

# FTET 2019

## ENTRANCE TEST FOR ADMISSION INTO M.SC (FOOD TECHNOLOGY) DEGREE PROGRAMME

2019-20

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**Part A:** Written examination will be held on July 9, 2019 at 10.00 AM – 12.00 Noon (Monday) in the Academic Complex at AAU, Jorhat campus. The test will constitute 150 multiple choice questions, covering the subjects shown below, to be answered by the examinee in 2 hours. There shall be no negative marks for wrong answers.

**Part B:** A personal interview on July 9, 2018 at 2.00 PM

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### SYLLABUS:

**Chemistry and Biochemistry:** Aliphatic and aromatic hydrocarbons, Chemical bonds and the forces involved, Chemical kinetics, Concept of pH and buffer, Electrophilic and nucleophilic reactions, Gas laws, Isomerism, Chemical equilibrium, Thermo-chemistry

Composition of foods, Minerals in foods, Water activity in foods. Carbohydrates - Mono and disaccharides, Sugars, Starch, Cellulose, Pectins, Proteins. Primary secondary and tertiary structure of proteins, Peptide bonds, Protein Denaturation, Amino acids. Coenzymes and cofactors, Vitamins and their function in the body, Hormones. Nucleic acids and their importance, Fat and protein metabolism, Elements in protein biosynthesis, Enzymes

**Physics:** Magnetism, Elements of mechanics, Electrostatics, Laws of Thermodynamics, Mode of heat transfer, Electrodynamics, Electro-magnetic radiation

**Mathematics:** Trigonometry, Integration and Integral equations, Binomial theorem, Uses of natural and common logarithms, Differentiation, Exponential series, Differential equations, Matrices, Ratios and their relations, Maxima-minima, Theory of quadratic equations, Vector

**Biology:** Economic botany, Cytology and physiology of plants, Ecology

Elements of genetics, Molecular basis of life, Nucleic acids and their role in life, Elements in human physiology, Endocrine glands, Organization of animal tissues, Respiration, Digestion, Absorption, General physiology of animals

**Microbiology:** Cytology, Morphology, Reproduction and genetics - Bacteria, Yeasts and Moulds, Food contamination, Culture technique and identification. Economic importance of bacteria, yeast and moulds. Food safety, Food control. Microbiological standards. Growth, Nutrition and physiology of microorganisms.