PROGRAMME GUIDE
for
Bachelor of Science (B.Sc.) (Mathematics)
Under UGC-FYUP

IMPORTANT

The **Programme Guide of B.Sc.(Mathematics)** programme contains key information about the programme including the details of the courses on offer, the syllabi of courses and how to study courses, assessment methods, rules and regulations, important forms, lists of Study Centres/Regional Centres of IGNOU. It will help you study the Programme and progress in it.

So, **read the Programme Guide carefully before studying the courses, refer to it for rules and procedures and let it guide you throughout this phase of your student life in IGNOU.**

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ignou
THE PEOPLE'S UNIVERSITY

School of Sciences
Indira Gandhi National Open University
New Delhi-110068

IMPORTANT

The B.Sc. degree of IGNOU is a recognized degree and at par with the B.Sc. degree awarded by any other University.

IGNOU Degrees/Diplomas/Certificates are recognized by all member universities of the Association of Indian Universities (AIU) and are at par with Degrees/Diplomas/Certificates of all Indian Universities/Institutes, as per UGC Circular letter No. F.1-52/2000 (CPP-II) dated 5th May, 2004, AIU Circular No. EV/11(449/94/176915-177115 dated January 14, 1994, AICTE Circular No. AICTE/Academic/MOU-DEC/2005 dated May 13, 2005 and UGC/DEB/2013 14.10.2013.

PAY ATTENTION

Our course materials are prepared in such a way that you can study them on your own. If you do not understand any part, take help from your counsellor at your Study Centre or from us. **Please do not use any guides for studying the IGNOU B.Sc. courses or solving assignments.** Such guides will neither help you in understanding the subject matter nor in passing the examinations.

OUR TERMINOLOGY

In IGNOU we use different terms from the ones used in conventional Colleges or Universities. So do please learn them. We use the terms

- **Programme** for Course,
- **Course** for Paper, and
- **Discipline** for subject.

Contents

QR Codes along with the Useful Web Links

eGyankosh Online
https://egyankosh.ac.in/
(for Online Course Materials)

Re-Registration Online
https://ignouadmission.samarth.edu.in/

iGRAM
https://igram.ignou.ac.in/
(IGNOU Grievance control Room)

To Watch Live Telecast/
https://onlineservices.ignou.ac.in/empclive/
To listen live Broadcast

On-line Examination form
https://exam.ignou.ac.in/

Assignments
https://www.ignou.ac.in/studentService/download/assignments

Note: *The above QR Codes can be scanned and open through and QR Code Scanner Application/App of your smart mobile phone.*

1. The University

The Indira Gandhi National Open University was established in September 1985 by an Act of Parliament to provide opportunities of higher education to large segments of population. The primary emphasis is on innovation, flexibility and cost-effectiveness. It is a university with a difference!

The major objectives of the university are to:

• promote the educational well-being of the community;
• democratize higher education by providing equitable access to all those who desire to improve their qualifications, skills and competence by taking education to the doorsteps of people living even in remote rural areas;
• disseminate knowledge through an innovative multiple media instructional package for self-learning; and
• provide high quality education at all levels.

In IGNOU, you can study:

• at your own pace and convenience;
• at your own chosen place; and
• courses of your choice from a wide range of Disciplines.

The University uses a variety of communication technologies for teaching-learning. **Student Support services** are provided at **Study Centres** located all over the country. These Centres are located in educational institutions and function on all holidays and Sundays. Some Study Centres open in the evenings on working days and Saturdays. Each Study Centre is supervised by a Coordinator and there is an **Assistant Coordinator for the B.Sc. Programme**. The functioning of Study Centres is monitored by **IGNOU Regional Centres.**

2. School of Sciences

The School of Sciences was established in 1985 and has been offering Science programmes successfully through the distance mode of education. Presently, there are eight disciplines, namely, Biochemistry, Chemistry, Geography, Geology, Life Sciences, Mathematics, Physics and Statistics in the School.

The functions of the School are to:

• plan, develop and offer academic programmes at the Awareness, Certificate, Diploma, Under-Graduate, Post-Graduate and Research levels;
• collaborate with the other Schools of the University in the development of various programmes/courses;
• participate in the development and academic monitoring of the student services; and
• carry out research in systemic and discipline-based areas of Science.

3. Your Regional Centre/Study Centre

• To provide effective student support, we have set up a number of study centres under Regional Centres all over the country.
• You will be allotted one of these study centres attached to the corresponding Regional Centre taking into consideration your place of residence or work. However, each study centre can handle only a limited number of students and despite our best efforts, it may

not always be possible to allot the study centre of your choice. The particulars regarding the Study Centre to which you are assigned will be communicated to you. The list of study centres is provided in Appendix-I.

Each Study Centre will have:

• A Coordinator who will coordinate different activities at the centre.
• An Assistant Coordinator and other supporting staff appointed on a part-time basis.
• all information and learning support;
• face-to-face counselling for every course by a senior and experienced teacher engaged as Academic Counsellor who will solve your difficulties for that course.
• library to read books, facilities to listen/watch audio/video programmes provided, and
• computer labs to do your practical work

A Study Centre has six major functions:

i) **Counselling(Theory/Lab):** Tutorial/Counselling is an important aspect of Open University System. Face to face contact-cum-counselling for the theory and laboratory Courses will be provided at the Study Centres. Generally there will be 10 counselling sessions for the 8 credit courses and 5 sessions for the 4 credit courses.

