

## The Online Quiz – September 2021 (with Answers)

### Miscellany

1. What is the name of the element that gives a blue hue to diamonds?  
**Boron**
2. In vinegar in the UK, what is the minimum percentage of acetic acid (ethanoic acid) as % w/v legally allowed?  
**5%w/v**
3. Name the three elements, apart from iron, that are magnetic at room temperature.  
**Nickel, cobalt and gadolinium**
4. What is the principal difference in composition between brass and bronze?  
**Brass contains zinc whilst bronze contains tin**
5. Name the gas, discovered in 1898, that is used in car headlamps to produce adequate light immediately on switching on.  
**Xenon**
6. Which crystalline form of aluminium oxide achieves nine on Mohs scale of hardness?  
**Corundum**
7. In the mid-18th and the 19th centuries which British city produced much of the copper needs of Britain and was given the nickname “Copperopolis”?  
**Swansea**
8. From which materials was the world’s blackest black created in September 2019?  
**Vertically aligned carbon nanotubes grown on etched aluminium foil**
9. What is the name of the building in London that houses the library of the Royal Society of Chemistry?  
**Burlington House**
10. In Cambridge what is the name of the Society’s headquarters building?  
**Thomas Graham House**

## Scientists

- Who was awarded the Nobel prize for chemistry in 1954 and the Nobel peace prize in 1962?  
**Linus Pauling**
- Which Scottish science writer who was once hailed as the “Queen of nineteenth century science” gave her name to an Oxford college, her face appeared on the new Royal Bank of Scotland £10 note that was issued in 2017 and appeared as a character in the 2014 film “Mr Turner”?  
**Mary Somerville**
- At which British university did two scientists win the 2010 Nobel prize for physics “for groundbreaking experiments regarding the two-dimensional material graphene”?  
**University of Manchester**
- Which English scientist’s steelmaking process became the most important technique for manufacturing steel in the late nineteenth-century?  
**Sir Henry Bessemer**
- Name either of the two female scientists who were awarded the Nobel prize for chemistry in October 2020.  
**Emmanuelle Charpentier and Jennifer Doudna**
- Which British female chemist produced the first X-ray diffraction image of DNA in 1952 but was denied credit for her work because of sexism?  
**Rosalind Franklin**
- Name the Danish father and son who separately became Nobel laureates in physics in 1922 and 1975.  
**Niels Bohr and Aage Bohr**

## Missing vowels

Identify the following elements, that include some transuranic examples, and chemical compounds by adding the necessary vowels. A mix of IUPAC and “old” nomenclature has been employed. Elements and compounds are mixed in no particular order.

ptssm	<b>potassium</b>
brn	<b>boron</b>
frrc slpht	<b>ferric sulphate</b>
cyclhxn	<b>cyclohexane</b>
hydrchlrc cd	<b>hydrochloric acid</b>
nptnm	<b>neptunium</b>
mthyl bnzn	<b>methyl benzene</b>
rsnc	<b>arsenic</b>
sbrgm	<b>seaborgium</b>
sdm bcrbnt	<b>sodium bicarbonate</b>
hssm	<b>hassium</b>
sdm hydxd	<b>sodium hydroxide</b>
slnm	<b>selenium</b>
prpn	<b>propane</b>

mscv  
trflrmthn  
cprncm  
brm mthn  
gnssn

***moscovium***  
***tri-fluoromethane***  
***copernicium***  
***bromomethane***  
***oganesson***

## **Words**

Makes as many recognised English language words of three or more letters from

**phenolphthalein.**

Targets are 60 good and 120 excellent.