

"Dissemination of Education for Knowledge, Science and Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (Empowered Autonomous)
Department of Zoology
B. Sc. I Semester-I
Academic Year: 2024 -25

Date:07/08/2024

NOTICE

All students of **B.Sc. I** are hereby informed that the **Open Book Test** for the paper **Animal Diversity-I** is scheduled to be held on **14/08/2024**. Attendance is **compulsory** for all students.

A. Jadhav
Teacher Incharge
(Ms. N. A. Jadhav)

G. K. Sontakke
Dr. G. K. Sontakke
HEAD
DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

"Dissemination of Education for Knowledge, Science and Culture"

-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Zoology

B. Sc. I Semester-I

Academic Year: 2024 -25

Name of the Paper: Animal Diversity - I

Date: 14/08/2025

Test:

Attendance

Sr. No.	Roll No.	Name of the Student	Signature
1.	7372	Sadhana Ravindra Magdum	<u>Magdum</u>
2.	7378	Payal Bajirao Patil	<u>Patil</u>
3.	7378	Akanksha Suresh Patil	<u>Patil</u>
4.	7376	Kaustika Mahesh Nikam	<u>Nikam</u>
5.	7385	Nilam Laxman Taminkar	<u>Nilam Taminkar</u>
6.	7385	Vaishnavi Sharanappa Bellundagi	<u>Bellundagi</u>
7.	7884	Uma Pandurang Karande	<u>Karande</u>
8.	7352	Anita Ankita Shamrao Shinde	<u>Shinde</u>
9.	7413	Smriti Manuti Kodak	<u>Kodak</u>
10.	7538	Sonika Anil Subare	<u>Subare</u>
11.	7419	Girisha Yuvraj Mhetre	<u>Mhetre</u>
12.	7344	Anjali Amal More	<u>Anjali</u>
13.	7515	Samruddhi Vijay Shinde	<u>S.V. Shinde</u>
14.	7488	Sakshi Bhaskar Korane	<u>Korane</u>
15.	7518	Pranali Mhalappa Uhanmare	<u>Uhanmare</u>
16.	7514	Subale Aditi Akeram	<u>Akeram</u>
17.	7513	Gauri Parmod Pawar	<u>G.P. Pawar</u>
18.	7425	Sonika Ranaji Chougale	<u>Chougale</u>
19.	7507	Sheeya Sunil Patil	<u>Patil</u>
20.	7437	Samruddhi Uttam Patkar	<u>Patkar</u>
21.	7434	Vrushali Mahadev Patil	<u>Patil</u>
22.	7389	Sonika Mahadev Ambi	<u>S.M. Ambi</u>
23.	7401	Akanksha Santosh Kadam	<u>Kadam</u>
24.	7423	Rameshvar Sopan Narale	<u>Narale</u>
25.			
26.			
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30.			
31.			<u>Gita</u>

HEAD

DEPARTMENT OF ZOOLOGY



॥ ज्ञान, विज्ञान आणि सुसस्कार यासाठी शिक्षण प्रसार ॥

- शिक्षणमहर्षी डॉ. बापूजी साळुंखे

VIVEKANAND COLLEGE, KOLHAPUR.
(Empowered Autonomous)

SUPPLIMENT

Jr. Supervisor's Sign. :

Students Sign. : Pragdum

Seat No. : 7372

Seat No. in words :

Suppliment No. :

11464

Centre V.C.K

प्र. क्र.
Q. No.

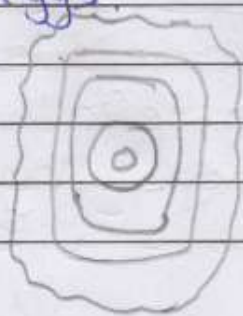
4

→ Life History / Cycle of *Ascaris lumbricoides*.