The detailed programme of the contact-cum-counselling sessions will be sent to you by the Coordinator of your Study Centre. In these sessions you will get an opportunity to discuss with the Counsellors your problems pertaining to the courses of your study.

ii) **Evaluation of Assignments:** The evaluation of your Tutor Marked Assignments (TMA) will be done by the Counsellors at the Study Centre. The evaluated assignments will be returned to you by the Coordinator of Study Centre with tutor comments and marks obtained in TMAs. These comments will help you in your studies.

iii) **Library:** Every Study Centre will have a library having relevant course materials, reference books suggested for supplementary reading as well as audio-video CDs prepared for the course(s).

iv) **Information and Advice:** You will be given relevant information about the courses offered by the University. Facilities are also provided to give you guidance in choosing your courses.

v) **Audio-Video facilities:** The Centres will be provided with audio-video equipment to help you make use of the audio and video cassettes prepared for different courses. Media notes of these audio/video programmes will also be available at the Study Centres. This will help you know the contents of each programme.

vi) **Interaction with fellow-students:** In the Study Centre you will have an opportunity to interact with fellow students. This may lead to the formation of self-help groups.

Please take relevant Blocks and your folder of corrected assignments with you, when you go to the counselling session.

4. The B.Sc. (Mathematics) Programme under UGC- FYUP Scheme

The design of undergraduate programmes under UGC-FYUP in accordance with NEP 2020 scheme offers opportunities and avenues to learn not only core subjects but also to explore additional avenues of learning beyond the core subjects for holistic development of an individual. The B.Sc. (Mathematics) programme will orient the learners towards how contribute to the advancement of knowledge in a holistic manner, apart from making the learners aware with the best international academic practices.

The salient advantages of the programme are as follows:

❖ Shift in focus from the teacher-centric to learner-centric education.

❖ Learners may undertake as many credits as they can cope up without repeating all the courses in a given semester if they fail in one/more courses.

❖ Learners can choose a wide variety of courses from the basket of discipline specific courses, inter-disciplinary courses, skill enhancement courses, ability enhancement courses, value added courses and vocational courses according to their learning needs, interests and aptitude.

Following UGC guidelines, University has launched the Bachelor of Science (Mathematics) under the FYUP scheme. The details of the programme are given below:

4.1   Programme Objectives

Objectives: With a substantial number of courses from the discipline of Mathematics and a few interdisciplinary and skill enhancing courses, this Bachelor of Science Honours programme is designed to provide an in-depth knowledge in Mathematics while giving the learner an opportunity to explore subjects beyond the discipline. The Honours programme has the following objectives:

- foster deep interest in learning mathematics and mathematical thinking.
- develop broad and balanced knowledge and understanding of definitions, concepts, principles and theorems and their proofs.
- familiarise themselves with suitable tools of mathematical analysis to handle issues and problems in mathematics and related areas.
- apply the knowledge and skills acquired by them during the programme to solve specific theoretical and applied problems in mathematics.
- undertake further studies in mathematics and its allied areas in multiple disciplines concerned with mathematics.
- develop a range of generic skills helpful in employment, internships and social activities

4.2   Programme Details:

- **Programme Code:** BSCFMT
- **Eligibility:** 10+2 with Mathematics
- **Medium of Instruction:** English & Hindi

4.3   Programme Structure:

The University follows the credit system for offering all its programmes. One credit is equal to 30 hours of learners study time. To earn Bachelor's Degree in Mathematics, a learner has to complete 120 credits in minimum six semesters (Three years, 40 credits per year) or 160 credits in 8 semesters (Four years, 40 credits per year). The meaning of **one credit** is explained below:

What is one credit?

 One credit is about 30 hours of your study time and includes the time taken for any of the activities from the following list:

- studying and understanding the study material,
- doing the exercises given in the study material,
- listening to audio/watching video programmes,
- attending counselling sessions in online/face-to-face mode,
- doing assignments,
- performing lab sessions, and
- doing project work.

The 120 credits of the programme have to be earned by completing the following categories of courses:

S.No.	Category	Credits
1	Discipline Specific Courses of Mathematics (DSC)	60
2	Vocational Courses (VOC)	12
3	Discipline Specific Courses from Minor Discipline	12
4	Ability Enhancement Courses (AEC)	8
5	Skill Enhancement Courses (SEC)	16
6	Interdisciplinary Courses (IDC)	6
7	Value Added Courses (VAC)	6

Structural Framework of the Four-year B.Sc. (Mathematics) programmes under FYUP

Year	Semester	Discipline Specific Courses Core	Minor	Ability Enhancement courses (language)	Inter-disciplinary courses (Introductory level) Skill Enhancement courses/internship/dissertation	Common Value-Added Courses	Total Credits
I yr	1st Semester	DSC-1 Calculus(BMTC-131) (6 credits)	Minor-1 VOC (4 credits)	-	SEC-1 (4 credits) IDC (6credits)	-	20
	2nd Semester	DSC-2 Differential Equations(BMTC-132) (6 credits)	Minor-2 VOC (4 credits)	AEC-1 [BEVAE-181 Environmental Sciences] (4 credits)		VAC-01 (6 credits)	20
Exit 1:			VOC* (4 credits)	UG Certificate in Mathematics			40 (+4)*
II yr	3rd Semester	DSC-3 Introduction to Probability and Statistics (BMTC-101) (4 credits) DSC-4 Multivariable Calculus (BMTC-102) (4 credits) DSC-5 Discrete Mathematics (BMTC-103) (4 credits)	Minor-3 DSC (4 credits)	AEC-2 [English/Hindi/ Urdu/ Sanskrit communication] (4 credits)	-	-	20
	4th Semester	DSC-6 Linear Algebra (BMTE-141) (6 credits) DSC-7 Real Analysis (BMTC-133) (6 credits)	Minor-4 DSC (4 credits)	-	SEC-2 (4 credits)	-	20
Exit 2:			VOC* (4 credits)	UG Diploma in Mathematics			80 (+4)*
III yr	5th Semester	DSC-8 Algebra (BMTC-134) (6 credits) DSC-9 Numerical Analysis (BMTE-144) (6 credits)	Minor-5 DSC (4 credits)	-	SEC-3 (4 credits)	-	20
	6th Semester	DSC-10 Programming and Data Structures (MMT-001) (4 credits) DSC-11 Linear Programming (BMTC-104) (4 credits) DSC-12 Mathematical Modelling (MTE-14) (4 credits)	Minor-6 VOC (4 credits)	-	SEC-4 (4 credits)	-	20
Total		60 Cr	24 Cr	08 Cr	22 Cr	06 Cr	120 Cr
Exit 3:		3-Year B.Sc. (Major) in Mathematics					120 Cr.

