

अनुक्रमांक (अंकों में) 0006

अनुक्रमांक (शब्दों में)

Astha Yadav

परीक्षार्थी का पूरा नाम

कक्ष निरीक्षक का नाम

परीक्षार्थी द्वारा सम्पूर्ण विवरण भर दिया गया है।

हस्ताक्षर

AJ



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 M.Sc वर्ष 20 19 भाग/सेमेस्टर Ist
(Name of Exam) (Year 20.....) (Part / Semester)
विषय Zoology प्रश्न-पत्र/पाठ्यक्रम Genetics पेपर कोड नं. 2062
(Subject) (Paper /Course) (Paper Code No.)
परीक्षा का दिन Thursday दिनांक 2/5/19
(Day of Examination) (Date)

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	1	1	1	1	1						5
2	2	1/2									3/2
3	4	3									7
4											
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14											

15/2
16
AJ

प्राप्तांक (शब्दों में)	अंकों में
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जाँचकर्ता के हस्ताक्षर एवं तिथि

परीक्षक के हस्ताक्षर एवं तिथि



2018- चौधरी चरण सिंह विश्वविद्यालय, मेरठ

अध्ययक निदेशों के तहत पूरा भाग देंगे

Date Stamp to be affixed here

परीक्षा का नाम M.Sc विषय Zoology प्रश्न पत्र Genetics
भाग/सेमेस्टर 2nd दिनांक 2/5/19
परीक्षार्थी का अनुक्रमांक (Roll Number) 0006
उत्तर पुस्तिका क्रमांक KM-I-01-

M	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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D	3	3	3	3	3	3	3	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	4	4	4	4	4	4	4
F	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
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H	7	7	7	7	7	7	7	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	8	8	8	8	8	8	8
J	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
K																				
L																				

(परीक्षार्थी की श्रेणी)

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

नामांकन संख्या (Enrollment Number)

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

पेपर कोड

H-2062

परीक्षार्थी का पूरा नाम

Astha Yadav

कक्ष निरीक्षक का नाम

AJ

SECTION-A

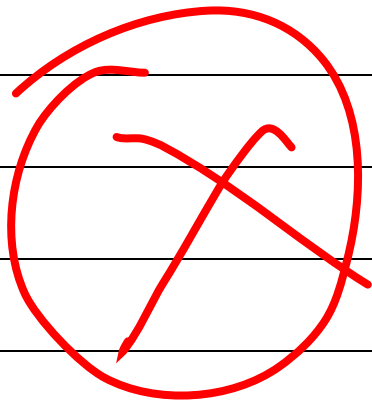
Ans - ① Mendel selected pea plant for his experiment because he can see 7 characters on same plant
- i.e.

Question is about plant

or plant -

Characters		
Flower colour	white	Violet
Seed colour	yellow	green

Plant height	Tall	Dwarf
Fruit shape	Round	wrinkled
Pod shape	Axial	constricted
Fruit colour	Red	white



