

**B.sc. SEM V  
BOT-A  
CC 11 (Cell and Molecular Biology)  
Internal Examination  
2021-22**

**Time: 30 min**

**FM 10**

Answer any ten questions:

1X10

- i) What is Marker gene?
- ii) What is SSB protein?
- iii) What is cosmid?
- iv) What is mtDNA?
- v) What is nuclear lamina?
- vi) What is nucleosome?
- vii) What is miRNA?
- viii) Write one function of DNA polymerase I.
- ix) What is plasmid?
- x) Who proposed endosymbiotic theory?
- xi) What is cpDNA?
- xii) What is wobble hypothesis?

**B.sc. SEM V  
BOT-A  
CC 12 (Biochemistry)  
Internal Examination  
2021-22**

**Time: 30 min**

**FM 10**

Answer any ten questions:

1X10

- i) Name one co-enzyme.
- ii) What is enantiomer?
- iii) Draw the molecular structure of Adenine.
- iv) Write the equation of Michaelis-Menten?
- v) Give an example of phospholipid?
- vi) Give an example of quaternary protein.
- vii) Define free energy?
- viii) Define isoelectric point.
- ix) Differentiate between covalent and non covalent bond.
- x) Give an example of glycolipid.
- xi) What is buffer?
- xii) What is Redox potential?

**B.sc. SEM V  
BOT-A  
DSE A (Biostatistics)  
Internal Examination  
2021-22**

**Time: 30 min**

**FM 10**

Answer any ten questions:

1X10

- i) Define goodness of fit.
- ii) Define mode.
- iii) What is probability?
- iv) What is coefficient of variation?
- v) What is standard error?
- vi) Write the formula of Hardy-Weinberg equilibrium.
- vii) What is test of significance?
- viii) Define mean.
- ix) What is degree of freedom?
- x) What is Random sampling?
- xi) Write the formula of chi-square test.
- xii) Write the formula of standard deviation.

**B.sc. SEM V**  
**BOT-A**  
**DSE B (Plant Biotechnology)**  
**Internal Examination**  
**2021-22**

**FM 10**

Answer any ten questions:

1X10

- i) Define artificial seed.
- ii) What is BT cotton? What is explant?
- iii) Give an example of gene transfer method.
- iv) Write one application of callus culture.
- v) What is totipotency?
- vi) Write a significance of somatic embryogenesis?
- vii) Define cyto-differentiation.
- viii) Write one importance of protoplast culture.
- ix) Give an example of plant tissue culture medium.
- x) What is explant?
- xi) What is Reporter gene?
- xii) What is callus culture?