

PROGRESSIVE EDUCATION SOCIETY
MODERN COLLEGE OF ARTS, SCIENCE AND COMMERCE

GANESHKHIND, PUNE - 411016.

DEPARTMENT OF BIOTECHNOLOGY

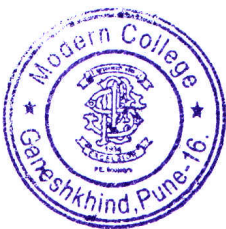
(A DST - FIST sponsored department; supported under DBT star college scheme)

CERTIFICATE

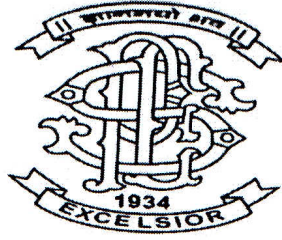
This to certify that **Miss. Bhavika Gala**, Exam seat no. _____ (Roll No. 203252066), has successfully completed the project entitled "**Insilico Analysis of Arsenic Stress Genes in Rice and Depicting the Role of Solanacol in Inhibiting Arsenic Uptake and its Accumulation**" as a part of Masters in Biotechnology curriculum under the guidance of **Dr. Vinay Kumar**, Modern College of Arts, Science and Commerce, Ganeshkhind, Pune-411016, as laid down by the Savitribai Phule Pune University for the academic year 2020-2021.

Project Guide,
Dr. Vinay Kumar

Coordinator, M.Sc. Biotechnology
Dr. Vinay Kumar



Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



PROGRESSIVE EDUCATION SOCIETY

MODERN COLLEGE OF ARTS, SCIENCE AND COMMERCE

GANESHKHIND, PUNE - 411016.

DEPARTMENT OF BIOTECHNOLOGY

(A DST - FIST sponsored department; supported under DBT star college scheme)

CERTIFICATE

This to certify that Ms. Payal Ravsaheb Dhawale, Exam seat no. _____ (Roll No. 203251023), has successfully completed the project entitled "A survey of Diabetes awareness among diabetic population from Nighoj village of Ahmednagar district, Maharashtra: A comparative approach." as a part of Masters in Biotechnology curriculum under the guidance of Dr. Geetanjali Litke, Modern College of Arts, Science and Commerce, Ganeshkhind, Pune – 411016, as laid down by the Savitribai Phule Pune University for the academic year 2020-2021.

Dr. Geetanjali Litake

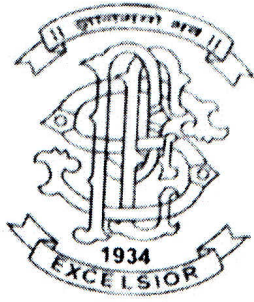
(Project Guide)

Dr. Vinay Kumar

(Coordinator, M.Sc. Biotechnolog)



Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



Progressive Education Society's
MODERN COLLEGE OF ARTS, SCIENCE AND COMMERCE
Ganeshkhind, Pune – 411016

DEPARTMENT OF BIOTECHNOLOGY

(A DST-FIST Sponsored Department; supported under DBT-Star College Scheme)

CERTIFICATE

This to certify that **Mr. Rushikesh Vilas Garade**, Exam seat no. _____
(Roll No. 203251024) has completed the project entitled "**Targeting RdRp of SARS CoV2 using phytochemicals**" as a part of Masters in Biotechnology curriculum under the guidance of **MISS. KAWALJEET KAUR** at Modern College of Arts Commerce and Science Ganeshkhind, Pune – 411016, as laid down by the Savitribai Phule Pune University for the academic year **2020-2021**.

Kaur

Project Guide,

Name of the Guide: Miss. Kawaljeet Kaur

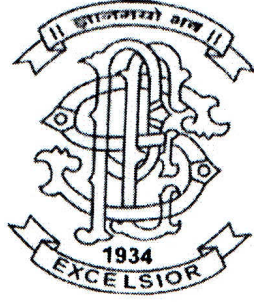
VK

Coordinator, M.Sc. Biotechnology

Dr. Vinay Kumar



Principal
Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



Progressive Education Society's

**MODERN COLLEGE OF ARTS, SCIENCE AND
COMMERCE, Ganeshkhind, Pune – 411016**

DEPARTMENT OF BIOTECHNOLOGY

(A DST-FIST Sponsored Department; supported under DBT-Star College Scheme)

CERTIFICATE

This to certify that **Mr. Suraj Rajendra Pawar**, Exam seat no. _____
(Roll No. 203252055) has successfully completed the project entitled as **“To explore docking
and biodegradation of the textile azo dye using a bacterial system”** a part of Masters in
Biotechnology curriculum under the guidance of Dr. Uttara Oak at Modern College of Arts
Commerce and Science Ganeshkhind, Pune – 411016, as laid down by the Savitribai Phule
Pune University for the academic year **2020-2021**.

Project Guide

Dr. Uttara Oak

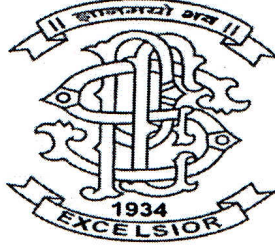
Coordinator, M.Sc. Biotechnology

Dr. Vinay Kumar



Principal

Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



PROGRESSIVE EDUCATION SOCIETY

**MODERN COLLEGE OF ARTS, SCIENCE, AND COMMERCE
GANESHKHIND, PUNE- 411016**

DEPARTMENT OF BIOTECHNOLOGY


(A DST-FIST Sponsored department; supported under DBT-Star College Scheme)

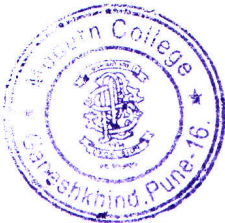
CERTIFICATE


This is to certify that **Ms.Prachi Gawande**, Exam Seat No _____ (Roll No. **203252058**) has completed the project entitled "**Microbial biodegradation of polyethylene by fungi (*Aspergillus species*)**" as a part of the Masters in Biotechnology curriculum under the guidance of **Prof. Monica Jamla** at Department of Biotechnology, P.E.S Modern College of Arts, Science, And Commerce, Ganeshkhind, Pune-411016 as laid down by the Savitribai Phule Pune University for the academic year **2020 – 2021**.

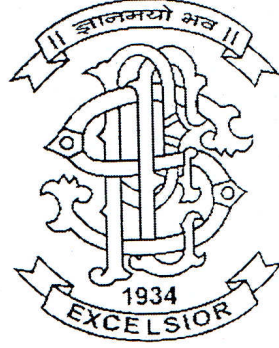
Project guide,

Prof. Monica Jamla


Coordinator, M.Sc. Biotechnology
Dr. Vinay Kumar





Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



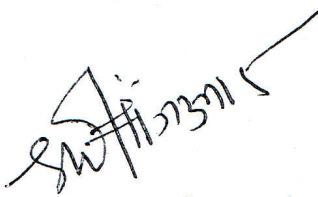
Progressive Education Society's
MODERN COLLEGE OF ARTS, SCIENCE AND COMMERCE
Ganeshkhind, Pune - 411 016
DEPARTMENT OF B.VOC (FOOD PROCESSING TECHNOLOGY)

Certificate

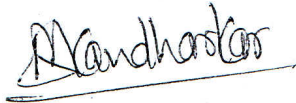
This is to certify that Pranjali Mhatre, Urja Jadhav, Animish Joshi, Hrushikesh Dabhade, Rajnandini Das has successfully completed the project entitled "STUDY ON PREPARATION OF BAELE FRUIT AND LEMON SQUASH" as a part of B.Voc (Food Processing Technology) T.Y. Semester VI curriculum under the guidance of Bhagyashree Sarode at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune - 411 016 for academic year 2018-2019.


Project Guide




External Examiner

Head of Department




Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

**“A Preliminary Report on the Lepidoptera:
Heterocera (Moth) from Satara, Maharashtra.”**

A dissertation submitted to
Savitribai Phule Pune University, Pune.
As a partial fulfilment for the degree of
Masters in Science, Zoology

By

Miss. Pratima Datturam kalel

Exam seat no.: 501133

Under the guidance of

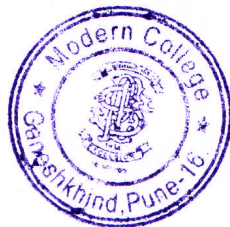
Dr. Shakera Inamdar

HOD, Department of Zoology, Modern College,
Ganeshkhind, Pune-16.

Project guide

External Examiner

Head of Dept.



Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

CERTIFICATE

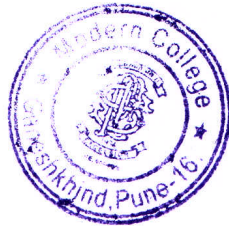
This is to certify that the work incorporated in this project entitled **“Diversity of Invertebrates in Moss in Mahabaleshwar, District Satara, Maharashtra”** submitted to Department of Zoology Modern college of Arts, Science and Commerce, Ganeshkhind , Pune-16 by **Mr. Yash Ajit Nikam** for the partial fulfilment of M.Sc. in the subject of Zoology was carried out by her under the guidance of **Dr. Shakera A. Inamdar** (Post Graduate Research Centre, Modern College, Ganeshkhind Pune -411016). This work was not previously submitted by her to this or any other university for the award of any degree, diploma or any other similar title.

Project Guide

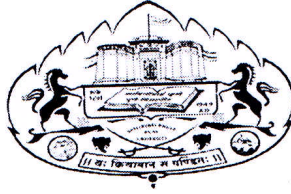
External Examiner

Head of the Dept.

Place: Pune



Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

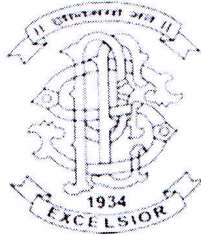


ISOLATION OF MICROBIAL FLORA FROM PIGEON DROPPINGS

A DISSERTATION SUBMITTED TO)

M.Sc. Dissertation Project Report

Submitted to



Savitribai Phule Pune University

To partial fulfilment for the award of Degree of

M.Sc. Zoology

By

Ms. Alfiya Aslam Attar

Under the guidance of

Dr. Shakera Inamdar,

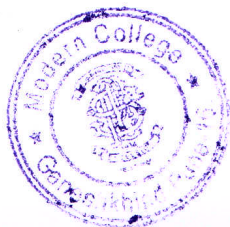
Associate professor

DEPARTMENT OF ZOOLOGY

**PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE
OF ARTS, SCIENCE AND COMMERCE COLLEGE**

GANESHKHIND, PUNE-411016

2020-21




G/A
Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

Progressive Education Society
MODERN COLLEGE OF ARTS, SCIENCE AND COMMERCE
GANESHKHIND, PUNE-411016
DEPARTMENT OF ZOOLOGY

CERTIFICATE

This is to certify that **Miss Pushpa Thakur**, Exam Seat No- (Roll No: 1950718) has successfully completed the project called "Morphology And Molecular Study Of Wood Borer Insect (Coleoptera: Cerambycidae)" as a part of Masters in Zoology curriculum under the guidance of **Dr. Shakera Inamdar** at Department of Zoology, Progressive Education Society's Modern College of Arts, Science and Commerce, Ganeshkhind, Pune-411016 as laid down by the Savitribai Phule Pune University for the academic year **2019-2020**.


Dr. Shakera Inamdar
Inamdar
Project Guide


Dr. Shakera

HOD
Department of
Zoology



External Examiner

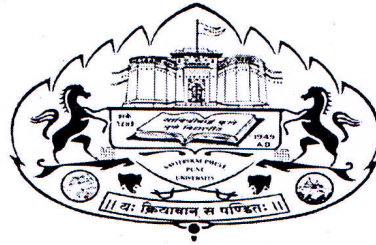

Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

Isolation and identification of gut parasites and fecal aggregation pheromones in *Periplaneta americana*.

