1059

M.Sc. (Bio-Informatics) Fourth Semester

MBIN-8020: Expression Bio-Informatics

Time allowed: 3 Hours

Max. Marks: 45

NOTE: *Attempt <u>five</u> questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.*

x-x-x

I.   Attempt the following:-

  a)   Differentiate between siRNA & shRNA.

  b)   What are hybridization & its significance?

  c)   Explain Differential display.

  d)   Define cDNA.

  e)   Define microarray.

  f)   Discuss RNAi.

  g)   What is protein chip?

  h)   What is cluster analysis?

  i)   What is dbEST   (9x1)

UNIT – I

II.   a) Discuss microarray experimentation.

  b) Discuss cluster analysis.   (5,4)

III.   a) Discuss normalization in array analysis.

  b) What is self organizing maps & its significance?   (5,4)

IV.   a) What is CHIP on chip arrays?

  b) Write a note on Databases for microarray analysis.   (5,4)

UNIT – II

V.   a) What is the importance of piRNA & SnoRNA?

  b) Discuss experimental strategy for making protein library?   (3,6)

VI.   Discuss Protein chips & its application.   (9)

VII.   a) What functional microarray and its applications?

  b) Write a short note on EST database.   (6,3)

VIII.   a) Define differential display & its significance?

b) Write a note on piRNA and SnoRNA.   (3,6)

x-x-x