*The students who would like to take exit from the programme after completion of first or second year, will have to complete a Vocational Course of 4 credits in addition to the required number of courses in these years (40+4 credits after first year and 80+4 credits after 2nd year).

4.4 Selection of Courses:

Discipline Specific Courses from Mathematics (Major Discipline)

Year	Semester	Discipline Specific Courses and Course Code, if any	Credits	Credits Distribution		
				Theory	Tutorial	Practical
I yr	1st Semester	Calculus(BMTC-131)	6	5	1	-
	2nd Semester	Differential Equations (BMTC-132)	6	5	1	-
II yr	3rd Semester	Introduction to Probability and Statistics (BMTC-101)	4	4	-	-
		Multivariable Calculus (BMTC-102)	4	4	-	-
		Discrete Mathematics (BMTC-103)	4	4	-	-
	4th Semester	Linear Algebra (BMTE-141)	6	5	1	-
		Real Analysis (BMTC-133)	6	5	1	-
III yr	5th Semester	Algebra (BMTC-134)	6	5	1	-
		Numerical Analysis (BMTE-144)	6	5	1	-
	6th Semester	Programming and Data Structures (MMT-001)	4	2	-	2
		Linear Programming (BMTC-104)	4	4	-	-
		Mathematical Modelling (MTE-14)	4	4	-	-

Interdisciplinary Courses:

The students are required to take any one course of 6 credits under this category from the list given below:

Sr No.	Course Code	Course Title	Credits
		English	
1.	BEGG171	Media and Communication Skills	6
		Hindi	
1.	BHDG175	Madhyakaneen Bharatiya Sahitya Evam Sanskriti	6
		Public Administration	
1.	BPAG171	Disaster Management	6
		Psychology	
1.	BPCG171	General Psychology	6
		Philosophy	
1.	BPYG171	Applied Ethics	6
		Political Science	
1.	BABG171	Understanding Ambedkar	6
		Sociology	
1.	BSOG171	Indian Society: Images and Realities	6
		Sanskrit	
1.	BSKG178	Pracheen Bharatiya Rajniti	6

Ability Enhancement Course:

Two courses worth 8 credits (4 credits each) will be offered from this category in II and III Semester. The following course would be taken in II semester.

Sr No.	Course Code	Course Title	Credits
1.	BEVAE181	Environmental Studies	4

In III semester the course(s) would be from English/Hindi/Urdu/Sanskrit Communication.

Value-Added Course:

One course of 6 credits is required from this category in I semester. The course is as given below:

Sr No.	Course Code	Course Title	Credits
1.	BEDSV101	Value Education	6

Vocational Courses:

The student is required to study four vocational courses (4 credits each) worth 16 credits in a span of 4 years (8 Semesters). These courses are to be taken in I, II, VI and VIII Semester. The list of the courses under this category is given below:

Sr No.	Course Code	Course Title	Credits
1.	BECS184	Data Analysis	4
2.	BPAS184	Logistics Management	4
3.	BHDS184	Radio Lekhan	4
4.	BCOS185	Entrepreneurship	4
5.	BCOS186	Personal Selling and Salesmanship	4

Skill Enhancement Courses:

Students are required to study four courses worth 16 credits (4 credits each) in I, IV, V and VI Semesters. The list of the courses under this category is given below:

Sl. No.	Course Code	Course Title	Credits
1.	BANS183	Tourism Anthropology	4
2.	BPCS183	Emotional Intelligence	4
3.	BPCS185	Developing Emotional Competence	4
4.	BEGS183	Writing and study Skills	4
5.	BHDS183	Anuvaad Sidhaant Evam Pravidhi	4
6.	BCOS183	Computer Application in Business	4
7.	BCHS183	Laboratory Management Skills	4
8.	BTTS183	An Introduction to Machine Translation	4

Discipline Specific Courses (Minor Discipline)

The students are required to study three courses worth 12 credits (4 credits each) in III, IV and V Semesters. These three courses are to be chosen from one of the Disciplines of Botany, Chemistry, Geology, Physics, Statistics, Zoology, Economics and Anthropology. The lists of courses of each discipline are given below:

Sr. No.	Discipline	Course Code	Course Title	Credits	To be Offered in Semesters
1	Botany	BBYCT-131	Biodiversity (Microbes, Algae, Fungi and Archegoniates)	4	IIIrd Semester
		BBYCT-133	Plant Ecology and Taxonomy	4	IVth Semester
		BBYCL-132	Biodiversity (Microbes, Algae, Fungi and Archegoniates): Laboratory	2+2 (To be taken Together)	Vth Semester
		BBYCL-134	Plant Ecology and Taxonomy: Laboratory		
2	Chemistry	BCHCT-131	Atomic Structure, Bonding, General Organic Chemistry and Aliphatic Hydrocarbons	4	IIIrd Semester
		BCHCT-133	Chemical Energetics, Equilibria and Functional Group Organic Chemistry-I	4	IVth Semester
		BCHCL-132	Atomic Structure, Bonding, General Organic Chemistry and Aliphatic Hydrocarbons: Laboratory	2+2(To be taken Together)	Vth Semester
		BCHCL-134	Chemical Energetics, Equilibria and Functional Group Organic Chemistry-I : Laboratory		
3	Physics	BPHCT-131	Mechanics	4	IIIrd Semester
		BPHL-103	Physics Laboratory	4	IVth Semester
		BPHCT-135	Thermal Physics and Statistical Mechanics	4	Vth Semester
4	Statistics	Course 1	Basic Statistical Methods	4	IIIrd Semester
		Course 2	Elementary Probability and Probability Distributions	4	IVth Semester
		Course 3	Estimation Techniques and Testing of Hypothesis	4	Vth Semester
5	Zoology	BZYCT-131	Animal Diversity	4	IIIrd Semester
		BZYCT-133	Comparative Anatomy and Developmental Biology of Vertebrates	4	IVth Semester
		BZYCL-132	Animal Diversity: Laboratory	2+2(To be taken Together)	Vth Semester
		BZYCL-134	Comparative Anatomy and Developmental Biology of Vertebrates: Laboratory		

Note: The list of courses from Geology, Economic and Anthropology would be added soon.

