

Bachelor of Science Examination: May - 2023

Day & Date	Semester	Subject Name	Time	Code	Marks
Thursday 11-05-2023	V (Repeater)	Microbial Biochemistry	02:30 PM To 05:00 PM	507103	75

Instruction: 1) Question No. 5 is compulsory
2) Attempt any three from the remaining.
3) All questions carry equal marks.

- Q.1 a) Describe the cytoplasmic is highly dynamic. 10
b) Explain the compounds of carbon and functional group. 10
- Q.2 a) Write about the water structure and interaction with solute. 10
b) Differentiate between phosphodiester and thioester bonds. 10
- Q.3 a) Write about the concept of free energy. 10
b) Explain the constitution of Glucose & Fructose. 10
- Q.4 a) Explain the classification of simple lipids. 10
b) Write about the chemical properties of amino acids. 10
- Q.5 Write a short note on following: (Any Three) 15
a) Peptide bonds
b) Enthalpy
c) The role of transfer RNA
d) Alpha & beta chain of proteins

Bachelor of Science Examination: May- 2023

Day & Date	Semester	Subject Name	Time	Code	Marks
Saturday 06-05-2023	3 rd (Repeater)	General Microbiology	02:30 PM To 05:00 PM	507101	75

- Instructions:
- 1) Q.5 is Compulsory.
 - 2) Attempt any three from the remaining.
 - 3) All questions carry equal marks.

- Q.1 a) Write about the types of transformation natural streptococcus. 10
b) Explain the Bacillus subtilis Artificial transformation. 10
- Q.2 a) Describe the sexduction and problems based on conjugation. 10
b) Write the replication of bacterial chromosome by theta mode. 10
- Q.3 a) Explain in detail elongation and termination. 10
b) Write on use of origin. 10
- Q.4 a) Describe the okazaki fragments. 10
b) Explain leading strands 10
- Q.5 Write a short note on following. (Any 3) 15
a) Primer
b) DNA polymerase
c) Synthesis of RNA
d) Regulation of transcription

Bachelor of Science Examination: June-2022

Day & Date	Semester	Subject Name	Time	Code	Marks
Friday 10-06-2022	V (Repeater)	Medical Microbiology	02:30 PM To 05:40 PM	507102	75

- Instruction:**
- 1) Q.NO. 5 is Compulsory.
 - 2) Attempt any three from the remaining.
 - 3) All questions carry equal marks.

- Q.1**
- a) Describe diagnostic cycle with use of good clinical laboratory practices with computerization. **10**
 - b) Explain in detail types, collection, handling and transportation in laboratory. **10**
- Q.2**
- a) Anatomy and function of respiratory tract and urinary tract. Explain it. **10**
 - b) Differentiate between affinity maturation and somatic hyper mutation. **10**
- Q.3**
- a) Discuss Experimental assessment of CM cytotoxicity. **10**
 - b) Explain antibody dependent cell cytotoxicity (ADCC). **10**
- Q.4**
- a) Describe in detail Bacteriophage typing & Immunological methods. **10**
 - b) Write about pathogens and factors involved in urinary tract infections. **10**
- Q.5** Write a short note on following. (Any Three) **15**
- 1) Tuberculosis.
 - 2) Rabies.
 - 3) Alternate pathway.
 - 4) Killing mechanism of NK cells.

Bachelor of Science: Examination: June-2022

Day & Date	Semester	Subject Name	Time	Code	Marks
Tuesday 14-06-2022	V (Repeater)	Microbial Biochemistry	02:30 PM To 05:40 PM	507103	75

Instruction: 1) Q. No. 5 is Compulsory.
2) Attempt any three from the remaining.
3) All questions carry equal marks.

