



RAN - 1803000201030112



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**F. Y. B Sc. (Sem. - I) Examination**

**March - 2023**

**Bioscience (Microbiology) : BS-102**

**Basic Genetics**

**સૂચના : / Instructions**

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  
**Fill up strictly the details of signs on your answer book**

Name of the Examination:

**F. Y. B Sc. (Sem. - I)**

Name of the Subject :

**Bioscience (Microbiology) : BS-102 Basic Genetics**

Subject Code No.: **1803000201030112**

Seat No.:

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Student's Signature

(2) All questions are compulsory.

***O.M.R. Sheet ભરવા અંગેની અગત્યની સૂચનાઓ આપેલ  
O.M.R. Sheetની પાછળ છાપેલ છે.***

***Important instructions to fillup O.M.R. Sheet  
are given on back side of the provided O.M.R. Sheet.***

- Q. 1.** The first scientific explanation regarding inheritance was given by
- William Bateson
  - Johannsen
  - Griffith
  - Mendel
- Q. 2.** Who is known as “Father of Genetics”?
- Theophrastus
  - Stephen Hales
  - Aristotle
  - None
- Q. 3.** A study of inheritance of an organism is known as \_\_\_\_\_.
- Genome
  - Genetics
  - Genotype
  - Gene
- Q. 4.** Organisms produced by sexual reproduction are called
- Genes
  - Clones
  - Characters
  - None
- Q. 5.** Offspring are
- Exactly identical to either of their parents.
  - Exactly identical to their parents.
  - Show intermediate characters inherited from both the parents.
  - None
- Q. 6.** The term “factor” for gene was coined by
- William Bateson
  - Johann Mendel
  - Johannsen
  - F.Griffith
- Q. 7.** Mendel discovered
- Law of inheritance
  - Law of codominance
  - Law of incomplete dominance
  - All
- Q. 8.** The botanical name of garden pea is
- Pisum sativum*
  - Lathyrus odoratus*
  - Mangifera indica*
  - Solanum tuberosum*
- Q. 9.** Which of the following is a character in pea?
- Wrinkled seeds
  - Inflated pod
  - Terminal flower
  - All

- Q. 10.** Which of the following character was not considered by Mendel?
- a. Seed coat color
  - b. Wrinkled or round leaves
  - c. Tallness or dwarfness
  - d. Position of flower
- Q. 11.** An inherited character and its detectable variant is called
- a. Allele
  - b. Trait
  - c. Gene
  - d. None
- Q. 12.** Which one of the following best describes a gene?
- a. A triplet of nucleotide bases.
  - b. A specific length of DNA responsible for the inheritance and expression of the character.
  - c. A specific length of single stranded RNA.
  - d. All
- Q. 13.** Recessive allele means
- a. An allele that prevents the expression of the other allele.
  - b. An allele without any effect.
  - c. An allele which cannot express in presence of other.
  - d. None
- Q. 14.** The external appearance of an individual for any trait is called as
- a. Phenotype
  - b. Karyotype
  - c. Morphology
  - d. Physique
- Q. 15.** Genome is
- a. Genetic constitution of an organism.
  - b. Genetic constitution of somatic cells.
  - c. Genetic constitution of plastids.
  - d. Genetic constitution of germ cells.
- Q. 16.** Homozygous individuals
- a. Hybrid for the trait.
  - b. Does not breed true to the trait.
  - c. Produce only one type of gamete.
  - d. All

