

**PDEA'S ANNASAHEB WAGHIRE ARTS, SCIENCE AND COMMERCE,
OTUR, TAL.JUNNAR, DIST.PUNE.
DEPARTMENT OF MATHEMATICS
CERTIFICATE COURSE IN
“BASIC COMMERCIAL MATHEMATICS AND
STATISTICS”
(2019-2020)**

SYLLABUS

Mathematics is an important discipline of learning at the secondary stage. It helps the learners in acquiring decision- making ability through its applications to real life both in familiar and unfamiliar situations. It predominately contributes to the development of precision, rational and analytical thinking, reasoning and scientific temper. One of the basic aims of teaching Mathematics at the Secondary stage is to inculcate the skill of quantification of experiences around the learner. Mathematics helps the learners to understand and solve the day to day life problems faced by them including those from trade, banking, sales tax and commission in transaction. It also helps them to acquire the skill of representing data in the form of tables/graphs and to draw conclusions from the same.

OBJECTIVES

The main objectives of teaching Mathematics are to enable the learners to :

1. acquire knowledge and understanding of the terms, concepts, symbols, principles and processes.
2. acquire the skill of quantification of experiences around them.
3. acquire the skill of drawing geometrical figures, charts and graphs representing given data.
4. interpret tabular/graphical representation of the data.
5. articulate logically and use the same to prove results.
6. translate the word problems in the mathematical form and solve them.
7. appreciate the contribution of Indian mathematicians towards the development of the subject.
8. develop interest in Mathematics.

DESCRIPTION OF COURSE

The present syllabus in Mathematics has been divided into TWO modules namely **Commercial Mathematics** and **Statistics**.

The marks allotted, number of lessons and suggested study time for each module are as under:

Name of the module	Number of lessons	Study time (in hours)
1. Commercial Mathematics	04	17
2. Statistics	04	18
Total	08	35

Module-1: Commercial Mathematics

Scope and Approach: After passing Secondary level examination, some learners may work in banks, business, houses, insurance companies dealing with sales tax, income tax, excise duty etc. Some other may enter business and industry. Some may go for higher studies. All of them will need mathematics of finance. In any case, every citizen has to deal with problems involving interest, investment, purchases etc. It is in this context; the present module would be developed. In this module, applications of compound interest in the form of rate of growth (appreciation) and depreciation(decay) will be dealt. In solving problems related to all the stated areas, the basic concepts of direct and inverse proportion (variation), and percentage are all pervading.

1.1 Ratio and Proportion

Review of ratio and proportion. Application of direct and inverse proportion (variation).

1.2 Percentage and its Applications

Concept of percentage. Conversion of percent to a decimal (fraction) and vice -versa. Computations involving percentage. Applications of percentage to (i) profit and loss (ii) simple interest (iii) discount (rebate) (iv) sales tax (v) commission in transaction (vi) installment buying

1.3 Compound Interest

Compound interest and its application to rate of growth and depreciation. (conversion periods not more than 4)

1.4 Banking

Concept of Banking. Types of accounts: (a) Saving (b) Fixed/term deposit Calculation of interest in saving account and on fixed deposit with not more than 4 conversion periods.

Module-2: Statistics

Scope and Approach: Since ancient times, it has been the practice by the householders, shopkeepers, individuals etc to keep records of their receipts, expenditures and other resources.

To make the learners acquainted with the methods of recording, condensing and culling out relevant information from the given data, the learners would be exposed to the lesson on Data and their Representation.

Every day we come across data in the form of tables, graphs, charts etc on various aspects of economy, advertisements which are eye catching. In order to read and understand these, the learners would be introduced to the lesson on Graphical Representation of Data.

Sometimes we are required to describe data arithmetically like average age of a group median score of a group or modal class size of a group. To be able to do this, the learners would be introduced to the lesson on Measures of Central Tendency. They would also be taught characteristics and limitation of these measures.

2.1 Data and their Representation

Introduction to Statistics. Statistics and statistical data. Primary and secondary data. Ungrouped/raw and grouped data. Class marks, class intervals, class limits and true class limits. Frequency, frequency distribution table. Cumulative frequency. Cumulative frequency table.

2.2 Graphical Representation of Data

Drawing of Bar charts, Histograms and frequency polygons. Reading and interpretation of Bar charts and Histograms. Reading and construction of graphs related to day to day activities; temperature- time graph, pressure -volume graph and velocity – time graph etc.