A dissertation submitted to

Submitted to

Savitribai Phule Pune University



To partial fulfilment for the award of Degree of masters in science, zoology

By

Miss.Kajal Premdas Chavhan

(Roll.no. 203151201)

Under the guidance of

Dr. Shakera Inamdar

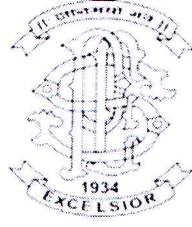
DEPARTMENT OF ZOOLOGY

MODERN COLLEGE OF ARTS, SCIENCE AND COMMERCE
COLLEGE GANESHKHIND, PUNE-411016

2020-2021



Principal
Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune




PROGRESSIVE EDUCATION SOCIETY
MODERN COLLEGE OF ARTS, SCIENCE AND COMMERCE
GANESHKHIND, PUNE-411016

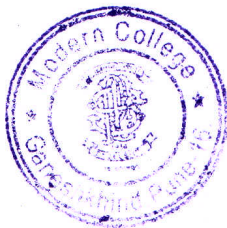
DEPARTMENT OF ZOOLOGY

CERTIFICATE

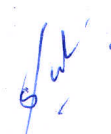
This is to certify that the work incorporated in this project entitled “**Isolation and identification of gut parasites and fecal aggregation pheromones in *Periplaneta americana***” submitted to department of zoology Progressive Education Society’s Modern College of Arts, Science and Commerce, Ganeshkhind, Pune 411016 by **Miss Kajal Premdas Chavhan**, (Roll No: 203151201) for the partial fulfilment of M.sc in the subject of zoology carried out under the guidance of **Dr. Shakera Inamdar** Department of Zoology Modern College of Arts, Science and Commerce, Ganeshkhind, Pune. This work was not previously submitted by her to this or any other university for the award of degree, diploma or any other similar title.

Dr. Shakera Inamdar
Project Guide


Dr. Shakera Inamdar
HOD Department of Zoology



External Examiner


Principal
**Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune**



**Diversity of Invertebrates in Moss in
Mahabaleshwar, District Satara, Maharashtra**

A Dissertation Submitted to

Savitribai Phule Pune University

As a partial fulfilment for the degree of

Masters in Science, Zoology

By

Mr. Yash Ajit Nikam

Under the guidance of

Dr. Shakera A. Inamdar

Modern College of Arts, Science and Commerce


Ganeshkhind Pune -16

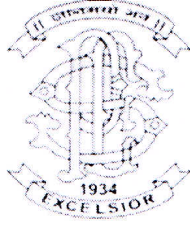
Project Guide


Head of The Department

External Examiner




Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



PROGRESSIVE EDUCATION SOCIETY
MODERN COLLEGE OF ARTS, SCIENCE AND COMMERCE
GANESHKHIND, PUNE-411016

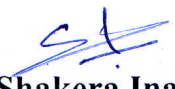
DEPARTMENT OF ZOOLOGY

CERTIFICATE

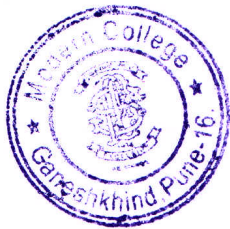
This is to certify that the work incorporated in this project entitled “**Isolation and identification of gut parasites and fecal aggregation pheromones in *Periplaneta americana***” submitted to department of zoology Progressive Education Society’s Modern College of Arts, Science and Commerce, Ganeshkhind, Pune 411016 by **Miss Kajal Premdas Chavhan**, (Roll No: 203151201) for the partial fulfilment of M.sc in the subject of zoology carried out under the guidance of **Dr. Shakera Inamdar** Department of Zoology Modern College of Arts, Science and Commerce, Ganeshkhind, Pune. This work was not previously submitted by her to this or any other university for the award of degree, diploma or any other similar title.

Dr. Shakera Inamdar


Project Guide


Dr. Shakera Inamdar

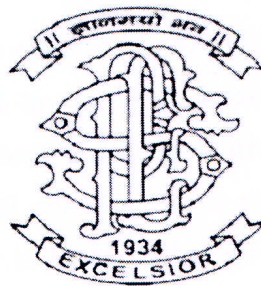
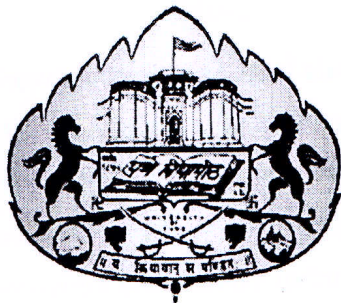
HOD Department of Zoology



External Examiner


Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

**Butterfly Diversity of Paparamnagar, District Solapur
(MS) ,India with Special Reference to Host plants**



Thesis for the partial fulfillment of the
M. Sc. Degree in Zoology

Under the guidance of
Dr. Shakira Inamdar & Miss. Manisha Mategaonkar

Submitted by
Apurva Sanjeev Bhosale
(Roll no.-203151206)

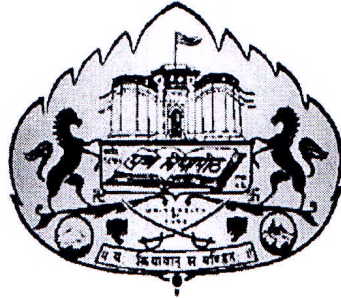
Submitted to
Department of Zoology
Modern college of Arts, Science and Commerce, Ganeshkhind ,
Pune – 411007, Maharashtra
June 2021

Project Guide

Head Of TheDepartment

External Examiner

**Butterfly Diversity of Paparnagar, District Solapur
(MS) ,India with Special Reference to Host plants**



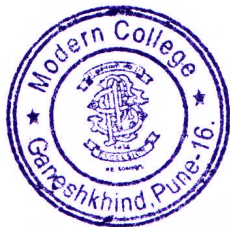
Thesis for the partial fulfillment of the
M. Sc. Degree in Zoology

Under the guidance of
Dr. Shakira Inamdar & Miss. Manisha Mategaonkar

Submitted by
Apurva Sanjeev Bhosale
(Roll no.-203151206)

Submitted to
Department of Zoology
Modern college of Arts , Science and Commerce, Ganeshkhind ,
Pune – 411007, Maharashtra
June 2021

Project Guide

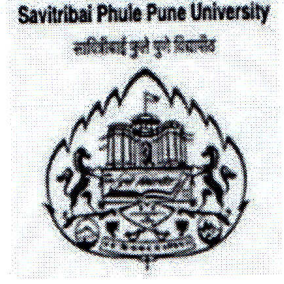


External Examiner

Head Of The Department

Principal

**Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune**



Progressive Education Society's
Modern College of Arts, Science and Commerce,
Ganeshkhind, Pune-16

CERTIFICATE

This is to certify that

Ms. Rinku Mangilal Ghanchi

of Class TYBA History (Spl-3) Introduction to History, Seat

No. **1182015963**

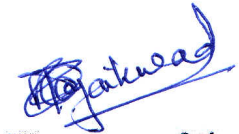
has submitted the project titled 'Mahadev Govind Rande

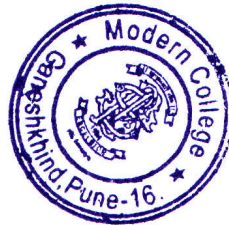
as prescribed by the

Savitribai Phule Pune University for the academic year 2020- 2021.

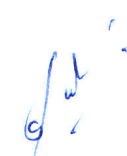

Teacher in- Charge.

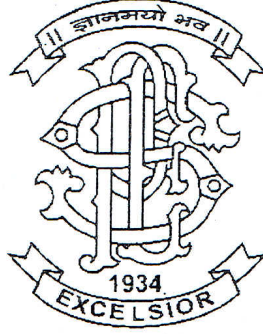

Head of Department


Signature of the Examiner



Page 2 of 20


Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



Progressive Education Society's

MODERN COLLEGE OF ARTS, SCIENCE AND COMMERCE

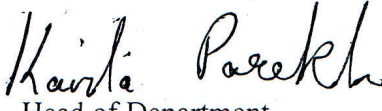
Ganeshkhind, Pune - 411 016

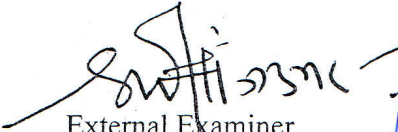
DEPARTMENT OF B.VOC (FOOD PROCESSING TECHNOLOGY)

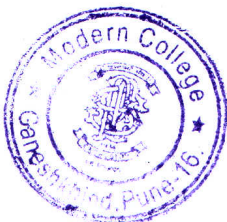
Certificate

This is to certify that Miss Aarti Harihar, Mr Avdhoot Pandit, Miss Saloni Bankar Miss. Shruti Jagdale and Mr Vinay Barvirkar. has successfully completed the project entitled "**Preparation of beetroot peda**" as a part of B.Voc(Food Processing Technology)T.Y. Semester VI curriculum under the guidance of Mrs Bhagyashree Sarode at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune – 411 016 for academic year 2018-2019

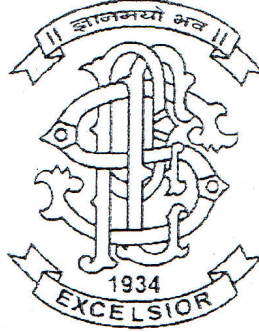

Project Guide


Head of Department


External Examiner




Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



Progressive Education Society's
MODERN COLLEGE OF ARTS, SCIENCE AND COMMERCE
Ganeshkhind, Pune - 411 016
DEPARTMENT OF B.VOC (FOOD PROCESSING TECHNOLOGY)

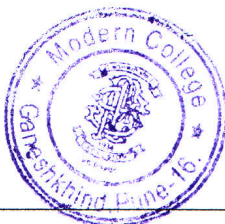
Certificate

This is to certify that Abhishek Devkar, Sayali Jadhav and Shraddha Chavan has successfully completed the project entitled "**Preparation of multigrain bhadang**" as a part of B.Voc (Food Processing Technology) T.Y. Semester VI curriculum under the guidance of Prof. Shweta Raichurkar at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune – 411 016 for academic year 2018-2019

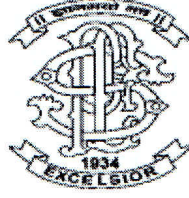
Project Guide

External Examiner

Head of Department



Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



Progressive Education Society's
Modern College of Arts, Science & Commerce
Ganeshkhind, Pune-411016

CERTIFICATE

THIS TO CERTIFY THAT Pavan Sunil Shinde Roll No: 202131011 AND Shubham Sanjay Pawar Roll No: 202131008 FROM CLASS: TYBBA(CA) SEMESTER VI HAS SATISFACTORY COMPLETED PROJECT ENTITLED "canteen management system" AS PERSCRIBED BY THE SAVITRIBAI PHULE PUNE UNIVERSITY FOR THE ACADEMIC YEAR 2020-2021.

Date:

SJ Mahsekar
Project Guide
Prof. Suvarna Mahsekar

College Stamp

Internal Examiner

External Examiner



SJ Mahsekar
Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

CERTIFICATE



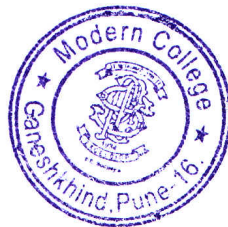
THIS ARE TO CERTIFY MR.ABHISHEK CHAUDHARI AND MR.SANTOSH JAGTAP OF TY BBA(CA) HAS SATISFACTORY COMPLETED PROJECT ON "EMPLOYEE MANAGEMENT SYSTEM" PRESCRIBED BY THE UNIVERSITY OF PUNE DURING THE ACADEMIC YEAR 2020-2021

S.J.M.hasekar
Project Guide
Mrs. Suwarna Mhasekar

S.J.M.hasekar
HOD
Mrs. Suwarna Mhasekar

EXTERNAL EXAMINER

INTERNAL EXAMINAR

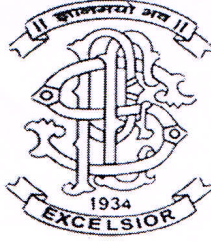


Sat
Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

P.E. Society's
Modern College Of Arts, Science & Commerce, Ganeshkhind,
Pune-16

Department of Computer Science

T.Y. B.Sc. (Computer Science)



CERTIFICATE

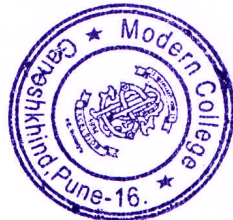
This is to certify that Project work titled Training and placement has been successfully completed by **Rohan krishna Tamuche (203331055)** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for Savitribai Phule Pune University, Pune.

