

**RANI RASHMONI GREEN UNIVERSITY**

**M.Sc. 1<sup>st</sup>Semester Examination, 2024**

**Subject: NUTRITION AND PUBLIC HEALTH**

**Course code: GNPHT-11**

**(Unit 1-Introduction to Nutrition and Public Health  
Unit 2-Concept of Population, Community and Disease Management)**

**Time: 2 hrs**

**FM= 40**

**Answer any three from each unit and two from any unit of your choice from the following questions:**

**Unit:1**

1.a) Define “postbiotics” with examples?

b) Describe the role of probiotics as functional foods. 2+3= 5

2.a) Describe the term “bioactive compounds” in food?

b) Write down the bioactive components of milk.

c) Give two examples of bioactive pigments.2+2+1= 5

3.a) Define “Health” according to WHO.

b) Discuss the importance of mental health.

c) Describe the role of public nutritionists in health care delivery. 1+2+2= 5

4. a) What is SAM?

b) Discuss the factors responsible for under-nutrition. 2+3= 5

5. Briefly describe about the benefits of a comprehensive healthcare system. Discuss about its challenges. 3+2= 5

6. Write short notes on any two of the followings: (2.5×2= 5)

a) Kwashiorkor

b) Dietary guidelines for Indians, ICMR, 2024

c) Nanoemulsion vs microemulsion

d) Functional food

**Unit: 2**

7. a) Define Major community.

b) Number of individuals of 10 species(S) in a grassland community are 132 (N). Shannon index is 0.835 (H). Calculate the species richness index and evenness index of that community.  $1+4= 5$

8. a) Differentiate between endemic, epidemic and pandemic.

b) Describe schematically the pathomechanism of microbial diseases.  $1.5+3.5= 5$

9. What is the critical limit of global average temperature set by IPCC to avoid catastrophic effects of climate change? How is it related to the emergence and re-emergence of diseases?  $2+3= 5$

10.a) What is the difference between Pasteurization and Sterilization?

b) Write the names of two chemical and two natural food preservatives.  $3+2= 5$

11. What do you mean by basic reproduction rate in epidemiology? Show graphically the change in this rate during the progression of an epidemic.  $2+3= 5$

12. Write short notes on any two of the followings:  $(2.5 \times 2= 5)$

a) Herd immunity

b) Antibiotic resistance

c) Permafrost

d) Hemolysin