

Chemistry AS90648

Describe properties and reactions of carbon and its compounds

**Use this to quickly identify the areas you need to study
Fold along the dotted line so that the answers are hidden.
Try the questions and check your answers.**



QUESTION	YOUR ANSWER	CORRECT ANSWER
What colour is carbon as diamond?		(almost) colourless
What is the combustion called that occurs in plentiful oxygen?		complete
Carbon is solid at room temperature – “solid” describes the _____ of C		state
What oxide of carbon is formed as a result of complete combustion?		CO ₂
Why does the foam from a CO ₂ fire extinguisher sink to the floor?		CO ₂ denser/heavier than air
True or false: Carbon dioxide supports combustion.		false
What is the chemical <u>formulae</u> for limewater		Ca(OH) ₂
What are the tiny insoluble particles that make lime water look cloudy in the test for carbon dioxide?		CaCO ₃ (s)
When CO ₂ is <i>first</i> bubbled through lime water it goes cloudy. What happens if CO ₂ continues to bubble through the suspension?		goes clear again
What acid is made when CO ₂ dissolves in water?		carbonic acid
What colour would a solution of CO ₂ in water turn universal indicator paper?		orange (it's a weak acid)
What gas does carbon monoxide prevent the red blood cells from carrying?		oxygen
CO is poisonous. What colour are the lips of someone poisoned by CO gas?		cherry pink
What is the chemical name for “marble chips”		calcium carbonate
If a lit splint is held at the mouth of a tube being filled with CO ₂ , what will happen to the flame when the tube is full?		it will go out
Balance this equation: CO + O ₂ → CO ₂		2CO 2CO ₂
What colour flame does CO burn with as it becomes CO ₂ ?		blue

Why does fizz "bubble out" of lemonade when the top is removed	under less pressure
The form of CO ₂ used in film and drama special effects is	dry ice
Sublimation means the change from _____ to _____ without passing through the _____ state	solid gas liquid
Give 2 examples of fossil fuels	2 from: coal, oil, gas
What organisms release C from the bodies of dead plant and animal material into the air, during respiration?	Bacteria & fungi/decomposers
Complete this equation: CaCO ₃ + 2HCl → _____ + H ₂ O + CO ₂	CaCl ₂
What "R" is the release of energy from food, carried out by plants, animals and microbes?	respiration
Name 2 types of decomposers	bacteria fungi
How does CO ₂ in the air become glucose and then starch in plant cells?	photosynthesis
How is the C locked up in coal, oil and gas released into the atmosphere?	combustion / burning
What name is given to different forms of an element in the same state @ room temperature?	allotropes
What allotrope of carbon can be used to make electrodes?	graphite
Give the chemical formula of Buckminsterfullerene	C ₆₀
What are the 2 different shapes of the rings found in the Bucky ball?	pentagons and hexagons
In diamond each C atom is bonded to 4 others in a t_____ arrangement	tetrahedral
What would you get if you burned diamonds in plentiful oxygen?	Carbon dioxide
Diamond is very _____ because of the strong covalent bonds between the C atoms	strong / hard
Which C allotrope might have future uses as a molecular sieve, chemical delivery system or as 'molecular ball bearings'?	C ₆₀ / bucky ball
Graphite has a high melting point because of <i>strong/weak</i> forces <i>within/between</i> the layers (choose which words)	strong, within
Graphite conducts electricity because of d_____ electrons that can move to carry a current	delocalised
Graphite feels greasy because of <i>strong/weak</i> forces <i>within/between</i> the layers (choose which words)	weak, between