

UNIVERSITY OF RUHUNA
SECOND EXAMINATION OF BSc IN GREEN TECHNOLOGY (PART I)
JULY 2022
INTRODUCTORY GREEN CHEMISTRY (ID2101)

INDEX NO:

MCQ (TIME:30 Minutes)

Encircle the most accurate answer

Only non-programmable calculators are permitted.

Mobile phones are NOT permitted.

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1. Green chemistry aims to
 - a) design chemical products and processes that maximize products.
 - b) design safer chemical products and processes that reduce or eliminate the use and generation hazardous substances
 - c) design chemical products and processes that work most efficiently
 - d) utilize non-renewable energy

 2. Green chemistry is also called
 - a) life chemistry
 - b) environmental chemistry
 - c) organic chemistry
 - d) sustainable chemistry

 3. Which of the following is a challenge for green chemists?
 - a) Awareness of the benefits of green chemistry
 - b) Developing chemicals recyclable
 - c) Training for cleaning up chemical spills
 - d) Knowing when to reduce and eliminate hazardous waste.

 4. Environmental benefits of green chemistry include?
 - a) Fewer raw materials and natural resources used
 - b) Cleaner production technologies and reduce emissions
 - c) Smaller quantities of hazardous waste to be treated and disposed
 - d) All of the above

 5. Green chemists reduce risk by
 - a) reducing the hazard inherent in a chemical product or process
 - b) minimizing the use of all chemicals
 - c) investing technologies that will clean toxic sites
 - d) developing recycled products

 6. The term missing in Risk = Hazard ×is
 - a) Cancer
 - b) Exposure
 - c) Benign
 - d) Reactivity

7. This word is synonymous with green chemists and also means harmless or gentle and not life threatening?
a) Sustainable b) User friendly c) Benign d) Greenness
8. One of the principles in green chemistry says that to producegoods.
a) harmful b) commercial c) most useful d) safer
9. The green synthesis methods should have
a) low efficiency b) very harmful products
c) low energy requirements d) low atom efficiency
10. Which of the following is not a principle of green chemistry?
a) Hazard chemical synthesis b) Design for energy efficiency
c) Use of renewable feedstock d) Green solvents and auxiliaries
11. Identify the non-toxic and a green solvent.
a) Carbon tetrachloride b) Liquefied carbon dioxide
c) Benzene d) Toluene
12. A desirable green solvent should be
a) costly b) toxic c) synthetic d) readily available
13. Which of the following is among 12 principles of green chemistry?
a) Design commercially viable products b) Use only new solvents
c) Use catalysts, not stoichiometric reagents. d) Re-use waste
14. How many oxygen atoms are there in 0.50 moles of CO_2 ?
a) 3.0×10^{23} b) 3.3×10^{-24} c) 6.0×10^{23} d) 8.3×10^{-25}
15. Which compound is an excellent green solvent as well as a greenhouse gas?
a) CFC's b) CO_2 c) CO d) Methanol
16. Biodiesel is an example of which of the 12 principles of green chemistry?
a) Waste prevention b) Use of renewable feedstock
c) Use of catalysts d) Safer solvents
17. Who is the father of green chemistry?
a) Albert Eintein b) Joseph Breen c) Paul Anastas d) John Warner
18. What is the percent by weight of nitrogen in N_2O ? RAM of N = 14.0; O = 16.0
a) 66.7 b) 63.6 c) 52.3 d) 46.7