5. Fee Structure and Schedule of Payment

• The programme fee, exclusive of registration fee and examination fee is Rs. 18,000/- for three years to be paid year wise @ Rs.6,000/- per year excluding registration and other admissible fees. As and when it is necessary, the University can revise the programme

fee and the revised fee shall be payable by you as per schedule of payment notified by the University.

• Learners are advised to submit the Re-Registration (RR) forms 'Online' only on the web portal **www.ignou.ac.in**. as per schedule being notified by the University from time to time for IInd and IIIrd years. **If the Re-Registration of this programme is not available online or for any other reason as specified by the University, learners should submit their RR forms at the respective Regional Centre ONLY and nowhere else**. If any student submits the 'Offline' Re-Registration Form at any other Regional Centre than the allocated Regional Centre, and consequently misses the scheduled date and a semester/year, he/she will have no claim on the University for regularization.

• Timely payment of programme fees is the responsibility of the students. Students are expected to remit fee as early as possible without waiting for the last date. In case, you fail to remit the fee as per above schedule, you will have to wait for next cycle of fee payment schedule. Non-payment of fee results in discontinuation of the despatch of study material. Such students will not be permitted to write the examinations. In case any student wilfully appears in the examination without proper registration for a course(s), disciplinary action shall be taken against him as per rules of the University. **Note that fee once paid is not refundable.**

6. How to Study at IGNOU

You have taken admission in the B.Sc. (Mathematics) programme of IGNOU and this means that you are prepared to study on your own. We use the following materials and ways to help you study the courses in the programme.

The methodology of instruction in this University is different from that in the conventional universities. The Open University system is more learner-oriented, and the student is an active participant in the teaching-learning process. Most of the instructions are imparted through distance rather than face-to-face communication.

The University follows a multi-media approach for instruction. It comprises of:

• self-instructional printed material
• audio and video programmes
• audio-video programmes transmitted through the National Network of Doordarshan and the All India Radio (selected stations).
• face-to-face counselling at study centres by academic counsellors
• assignments
• laboratory work
• project work in some courses
• teleconference/web conference
• Interactive radio counselling
• Gyan darshan channel
• associate studentship
• IGNOU web site

Web Enabled Academic Support Portal

6.1 Self-Instructional Material (Print and Digital)

- You will receive the course material in print form or you can download the course material from www.egyankosh.ac.in in digital form. The soft copy of the material are also available at the student app.

- Properly planned self-instructional print material is the mainstay. The study material prepared by the university is self-instructional in nature. Lessons, which are called Units, are structured to facilitate self-study.

- Usually, a 4 credits course has four printed booklets (called blocks). These blocks are bound in one or two volumes. Each block has 3 – 5 units.

- The first page of each block indicates the numbers and titles of the units comprising the block. In the first block of each course we start with course introduction.

- This is followed by a brief introduction to the block.

- Each unit begins with an introduction in which we tell you about the contents of the unit. We also outline a list of objectives which we expect you to achieve after working through the unit. This is followed by the main body of the unit, which is divided into various sections and sub-sections. We end each unit by summarising its contents. We summarise what has been said in the whole unit to enable you to recall the main points.

- In each unit, there are several Self-Assessment Questions (SAQs) and Terminal Questions (TQs)/exercises /activities. These are meant to help you to assess your understanding of the subject contents. Answers of both SAQs and TQs are given in section 'Answers' in the units.

- At the end of the unit or in the introduction of the course some books/web references for additional reading are suggested. You may refer to some of the books which are available in the library at your study centre.

- Read the Units carefully and note down the important points. You can use the space in the margin of the printed page for making notes and writing your comments. Read the unit again and again until you have understood the point. However, if you still do not understand something, consult your counsellor during the face-to-face sessions at the study centre for clarification.

- Try to answer SAQs after completing the unit. These exercises will help you to reinforce the information you gain through your reading of the text. You can compare your answers with the answers given at the end of the unit.

6.2 Audio-Video Programmes

- In addition to the print material, audio and video programmes have been prepared for each course.

- The audio-video material is supplementary to print material. Hence, we advise you to make use of it, as it will help you to understand the subject better.

- Video programmes are transmitted by Doordarshan on National Network every day from 6.05 to 6.35 a.m. The schedule of transmission is communicated through the IGNOU website, through the IGNOU Newsletter and on Saptahiki aired on every Sunday on DD1 at the same time.

- Audio-video material will not be supplied individually to you but will be made available to Study Centres. You can watch these programmes during counselling sessions. Anyone desirous of buying the audio-video CDs can procure them from: The Director, Electronic Media Production Centre (EMPC), IGNOU, Maidan Garhi, New Delhi-110068.

6.3 Help at you Study Centre

i. Counselling

- In distance education, face-to-face contact sessions between learners and their tutors/counsellors is an important activity. The purpose of such contact sessions is to answer some of your questions and clarify your doubts which may not be possible through any other means of communication. It is also intended to provide you an opportunity to meet your fellow students. There are experienced academic counsellors at the study centres to provide counselling and guidance to you in the courses that you have chosen for study. The counselling sessions for each of the courses will be held at suitable intervals throughout the whole academic session.

