



KERALA AGRICULTURAL UNIVERSITY
B.Sc. (Hons.)Ag. 2018 Admission
I Semester Final Examination-February-2019

Pbgn.1101

Fundamentals of Genetics (2+1)

Marks: 50
Time: 2 hours

I Choose the correct answer (10x1=10)

- 1 Genetics is a science that deals with the study of
 - a Cytogenetics
 - b Gene
 - c Heredity and variation
 - d Genotypes
- 2 Theory of Pangenesis
 - a Harvey
 - b Wolf
 - c Charles Darwin
 - d Maupertius
- 3 Fluid inside nucleus
 - a Nucleoplasm
 - b Cytoplasm
 - c Cell Wall
 - d Mitochondria
- 4 Hugo de Vries, Correns, Von Tschermak
 - a Charles Darwin
 - b Greger Mendel
 - c Thomas Hunt Morgan
 - d Rediscovery of Mendel's work
- 5 Reduction in chromosome number involves in
 - a Mitosis
 - b Meiosis
 - c Amitosis
 - d Binary Division

Fill in the blanks

- 6 An individual formed by the union of like gametes is said to be
- 7 Flemming coin the term.....
- 8 Meiosis results in..... daughter nuclei.

State True or False

- 9 Charles Darwin proposed the cytogenetics.
- 10 Identical twins are the result of two separate eggs being fertilized by two sperms.

I Write Short notes on any FIVE of the following (5x2=10)

- 1 Gene and Genotype
- 2 Homozygote and Heterozygote
- 3 Autopolyploidy
- 4 Penetrance and Expressivity
- 5 Reasons for Mendel's success
- 6 Differentiate between mitosis and meiosis – 4 points
- 7 Nucleolar organiser chromosome (NOR)

I Answer any FIVE of the following. (5x4=20)

- 1 Incomplete dominance
- 2 Metaphase

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- 3 Allopolyploidy
- 4 Monohybrid
- 5 Different types of linkage
- 6 Test Cross
- 7 Dominant epistasis

IV

Write an essay on any ONE of the following

(1x10=)

- 1 Recessive epistasis and duplicate recessive epistasis.
- 2 Double helix model of DNA.