SECTION - C

Ans-9 Mendelian Principles Of Genetics

Content:-

1. Introduction
 - 1.1 Mendel
2. Principles of Mendelian.

~~2.1~~ Law of dominance

~~2.2~~ Law of Segregation

~~2.3~~ Law of Independent
assortment

3. Deviations from Mendelian Inheritance.

3.1 Co-dominance

3.2 Incomplete dominance

3.3 Multiple allele

3.4 lethal gene

3.5 Epistasis

* INTRODUCTION :-

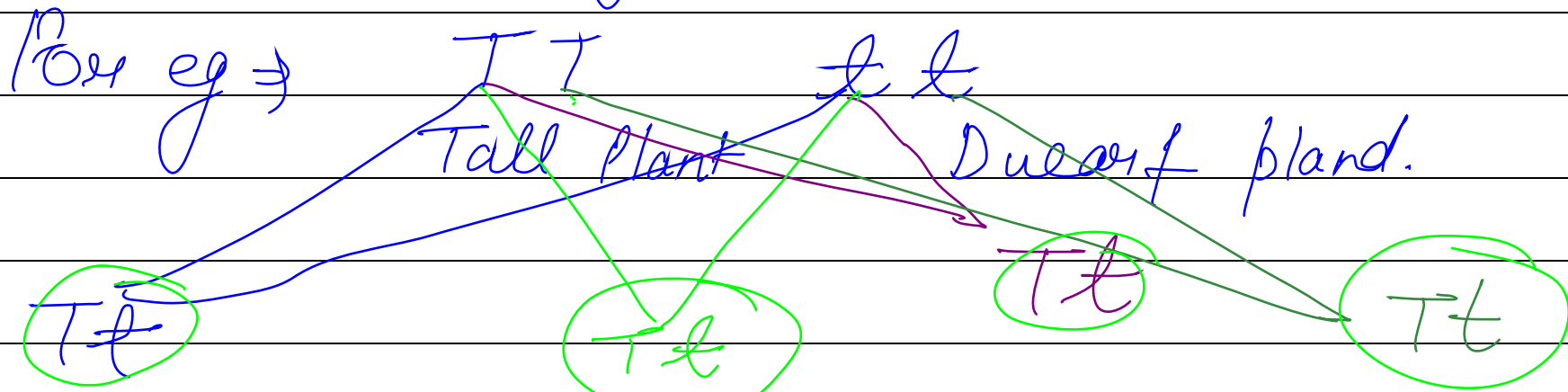
- G. J. Mendel is the father of Genetics.
- He explained about the Inheritance of genes.
- He done experiment on pea plants.
- His experiment time duration was Seven years.

* Mendel got Noble prize for his experiment.

(1) PRINCIPLES OF MENDEL :-

(1) Law of Dominance :-

Law of dominance states that when two characters are present and express itself in heterozygous form.



* All are dominant Tall plants
but heterozygous. Tt.

② Law of Segregation :-

Acc. to this law, the character does not blend with each other, one character is represented itself.

eg

3:1

ratio.

	T	t
T	TT	Tt
t	Tt	tt

(3) Law of Independent Assortment:-

Genes located on different chromosomes will be inherited independently of each other.

~~egs-~~

9:3:3:1

ratio

~~egs-
9:3:3:1
Coma.~~

* Deviations from Mendelian

Inheritance :-

① Co-dominance :-

9

≠ This is the situation in which both alleles are fully expressed in the form of phenotype of the F_1 generation.

Eg → Human Mn Blood group system.

② Incomplete Dominance :- In this situation phenotype of the heterozygous condition is

Intermediate b/w the phenotype between the homozygous for either allele.

* Ratio Comes :- 3:1

4

③ ~~Epistasis~~

Epistasis is the formula where the effect of gene is present on the locus of the modified gene.

SECTION-B:-

⇒ It is also called as royal disease because it is firstly detected in Queen Victoria.

Ans-⑧ In-borne Disorder:-

① Haemophilia :-

⇒ It is x-linked disease

(3) It mainly occurs in Female.

(4) Symptoms :-

- In this disease, blood is not clotted after the injury.

② Klienfeiter Syndrome :-

⇒ It is a sex-linked disorder

⇒ In this disorder, a extra

- chromosome added.

②) for eg:- $X'XY + AA$

Symptoms :-

- ① Short - Penis & testis
- ② Mentally retarded
- ③ High pitch volume

④ Less hairs on body.

⑤ Sterile.

⑥ Phenylketonuria:-

⇒ It is a autosomal disease.

⇒ In this disease chromosome no. 12 is affected. 2

⇒ Mutation occurs in chromosome no. 12.

Symptoms:-

- ① It affects our kidneys.

Ans-④ PCR stands for:- ①

* Polymerase Chain Reaction.

Ans-②

sum final AUG is the initiation ①
codon. *also*

Methionine is the Amino Acid.

Ans ③ Gene Bank

→ Gene Bank are a type of bio-
-repository which preserve
genetic material.

eg → Plants and Animal.