- *Ascaris* male and female copulate inside the host intestine and sperms are transferred into the vagina. The sperms ascend up in the uterus and fertilize the eggs in the upper part of uterus. After fertilization, uterine wall secrete shell around it. The shelled eggs are called capsule then these eggs move down wards.
- The eggs laying capacity of the adult female worm is approximately 20,000-2,00,000 eggs daily. A female can lay about 2,70,00,000 eggs in her life time.

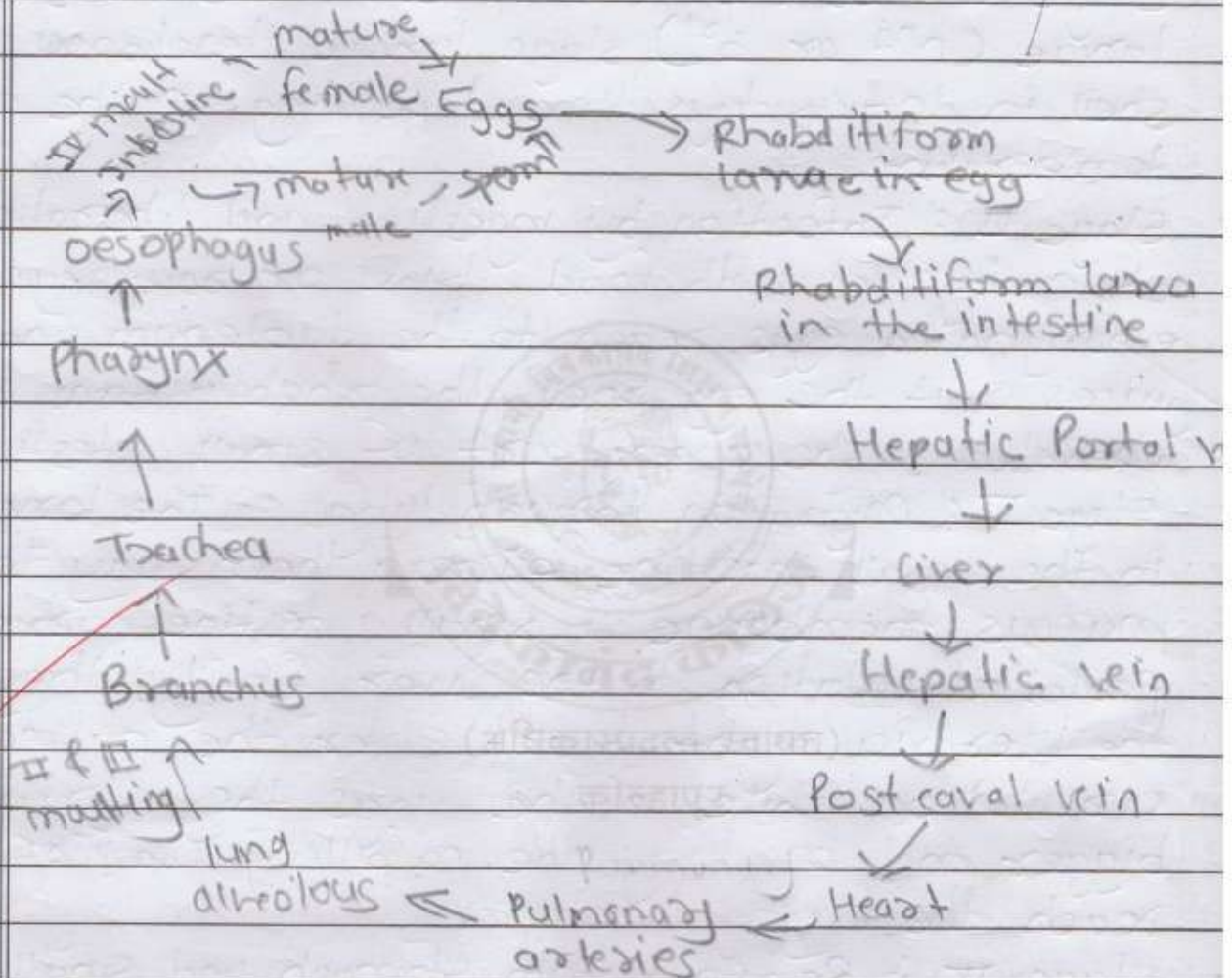
* Development stages of *Ascaris* :-

- 1 Eggs :- They are of two types - fertilized eggs and unfertilized eggs.



