19NDU08

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2022
(Second Semester)

Branch – **NUTRITION, FOOD SERVICE ~~AND~~ MANAGEMENT AND DIETETICS**

CHEMISTRY - II

Time: Three Hours Maximum: 50 Marks

SECTION-A (5 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 1 = 5)

1. The most suitable method of the separation of a 1 : 1 mixture of ortho-and para-nitrophenols is
   a) Crystallization b) Chromatography
   c) Steam distillation d) Sublimation
2. Wilson's disease is due to excess of
   a) Fe b) Cu
   c) Zn d) Mg
3. The fundamental unit in terpenoids is
   a) 1,3 butadiene b) Isoprene
   c) Allene d) 1,2 butadiene
4. The units of specific conductance are
   a) ohm cm b) ohm cm^{-1}
   c) ohm^{-1} cm d) ohm^{-1} cm^{-1}
5. Which causes water pollution?
   a) Jet planes c) Herbicides
   b) Smoke d) Combustion of fossils

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6 a Classify chromatography techniques.
OR
b Outline sublimation method of purification of organic compounds.

7 a Highlight the biological function of Mn, Mg and I.
OR
b Explain the role of sodium hydrogen sulphite and sodium nitrites as preservatives.

8 a Classify terpenoids.
OR
b Narrate the uses of nicotine, piperine and coniine.

9 a Write a short note on variation of equivalent conductance with dilution.
OR
b State: i) Ostwald's dilution law ii) Kohlrausch's law iii) Ohm's law.

10 a Bring out the health effect of pesticides
OR
b Examine the source of air pollution.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11 a Discuss the principle and working of fractional distillation.

OR

b Detail out the application of thin layer and column chromatography.

12 a Summarise the uses of organic preservatives.

OR

b Discuss the chemistry of haemoglobin.

13 a Prepare two organic compounds using green synthesis.

OR

b i) Write the chemical structure of vitamin A1 and C.
ii) Examine the function and disease caused by deficiency of vitamin D and K (1+1).

14 a Describe buffer action of acidic buffer.

OR

b i) Outline the laws of photochemistry. (4)
ii) Examine the concept of quantum yield. (2)

15 a Analyse the causes and environmental effect of acid rain.

OR

b i) Differentiate between primary and secondary water treatment. (4)
ii) Classify the pollutants. (2)

Z-Z-Z

END