SEAT No._____ No. of Printed Pages : 2

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SARDAR PATEL UNIVERSITY APR-2017 EXAMINATION

DATE -03/04/17 DAY- MONDAY TIME 10:00 TO 1:00 pm

Course- US06CGEN04 SUBJECT: GENETICS

CLASS- T.Y.B.Sc - VI Sem TITLE-Bioinformatics

TOTAL MARKS: 70

Q1- Answer the following Multiple Choice Questions: [10]

1)Which one of the following is a primary protein database?
a) SWISS-PROT b) EMBL c) DDBJ d) NCBI.

2) The brain of any computer system is
a) ALU b) Memory c) CPU d) Control unit

3) In PowerPoint, each page is called
a) A worksheet b) A text page c) A slide d) A presentation

4) Entrez, a life science search engine used to search across databases is maintained by _____.
a) SWISS-PROT. b) EMBL c) DDBJ d) NCBI.

5) The alignment search uses only conserved region in the sequences
a)Local alignment b) Global alignment
c)Pairwise alignment d) Multiple alignment

6) Introns are encoded by conserved region at 5' and 3' end are
a)GT-AU b) AG-GT c) GT- AG d) CG-GC

7)_____ compares protein sequence against protein databases.
a) BLASTp b) BLASTn c) BLASTx d) tBLASTx..

8) ORF is
a) open reading frame b) open research form. c) online research form d) none

9) Sulphur containing amino acids are
a) Cysteine and methionine b) Methionine and threonine c) Cysteine and threonine
d) Cysteine and serine

10) Secondary database is
a)Data collected from scientist b) modified data of primary database
c)Data collected from public d) none

Q2- ANSWER IN BRIEF (Attempt any 10) (each carry 2 marks) [12]

1) Differentiate between RAM & ROM.
2) Give the importance of Internet in Bioinformatics.
3) Enlist any 4 databases that contain sequence information.
4) Discuss the importance of biological databases in biology.
5) Differentiate local & global alignment.

(PTO)

6) Enlist any 5 useful sites of Bioinformatics.
7) What is Unix Operating system.
8) Explain tertiary structure of protein.
9) Diagrammatically explain the structure of Eukaryotic gene.
10) Enlist any 6 databases of NCBI.
11) How PubMed central differ from PubMed?
12) Give the basic concept of Chou Fasman mehod.

Q3-a) Explain structural organization of computer diagrammatically. [05]
Q3- a) Discuss different generations of computer. [05]

OR

Q3 - Elaborate in detail MS-OFFICE software and its different applications. [10]

Q4- What are databases? Classify it with examples. [10]

OR

Q4- a) Clarify the concept, scope & applications of Bioinformatics. [05]
Q4- b) Simplify NCBI data model and its various databases. [05]

Q5- Explain phylogenetics analysis and tool related to it. [10]

OR

Q5- a) Describe BLAST ,its type & importance. [05]
Q5- b) Explain Shareware software & how it is differ from freeware software. [05]

Q6- What is gene prediction? Elaborate any two methods in detail. [10]

OR

Q6- What is structure prediction? Elaborate any two methods in detail. [10]

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