DST

Dipali Tamhane
(Project Guide)

S.S. Bhatambrekar

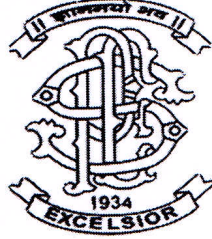
Dr. S.S. Bhatambrekar
(Head of Department)



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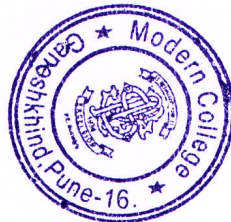


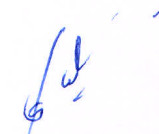
CERTIFICATE

This is to certify that Project work titled online shopping
portal has
been successfully completed by shruti I. Ramesh (203332144) as a
fulfillment of T.Y.B.Sc. (Computer Science) Examination for the
academic year 2020 -2021 for Savitribai Phule Pune University, Pune.


Mrs. Sonal Kulkarni
Name of Project Guide
(Project Guide)

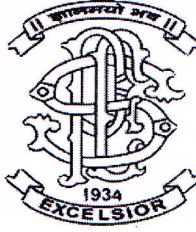

Dr. S.S. Bhatambrekar
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CERTIFICATE

This is to certify that Project work titled **ONLINE SHOPPING** has been successfully completed by **MR.PARIHAR VIKRAM BACHISINGH (203332136)** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for Savitribai Phule Pune University, Pune.

Mangesh Lahane
(Project Guide)

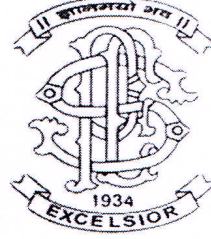
Dr. S.S. Bhatambrekar
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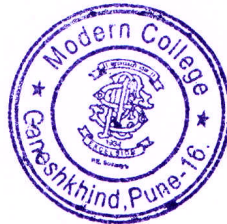


CERTIFICATE

This is to certify that Project work titled **Indian Wildlife** has been successfully completed by **Shweta Mahesh Ingale (203331043)** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for Savitribai Phule Pune University, Pune.

DST
Dipali Tamhane
(Project Guide)

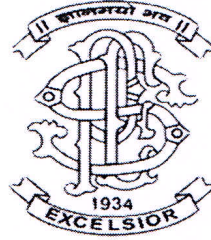
S.S. Bhat
Dr. S.S. Bhatambrekar
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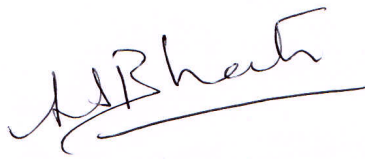
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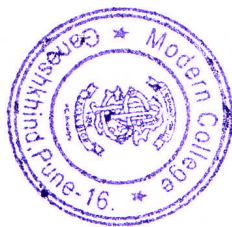



CERTIFICATE

This is to certify that Project work titled **Indian Wildlife** has been successfully completed by **Ganesh Vishram Rane (203331044)** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for Savitribai Phule Pune University, Pune.


_Dipali Tamhane
(Project Guide)

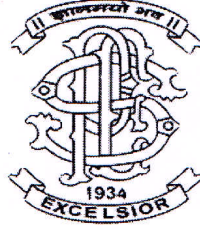

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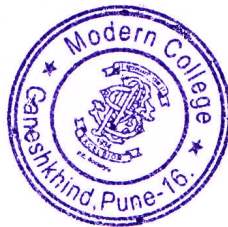


CERTIFICATE

This is to certify that Project work titled Online shopping has been successfully completed by Mr. Rajat Rajkumar Jadhav (203332141) as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for Savitribai Phule Pune University, Pune.

MangeshLahane
(Project Guide)

Dr. S.S. Bhatambrekar
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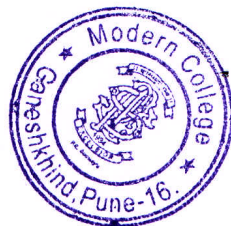


CERTIFICATE

This is to certify that Project work titled **Online Addition System For School** has been successfully completed by **Prajakta Sambhaji Gaikwad (203332127)** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for Savitribai Phule Pune University, Pune.

Mangesh Lahane
(Project Guide)

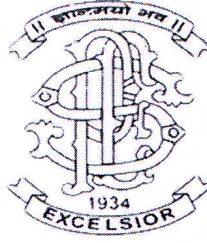
Dr. S.S. Bhatambrekar
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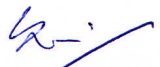
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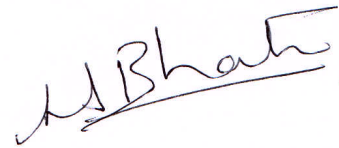


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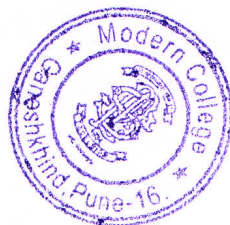
This is to certify that Project work titled Blood Bank **Project Name** has been successfully completed by Rahul Kamble 203332129 **Student Name (Roll Number)** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for Savitribai Phule Pune University, Pune.

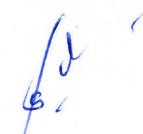

Sonal Kulkarni

Name of Project Guide
(Project Guide)



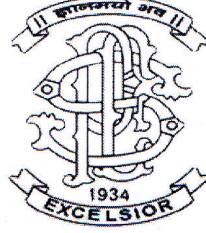
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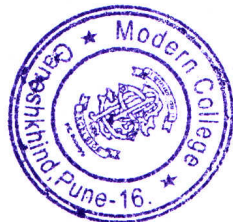
CERTIFICATE

This is to certify that Project work titled **Online Bank Account Registration.** has been successfully completed by **Tejas Mahadeo Patil (203332123)** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for Savitribai Phule Pune University, Pune.

Mangesh Lahane

Name of Project Guide
(Project Guide)

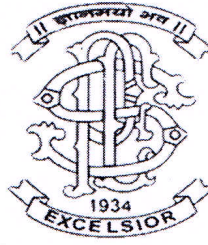
Dr. S.S. Bhatambrekar
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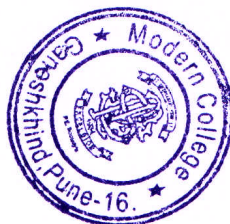
This is to certify that Project work titled **Project Name** has been successfully completed by **Abhijit Wavhal (203332151)** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for Savitribai Phule Pune University, Pune.

M. Mangesh Lahane

Name of Project Guide
(Project Guide)

S.S. Bhatambrekar

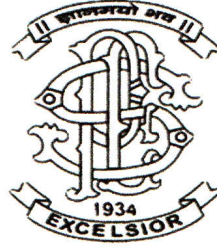
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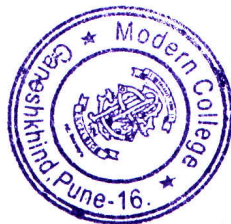



CERTIFICATE

This is to certify that Project work titled **AUTOMATIC FINE DEDUCTION** has been successfully completed by **DHOOT GAURAV NADKISHOR (11329)** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for Savitribai Phule Pune University, Pune.


Name of Project Guide
SONAL KULKARNI

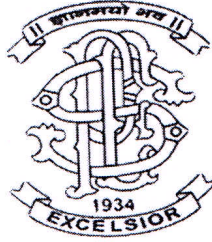

Dr. S.S. Bhatambrekar
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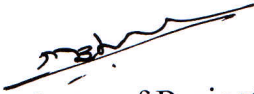
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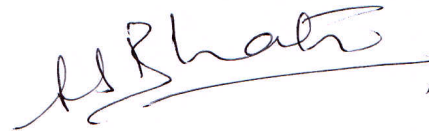
Department of Computer Science
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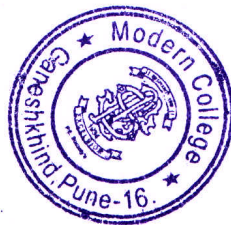



CERTIFICATE

This is to certify that Project work titled Online Society Management System has been successfully completed by Amruta Vitthal Bhosale (Roll Number :- 203331037) as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020-2021 for Savitribai Phule Pune University, Pune.


Name of Project Guide
(Project Guide)
(M.B. Lahane)


Dr. S.S. Bhatambrekar
(Head of Department)




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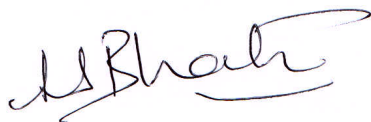



CERTIFICATE

This is to certify that Project work titled **Door Alarm System** has been successfully completed by **Ajay Annasaheb Gaikwad (203332197)** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for Savitribai Phule Pune University, Pune.


Sonal R. Kulkarni.
(Project Guide)

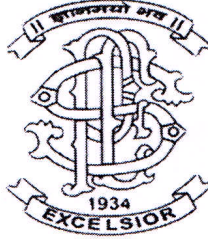



Dr. S.S. Bhatambrekar
(Head of Department)


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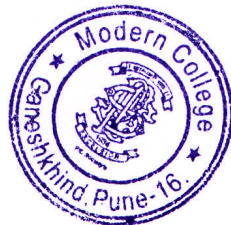
This is to certify that Project work titled Admission System for Dance Academy has been successfully completed by Prasad Ashok Patil(203331023) as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for Savitribai Phule Pune University, Pune.

Ranjana Shevkar

Ranjana Shevkar
(Project Guide)

Dr. S.S. Bhatambrekar

Dr. S.S. Bhatambrekar
(Head of Department)

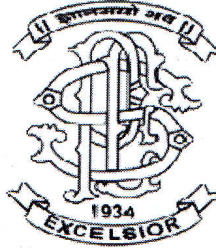


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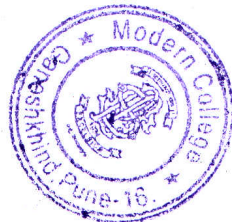



CERTIFICATE

This is to certify that Projectwork titled **ONLINE JOB PORTEL** has been successfully completed by **KUMBHAR ADITYA TANAJI ROLL Number 203331078** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for SavitribaiPhule Pune University, Pune.


Prof. Amol Patil
(Project Guide)


Dr. S.S. Bhatambrekar
(Head of Department)

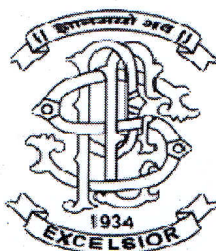



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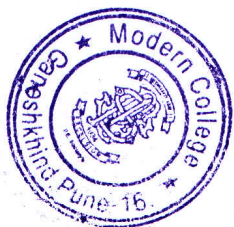
This is to certify that Projectwork titled **INTERTIOR**
DESIGNING SYSTEM has been successfully completed by
ABHISHEK PRALHAD POHARE **ROLL Number 203332124**
as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the
academic year 2020 -2021 for SavitribaiPhule Pune University, Pune.

