



R

2018-

भाग-2

M.Sc. Internal

चौधरी चरण सिंह विश्वविद्यालय, मेरठ  
Ch. Charan Singh University, Meerut

निम्नलिखित विवरण परीक्षार्थी द्वारा स्वयं भरा जाए (To be filled by the Examinee)

परीक्षा का नाम (Name of Exam) M.Sc II ed sem वर्ष 20 2019 भाग/सेमेस्टर (Part / Semester) II ed sem

विषय (Subject) Zoology प्रश्न-पत्र/पाठ्यक्रम (Paper / Course) genetic पेपर कोड नं. (Paper Code No.) M-1067

परीक्षा का दिन (Day of Examination) Thursday दिनांक (Date) 28 march 2019

प्राप्तांक एवं पूर्णांक परीक्षकों द्वारा भरे जायें

पूर्णांक (Max. Marks)

प्रश्नों की क्रम संख्या	a/I	b/II	c/III	d/IV	e/V	f/VI	g/VII	h/VIII	i/IX	j/X	योग
1	h										
2	h										
3	h										
4	h										
5	h										
6	h										
7	h										
8	h										
9	h										
10	h										
11	h										
12	h										
13	h										
14	h										

प्राप्तांक

(शब्दों में)	अंकों में
--------------	-----------



2018- चौधरी चरण सिंह विश्वविद्यालय, मेरठ

Date Stamp to be affixed here

मार्च 28 2019

परीक्षा का नाम (Name of Exam) M.Sc genetic भाग/सेमेस्टर (Part / Semester) II ed sem  
विषय (Subject) Zoology प्रश्न-पत्र/पाठ्यक्रम (Paper / Course) genetic पेपर कोड नं. (Paper Code No.) M-1067  
परीक्षा का दिन (Day of Examination) Thursday दिनांक (Date) 28 march 2019

परीक्षार्थी का अनुक्रमांक (Roll Number)

उत्तर-पुस्तिका क्रमांक

R	H	1	8	0	0	1	8	2	7	0	0	0	5
A	0	0	0	0	0	0	0	0	0	0	0	0	0
B	1	1	1	1	1	1	1	1	1	1	1	1	1
C	2	2	2	2	2	2	2	2	2	2	2	2	2
D	3	3	3	3	3	3	3	3	3	3	3	3	3
E	4	4	4	4	4	4	4	4	4	4	4	4	4
F	5	5	5	5	5	5	5	5	5	5	5	5	5
G	6	6	6	6	6	6	6	6	6	6	6	6	6
H	7	7	7	7	7	7	7	7	7	7	7	7	7
I	8	8	8	8	8	8	8	8	8	8	8	8	8
J	9	9	9	9	9	9	9	9	9	9	9	9	9

KM-I-01-

कालेज कोड

0	1	2	3	4	5	6	7	8	9
0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9

(परीक्षार्थी की श्रेणी)

- संस्थागत
- व्यक्तिगत
- बैक पेपर
- अंक सुधार
- भूतपूर्व
- एकल विषय

नामांकन संख्या (Enrollment Number)

M	1	5	7	8	3	5	6	8					
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9

पेपर कोड

H-1067

परीक्षार्थी का पूरा नाम

Jyoti

कक्ष निरीक्षक का नाम

Arjun

## Section A

Ans

Mendel select the pea plant for his experiment have some reason.

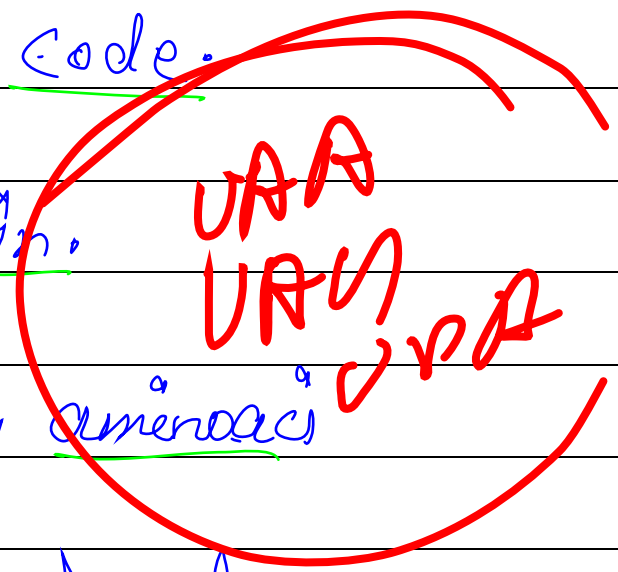
- Because the pea plant is growing in the small area.
- These produce more plant.
- These plant have get pure offspring after self pollination.

closed flower

Ans 2

# Transamination genetic code

- These are 64 type genetic code.
- These are storage with the protein.
- Into the genetic code using amino acid for the coding.
- Amino acid have 20 different type.
- Specific genetic code use for specific in quence.



