

Deola Education Society's  
**KARMAVEER RAMRAOJI AHER**  
**ARTS, SCIENCE & COMMERCE COLLEGE, DEOLA**  
Tal. Deola (Nashik) 423 102.

Personal Record

Name in Full :	<u>Gunjal Rajendra Shrawan</u>	
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Designation :	<u>Assistant Professor</u>	
Date of appointment :	<u>01/07/1993</u>	
Present Grade :	<u>57700 - 182400</u>	
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	b) Permanent / Temporary	
	c) Open / BG / ST / NT / VNT	
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(1) Blood Group :	<u>O +ve</u> Weight : _____ Height : _____	
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(3) Bank A/c. No. :		
(4) Vehicle No. :		
(5) LIC Policy No. :		
(6) Positions held	i) <u>Head department of Physics.</u> ii) <u>Aher.</u> iii) <u>Principal</u>	
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REDMI NOTE 11 T 5G

Kar. Ramraoji Aher Arts, Sc & Comm. College, Deola (Nashik)

**TIME TABLE**  
**2021 - 2022**

Sr. No.	Time	Class	Mon.	Tue	Wed.	Thu.	Fri.	Sat.
1	8:00 To 10:00 A.M.	T.Y.B.Sc.	-	-	-	Phy. IV	Phy. IV	Phy. IV
2	9:15 To 10:30 A.M.	Phy. I	Phy. I	Phy. I	Phy. I	Phy. V	Phy. V	Phy. V
3	10:45 To 11:30 A.M.	Prac. I	-	-	-	-	-	-
4	10:30 To 11:15 A.M.	T.Y.B.Sc.	Phy. II	Phy. II	Phy. II	Phy. III	-	-
5	11:15 To 12:00 P.M.	S.Y.B.Sc.	-	-	-	-	Environment studies	-
	12:30 To 1:30 P.M.	Prac. II	-	-	-	-	Studies	-
	1:30 To 2:30 P.M.	T.Y.B.Sc.	Prac. I	Prac. I	Prac. II	-	-	-
	2:30 To 3:30 P.M.	Prac. II	-	-	-	-	-	-
	3:30 To 4:30 P.M.	Prac. III	-	-	-	-	-	-
	4:30 To 5:30 P.M.	Prac. IV	-	-	-	-	-	-
	5:30 To 6:30 P.M.	Prac. V	-	-	-	-	-	-
	6:30 To 7:30 P.M.	Prac. VI	-	-	-	-	-	-
	7:30 To 8:30 P.M.	Prac. VII	-	-	-	-	-	-
	8:30 To 9:30 P.M.	Prac. VIII	-	-	-	-	-	-

**TEACHING SUBJECTS**

PRINCIPAL  
Kar. Ramraoji Aher Arts, Sc & Comm. College, Deola (Nashik)

Sr. No.	Class	Paper	Title
1	S.Y.B.Sc. Sem.	Paper I	Mathematical methods in Physics
2	T.Y.B.Sc.	Paper III	classical Mechanics
	Sem-I	Paper IV	Atomic & molecular Physics
	T.Y.B.Sc.	Paper V	Computational physics
	Sem-II	Paper III	Statistical physics & thermodynamics
		Paper IV	Nuclear physics
		Paper V	Electronics - II
		Paper VIII	Micro controller
		Practical Papers I & II.	PRINCIPAL Kar. Ramraoji Aher Arts, Sc & Comm. College, Deola (Nashik)

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18/11/2022, 12:43

PLANNING FOR THE YEAR - 2021- 2022		
Month	Class / Subject	Subject Topics
Nov-21	S.Y.B.Sc. Paper- I	Complex Numbers
Dec-21	-II-	Partial differentiation
Jan-22	-II-	Vector Algebra
Feb-22	-II-	Differential Equations.
Dec-21	T.Y.B.Sc. Environmental Studies	Natural resources, Renewable and Non-Renewable Resources
Nov-21	T.Y.B.Sc. Paper- III	Motion of particles

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PLANNING FOR THE YEAR - 2021- 2022		
Month	Class / Subject	Subject Topics
Dec-21	T.Y.B.Sc. Paper- III	Central force field
Jan-22	-II-	Scattering of particles. Internal Exam.
Feb-22	-II-	Lagrangian and Hamiltonian formulation
Nov-21	T.Y.B.Sc. Paper- IV	Atomic structure
Dec-21	-II-	One and Two Valence electron system.