प्र. क्र.
Q. No.

beings to discharge eggs in stool with in about 2 months from time of infection. cycle is again repeated.



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Department of Zoology

Academic Year: 2024 -25

Class-B.Sc.-I Sem-I

Name of the Paper: Animal Diversity-I

Date: 14/08/2025

Time-11-12 pm

Question Paper

Q1. Long Answer question

- a) Describe in detail life history of *Ascaris lumbricoides* with neat labelled diagram-10 Marks



Ms. N.A. Jadhav

Teacher Incharge

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Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Zoology

Academic Year: 2024 -25

Class-B.Sc.-I Sem-I

Date:12/08/2024

Name of the Paper: Cell Biology

Time-11-12 pm

Question Paper

Q1. Long Answer question

A) Explain in detail Watson and Crick's model of DNA.-10 Marks



Ms. N.A. Patel

Teacher Incharge

"Dissemination of Education for Knowledge, Science and Culture"

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Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Zoology

B. Sc. I Semester-I

Academic Year: 2024-25

Name of the Paper: cell Biology
Test:

surprise Test
Attendance

Date: 12/08/2024

Sr. No.	Roll No.	Name of the Student	Signature
1.	7464	Vaidehi A. Patole	<u>Vatole</u>
2.	7468	Chhavi R. Yadav	<u>Chhavi</u>
3.	7495	Asiya D. Nadaf	<u>Asiya</u>
4.	7496	Tasneem B. Nadaf	<u>T.B. Nadaf</u>
5.	7494	Siya Kailas More	<u>Siya</u>
6.	7428	Peenali mahadev Patil	<u>Peenali</u>
7.	7424	Aditi Jaywant Patil	<u>Aditi</u>
8.	7432	Swati Ananda Patil	<u>Swati</u>
9.	7515	Samruddhi Vijay Shinde	<u>S.V. Shinde</u>
10.	7518	Pranali Mhalappa Vhanmane	<u>Pranali</u>
11.	7475	Sanika Tanaji Chougale	<u>Sanika</u>
12.	7488	Sakshi Bhaskar Korape	<u>Sakshi</u>
13.	7471	Vaishnavi Shahaji Balugade	<u>Balugade</u>
14.	7413	Snushti Manoj Kodak	<u>Snushti</u>
15.	7352	Ankita Shamrao Shinde	<u>Ankita</u>
16.	7538	Sanika Anil Subare	<u>Sanika</u>
17.	7419	Girisha Yuvraj Mhetre	<u>Girisha</u>
18.	7344	Anjali Amare More	<u>Anjali</u>
19.	7342	Uma pandurang Karande	<u>Karande</u>
20.	7356	Vaishnavi Sharanappa Bellundagi	<u>V. Bellundagi</u>
21.	7378	Payal Bajirao Patil	<u>Payal</u>
22.	7377	Akanksha Surresh Patil	<u>Akanksha</u>
23.	7376	Kastika mahesh Nikam	<u>Kastika</u>
24.	7386	Nilam Laxman Taminkar	<u>Nilam</u>
25.	7372	Sadhana Ravindra Magdum	<u>Magdum</u>
26.			
27.			
28.			
29.			
30.			
31.			

Teacher incharge

Satish



(अधिकारप्रदत्त स्वायत्त)
कोल्हापूर

॥ ज्ञान, विज्ञान आणि सुसंस्कार यासाठी शिक्षण प्रसार ॥

- शिक्षणमहर्षी डॉ. बापूजी साळुंखे

3/10

VIVEKANAND COLLEGE, KOLHAPUR.

