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PBM-1603220001050400 Seat No. _____

B. Sc. (Bioinformatics) (Sem. V) (CBCS) Examination

November / December - 2018

BI - 504 : Advance Omics Technology

(New Course)

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

Instructions : (1) All questions are compulsory.
(2) The right side figure indicates total marks of the question.

1 Attempt the following : **14**

(a) Answer the following short questions : (all compulsory) **4**
(1) Define AMPs.
(2) List some AMP databases.
(3) What are NRPs ?
(4) Name some plant peptides.

(b) Answer any **one** of the following question. **2**
(1) Define Peptabiols.
(2) Domains of Colicin and its functions.

(c) Answer any **one** of the following question. **3**
(1) Explain steps involved in NRPS.
(2) Give a brief note on Cathelicidins.

(d) Answer any **one** of the following question. **5**
(1) Explain in detail Lantibiotics.
(2) Bioactivity, Opportunities and Challenges Plant Peptides. Explain.

2 Attempt the following : **14**

(a) Answer the following short questions : (all compulsory) **4**
(1) Myotoxins formed by _____ and Mushroom Toxin by _____.
(2) Name two toxins formed by mushroom.
(3) Allostatin has ability to inhibit _____ in insect.
(4) What is RPCH and PDH ?

(b) Answer any **one** of the following question : **2**

(1) Define Bombesin and what its penultimate residues of Bombesin peptides ?

(2) What is the main function of scorpion peptides ?

(c) Answer any **one** of the following questions. **3**

(1) Explain various types of Alostatin family.

(2) Give a brief note on Crustacean bioactive peptide.

(d) Answer any **one** of the following question. **5**

(1) Explain about Bombesin peptides and its types.

(2) Explain different type of peptide vaccine delivery.

3 Attempt the following : **14**

(a) Answer the following short questions : (all compulsory) 4

(1) Chemokines name derived from _____.

(2) CCK functions as _____.

(3) What is personalized medicine ?

(4) Define Exorphins.

(b) Answer any **one** of the following question. **2**

(1) What is Leptin ?

(2) What are the main function of BBB ?

(c) Answer any **one** of the following question. **3**

(1) What is the role of chemokines in AMP ?

(2) Adrenomedullin and IGC. Explain.

(d) Answer any **one** of the following question. **5**

(1) Explain peptides and sleep, peptides and stress, peptide and temperature.

(2) Explain In Silico Search for Biologically Active Peptides.

4 Attempt the following : **14**

(a) Answer the following short questions : (all compulsory) 4

(1) What are Aptamers and an example

(2) What are the recent approaches for metabolite identification ?

(3) Name the enzyme and biomolecule formed by Psychrophiles.

(4) The removal of mass spectral complication due to the presence of isotopic clusters are called _____.

(b) Answer any **one** of the following question. **2**

(1) Define Secretomics.

(2) Define Metabolomics.

(c) Answer any **one** of the following question. **3**

(1) Explain extracellular microbial metabolomics.

(2) Explain some applications of metabolomics in clinical and biomedical research.

(d) Answer any **one** of the following question. **5**

(1) Explain survival mechanism in Extremophiles.

(2) Extremozymes and its industrial application.

5 Attempt the following : **14**

(a) Answer the following short questions : (all compulsory) 4

(1) What is Conotoxin ?

(2) What is APID ?

(3) Three dimension standardization of Network based proteomics are _____, _____, _____,

(4) Modified approach based on GSEA-SNP for meta-analytics data is MAGENTA (true/false)

(b) Answer any **one** of the following question. **2**

(1) Define Interactome and Interactomics.

(2) What is Arena3D and BIANA ?

(c) Answer any **one** of the following question. **3**

(1) Explain Integrating networks and proteomics.

(2) What are the two approaches of pathway analysis ?

(d) Answer any **one** of the following question. **5**

(1) Explain the analytical methods to detect pathway-phenotype relationship.

(2) Explain in detail the applications of interactome.