DST
Prof. DIPALI TAMHANE

(Project Guide)

S.S. Bhatambrekar
Dr. S.S. Bhatambrekar

(Head of Department)

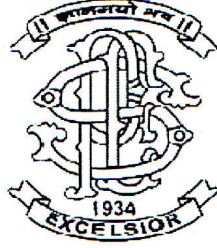


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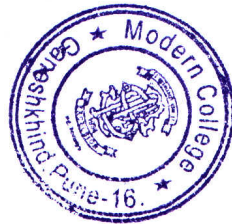


CERTIFICATE

This is to certify that Projectwork titled **Online Admission System for Dance Academy** has been successfully completed by **Manasi Murlidhar More(203332169)** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for SavitribaiPhule Pune University, Pune.

Ranjana Shevkar
(Project Guide)

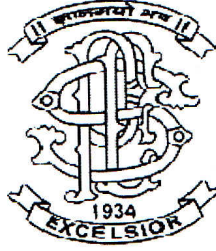
Dr. S.S. Bhatambrekar
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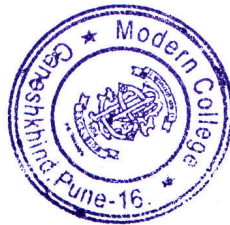
This is to certify that Projectwork titled **Online Examination System** has been successfully completed by **Pritesh Vijay Singh(203332184)** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for SavitribaiPhule Pune University, Pune.

R. Shevkar

Ranjana Shevkar
(Project Guide)

S.S. Bhatambrekar

Dr. S.S. Bhatambrekar
(Head of Department)

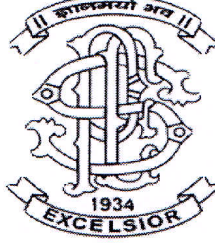


[Signature]
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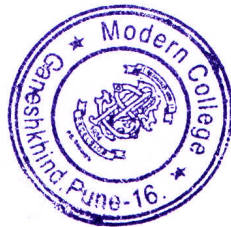


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This is to certify that Project work titled **Sports Club Administration** has been successfully completed by **Bodhe Vipul Vivek (203333249)** as a fulfillment of T.Y.B.Sc. (Computer Science) Examination for the academic year 2020 -2021 for Savitribai Phule Pune University, Pune.

Ranjana Shevkar
(Project Guide)

Dr. S.S. Bhatambrekar
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Certified that this dissertation titled "A fraud case study of Vijay Mallya "the facility of commerce as per the requirement of Savitribai Phule Pune University. I also clarify that this M.com distribution or part there of has not been previously submitted by anybody for degree of the Savitribai Phule Pune University.

DATE: - 9/2/2021



Project Guide

Dr Manjusha Kulkarni

M.Com – Co-ordinator

Dr Vijayalaxmi Kulkarni

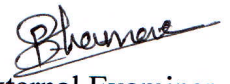


Vice-Principal


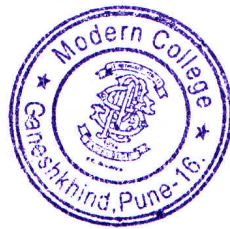
Prof. Shubhangi Joshi



Internal Examiner.



External Examiner.



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Certificate

Certified that this titled "AN IMPACT ANALYSIS OF COVID 19 MICRO SMALL AND MEDIUM ENTERPRISES (MSMEs) "is an original work of SHWETA SATISH SAGALGILE. Done under the guidance and supervision for the award of degree of master of commerce in the faculty of commerce as per the requirement of Savitribai Phule University of Pune. I also certified that this M.com dissertation or part thereof has not been previously submitted by anybody for degree of the Savitribai Phule Pune University.

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Mk

Project Guide

Dr. Manjusha Kulkarni

M.com Co-ordinator

Vijayalakshmi Kulkarni

Shubhangi Joshi

Vice Principal

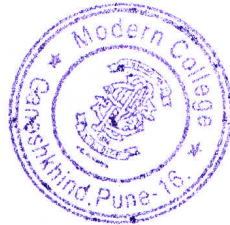
Dr. Shubhangi Joshi

Mk

Internal Examiner

Phanasa

External Examiner



Shubhangi Joshi


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CERTIFICATE

Certified that this dissertation titled "An Analytical Study of Problems faced by Employees of Travelling and Tourism Agency". In the facility of commerce as per the requirement of Savitribai Phule university of Pune. I also clarify that this M.com distribution or part there of has not been previously submitted by anybody for degree of the Savitribai Phule Pune University.

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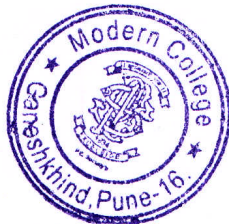
Dr. Manjusha Kulkarni


M.Com – Co-ordinator
Prof. Vijayalaxmi Kulkarni

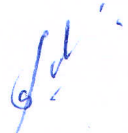

Vice-Principal

Prof. Shubhangi Joshi


Internal Examiner.




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CERTIFICATE

This is to certify that, the project work report titled “A Study on Customer perception and awareness on credit cards for Kotak Mahindra Bank.” is the original work of **JORIGAL GIRISH PRAKASH**. Done under my guidance and supervision for the award of degree of Master of Commerce. In the faculty of commerce as per the the requirement of Savitribai Phule University of Pune. I also certify that this M.com dissertation or part thereof has not been previously submitted by anybody for degree of the Savitribai Phule Pune University

Date : 8/2/2021

Student Signature

JORIGAL GIRISH PRAKASH

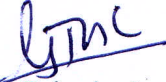


Project Guide

Prof. MANJUSHA KULKARNI

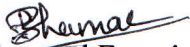
M.com Co-Ordinator

Prof. VIJAYALAXMI KULKARNI




Vice Principal

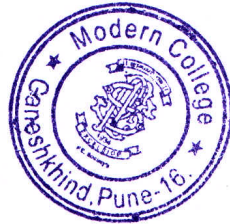
Dr. SHUBHANGI JOSHI



External Examiner



Internal Examiner



CERTIFICATE

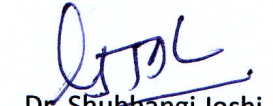
This is to certify that Mahima Vijay Chaudhari, student of Modern Collage of Arts, Commerce and Science, Ganeshkhind, Pune-16, has completed her project report on "ANALYTICAL STUDY OF PROBLEMS OF STUDENTS IN ONLINE EDUCATION_in the year 2020-2021 in final fulfilment of Post Graduate in Master of Commerce. She has successfully completed the project under my constant guidance and support.

Date: 10/2/2021



Prof. Manjusha Kulkarni.
(Project Guide)


Prof. Vijaya Kulkarni.
[M.com (coordinator)]



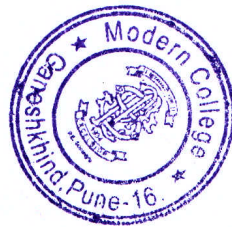
Dr. Shubhangi Joshi.
(Vice- principal)



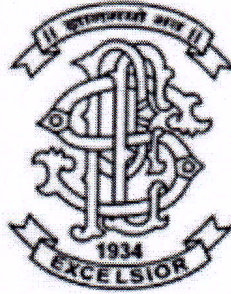
Internal Examiner



External Examiner



Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



Progressive Education Society's
MODERN COLLEGE OF ARTS, SCIENCE & COMMERCE
Ganeshkhind, Pune- 411016

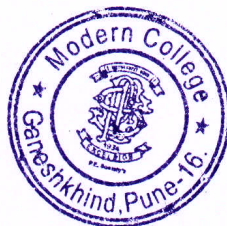
CERTIFICATE

THIS TO CERTIFY THAT MR.RISHABH SINGH CLASS
SYBBA(CA) HAS SATISFACTORY COMPLETED PROJECT
TRAVEL AGENCY MANAGEMENT SYSTEM AS
PERSCRIBED BY THE SAVITRIBAI PHULE PUNE UNIVERSITY
FOR THE ACADEMIC YEAR 2020-2021.

Project Guide

S. J. M. Hasle
Co-ordinator BBA(CA)

Signature of External Examiner



S. J. M. Hasle
Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



Progressive Education Society's
MODERN COLLEGE OF ARTS, SCIENCE & COMMERCE
Ganeshkhind, Pune- 411016

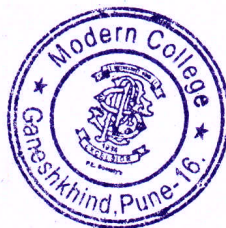
CERTIFICATE

THIS TO CERTIFY THAT Mrs. Samruddhi Nitin Jadhav ROLL NO. 202121014 AND Mrs. Trupti Ramdas Raut ROLL NO: 202121060 CLASS SYBBA(CA) HAS SATISFACTORY COMPLETED PROJECT ENTITLED "QUIZ(BASIC OF COMPUTER)" IN THE VISUAL BASIC AS PERSCRIBED BY THE SAVITRIBAI PHULE PUNE UNIVERSITY FOR THE ACADEMIC YEAR 2020-2021.

Project Guide

S. J. Thakur
Co-ordinator BBA(CA)

Signature of External Examiner



S. J. Thakur
Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



Progressive Education Society's
MODERN COLLEGE OF ARTS, SCIENCE & COMMERCE
Ganeshkhind, Pune- 411016

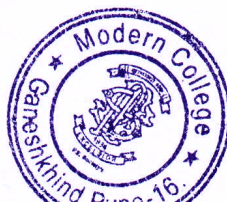
CERTIFICATE

THIS TO CERTIFY THAT MR. TANISHQ BHUSHAN GANU ROLL NO. 202121002 AND MR. VIKRANT SUNIL SHELAR ROLL NO: 202121018 CLASS SYBBA(CA) HAS SATISFACTORY COMPLETED PROJECT ENTITLED "WEATHER FORECASTING APPLICATION" IN THE HTML, CSS, JAVASCRIPT AS PERSCRIBED BY THE SAVITRIBAI PHULE PUNE UNIVERSITY FOR THE ACADEMIC YEAR 2020-2021.

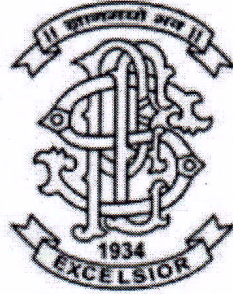
Project Guide

S. J. M. Hadkar
Co-ordinator BBA(CA)

Signature of External Examiner



S. J. M. Hadkar
Principal
Modern College of Arts, Science & Commerce



**Progressive Education Society's
MODERN COLLEGE OF ARTS, SCIENCE &
COMMERCE
Ganesh, Pune- 411016**

CERTIFICATE

THIS TO CERTIFY THAT **MAYUR MAHADIK** ROLL NO. **202121019** OF CLASS **SYBBA(CA)** HAS COMPLETED PROJECT ENTITLED **"EVENT MANAGEMENT SYSTEM"** AS PERSCRIBED BY THE SAVITRIBAI PHULE PUNE UNIVERSITY FOR THE ACADEMIC YEAR **2020-2021**.

Project Guide

Signature of External

Coordinator

S. J. Mahadev



S. J. Mahadev
Principal

Math Quiz



Progressive Education Society's
MODERN COLLEGE OF ARTS, SCIENCE & COMMERCE
Ganeshkhind, Pune- 411016

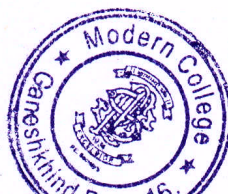
CERTIFICATE

THIS TO CERTIFY THAT MR. DEVAPPA SIYON SAMSON
ROLL NO. 202121026 CLASS SYBBA(CA) HAS SATISFACTORY
COMPLETED PROJECT ENTITLED "MATH QUIZ" AS
PERSCRIBED BY THE SAVITRIBAI PHULE PUNE UNIVERSITY
FOR THE ACADEMIC YEAR 2020-2021.