2.3 Measures of Central Tendency

Mean of ungrouped (raw) and grouped data. Mode and median of raw data. Properties of mean and median.

2.4 Correlation

Concept and types of correlation, scatter diagram, Karl's Pearson's correlation coefficient for ungrouped data.

Note- Practical course conducted by using Software's like Excel or others.

Reference books:

1. Business Mathematics-Dr. Amarnath Dikshit, Dr. Jinendra Kumar Jain.
2. Business Mathematics-V.K. Kapoor, Sultan Chand and sons, Delhi .
3. Business Mathematics-Bari New Literature publishing company, Mumbai.
4. Fundamentals of Statistics- S.C. Gupta-Sultan Chand and sons, Delhi.

Mr. Manoj V. Deshmukh
Assistant Professor, Mathematics
Department of Mathematics
Annasaheb Waghire College, Otur
Date 16.01.2020

To,
Dr. T.N. Salve
Principal,
PDEA's Annasaheb Waghire College Otur.

Subject: Requirement of advance amount for certificate course...

Respected Sir,

As per the academic year schedule, Department started the "Certificate course in Basic Commercial Mathematics and Statistics" for the S.Y.B.Sc. Students on 16.01.2020. There were 22 students enrolled for this course. The remuneration of expert persons and other purpose, I request you to give Rs.6500 advance amount. The documents will be submitting after completion of this course.

Please do needful.

Thanks for your co-operation.

श्री. कारभार
निदेश
21/01/2020

Yours Sincerely

M.V. Deshmukh
16/01/2020
M.V. Deshmukh



पुणे जिल्हा शिक्षण मंडळ, पुणे
४८/ १ अ, एरंडवणा, पौड रोड, पुणे - ४११ ०३८

Email :- honsecretary@pdeapune.org Web :- www.pdeapune.org

ना.क्र. पुजिशिमं/लेखा विभाग/२०१९-२०/२३२-१११

दिनांक - 3 MAR 2020

मति,
ना. प्राचार्य,
अण्णासाहेब वाघीरे महाविद्यालय,
ओतूर.


विषय :- महाविद्यालयातील गणित विभागाच्या विद्यार्थ्यांकरिता सर्टीफिकेट कोर्सचे आयोजन करणेबाबत.....

संदर्भ :- आपले पत्र जा. क्र.१७२/०५/२०१९-२०, दि.२२/०१/२०२०

उपरोक्त विषयास व संदर्भीय पत्रास अनुसरून आपणास कळविण्यात येते की, आपल्या महाविद्यालयामध्ये गणित विभागामार्फत घेण्यात येणाऱ्या **Certificate Course in Basic commercial mathematics & Statistics** या विषयाच्या कोर्सचे आयोजन दि.१६/०१/२०२० पासून करण्यात येणार आहे. त्यानुसार सदर कोर्स च्या आयोजनाकरिता तज्ञ व्यक्तींचे मानधन, स्टेशनरी इत्यादी बाबींकरिता रक्कम रु.६,५००/- (अक्षरी रक्कम रूपये सहा हजार पाचशे फक्त) इतका खर्च अपेक्षित आहे. असे आपण या कार्यालयास कळविलेले आहे. त्यानुसार महाविद्यालयामध्ये गणित विभागामार्फत घेण्यात येणाऱ्या **Certificate Course in Basic commercial mathematics & Statistics** या कोर्सचे आयोजन करण्यास व त्याकरिता तज्ञ व्यक्तींचे मानधन, स्टेशनरी इत्यादी बाबींकरिता होणाऱ्या रक्कम रु.६,५००/- (अक्षरी रक्कम रूपये सहा हजार पाचशे फक्त) पर्यंतच्या खर्चास या कार्यालयाकडून परवानगी देण्यात येत आहे. तथापि **Certificate Course in Basic commercial mathematics & Statistics** या कोर्सचे आयोजनासाठी प्रत्यक्ष झालेल्या खर्चाची देयके संस्थेच्या अंतर्गत हिशोब तपासणीस यांचेकडून तपासून घेण्यात यावीत.

कळावे.