(Empowered Autonomous)

SUPPLIMENT

Jr. Supervisor's Sign. :

Students Sign. : Ghinde

Seat No. : 7352

Seat No. in words : seven three
five two

Suppliment No. :

11462

Centre VCK.

प्र. क्र.

Q. No.

Cell biology

Q. explain Watson and crick's model of DNA.

- 1) In 1953 James Watson and Francis crick proposed DNA structure based on X-ray crystallographic studies.
- 2) DNA molecules consist of two long strands coiled around a common imaginary central axis to form a double helix. It looks like a twisted ladder.
- 3) Each strand consist of number of nucleotide. Each nucleotide is made up of deoxyribose sugar, phosphate group and nitrogen base.
- 4) The combination of sugar and nitrogen base is called nucleoside. Together with phosphate called nucleotide.
- 5) The successive nucleotide of the same strand are linked by 3'—5' phosphodiester linkage, i.e. phosphate attached to 5th carbon of sugar of nucleotide is joined to 3rd carbon of another

02

Section

Q. No.

Marks

प्र. क्र.

Q. No.

6) The two strands are equidistant and parallel all along their length. Each transverse step is made up of nitrogen bases which are purines and pyrimidines.

7) Double helix - The strands of DNA molecule are spirally twisted (coiled) around each other. The side arms of ladder are called banister, railing and the steps are called rungs.

8) The base pairs forms rungs or steps and back bone of strand forms railing. Back bone of strand is formed by sugar phosphate chain.

9) Base pairing nitrogen bases present on one strand, pair with the nitrogen bases of opposite strand.

10) Purine base always pairs with pyrimidine base.

11) G always pair with the pyrimidine base C with 3 hydrogen bonds.

12) This pairing is termed as complementary base pairing.

Purine - Pyrimidines

Adenine - Thymine (A = T or T = A)

Guanine - Cytosine (G = C or C = G)

snushti M. Kodak



(अधिकारप्रदत्त स्वायत्त)
कोल्हापूर

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(Empowered Autonomous)

SUPPLIMENT

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- शिक्षणमहर्षी डॉ. बापूजी साळुंखे

9
10

Jr. Supervisor's Sign. :

Students Sign. : smk

Seat No. : 7413

Seat No. in words : Seven four one three

Suppliment No. :

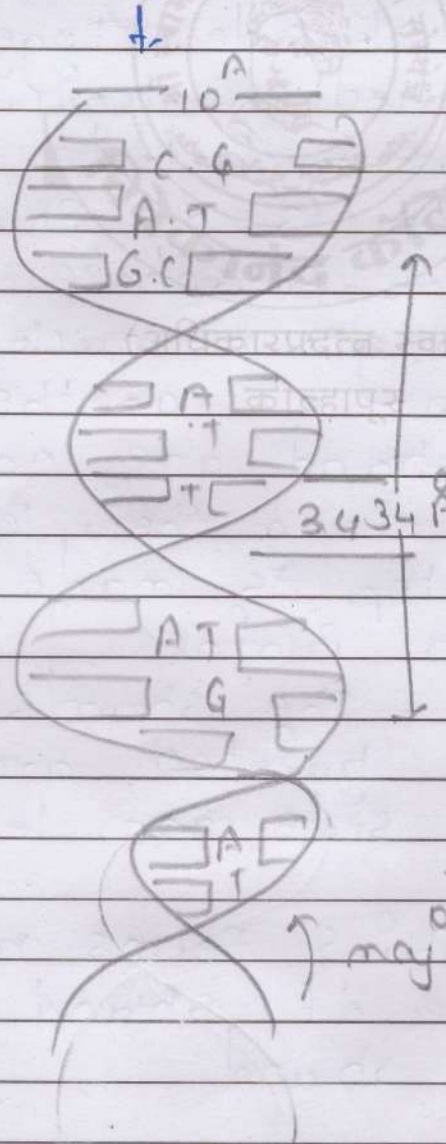
11449

Centre Vivekanand college

प्र. क्र.
Q. No.

