



K22P 3301

Reg. No. :

Name :

**IV Semester M.Sc. Degree (CBSS – Reg./Supple./Imp.)
Examination, April 2022
(2018 Admission Onwards)
BIOTECHNOLOGY
BTG4C12 : Medical Biotechnology**

Time : 3 Hours

Max. Marks : 40

SECTION – A

Write about **each** of the following in **2 or 3** sentences. **Each** question carries **1** mark.

1. Chromosome banding.
2. SNP.
3. Huntington's chorea.
4. *Viral* onco genes.
5. Stem cell therapy.
6. Thermophilic polymerases.
7. Focomelia.
8. Southern hybridisation.
9. Amniocentesis.
10. X linked genes.

(10×1=10)

SECTION – B

Write notes on or discuss **any four** of the following. **Each** question carries **5** marks.

11. Briefly explain the molecular pathology of retinopathies.
12. Compare and contrast Southern and Northern hybridization.
13. What are the applications of DNA fingerprinting ?
14. What are the main sex chromosome aneuploidies ?
15. Briefly explain the pros and cons of prenatal diagnosis.
16. What are the applications of DNA microarrays ?

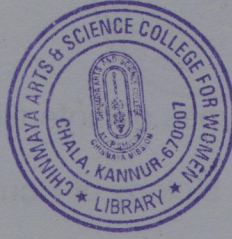
(4×5=20)

SECTION – C

Write an essay on **any one** of the following. The question carries **10** marks.

17. What are the different types of gene therapy ?
18. What are the applications of PCR in medicine ?

(1×10=10)



K22P 3302

Reg. No. :

Name :

IV Semester M.Sc. Degree (CBSS – Reg./Supple./Imp.) Examination, April 2022
(2018 Admission Onwards)
BIOTECHNOLOGY

BTG4C13 : Environmental and Agricultural Biotechnology

Time : 3 Hours

Max. Marks : 40

SECTION – A

Write about **each** of the following in **2 or 3** sentences. **Each** question carries **1** mark.

1. BOD.
2. *Ex situ* conservation of plants.
3. VAM.
4. Bio-pesticides.
5. Ramsar convention.
6. *Glofish*.
7. Molecular phylogeny.
8. BT brinjal
9. Bioleaching.
10. Biomagnification of pesticides.

(10×1=10)

SECTION – B

Write notes on or discuss **any four** of the following. **Each** question carries **5** marks.

11. Briefly explain the steps involved in aerobic composting.
12. What are the different types of biodiversity ?

P.T.O.

K22P 3302

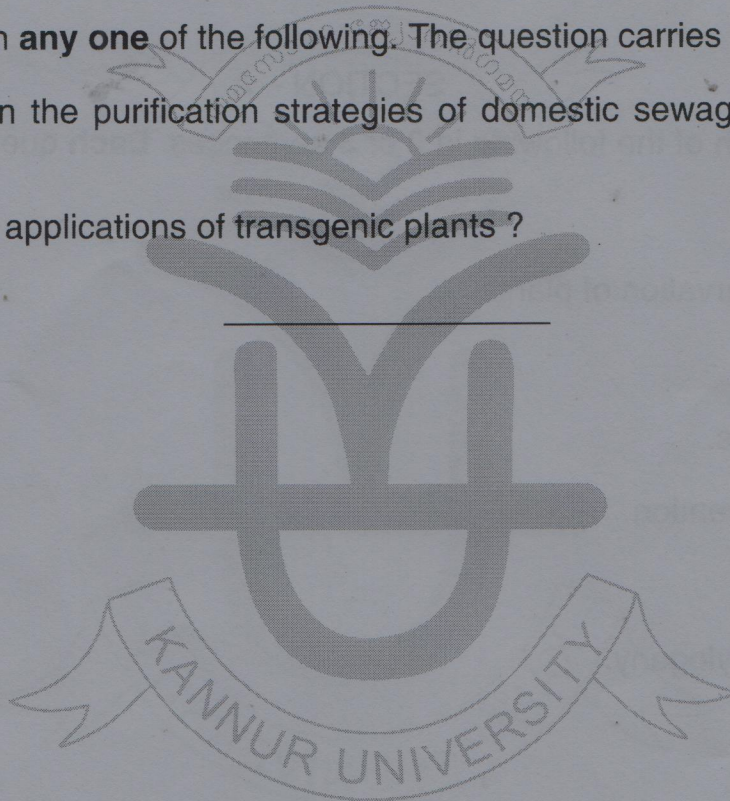


13. Briefly explain the different types of biofertilizers.
14. Briefly explain the molecular biology of Roundup ready crops.
15. Explain the applications of transgenic technology for improving abiotic stress resistance in aquaculture.
16. Explain combinatorial biosynthesis of antibiotics. (4×5=20)

SECTION – C

Write an essay on **any one** of the following. The question carries **10** marks.

17. Briefly explain the purification strategies of domestic sewage and industrial effluents.
18. What are the applications of transgenic plants ? (1×10=10)





K22P 3304

Reg. No. :

Name :

**IV Semester M.Sc. Degree (C.B.S.S. – Reg./Supple./Imp.)
Examination, April 2022
(2018 Admission Onwards)
BIOTECHNOLOGY
BTG4E07 : Biomolecular Modeling and Drug Design**

Time : 3 Hours

Max. Marks : 40

SECTION – A

Write about **each** of the following in **2 or 3** sentences. **Each** question carries **1** mark. **(10×1=10)**

1. Define Bragg's Law.
2. What is pharmacophore ?
3. What is a receptor ?
4. Define ADMET.
5. Define a lead molecule.
6. What is Hansch analysis ?
7. Define docking binding energy.
8. Define Antagonist.
9. Comment on the functions of carrier proteins.
10. What is an Ion-channel ?

SECTION – B

Write notes on or discuss **any four** of the following. **Each** question carries **5** marks. **(4×5=20)**

11. Describe on CADD.
12. Explain about scoring techniques used in molecular docking.

P.T.O.

K22P 3304



13. What is homology modelling? Discuss its importance in drug designing.
14. Explain the requirements to perform QSAR studies with suitable examples.
15. Discuss about structural proteins.
16. Explain the conformation of DNA.

SECTION – C

Write an essay on **any one** of the following. The question carries **10** marks: (1×10=10)

17. Describe various steps involved in molecular docking.
 18. Explain various steps involved in x-ray crystallography.
-