**ST. JOSEPH’S UNIVERSITY, BENGALURU -27**

**M.Sc (FOOD SCIENCE AND TECHNOLOGY) – II SEMESTER**

**SEMESTER EXAMINATION: APRIL 2023**

**(Examination conducted in May 2023)**

**FST 2422 – FOOD BIOTECHNOLOGY**

**(For current batch students only)**

**Time: 2 Hours Max Marks: 50**

**This paper contains 2 printed pages and FOUR parts**

1. **Answer any FOUR of the following 3×4=12**
2. What is Mutation? Mention its types.
3. Define Nutrigenomics. Give its Significance.
4. What are Transgenic Plants? Give examples and its advantages.
5. List the different methods used for enzyme immobilization.
6. Give a short note on labelling and traceability of GM Crops.
7. What are Biosensors? List its applications.

**II. Answer any TWO of the following 5×2=10**

1. Explain the mechanism of microbial gene transfer.
2. Discuss the ethical issues concerning GM Foods.
3. Write notes on the health benefits of Fermented Foods.

**III. Answer any TWO of the following 10×2=20**

1. Discuss in detail the process of production of Amylase from *Aspergillus niger*.
2. Write detailed notes on Biotechnological Production of Miso and Tempeh.
3. What is rDNA technology? Discuss in detail its Tools and Techniques.

**IV. Answer the following 8×1=8**

1. Two genetic engineers, Potrykus and Peter Beyer used phytoene synthase from *Narcissus pseudonarcissus* for the production of biofortified food through genetic engineering and the project was supported by Rockfeller Foundation, USA.
   1. Name the biofortified food produced. 1M
   2. Write detailed notes on its production. 5M
   3. Give its advantages and disadvantages. 2M