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**Karmaveer Ramraoji Aher Arts, Science & Commerce College, Deola**  
 Tal - Deola Dist - Nashik

**CLASS-WISE TIME-TABLE FOR THE YEAR 2021-22**

**Class - F. Y. B. Sc.**

Period	Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	8.00 AM to 8.45AM	Math/Zoo (SSK/VKW)	Math/Zoo (SSK/VKW)	Math/Zoo (SSK/VKW)	Botany (DKA)	Botany (DKA)	Botany (DKA)
2	8.45 AM to 9.30AM	Botany (MHA)	Botany (MHA)	Botany (MHA)	Math/Zoo (SSK/SVP)	Math/Zoo (SSK/SVP)	Math/Zoo (SSK/SVP)
3	9.30 AM to 10.15 AM	Chemistry (NST)	Chemistry (NST)	Chemistry (NST)	Chemistry (BKD)	Chemistry (BKD)	Chemistry (BKD)
10.15 AM to 10.30 AM - Short Recess							
4	10.30 AM to 11.15 AM	Phy/Geo (SBB/BSL)	Phy/Geo (SBB/BSL)	Phy/Geo (SBB/BSL)	Phy/Geo (RSG/BSL)	Phy/Geo (RSG/BSL)	Phy/Geo (RSG/BSL)
5	11.15 AM to 12.00 PM						
6	12.20 PM to onwards Practicals	Botany/ Zoo (MHA/ DMS/ VKW)	Botany/ Zoo (MHA/ DMS/ VKW)	Che/Phy/Geo (BKD/RSG /BSL)	Che/PhyGeo (NST/SBB/BSL)	Math (SSK)	Math (SSK)



Dr. V.K. Wahule



Prof. Dr. Smt. M. H. Aher



( H. R. Aher )

PRINCIPAL  
 KAR RAMRAOJI AHER ARTS, SCIENCE  
 AND COMMERCE COLLEGE, DEOLA  
 NASHIK

Deola Education Society's  
**Karmaveer Ramraoji Aher Arts, Science & Commerce College, Deola**  
 Tal - Deola Dist - Nashik

**CLASS-WISE TIME-TABLE FOR THE YEAR 2021-22**

**Class - S. Y. B. Sc.**

Period	Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	8.00 AM to 8.45AM	Mar/Eng (FSD/IDK)	Mar/Eng (FSD/IDK)	Mar/Eng (FSD/IDK)	Zoo/Phy (SPP/CVD)	Zoo/Phy (SPP/CVD)	Zoo/Phy (SPP/CVD)
2	8.45 AM to 9.30AM	Zoo/Phy (RSG/VKW)	Zoo/Phy (RSG/VKW)	Zoo/Phy (RSG/VKW)	Chemistry (MRB)	Chemistry (MRB)	Chemistry (MRB)
3	9.30 AM to 10.15 AM	Bot/Math (DKA/SSK)	Bot/Math (DKA/SSK)	Bot/Math (DKA/SSK)	Bot/Math (MHA/SSK)	Bot/Math (MHA/SSK)	Bot/Math (MHA/SSK)

10.15 AM to 10.30 AM - Short Recess

4	10.30 AM to 11.15 AM	Chemistry (SDT)	Chemistry (SDT)	Chemistry (SDT)	Env. Study	Env. Study	Env. Study
5	11.15 AM to 12.00 PM						
6	12.00 PM to onwards Practicals	Chemistry (MRB/VMJ)	Chemistry (MRB/VMJ)	Chemistry (DKA/SVP)	Bot/Zoo/Math (DKA/SVP/SSK)	Mar/Eng /Phy (ESP/JDK/SBB)	Physics (SBB)

Dr. V. K. Wahule

Prof. Dr. Smt. M. H. Aher

  
 (Prin. H. R. Aher)

  
 PRINCIPAL

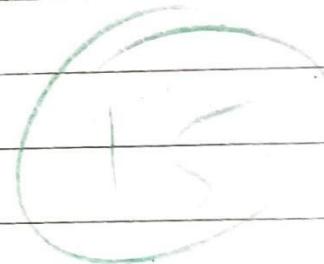
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 & COMMERCE COLLEGE, DEOLA  
 NASHIK

Savitribai Phule Pune University.

Karmveer Ramraoji Aher Art's. Science

Commerce College Deala. Nashik.

Department



of

Zoology

TOUR REPORT

2021-2022

# TOUR REPORT

A visit to Forensic Laboratory  
in Nashik.

Name : Nikam pooja Nitin

Std : I.Y.BSC.

