

[141]

SEAT No. _____

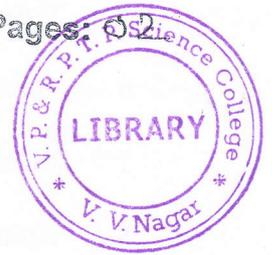


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Sardar Patel University

Fifth Semester (T.Y.B.Sc), Zoology

US05CZOO23 (Genetics and Biotechnology)



Date : 25/11/2021

Time: 3:00 to 5 :00 p.m.

Day : Thursday

Marks : 70

Q-1

MULTIPLE CHOICE QUESTIONS

10

1. Purple flower in *Lathyrus Odoratus* is due to
 - a) Dominant epistatus
 - b) Recessive epistatus
 - c) Duplicate dominant genes
 - d) Duplicate recessive genes
2. In congenital ichthyosis children at birth have _____.
 - a) crushed leathery skin
 - b) droopy jaw
 - c) raised eyes
 - d) none of the above
3. Test cross in an independent assortment gives _____ ratio.
 - a) 1:1
 - b) 1:1:1:1
 - c) 1:2: 1
 - d) 3:1
4. _____ is an example of aneuploidy.
 - a) monosomy
 - b) trisomy
 - c) tetrasomy
 - d) none
5. Mutagenic agents are _____.
 - a) Radiation
 - b) temperature
 - c) chemical
 - d) all
6. PCR technique was developed by _____.
 - a) Kary Mullis
 - b) Bridges
 - c) Stadler
 - d) Stansfield
7. Primary culture are subcultured to give _____.
 - a) secondary culture
 - b) cell lines
 - c) finite cell lines
 - d) continuous cell lines
8. The first organ culture was attempted by _____.
 - a) Loeb
 - b) Arnold
 - c) Harrison
 - d) Carrel
9. Grid method is a type of _____ culture.
 - a) cell culture
 - b) suspension culture
 - c) organ culture
 - d) none
10. The causative agents of cancer are _____.
 - a) physical
 - b) chemical
 - c) genetic and environmental factors
 - d) all

Q-2

FILL IN THE BLANKS / TRUE OR FALSE

08

1. Thalassaemia major is caused due to _____.
2. The petite mutants of yeast have a _____.
3. The chromatin resulting from interchange of chromosomal parts are known as _____.
4. Duplication takes place in _____.

- 5 Polyploidy in human have been found in liver cells.
- 6 A heat stable DNA polymerase TAQ is isolated from Thermococcus aquaticus.
- 7 Electron microscope uses beams of electron
- 8 Animal cells with improved genome is called transgenic

Q-3

ANSWER IN SHORT (ATTEMPT ANY TEN)

20

- 1 Define allele.
- 2 What is the difference between dominance and epistasis?
- 3 Define synapsis.
- 4 Define inversion.
- 5 What is haploid?
- 6 What are kappa particles?
- 7 What are genes present in cytoplasm known as?
- 8 What is christmas disease?
- 9 What is Shine Dalgarno sequence?
- 10 What is oligospermia?
- 11 What is the action of human chorionic gonadotropin (HCG)
- 12 What is a benign tumor?



Q-4

LONG ANSWER QUESTIONS (ATTEMPT ANY 4)

32

- 1 Write a note on extra nuclear inheritance of kappa particles in Paramecium.
- 2 Write a note on Haemophilia.
- 3 Write a note on euploidy.
- 4 Write a note on karyotyping.
- 5 Write a short note on rRNA.
- 6 Write a note on electron microscopy
- 7 Write a short note on laparoscopy
- 8 Describe the characteristics of growing tumor cells.

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