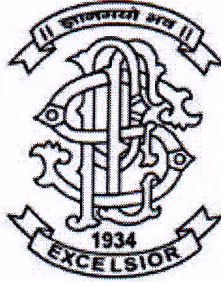
Project Guide

S. J. Thakur
Co-ordinator BBA(CA)

Signature of External Examiner



S. J. Thakur
Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



Progressive Education Society's
MODERN COLLEGE OF ARTS, SCIENCE & COMMERCE
Ganeshkhind, Pune- 411016

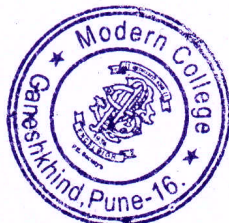
CERTIFICATE

THIS TO CERTIFY THAT Ms. NANDITA MAGESH ROLL NO. 202121007
CLASS SYBBA(CA) HAS SATISFACTORY COMPLETED PROJECT
ENTITLED "MOVIE RECOMMENDATION SYSTEM" AS PERSCRIBED
BY THE SAVITRIBAI PHULE PUNE UNIVERSITY FOR THE ACADEMIC
YEAR 2020-2021.

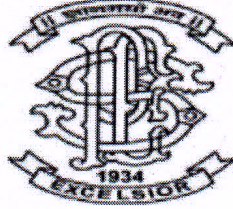
Project Guide

S.M. Haldar
Co-ordinator BBA(CA)

Signature of External Examiner



S. M. Haldar
Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



Progressive education society's
Modern college of Arts, Science & Commerce
Ganeshkhind, Pune-411016

CERTIFICATE

THIS IS TO CERTIFY THAT **MAITHILI MADHUKAR VIDEKAR ROLL NO:202121010** FROM CLASS SYBBACA SEMESTER IV
HAS COMPLETED PROJECT ENTITLED "CITY LIBRARY" AS DESCRIBED BY THE SAVITRIBAI PHULE UNIVERSITY FOR THE
ACDEMIC YEAR 2020-2021

DATE:5/6/2021

PROJECT GUIDE:

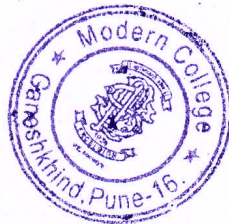
Prof. Swati Patil

S. J. M. has

College Stamp

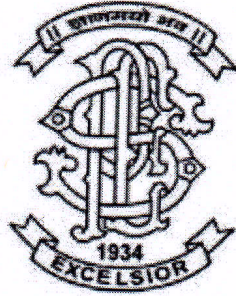
Internal examiner

External Examiner



S. J. M. has
Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

Examination Seat No : 25810



Progressive Education Society's

MODERN COLLEGE OF ARTS, SCIENCE & COMMERCE

Ganeshkhind, Pune- 411016

CERTIFICATE

THIS IS TO CERTIFY THAT MS. NIYATI NAIK ROLL NO. 202121017
FROM CLASS SYBBA(CA) HAS SATISFACTORY COMPLETED PROJECT
ENTITLED "TO DO LIST" AS PERSCRIBED BY THE SAVITRIBAI PHULE
PUNE UNIVERSITY FOR THE ACADEMIC YEAR 2020-2021.

Project Guide

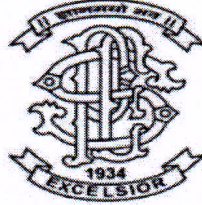
S.J. Mhalab
Co-ordinator BBA(CA)

Signature of External Examiner



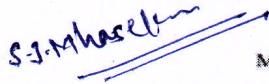
S. J. Mhalab
Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

CERTIFICATE



THIS ARE TO CERTIFY MISS. ANKITA ANANDRAO SAWANT & SNEHAL DATTATRAY JAGTAP OF TY BBA(CA) HAS SATISFACTORY COMPLETED PROJECT ON "DRIVING SCHOOL MANAGEMENT" PRESCRIBED BY THE UNIVERSITY OF PUNE DURING THE ACADEMIC YEAR 2020-2021


Project Guide
Mrs. Rituja Mokashi




HOD
Mrs. Suwarna Mhasekar

EXTERNAL EXAMINER

INTERNAL EXAMINAR





Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

Progressive Education Society's
Modern College of Arts, Science & Commerce
Ganeshkhind, Pune-411016

CERTIFICATE

THIS TO CERTIFY THAT Pavan Sunil Shinde Roll No: 202131011 AND Shubham Sanjay Pawar Roll No: 202131008 FROM CLASS: TYBBA(CA) SEMESTER V HAS SATISFACTORY COMPLETED PROJECT ENTITLED "LIC management system" AS PERSCRIBED BY THE SAVITRIBAI PHULE PUNE UNIVERSITY FOR THE ACADEMIC YEAR 2020-2021.

Date:

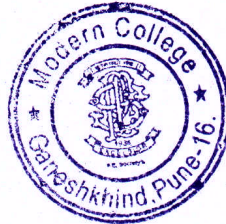

Project Guide
Prof. Rutuja Mokashi

S. J. Mahale
co-ordinator

College Stamp

Internal Examiner

External Examiner




Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



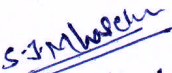
Progressive Education Society's
Modern College of Arts, Science & Commerce
Ganeshkhind, Pune-411016

CERTIFICATE

THIS TO CERTIFY THAT Suraj Pandurang Giri Roll No: 202131013 AND
Aditya Buddhaghosh Gaikwad Roll No: 202131015 FROM CLASS:
TYBBA(CA) SEMESTER V HAS SATISFACTORY COMPLETED PROJECT
ENTITLED "Auto Garage Management System" AS PERSCRIBED BY
THE SAVITRIBAI PHULE PUNE UNIVERSITY FOR THE ACADEMIC YEAR
2020-2021.

Date:


Project Guide
Prof. Rutuja Mokashi



Co-ordinator

College Stamp

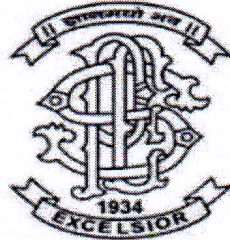
Internal Examiner

External Examiner




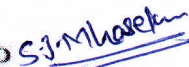

Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

CERTIFICATE



THIS ARE TO CERTIFY MR.Shubham Nanaware AND MRS.Nikita Kate OF TY BBA(CA) HAS SATISFACTORY COMPLETED PROJECT ON "ATM MANAGEMENT SYSTEM" PRESCRIBED BY THE UNIVERSITY OF PUNE DURING THE ACADEMIC YEAR 2020-2021



Project Guide
Mrs. Rutuja Mokashi


HOD
Mrs. Suwarna Mhasekar

EXTERNAL EXAMINER

INTERNAL EXAMINAR




Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

A Project Report on Hotel Management System

CERTIFICATE


This is to certify that, Mr. Abhishek Nagarkar and Mr. Bhalchandra Jawadwad
Students of T.Y.BBA (CA) has satisfactorily completed the project report titled

“Hotel Management System” as laid down by the Savitribai Phule University for the
Academic year 2020-2021. We have worked under our guidance and direction. Our work
is found to be satisfactorily complete in all respect.

TY BBA (CA) (SEM -V)

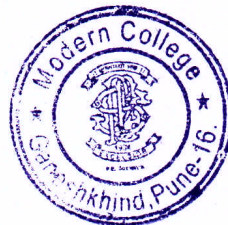
Date: 25-04-2021

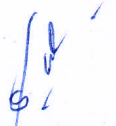

PROJECT GUIDE


HEAD OF DEPARTMENT
(Computer Application)

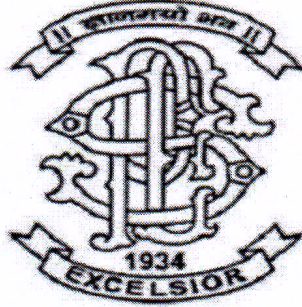
INTERNAL EXAMINAR

EXTERNAL EXAMINAR




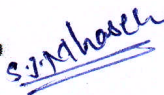

Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune

CERTIFICATE



**THIS ARE TO CERTIFY AVINASH KELSING PAWARA
OF TY (CA) HAS SATISFACTORY COMPLETED PROJECT
ON "ONLINE QUIZ" PRESCRIBED BY THE
UNIVERSITY OF PUNE DURING THE ACADEMIC YEAR
2020-2021**


Project Guide
Ms Rutuja Mokashi
Mhasekar

HOD 
Mrs Suvarna




Principal
Modern College of Arts, Science
& Commerce Ganeshkhind, Pune



Progressive Education Society's
Modern College of Arts, Science and Commerce, Ganeshkhind,
 Pune-16


CERTIFICATE

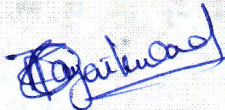
This is to certify that Mr./Miss Shubham Sharad Wakchaure
 of Class TYBA History (Spl-3) Introduction to History, Seat No. 201032228
 has submitted the project titled Chhatrapati Maharani Tarabai

as prescribed by the

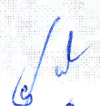
Savitribai Phule Pune University for the academic year 2020- 2021.

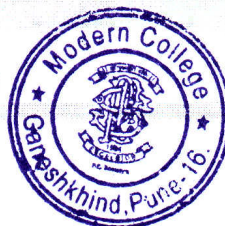

 Teacher in- Charge


 Head of Department


 Signature of the Examiner

REMARKS SHEET
 IN
 THE
 EXAMINATION


Principal
 Modern College of Arts, Science
 & Commerce, Ganeshkhind, Pune






Progressive Education Society's
Modern College of Arts, Science and Commerce, Ganeshkhind, Pune-
16

CERTIFICATE

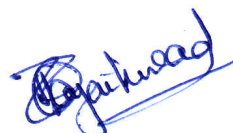
This is to certify that ~~Mr./Miss~~ PARIMAL GANGURDE _____
of Class TYBA History (Spl-3) Introduction to History, Seat No. _____
has submitted the project titled ARCHAEO-ASTRONOMY

as prescribed by the


Savitribai Phule Pune University for the academic year 2020- 2021.


Teacher in- Charge

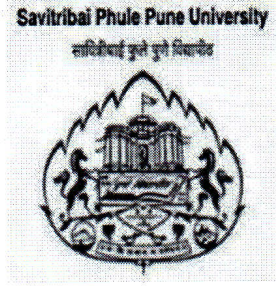

Head of Department


Signature of the Examiner

3


Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune





Progressive Education Society's
Modern College of Arts, Science and Commerce,
Ganeshkhind, Pune-16

CERTIFICATE

This is to certify that

Mr. Sagar Ananda Deole

of Class TYBA History (Spl-3) Introduction to History, Seat

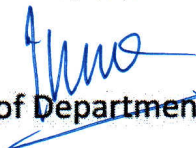
No. _____


has submitted the project titled Bhakti Movement


as prescribed by the

Savitribai Phule Pune University for the academic year 2020- 2021.

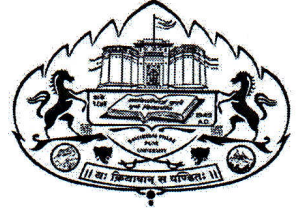

Teacher in- Charge.


Head of Department


Signature of the Examiner


Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune





Progressive Education Society's
Modern College of Arts, science and Commerce,
Ganeshkhind , Pune-16

CERTIFICATE

This is to certify that

Mr. Aniket Ramdas Nimbalkar

Of class **TYBA History (Spl-3) Introduction to History ,**

Seat no – **201033385**

has submitted the project titled **Loknete Yashwantrao Chavan**

as prescribed by the

Savitribai Phule Pune University for the academic year 2020-2021.

Teacher in-charge.

Head of Department.