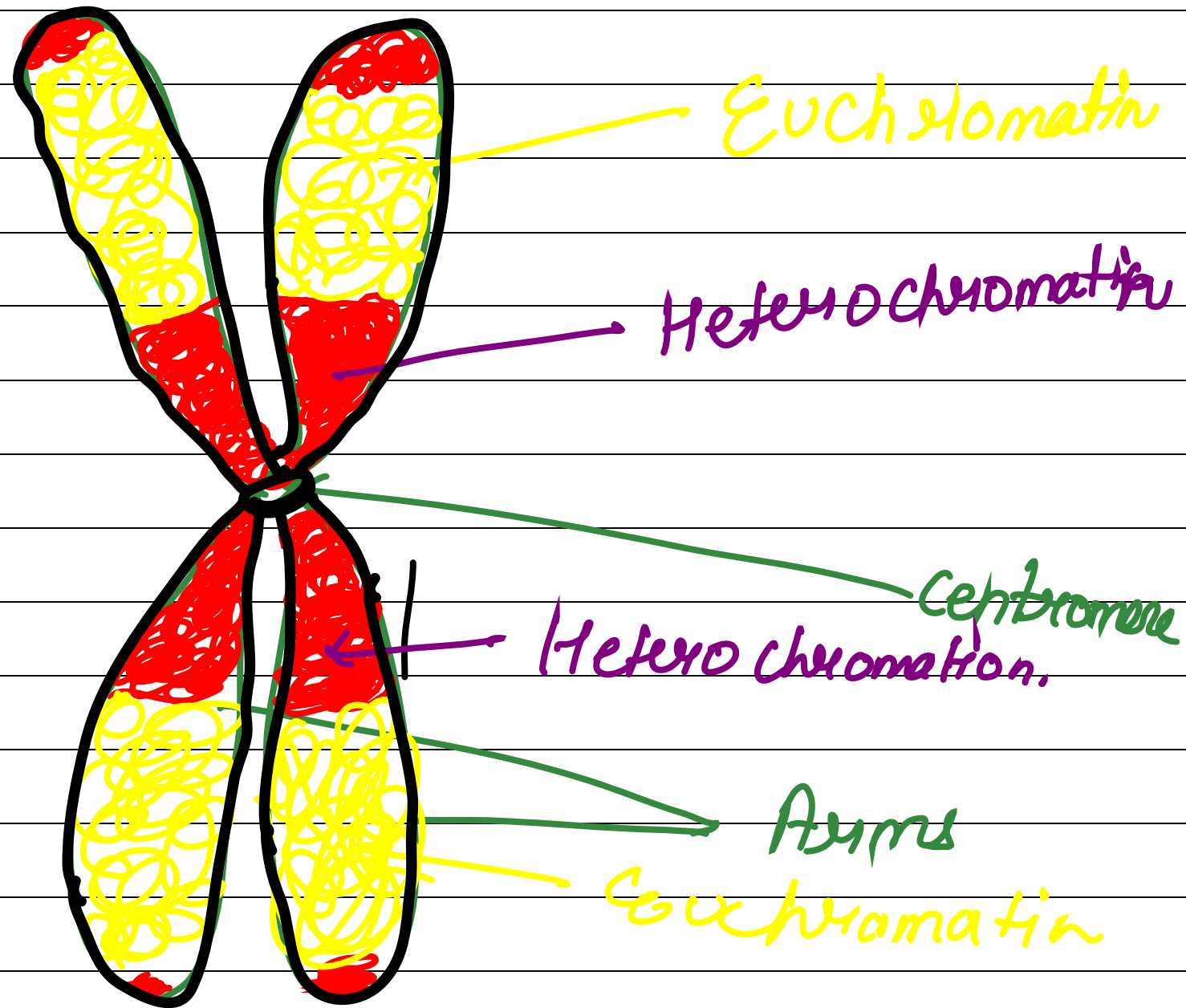
Plants (in vitro freezing).

Ans-5 Split gene makes the protein from RNA. It involves in the process of \Rightarrow Capping, splicing or protein synthesis.

\Rightarrow It have, I_1, I_2, I_3 & E_1, E_2, E_3 .

\Rightarrow Split genes due the introns & exons.

Ans - (7) Heterochromatin & Euchromatin



Euchromatin

● It is lighter part of chromosome.