Cell biology

Q 1] Explain watson & crick's model of DNA



प्र. क्र.

Q. No.

- ① In 1953 James Watson & Francis Crick proposed DNA structure based on X-Ray crystallographic studies.
- ② DNA molecule consists of 2 long strands coiled imaginarily around a central axis to form double helix.
- ③ Each strand consists of no. of nucleotides. A nucleotide is made up of deoxyribose sugar, phosphate group.
- ④ The combination of sugar & nitrogen base is called nucleoside. Together with phosphate called nucleotide.
- ⑤ The successive nucleotides of same strand are linked by '3-5' phosphodiester linkage. i.e. phosphate attached to 5th carbon of sugar of nucleotide joined to 3rd carbon of another.
- ⑥ The two strands are equidistant & parallel all along their length. Each transverse step is made up of nitrogenous bases which are purines.
- ⑦ Double helix - The strands of DNA molecule are spirally twisted around each other. The side arm ladder are called banister.
- ⑧ The base pairs form rungs or steps & back bone of strand form railing back bone of strand.

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Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Zoology

B. Sc. I Semester-II

Academic Year: 2024-25

Date: 08/02/2025

NOTICE

All students of **B.Sc. I** are hereby informed that the **Unit Test** for the paper **Animal Diversity-II** is scheduled to be held on **15/02/2025**. Attendance is **compulsory** for all students.

Atall
Teacher Incharge
(Ms. N. A. Tadhar)

G.K.
Dr. G. K. Sontakke
HEAD
DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

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Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur
(An Empowered Autonomous Institute)

Department of Zoology

Academic Year: 2024 –25

Class-B.Sc.-I Sem-II

Date:15/02/2025

Name of the Paper: Animal Diversity-II

Time-11-12 pm

Question Paper

Q1. Long Answer question

A) Write in detail the general characters of Class- Chondrichthyes and Class- Osteichthyes.-10 Marks



Ms. N.A. Jadhav

Teacher Incharge

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Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Zoology

B. Sc. I Semester-I

Academic Year: 2024 -25

Name of the Paper: Animal Diversity - II

Date: 15/02/2025

Test:

Attendance

Sr. No.	Roll No.	Name of the Student	Signature
1.	7518	Pranali Mhalappa Vhanmare	<u>Pranali</u>
2.	7493	Nikita Tanaji Mole	<u>Nikita</u>
3.	7515	Samruddhi Vijay Shinde	<u>S.V. Shinde</u>
4.	7471	Vaishnavi Shahaji Balugade	<u>Vaishnavi</u>
5.	7488	Sakshi Bhaskar Korane	<u>Bhaskar</u>
6.	7475	Sanika Tanaji Chougale	<u>Sanika</u>
7.	7432	Swati Ananda Patil	<u>Swati</u>
8.	7424	Aditi Jaywant Patil	<u>Aditi</u>
9.	7428	Pranali Mahadev Patil	<u>Pranali</u>
10.	7464	Vaidehi A. Patole	<u>Vaidehi</u>
11.	7496	Tasneem B. Nadaf	<u>T.B. Nadaf</u>
12.	7495	Asiya D. Nadaf	<u>Asiya</u>
13.	7468	Chhavi R. Yadav	<u>Chhavi</u>
14.	7494	Siya Kailas More	<u>Siya</u>
15.	7372	Sadhana Ravindra Magdum	<u>Sadhana</u>
16.	7375	Akanksha Suresh Patil	<u>Akanksha</u>
17.	7378	Payal Bajirao Patil	<u>Payal</u>
18.	7376	Kartika Mahesh Nikam	<u>Kartika</u>
19.	7386	Nilam Laxman Taminkar	<u>Nilam</u>
20.	7356	Vaishnavi Shamrao Belluragi	<u>Vaishnavi</u>
21.	7384	Uma Pandurang Korande	<u>Uma</u>
22.	7387	Srushti Maruti Kodak	<u>Srushti</u>
23.	7433	Samruddhi U. Patkar	<u>Samruddhi</u>
24.	7352	Ankita Shamrao Shinde	<u>Ankita</u>
25.	7538	Sanika Anil Suraze	<u>Sanika</u>
26.	7419	Girisha Yuvraj Mhetre	<u>Girisha</u>
27.	7344	Arya Ambar More	<u>Arya</u>
28.	7423	Rameshvar Sopan Narale	<u>Rameshvar</u>
29.	7434	Vrushali Mahadev Pahl	<u>Vrushali</u>
30.	7389	Sanika Mahadev Ambi	<u>Sanika</u>
31.	7401	Akanksha Santosh Kadam	<u>Akanksha</u>