- Attending counselling sessions is not compulsory. However, they may be very useful in certain respects such as: to share your views on the subject with teachers and fellow participants, comprehend some of the complex ideas or difficult issues, and get clarification for many doubts which you would not otherwise try to raise and consult academic counsellors for selecting courses of study.

- Generally, there will be 5 sessions for a 4-credit course. In some courses, there may be additional counselling sessions which will be informed to you by the Coordinator of your Study Centre. **The detailed schedule of the counselling sessions will be made known to you by the Coordinator of your Study Centre.**

- Face-to-face counselling will be provided to you at the study centre assigned to you. You should note that the counselling sessions are being very different from the usual classroom teaching or lectures. Counsellors will not be delivering lectures or speeches. They will try to help you to overcome difficulties (academic as well as personal) which you face while studying for the B.Sc. programme. In these sessions you must try to sort out the subject-based difficulties and any other issue arising out of such difficulties. Besides, some of the audio and video CDs that are available at that time will be played in the counselling sessions.

- Before you go to attend the counselling sessions, please go through your course materials and note down the points to be discussed. Unless you have gone through the Units, there may not be much to discuss. Try to concentrate on the relevant and the most important issues. Also try to understand each other's points of view, without making the session a seminar or a debate. You may also establish personal contact with your fellow participants to get mutual help for academic purposes. Try to get the maximum possible help from your counsellor.

ii. Laboratory Work

- Laboratory work will normally be conducted at your study centre. However, the university is not bound to do so and reserves the right to conduct the lab courses at any study centre other than yours in case the situation so warrants.
- Attendance in laboratory courses is compulsory.
- Details of number of sessions required to complete each laboratory course of 2 Credits are given below.

No.	Course	Credits	No. of Sessions to be conducted						Total No. of days required
			Introduction		Experiments (Guided)		Test (Unguided)	Total	
1	XYZ	02	01	+	12	+	01	14	07

Note : i)   Each lab session is of four hours duration
ii)   Two sessions of four hours each will be held each day.
iii)   First session of each laboratory course will be utilized as Introductory Session.

- You should bear in mind that **the attendance in the Laboratory course is compulsory**. Every experiment is evaluated and is included for final evaluation, the weightage being 70%. Hence, a student has to perform all the experiments in order to be able to secure maximum marks. The remaining 30% will be assigned for the unguided experiments to be performed by the student at the end of the Lab course.
- You are advised to pace your laboratory courses. As far as possible, you should complete the laboratory courses in the year in which you register for them.

iii. Project work

- Some of the courses may have the project work. For these courses follow the instruction given in the Project Guide. It outlines different steps involved in doing a project alongwith detailed examples.
- An academic counsellor from your study centre will supervise your project work.
- Submit your project report at the following address.

> **Asstt. Registrar (Project),**
> **SED, IGNOU,**
> **Maidan Garhi, New Delhi-110068**
> **DO NOT submit it at your Study Centre/Regional Centre**

6.4 Other Facilities

i. **Teleconference/Interactive Active Radio Counselling/Web Enabled Academic Support**

- Teleconference/web conference, using one-way video and two-way audio transmission via satellite, is another medium to impart instruction to and facilitate learning for a distance learner. The students concerned would be informed about the teleconferencing schedule and the place where it is to be conducted.

- Interactive phone-in radio counselling is available on every Sunday at all primary channels of AIR and Gyan Vani FM station. The radio counselling sessions are broadcast 'live' and are relayed by 184 radio stations across the country. Now, there is a synchronized weekly transmission "IGNOU HOUR" on Sundays from 4.00 p.m. to 5.00 p.m. with coverage of almost all over the country.

- Gyan Darshan, an 24 hours educational TV channel is a joint venture of IGNOU with Doordarshan. It is available through Cable TV network.

Please ask your cable operator to provide this channel.

The telecast schedule of Gyan Darshan in published in the IGNOU News letter and is also available on IGNOU web site: http://www.ignou.ac.in

IGNOU-e-Content Mobile App is an official mobile app of Indira Gandhi National Open University (IGNOU), New Delhi. This app is an ICT initiative of IGNOU to provide Digital Learning Environment to IGNOU learners and extending Technology Enhanced Learner Support Services to them. The aim of this initiative is to disseminate the digitised course materials to IGNOU Learners. IGNOU learners can use this app to access their course materials through their hand held devices such as Mobile Phones and Tablets.

ii. IGNOU Website

www.ignou.ac.in the official website of the University offers relevant information to the general public and student support facilities to the learners through the Single Window Information and Student Support (SWISS). These include:

- Online registration for fresh admission of various programmes

- Online Re-Registration

- Online submission of Term-End Examination Form

- Results of the Term End Examinations

- Checking status of study materiel

- Downloads Assignments/Question papers/Forms

- Catalogue of audio/video programmes

- Schedule of Gyan Darshan/Gyan Vani/ programmes

- Admission announcements

- Addresses of regional and study centres

- Update on the latest happenings at the University

- Checking of student's mailing address

- Web Enabled Academic Support (WEAS)

- Entrance test results

- TEE date-sheet

- Examination Hall Ticket

- Course Completion Status

- **Accessing e-GyanKosh:** using this web site you can download your course material and view video related to your courses.

- **Student Portal (after admission):** https://ignou.samarth.edu.in/: All students are advised to register on the Student Portal after confirmation of their admission and create their own Student Account.

7.   Evaluation

The evaluation consists of two components: (1) continuous evaluation through assignments, and (2) term-end examination. You must pass both in continuous evaluation as well as in the term-end examination of a course to earn the credits assigned to that course. In the final result, the assignment of a theory course carries 30% weightage, while 70% weightage is given for the term-end examination.

