

**UNIVERSITY OF CAPE COAST
COLLEGE OF AGRICULTURAL AND NATURAL SCIENCES
SCHOOL OF PHYSICAL SCIENCES
DEPARTMENT OF PHYSICS**

**MET 304: ATMOSPHERIC RADIATION AND RADIATION-BASED EQUIPMENT
SECOND SEMESTER, 2019/2020 YEAR: OCTOBER, 2020**

**QUIZ 1 ALT 3
ATTEMPT ALL QUESTIONS [TOTAL=90MARKS]
MARKING SCHEME**

Questions 1 -15 carry only one mark each.

1. In the order of increasing frequency, which of the following is correct?
 - a. Visible, Radio, UV and X-ray
 - b. IR, Visible, UV and Gamma radiation
 - c. Visible, Gamma, UV and X-ray
 - d. IR, X-ray, Visible and Gamma

2. In order to keep its food hot, a restaurant will place it under which type of lamp?
 - a. IR
 - b. Visible light
 - c. UV
 - d. X-ray

3. Glass panes are opaque to a certain type of radiation, which passes through quartz. What type of radiation is it? This radiation is important in ozone layer reactions.
 - a. Gamma
 - b. Microwave
 - c. Ultraviolet
 - d. X-ray

4. The human eye is sensitive to light with wavelength down to 390nm. What is the frequency of the radiation at this wavelength? ($1 \text{ nm} = 10^{-9} \text{ m}$ and $c = 3.00 \times 10^8 \text{ m/s}$)
 - a. $1.8 \times 10^8 \text{ Hz}$
 - b. $8.5 \times 10^8 \text{ Hz}$
 - c. $1.1 \times 10^{11} \text{ Hz}$
 - d. $7.7 \times 10^{14} \text{ Hz}$

5. Microwave radiation is useful in which of following?
 - a. sending phone messages
 - b. cooking food
 - c. aircraft navigation
 - d. Only b. and c.
 - e. All of a., b. and c.