(अधिकारप्रदत्त स्वायत्त)
कोल्हापूर

॥ ज्ञान, विज्ञान आणि सुसंस्कार यासाठी शिक्षण प्रसार ॥

- शिक्षणमहर्षी डॉ. बापूजी साळुंखे

08
10

VIVEKANAND COLLEGE, KOLHAPUR.

(Empowered Autonomous)

Pranali Mhalappa Vhanmane

SUPPLIMENT

Animal Diversity - II

Jr. Supervisor's Sign. :

Students Sign. : Prihanmane

Seat No. : 7518

Seat No. in words :

Suppliment No. :

8832

Centre

प्र. क्र.

Q. No.

Q. Write in detail the general characters of class - Chondrichthyes and Osteichthyes.

→ General Characters of Chondrichthyes :

- 1) This is also known as Cartilaginous fishes.
 - 2) These are cold blooded vertebrates.
 - 3) Heart is two chambered
 - 4) Mostly marine and predaceous.
 - 5) Body shape is usually dorso-ventrally flattened.
 - 6) Endoskeleton is entirely cartilaginous.
 - 7) Exoskeleton - Separate dermal microscopic placoid scales.
 - 8) Mouth is present on ventral side.
 - 9) Respiration by gills. Five pairs of gills slit present.
 - 10) Air (Swim) bladder is absent.
 - 11) Fertilization is internal.
 - 12) Rectal gland is present.
 - 13) Oviducts not connected to ovaries.
- e.g. Sharks, Sting ray, skates.

General Characters of Osteichthyes :

- 1) These are also known as bony fishes.
- 2) Heart is two chambered.

प्र. क्र.

Q. No.

- 3) Bony endoskeleton present.
- 4) Exoskeleton - Overlapping, dermal large, cycloid / cten
- 5) Body is spindle-shaped and streamlined
- 6) Mouth is terminal or sub-terminal with teeth but no enamel caps.
- 7) Respiration by gills. Four pairs of gills and gill slits covered by an operculum.
- 8) Air (Swim) bladder is present.
- 9) Olfactory sacs are dorsal.
- 10) Fertilization is external (except few)
- 11) Rectal gland is absent.
- 12) Oviducts are connected to ovaries.
e.g. Rohu, Catla, Mrigal.

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Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Zoology

B. Sc. I Semester-II

Academic Year: 2024-25

Date:08/02/2025

NOTICE

All students of **B.Sc. I** are hereby informed that the **Unit Test** for the paper **Genetics** is scheduled to be held on **15/02/2025**. Attendance is **compulsory** for all students.