For example - Into DNA - have some code CATCGAAGGAT

1

These have two types of code those  
 are not involved into the preparation  
 of DNA chain.

• These code use 9 in the decoding.  
 But stoping to the DNA chain.

Ans →

GENISH → Genomic is to heredity  
 Into the heredity we study  
 of genetic.

Ans

Use of PCR  $\Rightarrow$  • To use for the  
One copy to more

Copies get up in the  
sequence.

process DNA

- To the critical situation we get more  
copies of one DNA to 1,000 Number

Ans

CO dominance = The codominance

is the test of  
Mendel in the codominance get

• Genotype = 1:2:1

• Phenotype = 3:1

• than two pair of alleles have same colour in result  
It is pink colour.

Ch is after jointly.

Blind group

⊕ R<sub>x</sub> R<sub>x</sub>

For ex - We get  $F_1$  generation of  
the  $P$  parent gametes

Then cross in the  $F_1$  generation.

- We get (1) pair of alleles is pure red and (1) pair of pure white.
- Two pair of the alleles is pink colour. These are codominance.

R for red colour.  
r for white colour.


	R	r
R	RR	Rr
r	Rr	rr

Phenotype - 3:1

Genotype - 1:2:1

These are pink colour Allels.

$R^y, R^y$  alleles is the dominance allele are  
show codominance of the seed colour,  
And white colour.





# Section B

Ans 6

Criminal syndrome  $\Rightarrow$  The degeneration of the criminal syndrom is the supper male syndroms.

• ~~Which is found in those persons in which have extra character to other.~~

• Supes mal syndrom singel by (XXX)

• These prasones have criminal syndrom in the chromosom one chromosome is extra.

~~XY~~  
~~poly~~

Ans-8 A person whose mother was hemophilic marriage

A woman whose father was hemophilic calculate f

(1) Parent of the person

	$X^c X^c$ —		$XY$
	$X^c$	$X^c$	
$X^c$	$X^c X^c$	$X^c X^c$	50%
$Y$	$Y X^c$	$Y X^c$	50%

(2) Parent of woman =  $\varnothing X^c Y$  —  $XX$



	$X^c$	$Y$
$X$	$XX^c$	$XY$
$X$	$XX^c$	$XY$

50% Hemophelic  
general  
50% Normal

The frequency of the son have - 2 by the mother hemophelic maide  
 How 2 frequency of the hemophelic son  
 = 50%

# Section c

Ans 9 Application of genetic engineering

## Summary

- (1) Gene engineering definition ✓
- (2) What is genetic engineering? ✓
- (3) Source of genetic engineering? ✓
- (4) By the disorder of gene ✓
5. Mutation ✓

(6) Advantage of genetic engineering -

(1) Gene engineering = Study of the Genetic material  
is known gene engineering -  
For ex - study of DNA Chromosome  
etc.

Genetic Engineering  $\Rightarrow$  In the genetic Engineering  
those study of DNA

- DNA = DNA (Deoxyribonucleic acid)
- Discovery of the DNA by Frederick  
crick in 1953
- DNA made up by the four nitrogenous  
Base.
- DNA is a molecule which are made  
up some other particles

• DNA made up - Sugar - phosphate and structurally Nitrogenous base

• These Nitrogenous base are four type

(1) Adenine

(2) Thymine

(3) Cytosine

(4) Guanine.

Four DNA bases

These are amino acid for the specific Codon in the DNA.

Sugar and phosphate are strongly by the Nitrogenous base.

- then DNA have long chain.
  - DNA is Double stranded helix.
- It's discovered by the Johan Watson and Crick.

Source of genetic (eng) = In the  
disorder  
found in mutation

like as DNA Chromosome.  
and in the searching way.



## Advantage - (1) Advantage

- For the check disorder. In the gene engineering
  - For the pure generation advance in the nature character
  - The stopping on the genetic disease those are found in the mother and father do not transfer in the generation.
- Thatching by gene (eng).

Ans 10

## Method of gene transfer

### Summary

- (1) Griffith method
- (2) R strain
- (3) S strain
- (4) Procedure
- (5) Mexum method

(1) Gene transfer  $\Rightarrow$  gene transfer  
is the

Transferring of the genetic material  
by the some methods.

(1) Griffith method Griffith is  
An English  
Scientist and give method of  
Gene transfer.

R-stain = is the virus that is  
the use by the transfer  
Gene into cell.

S-stain = is the protein coated virus

Which is transfer in the seat  
then seat is done.

Process = 1

















