7.1 Assignments

Assignments constitute the continuous evaluation component of a course. As mentioned above assignments of a theory course carry 30% weightage while 70% weightage is given to the term-end examination (TEE). The marks that you get in your assignments will be counted in your final result. Therefore, you are advised to take your assignments seriously. However, there will be no written assignments for Lab courses.

- **You have to complete the assignments in time.**

- **You will not be allowed to appear for the term-end examination for a course if you do not submit the specified number of assignments in time for that course.**

- **If you appear in Term End Examination without submitting the assignments then the result of term-end examination is liable to be cancelled.**

- For each course of this programme, you have to do a set of Tutor Marked Assignments (TMAs) which consists of two to three parts depending upon the nature of the course. **The TMA for each semester can be downloaded from the Student Zone of the University website-www.ignou.ac.in.**

- The assignment responses should be complete in all respects. Before submission, you should ensure that you have answered all the questions in the assignment. Incomplete answer sheets would bring you poor scores.

- The University/Coordinator of the Study Centre has the right to reject the assignments received after the due date. You are, therefore, advised to submit the assignments before the due date.

- **For your own record, retain a copy of all the assignment responses which you submit to the coordinator of your Study Centre. If you do not get back your duly evaluated tutor marked assignments along with a copy of assessment sheet containing comments on your assignments by the evaluator within a month after submission, please try to get it from your study centre personally.** This may help you to improve upon future assignments.

> ➢   Please submit your assignment on or before the due date at your Study Centre.
>
> ➢   Please do the current year assignment only.

- **Specific Instructions for Tutor Marked Assignments**

  1. Write your Enrolment Number, Name, Full Address, Signature and Data on the top right had corner of the first page of your response sheet.

  2. Write the Programme Title, Course Code, Course Title, Assignment Code and Name of your Study Centre on the left hand corner of the first page of your response sheet.

Course Code and Assignment Code may be reproduced from the Assignment.

The top of the first page of your response sheet for each assignment should be like this:

ENROLMENT NO: ………………………

PROGRAMME TITLE: …………………………   **NAME: ……………………….**

ADRESS:……………………………………………………………………………...

COURSE CODE: …………………………………   **ASSIGNMENT CODE: ……............**

SIGNATURE: ....

STUDY CENTRE: …………………………………..   **DATE : ………………………**

3. Read the assignments carefully and follow the specific instructions, if any, given on the assignment itself.

4. Go through the units on which the assignments are based. Make some points regarding the questions, rearrange those points in a logical order and draw up a rough outline of your answer. While answering an essay type question, give adequate attention to introduction and conclusion. The introduction must offer your brief interpretation of the question and how you propose to develop it. The conclusion must summaries your response to the question. Make sure that the answer is logical and coherent, and has clear connections between sentences and paragraphs. The answer should be relevant to the question given in the assignment. Make sure that you have attempted all the main points of the question. Once you are satisfied with your answer, write down the final version neatly and underline the points you wish to emphasize. While solving numerical problems, use proper units and give working notes wherever necessary.

5. Use only foolscap size for your responses and tie all the pages carefully. Avoid using very thin paper. Allow a 4 cm. margin on the left and at least 4 lines in between each answer. This may facilitate the evaluator to write useful comments on the margins at appropriate places.

6. Write the response in your own hand. Do not print or type the answers. Do not reproduce your answers from the units sent to you by the University. If you reproduce from units, you will get poor marks for the respective question.

7. Do not copy from the response sheets of other students. If copying is noticed, the assignments of such students will be rejected.

8. Write each assignment separately. All the assignments should not be written in continuity.

9. Write the question number with each answer.

10. **The completed assignments should be sent to the Coordinator of the Study Centre allotted to you. Under no circumstances you should send the tutor marked response sheets to the Student Registration & Evaluation Division at Headquarters for evaluation. Please retain a copy of the assignment.**

11. After submitting the assignment at the Study Centre, get the acknowledgment from the Coordinator on the prescribed assignment remittance-cum-acknowledgment card.

12. In case you have requested for a change of Study Centre, you should submit your Tutor Marked Assignments only to the original Study Centre until the change of Study Centre is affected by the University.

7.2 Term End Examination

As stated earlier, Term End examination is another component of the evaluation system. For non-laboratory courses, Term End Examination carries 70% weightage in the final result. For laboratory courses, assigned unguided experiments similar to term-end examination carry 30% weightage.

If you get a pass score (35% marks or D grade) in a course in the Term End Examination, you will not be allowed to reappear in the subsequent examinations in that course for improvement of marks. In case, you fail to get a pass score in the Tem-end Examination, you will be eligible to reappear in the next Term End Examination for that course as and when it is held, within the total span of the programme.

General Guidelines Regarding the Term-End Examination

1. To be eligible to appear the Term-end Examination in any course, the students are required to fulfill the following conditions:

   a) registration for the courses, in which they wish to appear is valid,

   b) they should have opted and pursued the prescribed courses

   c) they have also submitted the required number of assignment(s), if any.

   d) they have submitted the online examination form of IGNOU and have paid the requisite examination fees.

2. The University conducts term-end examination twice a year, in June and December. The student can take the examination only after the minimum period prescribed for the course of study. Please note that learners enrolled in July 2022 session will have to take the Term End Examination of both first and second semesters together in June 2023. If you miss taking any examination in June 2023, you may appear in December 2023 or June 2024 for those courses. From the third semester onwards, the TEE may be conducted semester-wise or annually.

3. Examination schedule indicating the date and time of examination for each course is sent to all the Regional Centres/ Study Centres in advance. The same is also notified through IGNOU Newsletter from time to time and displays on the website of IGNOU

   www.ignou.ac.in. You are advised to see whether there is any clash in the examination dates of the courses you wish to take i.e. examination of any two courses you wish to take are scheduled on the same day at the same time. If there is any clash, you are advised to choose one of them in that examination and appear for the other course in the next examination (i.e. June or December as the case may be).