श्री. देशमुख
श्री. का. र. श. श. श.
नि. नि. नि. नि. नि.
06/03/2020


मानद सचिव
पुणे जिल्हा शिक्षण मंडळ, पुणे

A.W.COLLEGE OF SCIENCE

ARTS & COMMERCE OTUR

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Date 06/03/2020

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 Phone : 25886621/2/3/4
 Email : crossword@andh@yahoo.co.in
 GST No: 27AADFA2432P1ZL

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Invoice No : AU-19-556-53845
 Date : 01/March/2020
 Cashier : vy

Place Of Supply : Maharashtra(27)

Code	HSN	Description	Qty	Rate	Disc%	Value
BK 0417908	4901	GET SET GO NUMBERS JUNK	0%	1 RS.	275.00 50.00%	137.50
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BK 0474293	4901	UPAYOJIT SANKHYASHASTRA	0%	1 RS.	125.00 0.00%	125.00
BK 0422376	4901	HOW TO ENJOY YOUR LIFE A	0%	1 RS.	150.00 0.00%	150.00
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लुक अँडव्हर्टाईजिंग

लुक अँडव्हर्टाईजिंग
प्रा.टी.अ.द. १,टी.टी. १४६
महाराष्ट्र शासन, मुंबई

■ फ्लेक्स प्रिंटिंग ■ रेडियम कटिंग ■ लेजर कटिंग ■

शा.पं.९, शुभम कॉम्प्लेक्स, ओतुर, ता.ओतुर, जि.पुणे ४१२ ४०९

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एकदा वेळ केल्यानंतर राहिलेल्या चुकांची जबाबदारी ग्राहकांपर राहिल.
कारणातून आत कारणाच्या बजाय राहिल.
काही अपघटित कायदांमुळे टिनीफ्रेशील उशीर होऊ शकतो.

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Annasaheb Waghire College
Otur, Pune - 412409.


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The present syllabus in Mathematics has been divided into TWO modules namely **Commercial Mathematics and Statistics.**

The marks allotted, number of lessons and suggested study time for each module are as under:

Pune District Education Association's
**Annasaheb Waghire College Of Science,
Arts & Commerce**

Otur, Pune - 412409, Tel. : (02132) 264138

Account Head : _____

Name : Deshonukh. Manoj V.

Department

Voucher No.

Date : 26/6/2020

Particulars	Rate	Amount Rs.
Honorarium charges for Lectures. Total Period 22 x Rs. 150 /lect. 30 hrs. Certificat Course in Basic Commercial Mathematics & Statistics. during the period 16-1-2020 To 4-3-2020	150/-	3300=00
Total Rs.		3300=00

Received From the Principal, Annasaheb Waghire College, Otur, Pune - 412409.

Amount (In Words) Three thousand three hundred Rs. only.

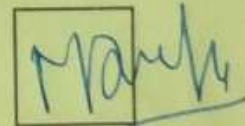
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Office Supdt
Annasaheb Waghire College
Otur, Pune - 412409.

Principal

Annasaheb Waghire College

Otur, Pune - 412409.



Receiver's Signature

Pune District Education Association's
**Annasaheb Waghire College Of Science,
Arts & Commerce**

Otur, Pune - 412409, Tel. : (02132) 264138

Account Head : _____

Name : Sachin Dumbre

Department

Voucher No.

Date : 26/6/20

Particulars	Rate	Amount Rs.
Remuneration for Support Staff for Lab Certification Course in Mathematics		500 = 00
Total Rs.		500 = 00

Received From the Principal, Annasaheb Waghire College, Otur, Pune - 412409.

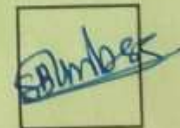
Amount in Words) Five hundred Rs only

Mode Specified above by Cash / Cheque No. _____ Date _____

Approved For Payment.

Office Supdt
Annasaheb Waghire College
Otur, Pune - 412409.

Principal



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The present syllabus in Mathematics has been divided into TWO modules namely Com

Pune District Education Association's
**Annasaheb Waghire College Of Science,
Arts & Commerce**

Otur, Pune - 412409, Tel. : (02132) 264138

Account Head : _____

Name : shree Deepak Babar

Department
Voucher No.
Date : <u>26/6/2020</u>

Particulars	Rate	Amount Rs.
Honorarium for Technical person for Lab of Computer. for the use of certi course of mathematics.		500=00
Total Rs.		500=00

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Rupees (In Words) Five hundred Rs only

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Office Supdt
Annasaheb Waghire College
Otur, Pune - 412409.

