

KERALA AGRICULTURAL UNIVERSITY

College of Agriculture, Vellayani

B.Sc (Hons) Agricultural Programme 2014 Admission

1st Semester Final Exam

Principles of Genetics & Cytogenetics (2+1)

Pbgn. 1102

Marks : 50

Time : 2 hour

SET-1

I. Fill in the blanks

(10 x 1=10)

1. Chromosome with secondary constriction is known as _____
2. The scientist who discovered compound microscope is _____
3. A chromosome in which the centromere is at one end is called _____
4. During protein synthesis, carry amino acids to the sites of protein synthesis.
5. The process of locating genes in their linear order on a chromosome is known as
6. The chemical bonds that joint nucleotides in a polynucleotide chain is.....
7. The set of 3 adjacent nucleotides in a m RNA that determine an amino acid is known as a
8. The maximum combination frequency between two linked genes is
9. Variation is continuous in the case of
10. Ochoa (1956) received the Nobel Prize for in vitro synthesis of.....

II. Write short notes on **Any Five** :-

(5 x 2= 10)

1. Differentiate between karyotype and idiotypic
2. Mitochondria
3. Messenger RNA
4. Inversions
5. Multiple Alleles
6. Polygenic traits
7. Chemical mutagens

III. Write short essays on **Any Five** :-

(5 x 4 = 20)

1. Description of chromosome morphology
2. Classification of mutagens
3. Define linkage and crossing over. Briefly describe the different types of linkage.
4. Structure of RNA

5. DNA replication

6. Pseudoalleles & Isoalleles

✓ 7. Law of independent Assortment

IV. Write an essay on **Any One** of the following

(1 x 10=10)

1. ✓ What are structural chromosome aberrations? Explain in detail with the help of diagrams.
 2. ✓ Explain briefly cytoplasmic inheritance involving infective particles with suitable examples
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