

End Semester Examination
Bachelor of Science (Biotechnology)

Subject Name: Plant Diversity
Subject Code: BSCBT102T
Semester: 1st

Time: 03:00 Hrs.
Max. Marks: 70

Instructions: Attempt all Sections. If require any missing data; then choose suitably.
Attempt all parts of a question at one place.

SECTION A

1. Attempt all questions in brief.

[10x2=20]

- 1.1. What are flagella?
- 1.2. State the function of Hormogones.
- 1.3. What is coenocytic mycelium?
- 1.4. Name the fruiting body in Aspergillus
- 1.5. What is the function of elaters in Riccia sporophyte?
- 1.6. How are fungi used as biocontrol agents?
- 1.7. Define Conjugation.
- 1.8. Name the male and female sex organs in Aspergillus.
- 1.9. Give the mode of Nutrition in Rhizopus.
- 1.10. Name the type of rhizoids found in Riccia.

SECTION B

Attempt any five questions of the following:

[5 X 10=50]

2. Give a comparative account of structure of sporophytes of Marchantia and Anthoceros with the help of diagrams.
3. Give an account of the structure of mycelium and sexual reproduction in Penicillium with the help of diagrams.
4. Describe gonidial layer. Discuss the types of vegetative reproduction in lichens.
5. Describe the structure and reproduction of Chara and discuss its position in algae.
6. Give an account of stelar structure and primitive characters of Psilotum.
7. Discuss types of fossils based on fossilization.
8. Write a brief note on chloroplast in algae.

End Semester Examination
Bachelor of Science (IT)

Subject Name: Programming in 'C'
Subject Code: BSCIT102T
Semester: 1st

Time: 03:00 Hrs.
Max. Marks: 70

Instructions: Attempt all Sections. If require any missing data; then choose suitably.
Attempt all parts of a question at one place.

SECTION A

1. Attempt all questions in brief.

[10x2=20]

- 1.1. What is Macro?
- 1.2. What is type casting?
- 1.3. Explain basic structure of a C program.
- 1.4. What is data type?
- 1.5. Differentiate between variable & constant.
- 1.6. What is string?
- 1.7. What is preprocessor directive?
- 1.8. What is expression?
- 1.9. Define pointer.
- 1.10. What is function?

SECTION B

Attempt any five questions of the following:

[5 X 10=50]

2. What is file? Explain file handling in C language.
3. Explain about fprintf() and fscanf() function with suitable example.
4. What is Array? Explain declaration, initialization and accessing elements of one and two dimension of numeric Array.
5. What is branching statement? Explain various types of if-else statement with syntax and example.
6. Write difference between call by value and call by reference with example.
7. Explain Pointer Arithmetic with suitable example.
8. Write a program to concatenate one string to another string without using library function.

End Semester Examination
Bachelor of Science (Microbiology)

Subject Name: Fundamentals of Microbiology
Subject Code: BSCMB102T
Semester: 1st

Time: 03:00 Hrs.
Max. Marks: 70

Instructions: Attempt all Sections. If require any missing data; then choose suitably.
Attempt all parts of a question at one place.

SECTION A

1. Attempt all questions in brief. [10x2=20]

- 1.1. Discuss the scope and applications of Microbiology.
- 1.2. Describe the methods of isolation of pure culture of bacteria.
- 1.3. What are the general characteristics of fungi which differentiate them from algae?
- 1.4. What are the functions of flagella and capsule in bacterial cell?
- 1.5. Discuss the various steps for gene cloning in bacteria.
- 1.6. What are the applications of DNA recombinant technology in daily life?
- 1.7. Write notes on Types of plasmids and their properties.
- 1.8. Write notes on Restriction enzymes as tool of recombinant technology.
- 1.9. Write in detail the role of microorganisms in nitrogen fixation.
- 1.10. Discuss the microbial flora commonly found in rhizoplane and their functions.

SECTION B

Attempt any five questions of the following: [5 X 10=50]

2. Describe the various culture techniques in Microbiology used for bacterial and fungal cultures.
3. How does virus differ from other microorganisms? Discuss in detail the morphology of viruses.
4. What is the role of Microbiology in industries? How are microbes beneficial in genetic engineering?
5. Who gave the germ theory of fermentation? Discuss the theory and its significance.
6. What is a bioreactor? How are they classified? Discuss the types of bioreactors.
7. Discuss the anabolic and catabolic processes in microbes with special reference to bacterial physiology.
8. Bacterial Genetics studies the mechanisms of their heritable information. Discuss.