● It have slightly coiled DNA.

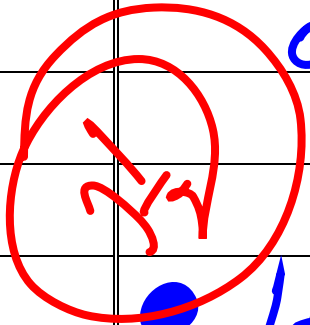
○) It contains less genes.

Heterochromatin

It is darkest part of the chromosome.

It have highly coiled DNA.

It contains more genes.



Sec. D.

ACB-10

Content:-

I. Chromosomes.

I.1 Introduction.

SI
M
Ch

Q.?

Types of chromosomes.

Q.1 Acrocentric

Q.2 Telocentric

Q.3 Metacentric

Q.4 Sub-Metacentric.

3. Numerical alteration of chromosomes.

3.1 Monoploidy ✓

3.2 Aneuploidy

3.3 Euploidy ✓

3.4 Heteroploidy ✓

* Chromosome:

→ It is a thread like structure

→ It contains genes. ✓

* Numerical Alteration in Chromosomes.

→ It is defined as there are all change in chromosomal number.

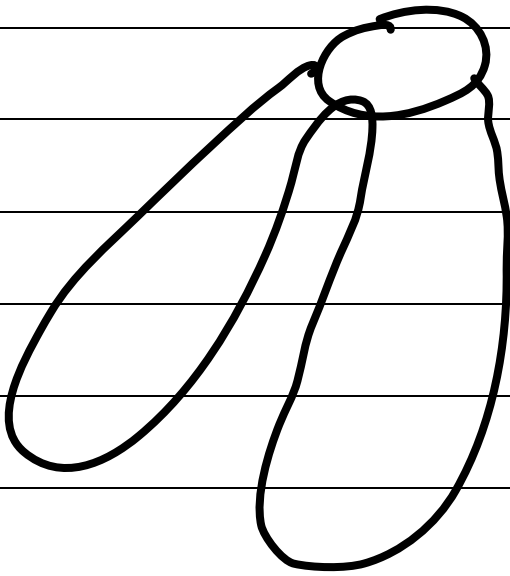
→ It is of many type?

- ① Euploidy
- ② Monoploidy
- ③ Tetraploidy.
- ④ Aneuploidy.

Polyploidy
Example

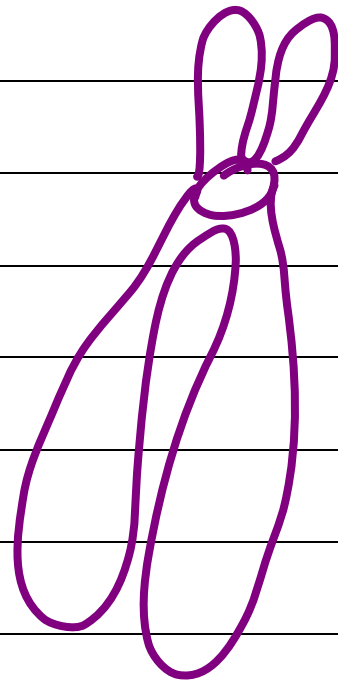
Types of Chromosomes

①

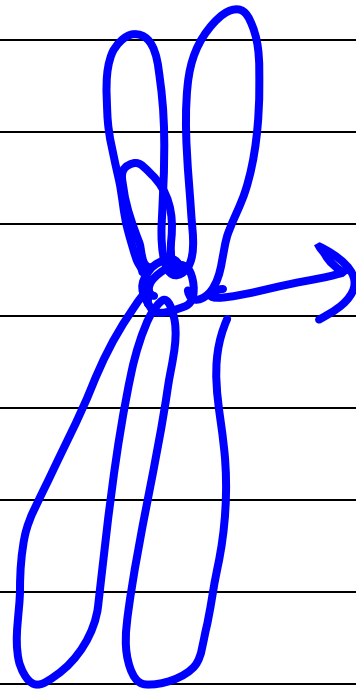


→ Telocentric.

Example
maize



Metacentric



Sub-Metacentric