Roll No : 73

Teacher's Sign.: \_\_\_\_\_

# CERTIFICATE

Class : T.Y.BSC.

Year : 2021-2022

This is to Certify that the work entered  
in study tour Report of  
Miss: Nikam pooja Nitin OF T.Y.BSC Division-  
A Roll No - 73 Uni. Exam No - has Satisfac-  
tily Complete the study tour report of the  
year 2021-2022 in College as laid down by  
the University.

*Head  
16/5/2022*

Head of  
Department

External  
Examiner

Internal  
Examiner.

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2	Regional occupational Scientist Laboratory Nashik.	
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5	Biology and Geology	W ✓
6	DNA	
7	Prohibition and Excise	
8	Physics.	
9	Test Division.	



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# Introduction

Forensic Science is the application of science and technology to the detection and investigation of crime. Forensic Science has shaped the world of justice, signifying the examination of crime with the help of modern and advanced technology.

Forensic Science laboratories play a vital role in resolving all civil and criminal cases. Forensic Science Laboratory, Mumbai was first established in 1958 at Sir J.J. Group of Hospitals with a handful of experts and staff. It also has Seven Regional Forensic Science Laboratories (RFSLs) at Nagpur (1966), Pune (1979), Aurangabad (1981), Nashik (2004); Amravati (2008), Nanded (2015) and Kolhapur (2016) and five mini forensic Science laboratories at Chandrapur (2019), Thane (2019) and Solapur (2020) with total State strength of 1463.

# Regional occupational Scientist Laboratory Nashik...

Division available -

- \* General Analytical and instrumentation
- \* Toxicology
- \* Biology and Geology
- \* DNA
- \* Prohibition and Excise physics
- \* Tape Authentication and Speaker identification.

# General Analytical and Instrumentation...

Chemical analysis of material like petroleum products, cement, explosives and post-explosion residues, oils and fats, dyes, dangerous drugs like heroin, brown sugar/gauze, cocaine, methaqualone, LSD, narcotics such as opium, cannabis, charas, ganja, bhang, industrial chemicals and residues thereof in case of suicide, arson, explosion, theft, cheating etc. is carried out in this division.

In the consumption of narcotic drugs blood and urine samples of the accused are referred for analysis.

Following Types of clue materials are examined in this division -

- Petroleum products and their adulteration.
- Explosive and post-explosive residues.
- Narcotic Drugs & psychotropic substances (NPS Drugs) & consumption by addicts.
- Analysis of gold in cheating cases.
- Arson cases.
- Vegetable oils and their adulteration.

# Toxicology

Toxicology is a field of a Science that helps us understand the harmful effects that chemicals, substance, or situations, can have on people, animals and the environment.

Toxicology uses the power of Science to predict what, and how chemicals may cause harm and then shares that information to protect public health.

The forensic toxicology division performs analysis on medicines, poisons, adulterated foods, narcotics and hallucinogenic and/or harmful chemicals in various biological samples on-site evidence related to identification of the cause of death and examination on regulated substances.

## Biology & Serology

Forensic biology division deals with the examination of biological fluids, skeletal remains, diatoms, hair, seeds, maggots, vegetable fibres, wood etc. present in various items of evidences value in Crime Cases such as murder, attempt to murder, Sexual assault and child abuse.

- Further serological examinations such as species origin and grouping of blood, semen and saliva is carried out in the division.

- \* Examination of blood stains
- \* Examination of Seminal and vaginal stains
- \* Examination of Salivary stains
- \* Examination of hair
- \* Determination of origin of species.
- \* Grouping of blood / other body fluids.

# DNA

over the last 25 years, forensic science has gained tremendous grounds as far as evidential values are concerned due to one particular biological tool that is the analysis of DNA.

The DNA division of this laboratory is well equipped with modern instruments DNA analysis has broad application in forensic such as disputed paternity testing, Tissues, bone, individualization etc.

## Collection of DNA Evidence:

- Liquid blood from a person should be collected by T.O. with EDTA as anticoagulant.
- Blood samples must be refrigerated (Not frozen) and submitted to FSI immediately.
- Blood stains on large objects should be scraped off.
- Dried blood stains on carpet, wood should be removed by cutting the object.

## Prohibition and Excise

Ethyl alcohol is a drug of addiction and is responsible for considerable morbidity and mortality to curb the crimes involving alcohol consumption drinking alcohol without a valid permit is a crime and possession. Sale, export and import of alcohol-containing beverages is a crime under the Bombay Prohibition Act.