- Q.1** a) Describe the structure and functions of cells 10
b) Explain the electrovalence bond with its importance. 10
- Q.2** a) Draw the suitable structure of Mono, Di- and polysaccharides. 10
b) Differentiate between reducing & non-reducing sugars. 10
- Q.3** a) Write about the relationship between genes and protein. 10
b) Explain the formation of commitment complex. 10
- Q.4** a) Explain the regulation of enzyme action. 10
b) Write about the feedback inhibition. 10
- Q.5** Write a short note on following. (Any Three) 15
1) Chemical foundations.
2) Esters.
3) Delta G.
4) Lipoprotein.

Bachelor of Science Examination: November/December - 2022

Day & Date	Semester	Subject Name	Time	Code	Marks
Saturday 26-11-2022	V (Fresh/ Repeater)	English – II	11:00 AM To 12:00 PM	500101	35

Instruction: Attempt all the questions.

Q.1 Read the following passage and answer the following questions.

15

A single floppy disk, the size of a 45-rpm record, can hold the content of several thousand types pages. A Computer can scan through this disk in a matter of seconds- to retrieve a particular letter for instance.

Versatility. That's one of the most wonderful things about the computer. One moment, it's speeding up your accounting. The next moment, it's racing through a complex inventory. In between, it's helping the MD's secretary trace an important letter in seconds. All you have to do to change its talents in slip in a new program.

Office modernization is now as important part of computer technology; developing new and better ways to do work. Pushing out drudgery, pushing up productivity.

Your account department need not waste precious days compounding income tax, provident fund and take home salary for every employee.

A Computer can carry out automatic checks on the stock of a particular item: see when it is setting low and decide how much to re-order depending on your current cash flow position.

A law firm can use a computer to keep a record of important cases – and recall the details of a particular case instantly.

Architects can display their scale models on a computer and study them from various angles and perspectives. Structural problems can now be solved with unprecedented speed and accuracy.

Hotels can use computers to greatly speed up billing and check- out and provide instant information on room availability and room status.

Word processors are fast replacing typewriters...and giving a whole new definition to paperwork. No more erasing or retyping for errors and changes. No more messy carbon copies. No more cumbersome filing and retrieval systems.

Basically, a word processor consists of a typewriter-style keyboard, a printer and a screen that displays whatever you type. The screen is like a magic slate: words appear, disappear and rearrange themselves to your command.

Questions:

- 1) How much content does a single floppy disk hold? 01
- 2) Describe the main areas where computer application is very useful. 04
- 3) How do law firms use a computer? 01
- 4) What is Word processor? Give illustration of its use. 04
- 5) Use the following words in the sentences of your own so as to bring out their Meaning: 05
 - a) Trace
 - b) Change
 - c) Complex
 - d) Versatile
 - e) Disappear

Bachelor of Science Examination: November/December - 2022

Day & Date	Semester	Subject Name	Time	Code	Marks
Tuesday 29-11-2022	V (Fresh / Repeater)	General Microbiology	11:00 AM To 01:30 PM	507101	75

Instruction: 1) Q.5 is compulsory.
2) Attempt any three from the remaining.
3) All questions carry equal marks.

- Q.1 a) Explain the Mendel's experimental design. 10
b) Write about the branches of genetics. 10
- Q.2 a) Describe the transformations with its types. 10
b) Write in detail the discovery of conjugation. 10
- Q.3 a) Write about the replication of bacterial chromosome. 10
b) Explain the details of molecular mechanism involved in initiation. 10
- Q.4 a) Mendel's principle of Segregation. Explain it. 10
b) Write in detail model organisms characteristics. 10
- Q.5 Write short notes on following (Any Three) 15
a) Application of genetics in medicine
b) Physical nature of plasmid
c) Insertion sequence
d) Concept of F+

Bachelor of Science Examination: November/December - 2022

Day & Date	Semester	Subject Name	Time	Code	Marks
Wednesday 30-11-2022	IV (Repeater)	Clinical Microbiology	02:30 PM To 05:00 PM	407102	75

Instructions: 1) Q.5 is compulsory.
2) Attempt any three from the remaining.
3) All questions carry equal marks.

