with Pulse | Flag a mistake

24 **A carboxylic acid reacts with a base to give a salt and**

A hydrogen

B oxygen

C an alkane

D water

Understand It with Pulse | Flag a mistake

25 **An advanced sample of mass 96 grams has molar mass 48 grams per mole. The amount, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

26 **Electronegativity is the ability of an atom in a bond to attract**

A protons

B neutrons

C shared electrons

D other atoms fully

Understand It with Pulse | Flag a mistake

27 **Condensation polymerisation joins monomers with loss of a**

A carbon atom

B metal ion

C small molecule such as water

D large polymer

Understand It with Pulse | Flag a mistake

28 **A reaction needs equal moles of two reactants. 5 moles of one and 10 moles of the other are mixed. The limiting amount, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

29 **A molecule with five bonding pairs and no lone pairs is**

A trigonal bipyramidal

B tetrahedral

C octahedral

D linear

Understand It with Pulse | Flag a mistake

30 **Esterification is a reaction between a carboxylic acid and an**

A alcohol

B alkane

C alkene

D amine

Understand It with Pulse | Flag a mistake

31 **An advanced sample of mass 132 grams has molar mass 44 grams per mole. The amount, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

32 **Bond polarity increases with the difference in**

- A mass
- B size only
- C electronegativity
- D colour

Understand It with Pulse | Flag a mistake

33 **An alkane has 15 carbon atoms. The hydrogen count is**

ANSWER _____

Understand It with Pulse | Flag a mistake

34 **An advanced sample of mass 84 grams has molar mass 28 grams per mole. The amount, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

35 **An ion has 12 protons and 10 electrons. Its charge is**

ANSWER _____

Understand It with Pulse | Flag a mistake

36 **An alkene with one double bond has 10 carbon atoms. The hydrogen count is**

ANSWER _____

Understand It with Pulse | Flag a mistake

37 **An advanced titration sample of mass 64 grams has molar mass 32 grams per mole. 2 moles of product form per mole of sample. The product amount, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

38 **A tetrahedral molecule has bond angles of about, in degrees**

ANSWER _____

Understand It with Pulse | Flag a mistake

39 **The name pent-2-ene locates the double bond starting at carbon**

A one

B two

C three

D five

Understand It with Pulse | Flag a mistake

40 **An indicator in an acid base titration changes colour near the**

A equivalence point

B start only

C end of washing

D first drop always

Understand It with Pulse | Flag a mistake

41 **Sulfur hexafluoride has a shape described as**

A tetrahedral

B octahedral

C linear

D bent

Understand It with Pulse | Flag a mistake

42 **A tertiary alcohol resists oxidation because its hydroxyl carbon has**

A one hydrogen

B two hydrogens

C three hydrogens

D no hydrogen attached

Understand It with Pulse | Flag a mistake

43 **Diluting a solution with water keeps the amount of solute**

A doubled

B halved always

C zero

D the same

Understand It with Pulse | Flag a mistake

44 **A network covalent solid is usually**

A hard with a high melting point

B soft with a low melting point

C a gas at room temperature

D soluble in water

Understand It with Pulse | Flag a mistake

45 **A benzene ring has alternating double bonds in a ring of**

- A five carbon atoms
- B four carbon atoms
- C six carbon atoms
- D eight carbon atoms

Understand It with Pulse | Flag a mistake

46 **The equivalence point of a titration is where reactants have reacted in**

- A equal masses
- B equal volumes always
- C equal colours
- D stoichiometric proportion

Understand It with Pulse | Flag a mistake

47 **The first shell of an atom holds at most**

A 8 electrons

B 18 electrons

C 2 electrons

D 1 electron

Understand It with Pulse | Flag a mistake

48 **Incomplete combustion of a hydrocarbon can produce carbon monoxide and**

A soot

B oxygen

C water only

D hydrogen only

Understand It with Pulse | Flag a mistake

49 **Random error in a titration is reduced by**

A using one titre only

B repeating and averaging titres

C estimating once

D ignoring outliers silently

Understand It with Pulse | Flag a mistake

50 **An isotope has the same atomic number but a different**

A mass number

B element name

C charge always

D electron count in a neutral atom

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	80	**18.**	C	**35.**	2
2.	30	**19.**	D	**36.**	20
3.	26	**20.**	B	**37.**	4
4.	80	**21.**	B	**38.**	109
5.	-2	**22.**	4	**39.**	B
6.	16	**23.**	D	**40.**	A
7.	D	**24.**	D	**41.**	B
8.	8	**25.**	2	**42.**	D
9.	10	**26.**	C	**43.**	D
10.	B	**27.**	C	**44.**	A
11.	C	**28.**	5	**45.**	C
12.	B	**29.**	A	**46.**	D
13.	6	**30.**	A	**47.**	C
14.	A	**31.**	3	**48.**	A
15.	A	**32.**	C	**49.**	B
16.	12	**33.**	32	**50.**	A
17.	C	**34.**	3		

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