Manufacture of illicit liquor from wash samples under GS (P) and altering the denatured spirit preparation by addition of French polish and varnished used for commercial purpose in crime.

## physics

Forensic physics division deals with examinations and comparisons of various physical evidences based on their physical attributes viz density & refractive index, resistivity temp elasticity and composition.

The physical evidences that are examined are point, glass, Soil, fibres, metallic pieces threads ropes, knots and obliterated tactics.

Another major part of forensic physics is forensic Ballistics i.e. the Science of projectiles and firearms. The examination of firearms leads to determination of the nature and types of weapons used in crime and range of firing.

## Tape Authentication and Speaker Identification

To determine whether or not a tape has been edited or tampered with or altered in any way. The output signals of a tape recorder can be damaged by three general factors, noise interference and distortion.

To reduce or eliminate various noise and distortion sounds from an audiotape, forensic audiospecialists use a variety of filters.

## Last Division - Type of Analysis

- \* Speaker identification
  - Audio Authentication
  - video Authentication
  - video Enhancement
  - photo / Face Comparison
  - photo / image Authentication

## Type of Cases (Audio & video)

- Bribery Cases
- kidnapping for Ransom
- Extortion Cells
- Call Girls Racket
- False telephonic message.

Semester-VI

Date- 30/5/2022

Class-T.Y.B.Sc.

Seat No. 63

Karm. Ramraoji Aher Arts, Science & Commerce College, Deola, Nashik  
Dept. of Zoology

Internal Examination May-2022  
Subject- Zoology Paper-III  
(ZO -363, Molecular Biology )

Supervisor sign.

*[Signature]*

Max. Marks.  
15

Marks obtained

*10*

(2.5) *15*

**Q.1 (A):- Choose the correct answers.**

- 1) ----- is the process by which instructions in DNA are converted in Functional product.  
a) Central dogma b) Replication c) Translation d) Okazaki Fragments
- 2) Process of copying genetic information from one strand of DNA into RNA is termed as-----.  
a) Initiation b) Elangation c) Transcription d) Translation
- 3) Non-Functional part of RNA is called -----.  
a) Exons b) Tailing c) Capping d) Introns
- 4) ----- is a small ,circular DNA molecule that is distinct from a Chromosomal DNA.  
a) Clonning Vector b) Cosmids c) Plasmids d) Clone
- 5) ----- is a method used in molecular biology for detection of specific DNA sequence in DNA samples.  
a) Southern Blotting b) Western Blotting c) Northern Blotting d) All of the above

**(B):-Mention true/false**

(2.5)

- 1) Nucleic acids are naturally occurring chemical compounds that serve as the primary information carrying molecules in cells. True
- 2) Nucleoside = Sugar + Nitrogenous base. False
- 3) Replication is the process of formation of DNA into RNA. True
- 4) DNA cloning is the process of making one copy of DNA of a particular piece of DNA. False
- 5) A northern blot is a technique used to detect specific DNA molecules among a mixture of RNA. False

**(C):- Define/ Explain (Any 10)**

(10)

- 1) Western blotting 2) Cosmids 3) Attenuation 4) Translation  
5) Replication 6) Nucleic acids 7) Splicing 8) hnRNA 9) Lac operon  
10) Chromatin 11) Histones 12) Clonning vector.

1) Translation - It is a process of segment copying DNA or RNA.

- 2) Replication - it is a process by double stranded DNA molecule is copied into consists of a copied two identical DNA molecule.
- 3) Cloning vector - cloning vector is a small piece of DNA of that can be stably maintained in an organism into which a foreign DNA fragment can be inserted for cloning purposes.
- 4) Nucleic acid - Nucleic acids are naturally occurring chemical compounds that serve as the primary information carrying molecules in cells.
- 5) Lac operon - Lac operon is a process of operon group of genes single promoter transcribed single RNA.

6) cosmids - cosmid is a hybrid plasmid. It contains lambda phage and - co-sequence.

7) Histones - A type of protein found in chromosomes.

8) hn RNA -

9) chromatin - A chromatin is an extracellular electron that is used plant an sea.

# COLLEGE EXAM COMMITTEE

## 2021-2022

**The following committee is working for the counseling of 2021-22 students. If any body have doubt about Examination please contact by e-mail or mobile number.**

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Asst.Prof Chandrakant Dani  
CEO



Prin. Hitendra Aher  
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AND COMMERCE COLLEGE DEOLA  
(NASHIK)