Principal

Dr. Babar

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DEPARTMENT OF MATHEMATICS
 CERTIFICATE COURSE IN BASIC COMMERCIAL MATHEMATICS AND STATISTICS
 YEAR: 2019-2020

ATTENDANCE

NAME OF THE STUDENTS	16-01-2020 2:15 PM - 3:30 pm	17/01/2020	18/01/2020	20/01/2020 8	21/01/2020 1:30 - 3:00 pm
AKSHAY BABAN	<u>Aak</u>	<u>Aak</u>	<u>Aak</u>	<u>Aak</u>	<u>Aak</u>
YOTI SOPAN	J.S.Bhos	J.S.Bhos	J.S.Bhos	J.S.Bhos	J.S.Bhos
MALE KIRAN RAMDAS	<u>Mharmal</u>	<u>Mharmal</u>	<u>Mharmal</u>	<u>Mharmal</u>	<u>Mharmal</u>
SHIVAD TEJAL RAMDAS	<u>Tejwood</u>	<u>Tejwood</u>	<u>Tejwood</u>	<u>Tejwood</u>	<u>Tejwood</u>
PARVATI PRATIBHA PARSHURAM	<u>Pratibha</u>	<u>Pratibha</u>	<u>Pratibha</u>	<u>Pratibha</u>	<u>Pratibha</u>
SHIVAV RUPALI BHAURAO	<u>Rupali</u>	<u>Rupali</u>	<u>Rupali</u>	<u>Rupali</u>	<u>Rupali</u>
SHIVAM DEEPANJALI SANJAY	<u>Skadam</u>	<u>Skadam</u>	<u>Skadam</u>	<u>Skadam</u>	—
SHIVDRE KIRAN NIVRUTTI	<u>Katose</u>	<u>Katose</u>	<u>Katose</u>	<u>Katose</u>	<u>Katose</u>
SHIVGARNI NEHA SHAILESH	<u>Neel</u>	<u>Neel</u>	—	<u>Neel</u>	<u>Neel</u>
SHIVDGE MAYUR SANTOSH	<u>Mandge</u>	<u>Mandge</u>	<u>Mandge</u>	<u>Mandge</u>	<u>Mandge</u>
SHIVLI KIRAN MANGALDAS	<u>Khal</u>	<u>Khal</u>	<u>Khal</u>	<u>Khal</u>	<u>Khal</u>
SHIVNDE NILAM DATTATRAY	<u>Nir</u>	<u>Nir</u>	<u>Nir</u>	<u>Nir</u>	<u>Nir</u>
SHIVNDLIK SAURAV KAILAS	<u>See</u>	<u>See</u>	<u>See</u>	<u>See</u>	<u>See</u>
SHIVNRADE VRUSHALI EKNATH	<u>Smrade</u>	<u>Smrade</u>	<u>Smrade</u>	<u>Smrade</u>	<u>Smrade</u>
SHIVLAWADE SIDDHIKA SANTOSH	<u>Balawade</u>	<u>Balawade</u>	<u>Balawade</u>	<u>Balawade</u>	<u>Balawade</u>
SHIVDHAL BHAVESH DEVDATTA	<u>Bel</u>	<u>Bel</u>	<u>Bel</u>	<u>Bel</u>	<u>Bel</u>
SHIVTEL VRUTTIKA GIRISH	<u>Atal</u>	<u>Atal</u>	<u>Atal</u>	<u>Atal</u>	<u>Atal</u>
SHIVDAPALE RUSHIKESH J.	<u>R</u>	<u>R</u>	<u>R</u>	<u>R</u>	<u>R</u>
SHIVDAPALE RUTUJA RAJENDRA	<u>Rute</u>	<u>Rute</u>	<u>Rute</u>	<u>Rute</u>	<u>Rute</u>
SHIVDALLUNKAR DIPAK SUBHASH	<u>Ass</u>	<u>Ass</u>	<u>Ass</u>	<u>Ass</u>	<u>Ass</u>
SHIVDHINGDE TEJAL SHANTARAM	<u>Thil</u>	<u>Thil</u>	<u>Thil</u>	<u>Thil</u>	<u>Thil</u>
SHIVDWAYAL RAMDAS CHIMA	<u>Rwayal</u>	<u>Rwayal</u>	<u>Rwayal</u>	<u>Rwayal</u>	<u>Rwayal</u>