Signature of the examiner

Principal
Modern College of Arts, Science
& Commerce, Ganeshkhind, Pune



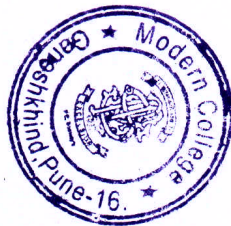
SAVITRIBAI PHULE PUNE UNIVERSITY

T.Y.B.A. HISTORY SYLLABUS

From 2015 -2016

HISTORY OF THE WORLD IN 20TH CENTURY (1914-1992)

LEVEL: G3



S. A.
Principal
Modern College of Arts, Science
& Commerce, Ganeskhind, Pune

9. INDIAN HISTORIANS

(10)

9.1 R. C. Mujumdar

9.2 K. A. Niolkant Shastri

9.3 D. D. Kosambi

9.4 Romila Thapar

10. HISTORICAL STUDY TOUR OR PROJECT WORK

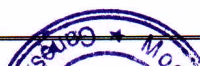
PROJECT WORK & EVALUATION SCHEME

1. Term end examination of 60 marks shall be held at the end of the first term.
2. Candidate shall submit a report of minimum 3000 words i.e. 10 to 15 pages to the department by end of the February.
3. A viva-voce should be conducted before theory examination and the results should be sent to the University as immediately
4. The result should be prepared as follows:
 - a) 60 marks of term end examination converted in to 20 marks
 - b) 50 marks Annual examination for 2 hours conducted by University of Pune Equal weightage for all topics
 - c) 30 Marks exam should be conducted by the department 20 marks for Project work & 10 marks Viva-voce exam.

BOOKS FOR STUDY

ENGLISH

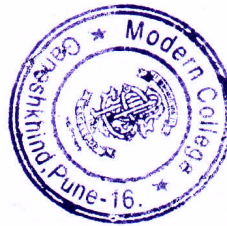
1. Avneri S., Social and Political Thought of Karl Marx, Cambridge, 1968.
2. Barnes H.E., History of Historical Writing, Dover, New York, 1963.



Principal
Faculty of Arts, Science
University of Pune

Savitribai Phule Pune University

**Three Year Degree Course in
B. Sc. Computer Science**



S. A.
Principal
Modern College of Arts, Science
& Commerce, Pune-16, Pune

1) Title of the Course : B. Sc. Computer Science

T. Y. B. Sc. Computer Science Syllabus in the Subject Computer Science (To be implemented from Academic Year 2015-16)

2) Preamble:

B. Sc. Computer Science is a systematically designed three year course that prepares the student for a career in Software Industry. The syllabus of Computer Science subject along with that of the three allied subjects (Mathematics, Electronics and Statistics) forms the required basics for pursuing higher studies in Computer Science. The Syllabus also develops requisite professional skills and problem solving abilities for pursuing a career in Software Industry.

3) Introduction:

At **first year of under-graduation** basic foundation of two important skills required for software development is laid. A course in programming and a course in database fundamentals forms the preliminary skill set for solving computational problems. Simultaneously two practical courses are designed to supplement the theoretical training. The second practical course also includes a preliminary preparation for website designing in the form of HTML programming.

Along with Computer Science two theories and one practical course each in Statistics, Mathematics and Electronics help in building a strong foundation.

At **second year under-graduation:** The programming skills are further strengthened by a course in Data structures and Object oriented programming. The advanced topics in Databases and preliminary software engineering form the second course. Two practical courses alongside help in hands-on training. Students also undertake a mini project using software engineering principles to solve a real world problem. Simultaneously two theories and one practical course each in Mathematics and Electronics help in strengthening problem solving abilities.

At **third year under-graduation:** Six theory papers in each semester and practical courses cover the entire spectrum of topics necessary to build knowledge base and requisite skill set. Third practical course also includes project work which gives students hands on experience in solving a real world problem.

Objectives:

- To develop problem solving abilities using a computer
- To build the necessary skill set and analytical abilities for developing computer based solutions for real life problems.
- To imbibe quality software development practices.
- To create awareness about process and product standards
- To train students in professional skills related to Software Industry.
- To prepare necessary knowledge base for research and development in Computer Science
- To help students build-up a successful career in Computer Science

4) Eligibility:

Higher Secondary School Certificate (10+2) Science with Mathematics or its equivalent Examination as per Savitribai Phule Pune University eligibility norms.

Note: Admissions will be given as per the selection procedure / policies adopted by the respective college, in accordance with conditions laid down by Savitribai Phule Pune University. Reservation and relaxation will be as per the Government rules.



6/11/15
Savitribai Phule Pune University
Computer Science

SAVITRIBAI PHULE PUNE UNIVERSITY
Proposed Draft of
T.Y. B. Sc. COMPUTER SCIENCE SYLLABUS
TO BE IMPLEMENTED FROM ACADEMIC YEAR 2015-16
TITLE OF PAPER :Lab Course III – Programming in PHP & Project
Code No. : CS-349

Aim:

To understand the process of designing and implementing Web applications, using PHP.

Objective :-

1. Implement Simple PHP programs to solve simple problems

Syllabus

Sr. No	Topic	Lectures
PHP		
1	String manipulation	8 Lectures
2	Arrays	8 Lectures
3	Inheritance	8 Lectures
4	File Handling	8 Lectures
5	Form designing	8 Lectures
6	Database Connectivity	8 Lectures
7	Sessions and cookies	8 Lectures
8	Java script with AJAX	8 Lectures
Networking		
1	Setting a LAN Environment	4 Lectures
2	Configuring the Server	4 Lectures
3	Use of Service Primitives	4 Lectures
4	Use of Networking Tools	12 Lectures
Project		
1	Choose Project topic and Prepare problem description	
2	Study of Existing System	
3	Identifying users and functionalities of proposed system	
4	Preparing the Design of the proposed system- Data Design Screen and Report Designs	
5	Implementation	

Examination

Internal Marks: Project (20) Continuous Evaluation.

External Marks: One programs (30) (large program on PHP + small program PHP), networking(10)
 – Internal, Lab book(10), Project(30) -20 Marks External + 10 Marks Internal for Project Demo before Final Practical Exam



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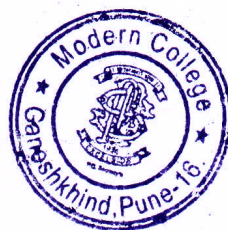
**M. Sc. Biotechnology IInd Year,
Semester IV**

(CBCS Semester Pattern)

Revised syllabus w.e.f. **June 2020**

Semester IV

Course code	Course Title	Credits
Core Compulsory Theory Papers (CCTP)		
MBT- 401	Genomics and Proteomics	4 Credits
MBT- 402	Advanced Bio analytical Techniques	4 Credits
Core Compulsory Practical Paper : CCPP-1		
MBT- 403	Research Project	4 Credits
Choice Based Optional Papers: CBOP (any Two)		
MBT - 404	Bio entrepreneurship & Start up Designing	4 Credits
MBT - 405	Pharmaceutical Biotechnology & Drug Designing	4 Credits
MBT - 406	Research Methodology & Scientific Communication	4 Credits
MBT - 407	Quality Control, Bio safety & Bioethics	4 Credits
Total		20 Credits



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Savitribai Phule Pune University
M. Sc. II Biotechnology (CBCS Semester Pattern) Semester IV
Revised syllabus wef. June 2020

Subject Code: MBT- 403

Subject : Research Projects
(4 Credit Course)

Project work , Thesis Submission & presentation

- Project work / Thesis / Dissertation shall be carried out under the supervision of a qualified teacher in the concerned Department./Research Institute/Industry
- Project work / Thesis / Dissertation shall be pursued for a minimum of 12 weeks during the final semester, following the preliminary plan of work carried out in during the previous semester.
- The Project Report/Thesis / Dissertation report is to be prepared as per standard scientific research methodology and duly signed by the supervisor(s) and the Head of the Department shall be submitted to the concerned department.
- The assessment (Internal and external) of the project work will be as per SPPU guidelines.



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Savitribai Phule Pune University
M. Sc. II Biotechnology (CBCS Semester Pattern) Semester IV
Revised syllabus wef. June 2020

Subject Code: MBT - 404 Subject : Bio-entrepreneurship & Start up Designing
(4 Credit Course)
Total Lectures=60

Unit	Title	Lectures 60
I	Introduction to Entrepreneurship	Lectures
	<ul style="list-style-type: none"> • Meaning Knowledge and concept of entrepreneurship, • Need and Importance of entrepreneurship • The history of entrepreneurship development, • Skills and characteristic of successful entrepreneurs; • Entrepreneurship process; • Factors impacting emergence of entrepreneurship • Role of entrepreneurship in economic development, • Evolution and Growth of Entrepreneurship in India 	10
II	An Entrepreneur and an Entrepreneurship Journey	
	<ul style="list-style-type: none"> • Types of Entrepreneurs • Ethical Entrepreneurship • Entrepreneurial Value: Values, Attitudes and Motivation. • The entrepreneurial decision process, and role models, • Self Assessment of Qualities, • Skills, Resources and Dreams. • Role of Society and Family in the growth of an entrepreneur. 	11
	Activity : Motivational games to boost the decision power, accuracy and Attitude of the students	
III	Starting the venture:	11
	Generating business idea – <ul style="list-style-type: none"> • Sources of new ideas, • Methods of generating ideas, • Creative problem solving, • Opportunity recognition and assessment • Environmental scanning, • Competitor and industry analysis; • Feasibility study : <ul style="list-style-type: none"> - Market feasibility:-Marketing plan: marketing research for the new venture, Steps in preparing marketing plan, - Technical/operational feasibility, - Financial feasibility. 	
	Activity : 1. Organization of 'Brain Storming' session for generating Creative Business idea 2. Market survey/Marketing Strategy	
IV	Preparing a Business Plan:	11
	<ul style="list-style-type: none"> • Introduction to Business and its Environment • Components of a business plan, • Meaning and significance of a business plan • Challenges of New Venture Strategies 	



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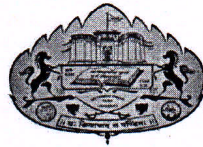
	<ul style="list-style-type: none"> • Start-up Policy Framework and Incentives • drawing business plan • Preparing project report; • Business Plan Preparation • Presenting business plan to investors • Execution of Business Plan • Business Incubation Centres 	
	Activity : Presentation on Business plan /Start-up business plan	
V	Entrepreneurship as Problem Solving	6
	<ul style="list-style-type: none"> • Entrepreneurs- as problem solvers. • Risk taking-Concept; types of business risks. • Barriers to Entrepreneurship. • Support structure for promoting entrepreneurship (various government schemes). 	
VI	Dimensions of Entrepreneurship	6
	<ul style="list-style-type: none"> • Entrepreneurial Culture • Entrepreneurial Society • Women Entrepreneurship • Rural Entrepreneurship 	
VII	Strategic Frameworks for Decision	5
	<ul style="list-style-type: none"> • Vision, Mission, Objective and Goal • Porter's 5-Forces Model • SWOT Analysis • Competitive Strategies • Value Chain Analysis 	

Reference Books:

1. Entrepreneurship, Hisrich, Robert D., Michael Peters and Dean Shepherded, , Tata McGraw Hill, ND
2. Entrepreneurship, , Brace R., and R., Duane Ireland, , Pearson Prentice Hall, New Jersey (USA).
3. Entrepreneurship, Lall, Madhurima, and ShikhaSahai, , Excel Book, New Delhi.
4. Entrepreneurship Development and Small Business Enterprises, Charantimath, Poornima, Pearson Education, New Delhi.
5. Entrepreneurship : New Venture Creation – David H. Holt
6. Entrepreneurship : Hisrich Peters
7. The Culture of Entrepreneurship- Brigitter Berger
8. Dynamics of Entrepreneurship development and Management: Entrepreneurship, Project Management, Finances, Programmes, and Problems – Vasant Desai (2009)
9. Entrepreneurship Development – Dr. P.C. Shejwalkar
10. Thought Leader : Shrinevas Pandit
11. Leadership and new Science : Margrat wheatly
12. Handbook of Entrepreneurship Research: An Interdisciplinary Survey and Introduction (International handbook series on Entrepreneurship) (2003) : Zolten J ACs, David B. Audretch



