CU-CET Syllabus for MSc Life Sciences

(Biochemistry, Biotechnology and Microbiology, Plant & Animal Sciences)

1. Techniques: Principles and applications of chromatography, spectroscopy, microscopy, electrophoresis, centrifugation, blotting, PCR & radioisotope techniques

2. Chromatin structure and function: Organization of chromosomes in prokaryotes and eukaryotes, chromatin types, centromere, Telomere and concept of gene

3. Biochemistry: Structure and functions of proteins, DNA, carbohydrates, lipids & vitamins. Bioenergetics, Glycolysis, TCA cycle, Electron Transport System and ATP synthesis, oxidation and synthesis of fatty acid, membrane structure and function

4. Biotechnology: Recombinant DNA technology, principles of gene cloning, applications of biotechnology in medicine, industry and agriculture, animal & plant cell culture, environmental biotechnology

5.Microbiology: Diversity of microbes, bacterial reproduction, antimicrobial agents, significance of microbes in the industry and agriculture, antigen, antibody, complement systems, immunity, vaccines, plant virus, animal virus and environmental microbiology.

6. Molecular Genetics: Principles of inheritance, linkage & crossing over, chromosomal aberrations, extrachromosomal inheritance, replication, transcription, translation, DNA repair and population genetics

7. Plant Sciences: Bryophytes, Pteridophytes, Gymnosperms, Angiosperms, Vascular system in plants, Economic important of plants, Photosynthesis, Photoperiodism, Vernalization, and Biogeochemical cycle

8. Animal Sciences: Characteristics of invertebrates and vertebrates, anatomy and physiology of different system of humans, nerve impulse transmission, endocrinology, human diseases Apoptosis and cancer, inherited diseases, animal cell culture.

CU-CET exam pattern

Question Paper pattern: - All Question Papers will be MCQ based consisting of: -

(i) Part A: English Language, general awareness, mathematical aptitude and analytical skills – comprising of 25 MCQs

(ii) Part B: Domain Knowledge – comprising of 75 MCQs. This part may consist of one/two/three or more sections. Each section can have 25 or more questions. An applicant is required to answer a set of „X" sections (75 questions) as specified on the front cover of the Test Question Booklet. However, he/she must ensure that he/she fills right circles in the OMR Sheet corresponding to the question numbers attended.

(iii) For example, Part B of Entrance Test-Paper (eg. UIQP01) shall consist of four sections i.e. Physics, Chemistry, Mathematics and Biology comprising 25 questions each. Applicants shall be required to attempt any three sections with combination of either PCM or PCB. While choosing the combination applicant must ensure that he/she has appeared in respective subjects at 10+2 or Pre-Board or equivalent qualifying exam.

(iv) If an Entrance Test-paper contents X number of sections and an applicant is required to answer Y number of section but if an applicant attempt all „X" sections then best of „X" sections as per instructions on the question booklet will be considered for preparation of Merit list.

(v) Admission to some Integrated Programmes/B.Voc/MBA/MCA/LLB or any other general Programme, only one paper comprising of 100 MCQs covering English language, reasoning, data interpretations/ numerical ability, general awareness and analytical skills will be held.

(vi) An applicant will have to choose one correct answer and mark on OMR Sheet, however if an applicant marks multiple entries in the OMR Sheet for particular question(s), it will be treated as wrong answer with negative marking.

(vii) Each paper will be only of Two Hours Duration.

(viii) There will be negative marking in CUCET-2019 in UI and PG programmes. Each correct answer will carry 01 mark and for each wrong answer, 0.25 marks will be deducted. Questions not attempted will not be assessed and hence will not be considered for preparing final merit list.

(ix) No negative marking for research programmes of CUCET