26-01-20 1/1/20

DEPARTMENT OF MATHEMATICS
CERTIFICATE COURSE IN BASIC COMMERCIAL MATHEMATICS AND STATISTICS
 YEAR: 2019-2020 ATTENDANCE

Sr. No.	NAME OF THE STUDENTS	3/2/2020 2-20-3-20	4/2/2020 2-20-3-30	6/2/2020 2-20-3-00	11/2/2020 2-15-3-30	13/2/2020 2-20-3-30
1	AROTE AKSHAY BABAN	<u>Arote</u>	<u>Arote</u>	<u>Arote</u>	<u>Arote</u>	<u>Arote</u>
2	BHOR JYOTI SOPAN	<u>J.S.Bhor</u>	<u>J.S.Bhor</u>	<u>J.S.Bhor</u>	<u>J.S.Bhor</u>	<u>J.S.Bhor</u>
3	DHAMALE KIRAN RAMDAS	<u>P.Dhamale</u>	<u>P.Dhamale</u>	<u>P.Dhamale</u>	<u>P.Dhamale</u>	<u>P.Dhamale</u>
4	GAIKWAD TEJAL RAMDAS	<u>P.Gaikwad</u>	<u>P.Gaikwad</u>	<u>P.Gaikwad</u>	<u>P.Gaikwad</u>	<u>P.Gaikwad</u>
5	GAYKAR PRATIBHA PARSHURAM	<u>P.Pratibha</u>	<u>P.Pratibha</u>	<u>P.Pratibha</u>	<u>P.Pratibha</u>	<u>P.Pratibha</u>
6	JADHAV RUPALI BHAURAO	<u>Rupali</u>	<u>Rupali</u>	<u>Rupali</u>	<u>Rupali</u>	<u>Rupali</u>
7	KADAM DEEPANJALI SANJAY	<u>D.Kadam</u>	<u>D.Kadam</u>	<u>D.Kadam</u>	<u>D.Kadam</u>	<u>D.Kadam</u>
8	KATORE KIRAN NIVRUTTI	<u>K.Katore</u>	<u>K.Katore</u>	<u>K.Katore</u>	<u>K.Katore</u>	<u>K.Katore</u>
9	KULKARNI NEHA SHAILESH	<u>N.Neha</u>	<u>N.Neha</u>	<u>N.Neha</u>	<u>N.Neha</u>	<u>N.Neha</u>
10	LANDGE MAYUR SANTOSH	<u>M.Landge</u>	<u>M.Landge</u>	<u>M.Landge</u>	<u>M.Landge</u>	<u>M.Landge</u>
11	MALI KIRAN MANGALDAS	<u>M.Mali</u>	<u>M.Mali</u>	<u>M.Mali</u>	<u>M.Mali</u>	<u>M.Mali</u>
12	MANDE NILAM DATTATRAY	<u>N.Mande</u>	<u>N.Mande</u>	<u>N.Mande</u>	<u>N.Mande</u>	<u>N.Mande</u>
13	MANDLIK SAURAV KAILAS	<u>S.Mandlik</u>	<u>S.Mandlik</u>	<u>S.Mandlik</u>	<u>S.Mandlik</u>	<u>S.Mandlik</u>
14	MARADE VRUSHALI EKNATH	<u>V.Marade</u>	<u>V.Marade</u>	<u>V.Marade</u>	<u>V.Marade</u>	<u>V.Marade</u>
15	NALAWADE SIDHIKA SANTOSH	<u>S.Nalawade</u>	<u>S.Nalawade</u>	<u>S.Nalawade</u>	<u>S.Nalawade</u>	<u>S.Nalawade</u>
16	PAOVAL BHAVESH DEVDATTA	<u>B.Paoval</u>	<u>B.Paoval</u>	<u>B.Paoval</u>	<u>B.Paoval</u>	<u>B.Paoval</u>
17	PATEL VRUTTIKA GIRISH	<u>V.Patel</u>	<u>V.Patel</u>	<u>V.Patel</u>	<u>V.Patel</u>	<u>V.Patel</u>
18	PHAPALE RUSHIKESH J.	<u>R.Phapale</u>	<u>R.Phapale</u>	<u>R.Phapale</u>	<u>R.Phapale</u>	<u>R.Phapale</u>
19	PHAPALE RUTUJA RAJENDRA	<u>R.Phapale</u>	<u>R.Phapale</u>	<u>R.Phapale</u>	<u>R.Phapale</u>	<u>R.Phapale</u>
20	SALUNKAR DIPAK SUBHASH	<u>D.Salunkar</u>	<u>D.Salunkar</u>	<u>D.Salunkar</u>	<u>D.Salunkar</u>	<u>D.Salunkar</u>
21	SHINDE TEJAL SHANTARAM	<u>T.Shinde</u>	<u>T.Shinde</u>	<u>T.Shinde</u>	<u>T.Shinde</u>	<u>T.Shinde</u>
22	WAYAL RAMDAS CHIMA	<u>R.Wayal</u>	<u>R.Wayal</u>	<u>R.Wayal</u>	<u>R.Wayal</u>	<u>R.Wayal</u>

