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(FYUGP)

(6th Semester)

ZOOLOGY

(MINOR)

Paper: ZOO/M6 missort

(Principles of Genetics)

Full Marks: 75 Pass Marks: 40%

Time: 3 hours

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(PART : B—DESCRIPTIVE)

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(*Marks* : 50)

The figures in the margin indicate full marks for the questions

1. Describe the principles of Mendelian inheritance.

Or commence of the commence of

Write notes on: 5+5=10

(a) Epistasis

ancitatem year.

(b) Pleiotropy

L25**/587a** (Turn Over)

2. What is crossing over? Explain the molecular mechanism of crossing over. 2+8=10

Or

Describe in detail the process of somatic cell hybridization.

3. Describe the various types of gene mutation. 10

Or

Explain the molecular mechanism of mutation in relation to UV light and chemical mutagens.

4. Write a note on sex-linked chromosomal abnormalities.

Or

Define polygenic inheritance. Write a note on criteria for extra chromosomal abnormalities.

2+8=10

5. Write notes on:

5+5=10

- (a) Transduction
- (b) Conjugation

Or

What are transposable elements? Write a note on transposons in bacteria. 2+8=10

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(6th Semester)		
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(MINOR) vertues and home area build moles and (c) Paper : ZOO/M6 vertigues		
(Principles of Genetics) mon (c)		
the first contract in a superchase tensor retrigional accompanion		
PART : A—OBJECTIVE)		
(Marks: 25)		
The figures in the margin indicate full marks for the questions		
I. Put a Tick (✓) mark against the correct answer in the brackets provided: 1×15=15		
1. The expected ratio for dominant epistasis is		
(a) 9:3:4 (b) (b) (c) (c)		
(b) 9:6:1 ()		
(d) 12:2:2		
2. Y-linked genes are also known as		
(a) holandric genes ()		
(b) diagenic genes ()		
(c) hologenic genes ()		
(d) diandric genes ()		

3. A marriage between normal visioned mocolourblind woman will produce offspring	an and s which
(a) colourblind sons and 50%	carrier
daughters () (b) 50% colourblind sons and 50% daughters ()	carrier
(c) normal males and daughters ()	carrier
(d) colourblind sons and daughters ()	carrier
4. Crossing over takes place in	The figures
(a) pachytene stage of prophase I (b) zygotene stage of prophase I (c)	I. Puta Ti bracket
(c) diplotene stage of prophase I	(n)
(d) diakinesis stage of prophase I5. Cytological basis of crossing over was fire	st noted
in <i>Drosophila</i> by (a) McClintock ()	(25)
(b) Creighton ()	tal) [1]
(c) Stern ()	
(d) Janssen ()	distribution of the second

6	. Re	ecombination frequency was and to the
ref	(a)	is the measure of actual distance between
	1	genesias an (ozon) os la radimum and
	(b)	tends to be lower near centromere ()
	(c)	maps ()
	(d)	All of the above ()
7	. Su	bstitution of a purine base with a pyrimidine
1	ba	se is known as a printed of the to rightly it
	(a)	deletion () out the computer
	(b)	transition seem (ad)) to close able (b)
	(c)	addition () actions books (d)
	(d)	transversion () () () () () ()
8.	Nu	merical chromosomal aberrations are
	(a)	aneuploidy ()
Air.	(b)	euploidy () of the control of the c
	(c)	그는 그들은 보다 하는 것은 아이들은 아이들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람
REC	31 (31-7)	Both (a) and (b)
9.	Add	dition or deletion of bases causes which kind
		nutation?
	(a)	Transversion ()
		Frameshift mutation (1997)
		지근 사용 마음 이 경험 경험 가장 하는 경험 사람이 되었다. 그 사용 그 교육 사용 중에 맞은 경험 사용 사람들이 되었다는 것이 되었다. 그 사용 기업
		Transition ()
	(a)	Transcription () () () () () () () () () (

10. T	he sex of Drosophila is determined by
C 39 (C	the number of X chromosomes divided by the number of autosome sets ()
THE OF THE PERSON OF THE PERSO	chromosomes X and Y ()
(c) proportion of X chromosome pairs to autosome pairs ()
(d	whether or not the egg is fertilised and develops parthenogenetically ()
tiranina m	the phainte seament man to house the the Ta
	hich of the following is a classic example of lygenic inheritance?
(a)	Skin colour in humans ()
(b)	Blood groups ()
(c)	Flower colour in peas ()
	Stem height in peas
Mary Bally Tally and the state of the state	ich of the following is incorrect about 'petite tants'?
(a)	The mutation refer to the small size of yeast colony ()
(b)	They cannot carry out oxidative phosphorylation ()
(c)	They are primarily inherited through parental parent
(d)	It is caused by mutations in the mitochondrial DNA ()

0/213.	Transfer of genetic material from the donor to recipient bacterium through cell contact is termed as
	(a) transduction ()
	(b) recombination ()
	(c) conjugation ()
	(d) transformation ()
14.	Transduction was discovered by
	(a) Zinder and Lederberg ()
	(b) Ivanovsky ()
	(c) Griffith ()
	(d) Avery et al. ()
15. ′	Transposable elements are known as
	(a) mobile elements ()
(b) jumping genes ()
0	c) transposons ()
(0	d) All of the above ()

II. Write short notes on any five of the following: $2\times5=10$

that indicates and the

"46" Black party bary destrop barrow" + 1

Zinder and Lederberg Life

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Make and the state of the state

1. Incomplete dominance

2. Multiple alleles

3. Recombination frequency

4. Aneuploidy was agreement required extended to

5. Difference between linkage and crossing over

6. Transformation Distribution in alternated 5 7

7. P elements in Drosophila moissimoleus T o

8. Bacteriophage