- Q.1** a) Explain microbial diversity in soils and their activities. 10
b) Write about significance of fecal indicator organism. 10
- Q.2** a) Discuss water purification processes and explain composition of sewage. 10
b) Write about domestic waste water treatment processes. 10
- Q.3** a) Describe air composition, distribution and sources of microorganisms in air. 10
b) Write about the bacteriological examination for water potability. 10
- Q.4** a) Discuss Municipal sewage treatment process. 10
b) Write in brief Carbon, Nitrogen, Sulphur, Phosphorus cycles. 10
- Q.5** Write short notes for the following: (any 3) 15
a) Soil, plants and nutrients
b) Membrane Filter technique
c) Microbiological examination of soil
d) IMVIC test.

Bachelor of Science Examination: November/December-2022

Day & Date	Semester	Subject Name	Time	Code	Marks
Thursday 01-12-2022	V (Fresh/ Repeater)	Medical Microbiology	11:00 AM To 01:30 PM	507102	75

- Instructions: 1) Q.5 is compulsory.
2) Attempt any three from the remaining.
3) All questions carry each mark.

- Q.1** a) Describe identification of pathogens from specimens with respect to Microscopy & Culture dependent methods. 10
b) Explain in detail molecular methods & analysis of metabolic products. 10
- Q.2** a) Lower respiratory tract infection. Explain it. 10
b) Differentiate between Pneumococcal and Haemophilus. 10
- Q.3** a) Discuss T cell activation and differentiation. 10
b) Generation and target destruction by Cytotoxic T cells. 10
- Q.4** a) Describe in detail Biohazardous waste management in hospitals. 10
b) Write about B cell activation and Differentiation. 10
- Q.5** Write a short note on the following: (Any three) 15
a) Tetanus.
b) Modes of Transmission of Nosocomial Infections.
c) Lectin pathway.
d) Generation of plasma cells and memory cells.

Bachelor of Science Examination: November/December - 2022

Day & Date	Semester	Subject Name	Time	Code	Marks
Saturday 03-12-2022	V (Fresh/ Repeater)	Microbial Biochemistry	11:00 AM To 01:30 PM	507103	75

Instructions: 1. All questions carry equal marks.
2. Q.5 is compulsory.
3. Attempt any three from the remaining.

- Q.1** a) Describe the three-dimensional structure. 10
b) Explain the transformation of energy and matter from the surrounding. 10
- Q.2** a) Write about the glycosidic bonds. 10
b) Differentiate between the first and second law of thermodynamics. 10
- Q.3** a) Write about the closed and open system. 10
b) Explain the determination of ring size. 10
- Q.4** a) Explain the classification of compound lipids. 10
b) Write about the physical properties of amino acids. 10
- Q.5** Write short notes for the following: (any 3)
- Complementary interaction between protein and ligands
 - Entropy
 - Standard free energy
 - Encoding genetic information

Bachelor of Science Examination: November/December-2022

Day & Date	Semester	Subject Name	Time	Code	Marks
Tuesday 06-12-2022	(Fresh/ Repeater)	Industrial Microbiology	11:00 AM To 01:30 PM	507104	75

Instruction: 1) Q.5 is compulsory.
2) Attempt any three from the remaining.
3) All questions carry equal marks.

- Q.1 a) Explain the primary and secondary screening. 10
b) Write in detail about the fermentation media. 10
- Q.2 a) Describe in detail fermentation equipment and process. 10
b) Write about the production of Beer-Ale and Lager. 10
- Q.3 a) Explain the production process of Glutamic acid. 10
b) Write about the production of Mushrooms. 10
- Q.4 a) Describe the preparation of inoculums. 10
b) Explain in detail aerobic fermentation. 10
- Q.5 Write a note on the following. (Any 3) 15
a) Anaerobic fermentation
b) Mechanical-Waldhof fermenter
c) Dissolved oxygen
d) Baker's and Brewer's yeast