Biyani Girls College

Model test paper A

B.Sc Biotech –III

Genome Analysis

Time allowed: 3hrs **Max Marks=50**

Q1 is compulsory. Attempt any 5 in all.

Q1. (a) One map unit on a linkage map is equal to _____. **(1x10)**

(b) Chain termination method was given by _____.

(c) EST stands for_____.

(d) _____ is a form of PCR that uses one arbitary primer instead of two.

(e) CpG islands are mostly found in ____ region.

(f) Define VNTR.

(g) ____ curve gives the complexity of genome.

(h) Define QtLs.

(i) _____& _____ organizations completely sequenced human genome.

(j) _____ is an example of multigene family.

Section A

Q2. Write in detail about Chromatin model. **10**

Q3. Write short notes on: **(5+5=10)**

- Linkage analysis in neurospora
- Concept of gene

Section-B

Q4. Give a detailed account of Pedigree analysis. **10**

Q5. Describe in short:
(5+5=10)

- C-value paradox
- Multigene family

Section-C

Q6. Write short notes on: (any2)
(5+5=10)

- FISH.
- RAPD
- CpG island identification

Q7. Describe in detail the technique of chromosome walking.
10

Section-D

Q8. Write an essay on Rice genome project and its applications.
10

Q9. State the applications of Human Genome Project.
10

Biyani Girls College

Model test paper B

B.Sc Biotech –III

Genome Analysis

Time allowed: 3hrs **Max Marks=50**

Q1 is compulsory. Attempt any 5 in all.

Q1. (A)Fill in the blanks: **(1x10)**

(a) SNPs are present after every ____ base pairs.

(b) _____ is a hybridization technique used for comparing DNA similarity among animals.

(c) In FISH, Cells are arrested in _____ phase.

(d) The technique used for sequencing , involves the use of _____ .

(e) ____ is a co-dominant marker used for physical mapping.

(B) Define:

a) SNP b) RACE c) CpG islands d) C_0t curve e) Satellite DNA

Section A

Q2. Give a detailed account of Linkage analysis.
10

Q3. Differentiate between:
(5+5=10)

- Prokaryotic and Eukaryotic Genome
- Linkage and Crossing over

Section-B

Q4. Write an essay on Genetic mapping and its tools.
10

Q5. Describe in short:
(5+5=10)

- Repititive DNA
- Complexity of Genome

Section-C

Q6. Differentiate between:
(5+5=10)

- Zoo blot and Dot blot.
- FISH and GISH

Q7. Describe in detail the technique used in physical mapping.
10

Section-D

Q8. Give a detailed account of HGP.
10

Q9. Write in short:
(5+5=10)

- Rice genome project
- Applications of HGP