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Savitribai Phule Pune University

(Formerly University of Pune)

Two Year Degree Program in Zoology

(Faculty of Science & Technology)

Revised Syllabi for

M.Sc. (Zoology) Part-II

(for Colleges Affiliated to Savitribai Phule Pune University)

Choice Based Credit System Syllabus

To be implemented from Academic Year 2020-2021

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Title of the Course: M.Sc. (Zoology)**Preamble**

Zoology is a major subject of Basic Sciences which deals with all aspects of animal biology. It includes an interesting range of highly diverse topics. The advancements in biological Sciences demands, a zoology student to be a master of many areas in the subject. This Postgraduate degree program has been designed by the Board of Studies in Zoology of Savitribai Phule Pune University with a tangible understanding of what is needed from zoologists and what zoologists need to pursue as a skilled career. It emulates closely the Benchmark Statement for Biosciences and the guidelines laid down by the University Grants Commission, New Delhi. This Newly designed Curriculum is an appropriate blend of the classical aspects in Zoology which has been the “backbone” knowledge required for all zoologists and the recent and specialized areas. The flexibility in the Curriculum allows the students to choose their areas of interest leading to enhanced employability. Students will be provided sufficient number of hours for their skill development through the Lab Courses and the Project component. The lab courses have differing flavours and priorities to make a good zoologist. This degree offers specialization in areas like Genetics, Animal Physiology and Entomology along with a range of core courses like Biochemistry, Molecular Biology, Comparative Animal Physiology, Developmental Biology, Environmental Biology etc. Various cross cutting issues relating to Environmental biology have been aptly included to develop the students’ sense towards human wellbeing. The field trip/surveys and study tours are included to gives the student an enticing taste of what life is specially outside the walls of the classroom. On successful completion of the programme, the students are expected to understand the key life processes of human and other animal groups, the functioning of molecules, cells, tissues, organs and systems. Also the students will gain increased confidence to use initiative and judgement to make decisions in complex and changeable situations and reflect critically and analytically on personal experience and make informed decisions about further study, training and employment opportunities. The Master of Science (M.Sc.) in Zoology is a Postgraduate program under the Faculty of Science and Technology of Savitribai Phule Pune University Pune. The curriculum designed encompasses subjects like Physiology, Entomology, Genetics, Cell Biology, Developmental Biology, Endocrinology, Biochemistry, Molecular Biology, Freshwater Zoology, Environmental Biology etc. Both classical and applied subjects of Zoology have been rightly blended to offer holistic understanding of the subject.

The Choice Based Credit System (CBCS) will be implemented through this curriculum. This curriculum would certainly felicitate students to develop a strong base of the fundamentals and specialize in the desired area of their fondness and abilities. The students pursuing this program

ZY 403T Mammalian Reproductive Physiology	ZOUT 242- Mammalian Reproductive Physiology
ZY 403T Biodiversity assessment	--
ZY 404T Histology and Histochemistry	ZODT 243 Histology and Histochemistry
ZY 405T Pollution Biology	ZODT 244 Pollution Biology
ZY 406T Apiculture	ZODT 244 Apiculture
ZY 407T Pest control	ZODT 243 Pest control
ZY 408T Toxicology II	--
ZY 401 P Practical Animal Physiology II	ZODP 243 Practical
ZY 401 P Practical Entomology II	ZODP 244 Practical
ZY 401 P Practical Genetics II	ZODP 244 Practical
ZY 402 P Practical Economic Zoology	ZOUP 245 (Project)
ZY 402 P Practical Bacteria and phage Genetics	ZOUP 245 (Project)
ZY 403 P Practical Mammalian reproductive physiology	
ZY 403 P Practical Biodiversity assessment	
ZY404 P Practical Histology and histochemistry	
ZY405 P Practical Pollution biology	
ZY406 P Practical Apiculture	
ZY308 P Research Project	
ZY 408 P Practicals in Toxicology II	



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SAVITRIBAI PHULE PUNE UNIVERSITY

Faculty of Commerce & Management

Master of Commerce (Semester IV)

(Choice Based Credit System)

Revised Syllabus (2019 Pattern)

(w.e.f. Academic Year-2020-2021)

CORE COMPULSARY SUBJECT

Subject: Capital Market and Financial Services

Course Code: 401

Total Credits: 04

Objectives:

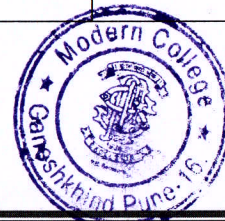
1. To acquaint the students with working of capital market.
2. To make the students aware about the latest developments in the field of capital market in India.
3. To enable the students to understand various transactions in stock exchanges and agencies involved in it.
4. To give exposure of financial services offered by various agencies and financial adviser to students.

Skills to be developed:

1. To make aware about working of capital market in India.
2. To expose them to various instruments of capital market.
3. Students shall learn and acquire the knowledge of financial services offered by agencies.

Students will acquire skills about recent development in regulatory body SEBI

Unit No.	Topic	No. of Lectures	Teaching Method	Course Outcome
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SPECIAL ELECTIVE SUBJECT - GROUP A (ADVANCED ACCOUNTING & TAXATION)
Subject: PROJECT WORK / CASE STUDIES Course Code: 404 Total Credits: 04

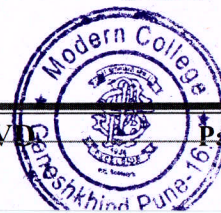
Project Work in Accounting and Taxation

A student can select any topic relating to principles practices and procedures of accounting auditing taxation and management accounting. Any topic from the syllabus of the papers studied at M Com. Part One or Part Two under special paper Accountancy & Taxation can be of a use. Pick up any unit studied and try to connect it to commercial word around e.g. in taxation a student has studied taxation of a company, then he can select a topic Tax Planning of a particular company or a study of taxation of an educational institute. On this line following areas have been listed out for project work in Accountancy.

Area of Project Work in Accounting:-

Following is the list of topics for project work in Accounting.

1. Financial statement Analysis of –
 - a. A Limited Company for 5 years
 - b. Five Companies of five different industries
 - c. Five companies of one industry e.g. Automobile, Engineering, Textile
 - d. Five banks from Private sector/Co-op. sector
2. Study of Working Capital Management of a large Company.
3. Study of Budgetary Control System of four Companies
4. Study of Management Information System of four Companies.
5. Procedure of preparation of Consolidated Balance Sheet by Holding Company having two / three subsidiaries companies.
6. Valuation of Shares of 10 unlisted Companies.
7. A study of Amalgamation/Merger of procedure of two Companies (Accounting procedure)
8. A comparative study of Accounting System of Hotel industry – Five Star, Three stars, large Hotel and small Hotel.
9. Comparative study of Accounting of Hospitals from Private sector, Trust and Small Hospital.
10. Study of Accounting for Grants to school, college, and institute.
11. Application of Inflation Accounting to a large Company's Balance Sheet.



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SPECIAL ELECTIVE SUBJECT - Group F (Business Administration)

Subject: **Project work / Case Studies**

Course Code: **414**

Total Credits: **04**

There will be a project work carrying 100 marks for internal students only. The students will have to select a subject from any area of the syllabi for Business- Administration. The students will have to work under the guidance of concerned subject teacher. The project will carry total 100 marks out of which sixty marks will be allotted for Project Report and 40 marks will be allotted for Project Viva Voce to be conducted by internal teacher and external teacher (examiner) appointed by the University. Note: The list of suggested areas for project work will be notified in due course. Case Studies: There will be a paper of case studies for external students. The paper will be set for 80 marks- to be converted to 100 marks. Total 20 cases will be selected from standard book for study. In the question paper 3 cases out of 20 (twenty) cases will be covered, each carrying twenty (20) marks. One unseen case also will be covered & it will carry twenty (20) marks. Note: The paper of case studies will be offered only by external students only.

BUSINESS ADMINISTRATION – SUGGESTED TOPICS FOR PROJECT REPORT

CONTENTS:

- 1.CoverPage
- 2.CompanyCertificate
- 3.Guide Certificate
- 4.Acknowledgement
- 5.Declaration
- 6.Executive Summary

TENTATIVE CHAPTER SCHEM E

CHAPTER 1. INTRODUCTION TO STUDY


CHAPTER 2. COMPANY PROFILE

CHAPTER 3. OBJECTIVES OF STUDY

CHAPTER 4. REVIEW OF LITERATURE

CHAPTER 5. RESEARCH METHODOLOGY

CHAPTER 6. DATA ANALYSIS AND INTERPRETATIONS OBSERVATIONS


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PH-346 Elective II –(J): Electro Acoustics and Entertainment Electronics

1. Speech and Hearing:

(03 L)

Human voice and speech mechanism. Human hearing mechanism, theories of hearing

2. Electro Acoustic Transducers:

(25 L)

1. Microphones: Design and operational features of carbon, moving coil and condenser microphones. Expressions for sensitivity, calibration, directivity. Problems.

2. Loudspeakers: Direct radiator dynamic type, expression for efficiency, radiated output power, effect of voice coil parameters. Horn loudspeaker cutoff frequency, output of horn. Loudspeaker cabinets – types, bass reflex cabinets. Problems.

3. Sound reinforcement system for auditoria: Power handling capacities, testing and evaluating amplifier specifications for auditoria. High-Fidelity (Hi-fi) acoustic evaluation of an auditorium/studio articulation test, sound level distribution, measurement of reverberation time. Acoustic delay units.

3. Sound recording and reproduction:

(18 L)

1. Basic requirements of a system for good quality sound recording and reproduction, volume compressors, expanders, equalizers, graphic equalizers, monophonic, stereophonic sound reproducing system, surround sound. Noise reduction. Dolby A, B system

2. Magnetic tape sound recording and reproduction basic principles, digital audio tape recording (DAT), basic principles of compact disc audio systems, motion picture sound recording and reproduction system, motion picture sound recording and reproduction variable area and variable density

4. Ultra Sonics principles and applications

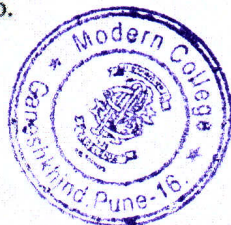
(2L)

Reference Books:

1. Fundamentals of Acoustics: Kinsler and Fray et al, 4th edition, John Wiley and sons
2. Music, physics and Engineering H.F. Olson Dover publication 1960
3. Basic Acoustics D.E. Hall, Oxford University Press.
4. Acoustics Sourcebook Sybil Parker (Ed) McGraw Hill
5. Handbook for sound engineers G.M. Balov (Ed) New audio cyclopedia
6. Consumer Electronics by S.P. Bali (Pearson Publication)
7. Electroacoustics by Mendel and Kleiner (CRC Press)

List of experiments:

1. Non linear distortion of an amplifier.
2. Study of properties of porous acoustic materials.
3. Calibration of microphone by closed chamber method.
4. Study of a tape recorder.
5. Study of graphic equalizer.
6. Study of mufflers of noise reduction.
7. Use of distortion factor meter.
8. Acoustical evaluation of a Hall/Studio.
9. Ultrasonic Interferometer (modified).



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8. Fundamentals of Mechanics: J C Upadhyaya, Himalaya Publishing House.
 9. Mechanics: D. S. Mathur, Revised by P. S. Hemne, S. Chand and Company, New Delhi.

