



A Charutar Vidya Mandal's Institution
V.P. & R.P.T.P. SCIENCE COLLEGE
(AUTONOMOUS) (Grant-in-Aid)
Affiliated to Sardar Patel University
VALLABH VIDYANAGAR-388120



Bachelor of Science (Semester -5) Internal Examination - 2025
US05MAZOO01: GENETICS & BIOTECHNOLOGY

Date: 22-09-2025, MONDAY

Time: 10:45A.M. TO 12:15P.M.

Total marks: 30

Q-1 MULTIPLE CHOICE QUESTIONS.

(6Marks)

1. The crossing of F1 to either of the parents is known as
(a) Test cross (b) Back cross (c) F1 cross (d) All of the above
2. When the activity of one gene is suppressed by the activity of a non-allelic gene, it is known as
(a) Pseudo-dominance (b) Hypostasis (c) Epistasis (d) Incomplete dominance
3. Sickel cell anemia is-----
(a) Sex linked inheritance (b) Autosomal heritable disease
(c) Infectious disease (d) Deficiency disease
4. Which type of RNA brings amino acids to the ribosome during protein synthesis?
(a) MRNA (b) RRNA (c) TRNA (d) SNRNA
5. Eugenics is the study of
(a) Different races of mankind
(b) Altering Human beings by changing their genetic components
(c) Growing trees
(d) All of the above
6. What technique involves fertilization outside the body of the female?
(a) In vivo fertilization (b) Intra uterine fertilization
(c) In vitro fertilization (d) Ex vivo fertilization



Q-2 Explain the Dihybrid cross with example.

(6Marks)

OR

Q-2. Explain the dominant and recessive lethal genes.

(6Marks)

Q-3 Describe the cytoplasmic- inheritance in Paramoecium.

(6Marks)

OR

Q-3 Write about types and characteristics of mutation.

(6Marks)

Q-4 Describe the Polymorphism of DNA Helix.

(6Marks)

OR

Q-4 Write about brief account of human genetic disorders.(any three)

(6marks)

Q-5 Explain the primary & secondary tissue culture.

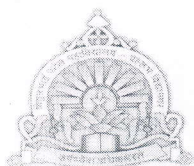
(6marks)

OR

Q-5 Write a note on transgenic animals.

(6marks)





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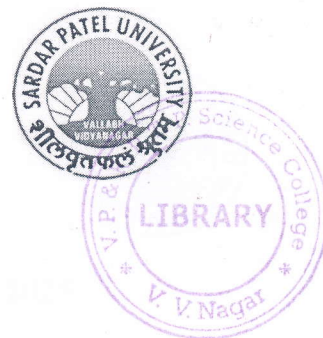
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BSC (Semester -5) Quiz - 2025

US05MAZOO01 : GENETICS & BIOTECHNOLOGY



Date: 22-09-25, MONDAY

Time: Maximum 20 minutes

Total marks :15

Q-1 Fill in the blanks with appropriate answer given in the bracket.

[08]

- (i) _____ is father of genetics. [Mendel / Darwin]
- (ii) The ratio obtained in complementary interaction of genes is _____ [9:7/ 13:3]
- (iii) Crossing over occurs between _____ [sister chromatids / non-sister chromatids]
- (iv) Linked genes may be separated by _____ [Polyploidy/Crossing over]
- (v) The process of converting RNA into proteins is called _____ [Transcription/Translation]
- (vi) A women is carrying two identical twins are known as _____.[Dizygotic /Monozygotic]
- (vii) The process whereby cells or tissue are frozen is called _____.
[Cryopreservation / Proliferation]
- (viii) The introduction of the nucleus from a cell into an enucleated egg cell is called as _____.
[Gene transfer / Nuclear transfer]

Q-2 Whether the following statement is true or false. Write your answer in the box

[07]

- (i) All of the cells within an individual are genetically identical. []
- (ii) Allelomorphs (Allele) represents a pair of contrasting characters. []
- (iii) Cystic fibrosis is a Sex-linked recessive disorder. []
- (iv) Those mutations that occur by environmental damage during DNA replications are known as Acquired mutations. []
- (v) UAA is a start codon in MRNA. []
- (vi) Poor sperm quality is known as oligospermia. []
- (vii) Cell viability refers to the varying ability of stem cells to differentiate into specialized cell types. []