- Q. 17.** Which of the following term indicates a pair of dissimilar alleles?
- a. Homozygous
  - b. Heterozygous
  - c. Homologous
  - d. All
- Q. 18.** A cross between two pure individuals, differing in at least one set of characters, is called
- a. Monohybrid
  - b. Polyploid
  - c. Mutant
  - d. Variant
- Q. 19.** F1 generation means
- a. First flowering generation
  - b. First fertile generation
  - c. First filial generation
  - d. First seed generation
- Q. 20.** In genetics, the use of test cross was done by
- a. Mendel
  - b. Correns
  - c. Punnet
  - d. Darwin
- Q. 21.** Mendel, in his experiments
- a. Maintained qualitative records.
  - b. Maintained quantitative records.
  - c. Conducted ample crosses and reciprocal crosses.
  - d. All
- Q. 22.** Mendel performed
- a. Monohybrid cross
  - b. Tetra hybrid cross
  - c. Poly hybrid cross
  - d. All
- Q. 23.** Mendel always started his experiment (Monohybrid and Dihybrid cross) with
- a. Any pea plant
  - b. A heterozygous plant
  - c. A pure line plant
  - d. A fresh new plant
- Q. 24.** When Mendel allowed monohybrid cross between pure tall and pure dwarf pea plant, he found \_\_\_\_\_ in I<sup>st</sup> generation.
- a. All plants were tall.
  - b. All plants were dwarf.
  - c. Dwarfness reappeared in some plants.
  - d. Tallness reappeared in some plants.



- Q. 34.** In Turner's syndrome the karyotype shows \_\_\_\_\_.
- 47 chromosomes (Trisomy of 21).
  - 47 chromosomes (AA+XXY).
  - 46 chromosomes (AA+XY or XX).
  - None
- Q. 35.** In Klinefelter's syndrome the karyotype shows \_\_\_\_\_.
- 47 chromosomes (Trisomy of 21).
  - 47 chromosomes (AA+XXY).
  - 47 chromosomes (Trisomy of 18).
  - 45 chromosomes (AA+XO).
- Q. 36.** Webbed neck and Barr body negative are the symptoms of \_\_\_\_\_.
- Turner's syndrome.
  - Klinefelter's syndrome.
  - Down syndrome.
  - Cat-cry syndrome.
- Q. 37.** Turner's syndrome is a result of \_\_\_\_\_.
- Nullisomy
  - Monosomy
  - Trisomy
  - Polysomy
- Q. 38.** Chromosome \_\_\_\_\_ trisomy leads to Edward's syndrome.
- 12
  - 13
  - 18
  - 21
- Q. 39.** A child is born with AB blood group, what is the blood group of their parents?
- Only A
  - Only B
  - A, B, AB and O
  - O
- Q. 40.** I<sup>A</sup> allele responsible for the \_\_\_\_\_ while I<sup>B</sup> for \_\_\_\_\_.
- A antigen, B antigen
  - I antigen, I antibody
  - A antibody, B antibody
  - H antigen, D antigen
- Q. 41.** Which of the following are the properties of gene?
- Autocatalytic
  - Heterocatalytic
  - Recombination
  - All
- Q. 42.** A complete set of genes in an organism is called \_\_\_\_\_.
- Genes
  - Genotype
  - Genome
  - Genetics.
- Q. 43.** Concept of gene was first time given by \_\_\_\_\_.
- Turner
  - Mendel
  - Morgan
  - Benzer

- Q. 44.** Self duplication of gene, this property is known as \_\_\_\_\_.
- Autocatalytic
  - Heterocatalytic
  - Recombination
  - All
- Q. 45.** Gene define as
- A small fragment of DNA responsible for a specific trait
  - Some nucleotides of DNA responsible for a specific trait
  - A piece of DNA fragment responsible for a specific trait
  - All
- Q. 46.** Normally gene has two form \_\_\_\_\_ and \_\_\_\_\_.
- Dominant, Recessive
  - Trait, Character
  - Allele, Morph
  - None
- Q. 47.** Which of the following is an example of trisomy \_\_\_\_\_.
- Endosperm
  - Klinfelter
  - Turner
  - Xeroderma
- Q. 48.** Beedle and Tatum discovered the \_\_\_\_\_.
- One gene-one protein hypothesis
  - One gene-one enzyme hypothesis
  - One gene-one peptide hypothesis 21
  - None
- Q. 49.** Gene which can move from one locus to another in same or homologous chromosome is called \_\_\_\_\_.
- Altered gene
  - Jumping gene
  - Lethal gene
  - None
- Q. 50.** Gene Splicing is a removal of \_\_\_\_\_ from m-RNA.
- Introns
  - Exons
  - Both Introns and Exons
  - None
- \_\_\_\_\_

**SPACE FOR ROUGH WORK**