Course code and title: PHY-112 Physics Principles and Applications

Lectures: 36

(Credits-02)

Learning Outcomes:

On successful completion of this course students will be able to do the following:

1. To understand the general structure of atom, spectrum of hydrogen atom.
2. To understand the atomic excitation and LASER principles.
3. To understand the bonding mechanism and its different types.
4. To demonstrate an understanding of electromagnetic waves and its spectrum.
5. Understand the types and sources of electromagnetic waves and applications.
6. To demonstrate quantitative problem solving skills in all the topics covered.

1. Physics of Atoms

(08-Lectures)

1.1 Introduction to Atom

1.2 Atomic Models:

1.2.1 Thomson's Atomic Model

1.2.2 Rutherford's Atomic Model

1.2.3 Bohr's Atomic Model

1.3 Atomic Spectra:

1.3.1 Emission line Spectrum

1.3.2 Absorption line spectrum

1.3.3 Uses of Atomic Spectra

1.4 Classical planetary model of Hydrogen Atom

1.5 The Bohr Theory of the Hydrogen Atom

1.6 The Hydrogen Spectrum

1.7 Frank-Hertz experiment

Problems

2. LASERS and Its Applications

(07-Lectures)

2.1 Introduction to LASERS

2.2 Basic Principle of Lasers: Three Processes

2.3 Characteristics of Lasers: brief explanation

2.4 Boltzmann Distribution Law

2.5 Population Inversion and Pumping

2.6 Types of Lasers:

2.5.1 He-Ne Laser

2.5.2 Ruby Laser

2.7 Applications of Lasers

Problems

3. Physics of Molecules

(08-Lectures)

3.1 Introduction to Bonding Mechanisms

3.2 Forces between Atoms

3.3 Types of Bonding:

3.3.1 Ionic Bonds

3.3.2 Covalent Bonds

3.3.3 van der Waal's Bonds

3.3.4 Hydrogen Bond

3.3.5 Metallic Bond

- 3.4 Rotation energy levels of a diatomic molecule
- 3.5 Vibration energy levels of a diatomic molecule
- Problems

4. Sources of Electromagnetic Waves

(06-Lectures)

- 4.1 Introduction to Electromagnetic Waves: Historical Perspective
- 4.2 General properties of Electromagnetic radiations
- 4.3 Electromagnetic spectrums and its sources
- 4.4 Production of electromagnetic waves: Hertz experiment
- 4.5 Plank's hypothesis of Photons
- 4.6 Applications of various waves in electromagnetic spectrum

5. Applications of Electromagnetic Waves

(07-Lectures)

- 5.1 Microwave oven
- 5.2 RADAR
- 5.3 Pyroelectric thermometer
- 5.4 X-ray radiography
- 5.5 CT Scan
- 5.6 Solar cell and its types
- Problems

Books/References

1. Concepts of Modern Physics: A Beiser (6th ed., McGraw Hill, 2003)
2. Modern Physics: Raymond A. Serway, Clement J. Moses, Curt A. Moyer
3. Sears and Zemansky's University Physics: H.D. Young R. A. Freedman, Sandin (11th Ed. Pearson Education)
4. LASERS: M. N. Avdhanulu, S. Chand Publications.

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Syllabus

**BACHLORS OF VOCTIONAL (B.Voc) for
Food processing Technology
Under National Skill Qualification Framework (NSFQ)**

(2014-2015)

Submitted to

Savitribai Phule University of Pune

By



**Progressive Education Society's
Modern College of Arts, Science and Commerce,
Ganeshkhind, Opposite Pune University,
Pune 411016, Maharashtra**



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Subjects and subject code : B.Voc. Food processing Technology


Sr.No.	Subject Code	Food processing Technology subjects	Credits
Year-1 Semester-I			
1.	BvFt 101	Food Science	3
2.	BvFt 102	Fundamentals of Microbiology	3
3.	BvFt 103	Food chemistry and Nutrition	3
4.	BvFt 104	Food processing and engineering	3
5	BvFt 105	Value education	1
6	BvFt 106	Practical on Food science	3
7.	BvFt 107	Practical of Microbiology	3
8.	BvFt 108	Practical of Food Chemistry and Nutrition	3
9.	BvFt 109	Practical of Food processing and engineering	3
10	BvFt 110	Industry Training	5
			30
Year-1 Semester – II			
1.	BvFt 201	Food Biochemistry	3
2.	BvFt 202	Food processing operation	3
3.	BvFt 203	Food safety & hygiene	3
4.	BvFt 204	Food Microbiology	2
5.	BvFt 205	Communication skill and Technical English	3
6	BvFt 206	Practical for Food Biochemistry	3
7.	BvFt 207	Practical for food processing operation	3
8.	BvFt 208	Practical on Food safety & hygiene	3
9.	BvFt 209	Practical on Food Microbiology	2
10.	BvFt 210	Summer training	5
			30
Year-2 Semester- III			
1.	BvFt 301	Principles of Food preservation	3
2.	BvFt 302	Food safety standards	3
3.	BvFt 303	Post-harvest management of fruits & vegetables	3
4.	BvFt 304	Food analysis	3
5.	BvFt 305	Applied statics	1
6	BvFt 306	Practicals on Food preservation	3
7.	BvFt 307	Practical on Food safety standards	3
8.	BvFt 308	Practical Post-harvest management of fruits &	3
9.	BvFt 309	Practical of Food analysis	3
10.	BvFt 310	Industry training	5
			30



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Year 2 Semester- IV			
1.	BvFt 401	Processing of spices & flavoring agents	3
2.	BvFt 402	Dairy Technology	3
3.	BvFt 403	Food packaging Technology	3
4.	BvFt 404	Computer application in food industry	3
5.	BvFt 405	Practical of Processing of spices & flavoring agents	3
6	BvFt 406	Practical on Dairy Technology	3
7.	BvFt 407	Practical on food packing	3
8.	BvFt 408	Practical on Computer application in food industry	3
9.	BvFt 409	Industry internship	6
			30
Year-3 Semester V			
1.	BvFt 501	Bakery & confectionary products	3
2.	BvFt 502	Meat, fish & poultry processing	3
3.	BvFt 503	Product development & formulation	3
4.	BvFt 504	Waste management in food industry	2
5.	BvFt 505	Management principles and business ethics	2
6	BvFt 506	Practical of bakery & confectionary products	3
7.	BvFt 507	Practical on Meat, fish & poultry processing	3
8.	BvFt 508	Practical Product development & formulation	3
9.	BvFt 509	Practical on Waste management in food industry	2
10.	BvFt 510	Project & Industry training	6
			30
Year-3 Semester VI			
1.	BvFt 601	Food storage & warehouse technology	3
2.	BvFt 602	Quality control and Quality assurance	3
3.	BvFt 603	Food laws & regulation	3
4.	BvFt 604	Entrepreneurship development	3
5.	BvFt 605	Practical on Food storage & warehouse technology	3
6	BvFt 606	Practical on Quality assurance & certification	3
7.	BvFt 607	Practical on entrepreneurship	6
8.	BvFt 608	Project	6
			30




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S.Y.B.B.A.(C.A.) Semester – IV

Course Code: CA- 405

Subject: Project

Project Guidelines

DSE: (405) Project

Total Credits: 4

Teaching Scheme

- Project: 4 hours/week
- Batch Size: 10 Projects

Workload:

1. One project guide to be assigned to 10 Projects.
2. 4 hours /week to be allotted for 10 Projects.

Guidelines:

- Students should work in a team of maximum 2 students.
- Students can choose a project topic without any restriction on technology or domain.
- The student group will work independently throughout the project work including: problem identification, information searching, literature study, design and analysis, implementation, testing, and the final reporting.
- Project guide must conduct project presentations (minimum 4) to monitor the progress of the project groups.
- At the end of the project, the group should prepare a report which should conform to international academic standards. The report should follow the style in academic journals and books, with clear elements such as: abstract, background, aim, design and implementation, testing, conclusion and full references, Tables and figures should be numbered and referenced to in the report.
- The final project presentation with demonstration (UE) will be evaluated by the project guide (appointed by the college) and one external examiner (appointed by the University).

Evaluation guidelines:

IA (30 marks)			UE (70 marks)		
First presentation	Second presentation	Documentation	Project Logic/Presentation	Documentation	Viva
10	10	10	40	10	20

Recommended Documentation contents:

Abstract

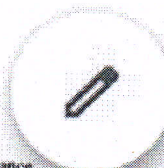
Introduction

- motivation
- problem statement
- purpose/objective and goals
- literature survey
- project scope and limitations

System analysis

- Existing systems
- scope and limitations of existing systems
- project perspective, features
- stakeholders
- Requirement analysis - Functional requirements, performance requirements, security requirements etc.

System Design



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Recommended Documentation contents:

Abstract

Introduction

- motivation
- problem statement
- purpose/objective and goals
- literature survey
- project scope and limitations

System analysis

- Existing systems
- scope and limitations of existing systems
- project perspective, features
- stakeholders
- Requirement analysis - Functional requirements, performance requirements, security requirements etc.

System Design

- Design constraints
- System Model: DFD
- Data Model
- User interfaces

Implementation details

- Software/hardware specifications

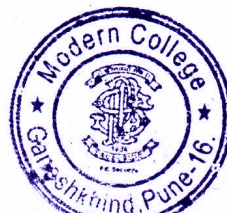
Outputs and Reports Testing

Test Plan, Black Box Testing or Data Validation Test Cases, White Box Testing or Functional Validation Test cases and results

Conclusion and Recommendations

Future Scope

Bibliography and References



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B. C. A. (Semester V)

501 : Java Programming

Objectives:-

1. To learn the basic concept of Java Programming.
2. To understand how to use programming in day to day applications.

Unit No.	Topic	No. of Lectures	Reference Books
1	Introduction to Java 1.1 Features of java 1.2 JDK Environment & tools like(java, javac, appletviewer, javadoc, jdb) 1.3 OOPs Concepts Class, Abstraction , Encapsulation, Inheritance, Polymorphism 1.4 Difference between C++ and JAVA 1.5 Structure of java program 1.6 Data types ,Variables ,Operators , Keywords ,Naming Convention 1.7 Decision Making (if, switch), Looping(for, while) 1.8 Type Casting 1.9 Array Creating an array Types of Array - One Dimensional arrays - Two Dimensional array 1.10 String - Arrays , Methods. - StringBuffer class	8	1,2
2	Classes and Objects 2.1 Creating Classes and objects 2.2 Memory allocation for objects 2.3 Constructor 2.4 Implementation of Inheritance Simple, Multilevel, 2.5 Interfaces	10	1,2



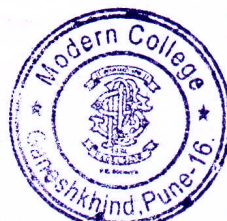
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Semester - V(w.e.f A.Y. 2015-16)

Paper No.	Name of the subject	Marks			No. of sessions per week	
		Int.	Uni.	Total	Th.	Pract.
501	Java Programming	20	80	100	4	-
502	Web Technologies	20	80	100	4	
503	Dot Net Programming	20	80	100	4	
504	Object Oriented Software Engg.	20	80	100	4	
505	Software Project – I [Based on C++ / VB Technology]	-	100	100	-	4
506	Laboratory Course – V [Based on Paper No. 501 & 502]	-	100	100	-	4
Total		80	520	600	16	8

Semester – VI (w.e.f A.Y. 2015-16)

Paper No.	Name of the subject	Marks			No. of sessions per week	
		Int.	Uni.	Total	Th.	Pract.
601	Advanced Web Technologies	20	80	100	4	-
602	Advanced Java	20	80	100	4	
603	Recent Trends in IT	20	80	100	4	
604	Software Testing	20	80	100	4	
605	Software Project – II [Java / Dot net Technology]	-	100	100	-	4
606	Laboratory Course – VI [Based on Paper No. 601 & 602]	-	100	100	-	4
Total		80	520	600	16	8



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