PDEA ANNASAHEB WAGHIRE COLLEGE OTUR
DEPARTMENT OF MATHEMATICS
CERTIFICATE COURSE IN BASIC COMMERCIAL MATHEMATICS AND STATISTICS
YEAR:2019-2020

SR. NO.	NAME OF THE STUDENTS	ATTENDANCE				
		15/2/2020 2-15 to 3-20	17/2/2020 2-15 to 3-15	18/2/2020 8-00-8-45	18/2/2020 1-30-2-45	20/2/2020 8-10-8-45
1	AROTE AKSHAY BABAN	<u>Arote</u>	<u>Arote</u>	<u>Arote</u>	<u>Arote</u>	<u>Arote</u>
2	BHOR JYOTI SOPAN	<u>J.S.Bhor</u>	<u>J.S.Bhor</u>	<u>J.S.Bhor</u>	<u>J.S.Bhor</u>	<u>J.S.Bhor</u>
3	DHAMALE KIRAN RAMDAS	—	<u>Dhamale</u>	<u>Dhamale</u>	—	<u>Dhamale</u>
4	GAIKWAD TEJAL RAMDAS	<u>Gaikwad</u>	<u>Gaikwad</u>	<u>Gaikwad</u>	<u>Gaikwad</u>	<u>Gaikwad</u>
5	GAYKAR PRATIBHA PARSHURAM	<u>Pratibha</u>	<u>Pratibha</u>	<u>Pratibha</u>	<u>Pratibha</u>	<u>Pratibha</u>
6	JADHAV RUPALI BHAURAO	<u>Rupali</u>	<u>Rupali</u>	<u>Rupali</u>	<u>Rupali</u>	<u>Rupali</u>
7	KADAM DEEPANJALI SANJAY	<u>Ekadam</u>	<u>Ekadam</u>	<u>Ekadam</u>	<u>Ekadam</u>	<u>Ekadam</u>
8	KATORE KIRAN NIVRUTTI	<u>Katore</u>	<u>Katore</u>	<u>Katore</u>	<u>Katore</u>	<u>Katore</u>
9	KULKARNI NEHA SHAILESH	<u>Neha</u>	<u>Neha</u>	<u>Neha</u>	<u>Neha</u>	<u>Neha</u>
10	LANDGE MAYUR SANTOSH	<u>Landge</u>	<u>Landge</u>	<u>Landge</u>	<u>Landge</u>	<u>Landge</u>
11	MALI KIRAN MANGALDAS	<u>Malik</u>	—	—	<u>Malik</u>	<u>Malik</u>
12	MANDE NILAM DATTATRAY	<u>Nilam</u>	<u>Nilam</u>	<u>Nilam</u>	<u>Nilam</u>	<u>Nilam</u>
13	MANDLIK SAURAV KAILAS	<u>Saurav</u>	<u>Saurav</u>	<u>Saurav</u>	<u>Saurav</u>	<u>Saurav</u>
14	MARADE VRUSHALI EKNATH	<u>Marade</u>	<u>Marade</u>	<u>Marade</u>	<u>Marade</u>	<u>Marade</u>
15	NALAWADE SIDDHIKA SANTOSH	<u>Nalawade</u>	<u>Nalawade</u>	<u>Nalawade</u>	<u>Nalawade</u>	<u>Nalawade</u>
16	PADWAL BHAVESH DEVDATTA	<u>Padwal</u>	<u>Padwal</u>	<u>Padwal</u>	<u>Padwal</u>	<u>Padwal</u>
17	PATEL VRUTTIKA GIRISH	<u>Patel</u>	<u>Patel</u>	<u>Patel</u>	<u>Patel</u>	<u>Patel</u>
18	PHAPALE RUSHIKESH J.	<u>R</u>	<u>R</u>	<u>R</u>	<u>R</u>	<u>R</u>
19	PHAPALE RUTUJA RAJENDRA	<u>Phapale</u>	<u>Phapale</u>	<u>Phapale</u>	<u>Phapale</u>	<u>Phapale</u>
20	SALUNKAR DIPAK SUBHASH	<u>Salunkar</u>	<u>Salunkar</u>	<u>Salunkar</u>	<u>Salunkar</u>	<u>Salunkar</u>
21	SHINDE TEJAL SHANTARAM	<u>Shinde</u>	<u>Shinde</u>	<u>Shinde</u>	<u>Shinde</u>	<u>Shinde</u>
22	WAYAL RAMDAS CHIMA	<u>Wayal</u>	<u>Wayal</u>	<u>Wayal</u>	<u>Wayal</u>	<u>Wayal</u>