4. The online examination form is to be filled up from IGNOU website, in general, as per the schedule given on the IGNOU website (You MUST visit IGNOU website for actual cutoff dates). The details of fee and late fee are displayed on the website.

5. **Process to submit Term End Examination Form**

   - **Open the following link:** http://exam.ignou.ac.in/

   - **Select and Enter Programme Code from the options list available. Please note that option code for BA/BCOM/BSC is BDP & MLIS is MLS.**

   - **Select Examination Centre Code from the options available on the website. List of Regional Centre wise Examination centres for Term-End Examination June-2019 is available for information on this web page.**

   - **If the Examination Centre opted by the student is not activated as Examination Centre or not allotted for administrative reasons, alternative Examination Centre will be allotted to the student.**

   - **Select course(s) carefully while filling the Examination Form as per your valid registration details available in IGNOU website. Courses for theory as well as practical needs to be selected separately from the list appearing on the screen for filling the Exam form.**

   - **After successful submission of Examination Form, you will receive an acknowledgement with Control Number on the screen. Please retain the auto generated Control Number for your reference and record. For checking Examination Form status please visit SEARCH OPTION after 72 hours of submitting the Form. Details regarding examination form submission are not available; you may submit the form again only after following the due procedure as listed above.**

   - **Delhi & NCR - The student may please select the location and exam centre will be allotted accordingly (change of exam centre will not be permitted in any case)**

5. You can pay examination fee online using Credit Card / Debit Card /Net Banking while filling up the form. It may also be noted that in case, examination fee needs to be returned to student due to technical reasons, the fee will be refunded to the same account (Credit card/ Debit card/ Net Banking) from which the payment was made.

6. **Hall Ticket for Term-End Examination**

   - Hall Ticket will be uploaded on the University Website 10 days before the commencement of the Term-end examinations. Please take print out of Hall Ticket from University website (www.ignou.ac.in) and report at the Examination Centre along with the Identity Card issued by the Regional Centre/University.

   - You will be allowed to appear in Term-end Examination for the course(s) for which registration is valid and not time-barred and assignment(s) is/are submitted. Examination Fee once submitted will not be refunded.

   - You must carry IGNOU Identity-Card in the Examination Hall for writing Examination. In case, students do not have IGNOU Identity card due to various reasons, they must get it issued (i.e. duplicate copy of IGNOU Identity card) from Regional Centre concerned well before the start of the Examination. Students are

required to contact the RC in person (by post) and get the duplicate Identity card for attending Examination.

7. Contact Details

In case of non-receipt of Control number or any query pertaining to Examination Form please contact **Phone No.(s) : 011-29572209 or send us email at termendexam@ignou.ac.in**

YOU MUST READ and FOLLOW all the instructions very carefully. You can save these instructions for any future reference. These instructions relate to:

- **Dates for the Submission of Online Term End-Examination form**

- **Prerequisite for the submission of the Term=End Examination Form**

- **Process to submit Term-End Examination Form**

- **Examination fee and Mode of Payment**

- **Un-successful Submission of Exam Form**

- **Related to Refund excess Examination Fee**

- **Hall Ticket for Term=End Examination**

- **Contact Details**

A learner should not apply for appearing at the Term-End Examination of any course without getting registered for the same and that if he/she does so, his /her result would not be declared and the onus shall be on him/her.

Important Guidelines and instructions for submission of Term End Examination form and other forms (Please note that guidelines and fee for forms may change, therefore, you are advised to read guidelines and fee details as per latest forms available online or on the IGNOU website)

1. Please ensure that you have already submitted the assignments as applicable for the courses you are filling in the Examination Form. You are required to pay examination fee for every course of theory. At present there is no examination fee for practical courses, therefore there is no need to register you for practical courses. For the registration of practical courses you should be in touch with your allotted study centre or the Regional Director of your region.

2. You are requested to check the result status before filling examination form.

3. Select and enter Programme code and Examination Centre Code from the options available. If the centre opted by the student is not activated as examination centre or not allotted for any other reason, alternative examination centre will be allotted.

4. Select courses carefully courses for theory from the list appearing on the screen.

5. Students will be allowed to appear in Term-end Examination for the course(s) for which registration is valid and not time-barred and assignment(s) is/are submitted. Examination Fee once submitted will not be refunded.

6. Students must carry IGNOU Identity-Card in the Examination Hall for writing Examination. In case, students do not have IGNOU Identity card due to various reasons, they must get it issued (i.e. duplicate copy of IGNOU Identity card) from Regional Centre concerned well before the start of the Examination. Students are required to contact the RC in person (by post) and get the duplicate Identity card for attending Examination.

7. The students will be entitled to appear for the examination only at the examination centre allotted to them and **NOT** at any other centre without specific permission from the University. The Examination Centre once opted for in a form shall not be changed.

8. Although all efforts will be made to declare the results in time, there will be no binding on the University to declare the results of the last examination before the commencement of next examination. The students may, therefore, fill up the examination form without necessarily waiting for the result and get it cancelled at a later date, if so desired. In case the student gets result after filling up the exam form, s/he should not re-appear in the course qualified by her/him with a view to improve the qualified score.

9. Students who fail to complete the minimum required number of course(s) prescribed for the Programme within the allotted period of study shall cease to be on the rolls of this University for that programme till they re-enroll themselves, if they wish to do so. Such students are advised to get in touch with the Regional Director concerned.

