(Pages : 3) **G – 1658**

Reg. No. : .....

Name : .....

Sixth Semester B.C.A. Degree Examination, April 2019
Career Related FDP under CBCSS
Group2(b) : COMPUTER APPLICATIONS
Elective Course
CP 1661.1 : Bioinformatics
(2014 Admission Onwards)

Time : 3 Hours Total Marks : 80

SECTION – A
(Very Short Answer Type)

(**One** word to maximum of **one** sentences, Answer **all** questions) : **(10×1=10 Marks)**

1. What is SWISS – PORT database ?
2. Expand scop.
3. What is mRNA ?
4. What is Cheminformatics ?
5. What is a cell in biology ?
6. What is nucleic acid ?
7. What is field ?
8. What is meant by EMBL ?
9. What is a table in a database ?
10. What is genetic code ?

P.T.

SECTION – B
(Short Answer Type)

(**Not** to exceed **one** paragraph, answer **any eight** questions. **Each** carries **two** marks) : **(8×2=16 Marks)**

11. Explain PubMed ? Explain.
12. Explain the usage of blotting method.
13. What is system Biology ? Explain.
14. How genetic information is stored and passed on ?
15. What is the use of microarray ?
16. Describe the use of PIR in Bioinformatics.
17. What is multiple sequence alignment ?
18. Explain why perl language is heavily used in bioinformatics ?
19. Write short note on Proteins.
20. What is prokaryotic cells ?
21. What is molecular visualization ?
22. What are the functions of nucleic acids in living organisms ?

SECTION – C
(Short Essay)

(**Not** to exceed **120** words, answer **any six** questions. **Each** carries **four** marks) : **(6×4=24 Marks)**

23. Write short notes on CATH databases.
24. Write short notes on BLOCKS database in bioinformatics.
25. What is RasMol ? Explain.

26. Write short notes on Swiss-pdb Viewer.

27. Why is the central dogma of biology important ?

28. Explain phylogenetic tree.

29. Explain sequence alignment in bioinformatics.

30. What are the Difference between PAM and BLOSUM Matrix ?

31. Write short note on GENSCAN and SNP in bioinformatics.

SECTION – D
(Long Essay)

(**Not** to exceed **120** words, answer **any six** questions. **Each** carries **four** marks) :
(2×15=30 Marks)

32. Discuss the applications of bioinformatics in different fields.

33. What are Biological databases ? Explain.

34. What are the similarities and differences between DNA and RNA ?

35. How does the process of DNA fingerprinting work ? What are its applications ?

(Pages : 2) E – 1900

Reg. No. : .....

Name : .....

Sixth Semester B.C.A. Degree Examination, April 2018
Career Related FDP under CBCSS
Group 2(b) – Computer Applications
Elective Course
CP 1661.1 – BIOINFORMATICS
(2014 Admission Onwards)

Time : 3 Hours Total Marks : 80

SECTION – A

Very short answer type. **One** word to maximum of **one** sentence. Answer **all** questions. **(10×1=10 Marks)**

1. What is Cheminformatics ?
2. What is EMBL ?
3. What do you mean by 'field' in a database ?
4. What is SCOP ?
5. What is KEGG ?
6. What is DNA sequencing ?
7. Who developed the modern process of DNA finger printing ?
8. What is mRNA ?
9. What is SNP ?
10. What is Pharmagenomics ?

SECTION – B

Short answer type. Answer **any 8** questions. **Not** to exceed **one** paragraph, answer **any eight** questions. **Each** question carries **two** marks. **(8×2=16 Marks)**

11. What is nucleic acid ?
12. What is PROSITE ?
13. What is intron ?
14. What is FASTA ?

P.T.O.

15. What is a protein in biology ?
16. What is Protein Information Resource ?
17. Explain the use of BLAST.
18. Write short notes on GENSCAN.
19. What is PyMol ?
20. Explain DNA polymerases.
21. What is gene ?
22. What is the use of microarray ?

SECTION – C

Short essay. Answer **any 6** questions. **Not** exceed **120** words. Answer **any six** questions. **Each** question carries **four** marks. **(6×4=24 Marks)**

23. What is swiss pdb viewer ?
24. Write short notes on Sequence Alignment.
25. Explain the use of RasMol.
26. Write short note on PAM matrices.
27. Write short note on 'Storage of Genetic Information'.
28. What is CATH database ? Explain.
29. What is DNA-fingerprinting ?
30. Write short note on Global and Local alignment.
31. Write short note on Predication tools used in bioinformatics.

SECTION – D

Long essay. Answer **any 2** questions. **Each** question carries **15** marks. **(2×15=30 Marks)**

32. Explain application of bioinformatics in different fields.
33. Explain Biological databases and their classifications.
34. What is scoring matrix ? Explain.
35. Distinguish between DNA and RNA.

———————

(Pages : 3) H – 6510

Reg. No. : .....

Name : .....

Fifth Semester B.Sc. Degree Examination, December 2019

Career Related FDP Under CBCSS

Group 2(b) – Computer Science

Elective Course

CS 1561.2 BIOINFORMATICS

(2014 Admission Onwards)

Time : 3 Hours Max. Marks : 80

PART – A

(Very Short Answer Type)

(One word to maximum of one sentence. Answer **all** questions)

1. Expand RNA.
2. Name two Nucleotide databases.
3. Name two secondary databases.
4. What is a dot plot?
5. Name two visualization tools.
6. What is a chromosome?

P.T.O.

7. What is multiple alignment?

8. Expand KEGG.

9. Name any two data storage and retrieval tools.

10. Expand DDBJ.

(10 × 1 = 10 Marks)

PART – B

(Short Answer)

(Not to exceed one paragraph, answer **any eight** questions. Each question carries **2** marks)

11. What is a blot?

12. What do you mean by DNA sequencing?

13. What is a phylogenetic tree?

14. What is a genome?

15. What is proteomics?

16. What is Swiss-Prot?

17. What do you mean by low complexity sequence?

18. What is ExPasy?

19. Differentiate intron and exon.

20. What are the steps in turning the DNA to proteins?

21. What is a PAM matrix?

22. Name two sequence comparison tools.

(8 × 2 = 16 Marks)

PART – C

(Short Essay)

(Not to exceed 120 words, answer **any six** questions. Each question carries **4** marks).

23. Explain DNA fingerprinting.
24. Write short notes on PubMed.
25. Explain RNA structure.
26. Briefly explain FASTA format.
27. Explain DNA polymerase.
28. Give an account of PROSITE.
29. Write short notes on GENSCAN.
30. Explain the central dogma of molecular biology.
31. Differentiate eukaryotes and prokaryotes.

(6 × 4 = 24 Marks)

PART – D

(Long Essay)

(Answer **any two** questions. Each question carries **15** marks)

32. Explain protein sequencing.
33. Briefly explain primary, secondary and tertiary structure of a protein.
34. Give a detailed account of structure databases.
35. Explain the features of RasMol.

(2 × 15 = 30 Marks)
