

PG (CBCS)
M.SC Semester- II Examination, 2023
NUTRITION & DIETETICS
PAPER: NUD 203

(FOOD MICROBIOLOGY AND NUTRITIONAL ANTHROPOLOGY)

Full Marks: 40

Time: 2 Hours

The figures in the right-hand margin indicate full marks.
 Candidates are required to give their answers in their own words as far as practicable.

Write the answer for each unit in separate sheet

UNIT: 17

FOOD MICROBIOLOGY

GROUP-A

1. Answer any **TWO** from the following questions: 2×2=4
- a) Define water activity (aw) of food.
 - b) What do you mean by xerotolerant microbes?
 - c) Define F-value.
 - d) Define probiotic and prebiotic with one example of each.

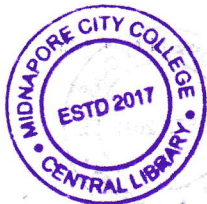
GROUP-B

2. Answer any **TWO** from the following questions: 2×4=8
- a) What do you mean by micro-Aerophilic bacteria? Explain the role of PH and moisture content in the growth of micro-organism. 1+3
 - b) Write down the common causes of canned food spoilage.
 - c) 'Foods create favourable environment for microbial growth'- explain the statement.
 - d) Write down the basic working principle and biological application of autoclave.

GROUP-C

3. Answer any **ONE** from the following questions: 1×8=8
- a) Why do the bacteria can maintain the stationary phase? Elucidate the mode of action and application of phenol as effective disinfectant. 2+4+2
 - b) How will you isolate a single colony from a mixed bacterial population? Give an account on the beneficial effect of fermented food on human health. 4+4

(P.T.O)



(2)

UNIT: 18
NUTRITIONAL ANTHROPOLOGY

GROUP-A

1. Answer any **TWO** from the following questions: 2×2=4
- What do you mean by nutritional anthropometry?
 - State the human body plans with examples.
 - Mention the different landmarks for measuring body height.
 - Write the cut off values of weight for height and height for age.

GROUP-B

2. Answer any **TWO** from the following questions: 2×4=8
- Write the importance of nutritional anthropometric measurements for nutritional status assessment of different age groups along with its demerits.
 - How do you interpret the weight for age by Gomez, waterlow and welcome classification?
 - How do you measure BMR of your own?
 - Write the different measurements techniques of circumference and body diameters.

GROUP-C

3. Answer any **ONE** from the following questions: 1×8=8
- Describe the somatic indicators for PEM assessment and Kanawati index. 4+4
 - Calculate and interpret the total body fat, percentage of body fat and lean body weight with the help of following prediction formula of a female students, having age 22 years, body weight 55 kg, body height 165 cm, iliac skinfold (X) is 25 cm and air skinfold (Y) is 15 cm respectively. 3+5
Body density= $1.0764 - \{(0.00081 \times X) - (0.00088 \times Y)\}$
Percentage of body fat= $\{(4.570 \div \text{body density}) - 4.142\} \times 100$