P. D. ANANNASHEE WAGHIRE COLLEGE OF
DEPARTMENT OF MATHEMATICS
CERTIFICATE COURSE IN BASIC COMMERCIAL MATHEMATICS AND STATISTICS
YEAR: 2019-2020

ATTENDANCE

SR. NO.	NAME OF THE STUDENTS	22/2/2020 8:15 to 9:50	28/2/2020 9:00-10:00	29/2/2020 8:30-10:00	29/2/2020 12:30-1:10	2/3/2020 8:30-9:50
1	AROTE AKSHAY BABAN	Arote	Arote	Arote	Arote	Arote
2	BHOR JYOTI SOPAN	J.S. Bhor	J.S. Bhor	J.S. Bhor	J.S. Bhor	J.S. Bhor
3	DHAMALE KIRAN RAMDAS	Dhamale	Dhamale	Dhamale	Dhamale	Dhamale
4	GAIKWAD TEJAL RAMDAS	Gaikwad	Gaikwad	Gaikwad	Gaikwad	Gaikwad
5	GAYKAR PRATIBHA PARSHURAM	Pratibha	Pratibha	Pratibha	Pratibha	Pratibha
6	JADHAV RUPALI BHURAO	Rupali	Rupali	Rupali	Rupali	Rupali
7	KADAM DEEPANJALI SANJAY	Skadam	Skadam	Skadam	Skadam	Skadam
8	KATORE KIRAN NIVRUTTI	Katore	Katore	Katore	Katore	Katore
9	KULKARNI NEHA SHAILESH	Neha	Neha	Neha	Neha	Neha
10	LANDGE MAYUR SANTOSH	Mandge	Mandge	Mandge	Mandge	Mandge
11	MALI KIRAN MANGALDAS	Mali	Mali	Mali	Mali	Mali
12	MANDE NILAM DATTATRAY	Mande	Mande	Mande	Mande	Mande
13	MANDLIK SAURAV KAILAS	Skalik	Skalik	Skalik	Skalik	Skalik
14	MARADE VRUSHALI EKNATH	Marade	Marade	Marade	Marade	Marade
15	NALAWADE SIDDHIKA SANTOSH	Nalawade	Nalawade	Nalawade	Nalawade	Nalawade
16	PADWAL BHAVESH DEVDATTA	Padwal	Padwal	Padwal	Padwal	Padwal
17	PATEL VRUTTIKA GIRISH	Patel	Patel	Patel	Patel	Patel
18	PHAPALE RUSHIKESH J.	Phapale	Phapale	Phapale	Phapale	Phapale
19	PHAPALE RUTUJA RAJENDRA	Phapale	Phapale	Phapale	Phapale	Phapale
20	SALUNKHE DIPAK SUBHASH	Salunkhe	Salunkhe	Salunkhe	Salunkhe	Salunkhe
21	SHINDE TEJAL SHANTARAM	Shinde	Shinde	Shinde	Shinde	Shinde
22	WAYAL RAMDAS CHIMA	Wayal	Wayal	Wayal	Wayal	Wayal

