#### 2022

#### **Food Science & Nutrition**

[P.G.]

# (M.Sc. Second Semester End Examination-2022) PAPER-MFSN 203

[Advance and Industrial food Microsidry]

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far

as practicable

Illustrate the answers wherever necessary

#### 1. Answer any five Questions from the following

5x2=10

- a. Write the criteria of a good strain for bioindustry.
- b. Why is sodium nitrite used as meat preservatives
- c. Define homotropic and heterotropic fermentation with example.
- d. What is primary and secondary metabolites?
- e. Write the criteria of a media for industrial production.
- f. What is growth yield? Write its importance.
- g. Define probiotics and prebiotics.
- h. Write the difference between batch culture and continuous culture.

## 2. Answer any four Questions from the following

4x5=20

a. What is solid state fermentation? Write its Advantage and disadvantage.

- b. What is pure culture? Write the process to obtain the pure culture from mixed culture.
- c Draw and describe the bacterial growth curve
- g. Canning is termed as '12D Processing' Explain
- h. Write a short note on 'Biopresenation'.
- i. Briefly describe the production of amylase using mode.

#### **Group C**

### 3. Answer any one Question from the following 1x10=10

- a. What is GM food? Give some example of GM-food. Write the beneficial effect of probiotics and fermented food. Give some examples of industrial important microorganism with products.

  (1+2)+(2+2)+3
- b. Briefly describe the process to measure the bacterial growth in direct and indirect methods. Write the methods to maintain the pure culture.