End Semester Examination
Bachelor of Social Work (BSW)

Subject Name: Introduction to Social Work
Subject Code: BSW102T
Semester: 1st

Time: 03:00 Hrs.
Max. Marks: 70

Instructions: Attempt all Sections. If require any missing data; then choose suitably.
Attempt all parts of a question at one place.

SECTION A

1. Attempt all questions in brief.

[10x2=20]

- 1.1. What is meant by social welfare administration?
- 1.2. What you mean by social case work?
- 1.3. What is the concept of social work?
- 1.4. Write a short note on definitions of social work?
- 1.5. Write a short note on methods of social work?
- 1.6. Explain about nineteen century social work in India?
- 1.7. What are the principles of social work?
- 1.8. Explain the term social reform?
- 1.9. Difference between social policy and social legislation?
- 1.10. State the process of social development?

SECTION B

Attempt any five questions of the following:

[5 X 10=50]

2. Define how Social Work has emerged as a profession during the last century?
3. What is social service? Explain the types of social service.
4. Briefly explain tools and techniques in social case work?
5. Explain the scope and importance of social case work?
6. What are the phases of community organization?
7. Define fieldwork. What are objectives of field work?
8. Explain the different methods of social work?

End Semester Examination

Bachelor of Technology

Subject Name: Physics-I

Subject Code: BT101T

Semester: 1st

Time: 03:00 Hrs.

Max. Marks: 70

Instructions: Attempt all Sections. If require any missing data; then choose suitably.
Attempt all parts of a question at one place.

SECTION A

1. Attempt all questions.

[10x2=20]

- 1.1. Define torque.
- 1.2. What is a torsional pendulum?
- 1.3. What do polarized sunglasses do to the light entering your eyes?
- 1.4. Write the general electromagnetic wave equation in terms of magnetic field vector in free space.
- 1.5. State Doppler effect.
- 1.6. Mention any two properties of laser light.
- 1.7. State Compton effect.
- 1.8. What are Eigen values and Eigen function?
- 1.9. What is meant by harmonic oscillator?
- 1.10. Why does quantum tunnelling occur?

SECTION B

Attempt any five questions of the following:

[5 X 10=50]

2. Include a description of the gyroscope's construction, working, and its uses.
3. Discuss the path taken by electromagnetic waves when they move from a vacuum to a nonconducting substance.
4. Describe how interference fringes form in an air-wedge-shaped film. How does this procedure calculate the wire thickness?
5. Describe the CO₂ molecule vibrational modes. Describe the CO₂ lasers design and operation with the appropriate diagrams.
6. Derive an expression for energy levels of a particle enclosed in the 1D infinite potential box of width "a".
7. Derive an expression for the harmonic oscillator's energy levels by using the Schrodinger wave equation.
8. With the appropriate diagram, describe the resonant diode's construction and operation.

End Semester Examination
Bachelor of Science (ZBC)

Subject Name: Plant Diversity
Subject Code: BZBC102T
Semester: 1st

Time: 03:00 Hrs.
Max. Marks: 70

Instructions: Attempt all Sections. If require any missing data; then choose suitably.
Attempt all parts of a question at one place.

SECTION A

1. Attempt all questions in brief.

[10x2=20]

- 1.1. What are flagella?
- 1.2. State the function of Hormogones.
- 1.3. What is coenocytic mycelium?
- 1.4. Name the fruiting body in *Aspergillus*
- 1.5. What is the function of elaters in *Riccia* sporophyte?
- 1.6. How are fungi used as biocontrol agents?
- 1.7. Define Conjugation.
- 1.8. Name the male and female sex organs in *Aspergillus*.
- 1.9. Give the mode of Nutrition in *Rhizopus*.
- 1.10. Name the type of rhizoids found in *Riccia*.

SECTION B

Attempt any five questions of the following:

[5 X 10=50]

2. Give a comparative account of structure of sporophytes of *Marchantia* and *Anthoceros* with the help of diagrams.
3. Give an account of the structure of mycelium and sexual reproduction in *Penicillium* with the help of diagrams.
4. Describe gonidial layer. Discuss the types of vegetative reproduction in lichens.
5. Describe the structure and reproduction of *Chara* and discuss its position in algae.
6. Give an account of stelar structure and primitive characters of *Psilotum*.
7. Discuss types of fossils based on fossilization.
8. Write a brief note on chloroplast in algae.