Teacher incharge
Mr. G. H. Fadake
Gadke


Dr. G. K. Sontakke

HEAD
DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

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Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur
(An Empowered Autonomous Institute)

Department of Zoology

Academic Year: 2024 -25

Class-B.Sc.-I Sem-II

Date:15/02/2025

Name of the Paper: Genetics

Time-11-12 pm

Question Paper

Q1. Long Answer question

A) Describe dihybrid cross with suitable example.-10 Marks



Mr. G. H. Fadake

Teacher Incharge

"Dissemination of Education for Knowledge, Science and Culture"

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Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Zoology

B. Sc. I Semester-I

Academic Year: 2024 -25

Name of the Paper: Genetics
Test-

Date: 15/02/2025

Attendance

Sr. No.	Roll No.	Name of the Student	Signature
1.	7413	Snushti ^o Maruti ^o Kodak	<u>Sook</u>
2.	7419	Girisha Yuvraj Mhetre	<u>Girisha</u>
3.	7538	Gunika Anil Sutar	<u>Gunika</u>
4.	7352	Ankita Shamrao Shinde.	<u>Ankita</u>
5.	7344	Anjali Amro Morre	<u>Anjali</u>
6.	7356	Vaishnavi Sharanappa Bellundagi	<u>Vaishnavi</u>
7.	7342	Uma pandurang Karande	<u>Karande</u>
8.	7377	Akanksha Sunesh Patil	<u>APatil</u>
9.	7378	Payal Bajirao Patil	<u>PPatil</u>
10.	1372	Sadhana Ravindra Magdum	<u>Magdum</u>
11.	7386	Nilam Laxman Taminkar	<u>Nilamtaminkar</u>
12.	7376	Kaetika Mahesh Nikam	<u>Kamiker</u>
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Sanika Anil Suber



(अधिकारप्रदत्त स्वायत्त)
कोल्हापूर

VIVEKANAND COLLEGE, KOLHAPUR.
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SUPPLIMENT

॥ ज्ञान, विज्ञान आणि सुसंस्कार यासाठी शिक्षण प्रसार ॥

- शिक्षणमहर्षी डॉ. बापूजी साळुंखे

07
10

Jr. Supervisor's Sign. :

Students Sign. : Sanika

Seat No. : 7538

Seat No. in words : Seven five Eight
three Eight

Suppliment No. :

11454

Centre vivekanand college

प्र. क्र.

Q. No.

Genetics

Q. Describe Dihybrid cross with suitable example.
→ Dihybrid cross:-

A dihybrid cross involves inheritance of two trait it is called dihybrid cross.

principle :- given example is base on dihybrid cross.

Given :- i] Rough coat [R] is dominant over smooth coat [r]

ii] Black colour [B] is dominant over white colour [b]

iii] Homozygous rough black [RRBB] is crossed with smooth white [rrbb] coated guinea pig.

To find out :- Genotyp & phenotype of F₁ & F₂ generation.

02

Section

Q. No.

Marks

प्र. क्र.

Q. No.

Solution:-

phenotype : Rough black $\times$ smooth white.Genotype : $RRBB \times rrbb$.Gametes : $RB \times rb$.F₁ generation : $RB \times rb$ Heterozygous rough black.F₂ generationphenotype :- Heterozygous rough black $\times$
Heterozygous rough blackGenotype :- $RB \times rb \times RB \times rb$.Gametes :- $RB, Rb, rB, rb \times RB, Rb, rB, rb$.

प्र. क्र.
Q. No.

Putting gametes in checker board.

$\frac{\text{♀ gamete}}{\text{♂ gamete}}$	RB	Rb	rB	rb
RB	RRBB Rough Black	RRBb Rough black	RrBB Rough black	RrBb Rough black
Rb	RRBb Rough Black	RRbb Rough white	RrBb Rough black	Rrb b Rough white
rB	RrBB Rough Black	RrBb Rough black	rrBB Smooth black	rrBb Smooth black
rb	RrBb Rough Black	Rrb b Rough white	rrBb Smooth Black	rrbb Smooth white.

* Ratio.

9 - rough black, 3 - rough white, 3 - smooth black & 1 smooth white.
9 : 3 : 3 : 1.

$$9 : 3 : 3 : 1$$