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CERTIFICATE COURSE IN BASIC COMMERCIAL MATHEMATICS AND STATISTICS

YEAR:2019-2020

ATTENDANCE

SR. NO.	NAME OF THE STUDENTS	2/3/2020 12-45 PM - 2-2.5 PM	3/3/2020 9:00-10:45			
1	AROTE AKSHAY BABAN	<u>Arote</u>	<u>Arote</u>			
2	BHOR JVOTI SOPAN	<u>J's Bhor</u>	<u>J's Bhor</u>			
3	DHAMALE KIRAN RAMDAS	<u>Dhamale</u>	<u>Dhamale</u>			
4	GAIKWAD TEJAL RAMDAS	<u>Gaikwad</u>	<u>Gaikwad</u>			
5	GAYKAR PRATIBHA PARSHURAM	<u>Pratibha</u>	<u>Pratibha</u>			
6	JADHAV RUPALI BHAURAO	<u>Rupali</u>	<u>Rupali</u>			
7	KADAM DEEPANJALI SANJAY	<u>————</u>	<u>————</u>			
8	KATORE KIRAN NIVRUTTI	<u>Katore</u>	<u>Katore</u>			
9	KULKARNI NEHA SHAILESH	<u>Neel</u>	<u>————</u>			
10	LANGDE MAYUR SANTOSH	<u>Langde</u>	<u>Langde</u>			
11	MALI KIRAN MANGALDAS	<u>Malik</u>	<u>Malik</u>			
12	MANDE NILAM DATTATRAY	<u>Mande</u>	<u>Mande</u>			
13	MANDLIK SAURAV KAILAS	<u>Saurav</u>	<u>Saurav</u>			
14	MARADE VRUSHALI EKNATH	<u>Marade</u>	<u>Marade</u>			
15	NALAWADE SIDDHIKA SANTOSH	<u>————</u>	<u>————</u>			
16	PADWAL BHAVESH DEVDATTA	<u>Padwal</u>	<u>Padwal</u>			
17	PATEL VRUTTIKA GIRISH	<u>Patel</u>	<u>Patel</u>			
18	PHAPALE RUSHIKESH J.	<u>Phale</u>	<u>Phale</u>			
19	PHAPALE RUTUJA RAJENDRA	<u>Phale</u>	<u>Phale</u>			
20	SALUNKHE DIPAK SUBHASH	<u>Salunkhe</u>	<u>Salunkhe</u>			
21	SHINDE TEJAL SHANTARAM	<u>Shinde</u>	<u>Shinde</u>			
22	WAYAL RAMDAS CHIMA	<u>Wayal</u>	<u>Wayal</u>			

End

26-06-20 14:2

PDEA's Annasaheb Waghire College Otur

Department of Mathematics

**Certificate Course on “Basic Course on
Commercial Mathematics and Statistics”**

16 Jan 2020 - 4 March 2020

Conclusion Ceremony

4/5/2020



















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ANNASAHEB WAGHRE COLLEGE, OTUR

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DEPARTMENT OF MATHEMATICS

2019-20

Certificate of Completion

This is to certify that

Arote Akshay Baban

participated and completed the certificate course in Basic Commercial
Mathematics and Statistics

Mr.M.V.Deshmukh

Dr.S.F.Dhakane



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Certificate of Completion

This is to certify that

Bhor Jyoti Sopan

participated and completed the certificate course in Basic Commercial
Mathematics and Statistics

Mr.M.V.Deshmukh

Dr.S.F.Dhakane



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2019-20

Certificate of Completion

This is to certify that
Dhamale Kiran Ramdas
participated and completed the certificate course in Basic Commercial
Mathematics and Statistics

Mr. M.V. Deshmukh

Dr. S.F. Dhakane



ANNASAHEB WAGHRE COLLEGE, OTUR
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Certificate of Completion

This is to certify that
Gaikwad Tejal Ramdas
participated and completed the certificate course in Basic Commercial
Mathematics and Statistics

Mr.M.V.Deshmukh

Dr.S.F.Dhakane



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2019-20

Certificate of Completion

This is to certify that
Gaykar Pratibha Parshuram
participated and completed the certificate course in Basic Commercial
Mathematics and Statistics

Mr.M.V.Deshmukh

Dr.S.F.Dhakane