10. **Obtaining Photocopy of Answer Scripts:** After the declaration of result, if the students are not satisfied with the marks awarded, they can request the University for Photocopy of Answer Scripts on payment of 100/- per course. The request for obtaining Photocopy of Answer Scripts by the student must be made within 45 days from the date of declaration of result to the Evaluation Centre concerned in the prescribed format along with the fee of 100/- per course in the form of Demand Draft in favour of IGNOU payable at the city where submitting the request for Photocopy. Format is available on the IGNOU website: www.ignou.ac.in

11. **Early Declaration of Results:** In order to facilitate the students who have got offer o admission and or selected for employment etc. and are required to produce marks sheet/grade card by a specified given date may apply for early process of their answer-scripts and declaration of the results for this purpose. The students are required to apply in the specified format available on the University website with a fee of 1000/- per course through Bank Draft drawn in favour of IGNOU along with the attested photocopy of the offer of admission/employment offer. The students can submit their requests for early declaration before the commencement of the Term-end Examination i.e., before 1st June and 1st December respectively. The University in such cases will make arrangements for processing the answer-scripts and declare the results as a special case.

12. **Re-evaluation of Answer-script(s):** The University has replaced the scheme of rechecking with the re-evaluation whereby the answer-scripts will be re-evaluated by another Evaluator in case the students are not satisfied with the marks/grades secured by them in Term-end Examination. Such students can apply for re-evaluation within one month from the date declaration i.e. the date on which the results are made available on the University Website on payment of 750/- per course in the prescribed application form available on the University Website. The better of the two courses or original marks/grades and re-evaluated marks/grades will be considered and the revised marks/grades shall be incorporated in the students' record as applicable and the revised grade card/marks sheet will be sent to the students within one month from the receipt of

application. **Re-evaluation is not permissible for Projects, Practical, Assignments and Seminars etc**.

13. **Improvement of Division/Class:** Keeping the interest of students who have completed their Bachelor's Degree and Master's Degree Programmes, but falling short of 2% marks for securing 1st Division/2nd Division the university has made a provision for allowing such students to improve their performance. The improvement is permissible only in theory papers and the students may apply for improvement of their performance on the prescribed application format along with a fee of Rs. 750/- per course through a Bank Draft drawn in favour of IGNOU payable at Delhi and submit the application and fee to the Registrar, SRE Division, IGNOU, Maidan Garhi, New Delhi. The improvement is not permitted to those students who have completed their maximum duration of the programme. The students will be given only one opportunity to improve the marks/grades and they can apply for improvement a maximum of 25% of the credits for successful completion of the respective programme. However, the sealing for the number of courses in which the student can improve is five courses. **The better of the two examinations i.e., marks already awarded and the marks secured in the improvement examination will be considered**.

7.3 Evaluation of Practical/Laboratory Courses

Evaluation of laboratory courses is carried out at the time of conducting the laboratory courses at the study centre. Each and every experiment, which you perform, is evaluated. Evaluation of experiments, which you perform under the guidance of your counsellor, constitutes continuous evaluation and carries 70% weightage. On the other hand, the evaluation of unguided assigned experiment(s), which you perform during the last session of your lab course, carries 30% weightage and constitutes Term End evaluation.

7.4 Project Evaluation

If you opt for a course with a project component, you will need to submit a detailed report at the end of your project work. This should be sent only to

Assistant Registrar (Project),

Student Evaluation Division,

Indira Gandhi National Open University,

Maidan Garhi,

New Delhi-110 068.

You will be graded on the basis of this report.

8. Some Important Information and Rules

8.1 Simultaneous Registration

As per the University policy, a student is allowed to pursue two academic programmes simultaneously through ODL / Online mode, as per the illustration given below.

One Certificate Programme with any other Programme	Admission in both programmes can be taken in the same admission cycle
One UG + One PG Programme*	**Admission has to be taken in two different admission cycles**

Two UG Programmes*	*Admission can be taken ONLY in specified Programmes. Details are available on the IGNOU website
Two UG Programmes*	

Certain programmes are not allowed under the simultaneous registration. Students are advised to visit the following link for more details:

http://www.ignou.ac.in/userfiles/Notification%20Simultaneous%20programs%202-9-2022.pdf

There will be no change in the counseling/assignment submission/examination schedule in case dates for the above clash in the programmes in which a student has taken admission.

8.2 Re-Registration

Learners are advised to submit the Re-Registration (RR) forms 'Online' only on the web portal www.ignou.ac.in. as per schedule being notified by the University from time to time. If the Re-Registration in any of the programme is not available online or for any other reason as specified by the University, Learners should submit their RR forms at the respective Regional Centre ONLY and nowhere else. If any student submits the 'Offline' Re-Registration Form at any other Regional Centre than the allocated Regional Centre, and consequently misses the scheduled date and a semester/ year, he/she will have no claim on the University for regularization. International students of the University pursuing their programme from India are advised to submit re- registrations form Offline at respective Regional Centre or International Division, HQ.

8.3 Refund of Fee

Fee once paid will not be refunded under any circumstances except the provision of refund of admission fee as notified by the University. It is also not adjustable against any other programme of this University. However, in cases where University denies admission, the programme fee will be refunded after deduction of processing fee, if any, through online mode.

8.4 Additional Chance in Differently-abled Students

a) Students with disability of 40% or more are given additional 2(two) years beyond the maximum duration prescribed for all academic programmes.

b) Disabled students seeking benefit of the aforesaid facility should submit the 'Disability Certificate' issued by the competent authority at the Regional Centre concerned, which, in turn will verify it, make entry in the database and transmit the data to SRD for updating in the Master records.

c) Re-admission facility to disabled students will be extended without charging any pro-rata fee, i.e. further extending the duration beyond the maximum duration by six months/ one year/ two year, as the case may be. However, disabled students are required to submit Re-admission Form, as per schedule, without any pro-rata fee.

8.5 Scholarships and Reimbursement of Fee

Reserved Categories, viz., Scheduled Castes, Scheduled Tribes and Physically Handicapped students etc. have to pay the fee at the time of admission to the University along with other students. Physically Handicapped students admitted to IGNOU are eligible for Government of India scholarships. They are advised to collect scholarship forms from the respective State Government Directorate of Social Welfare or Office of the Social Welfare Officer and submit the filled-in forms to them through the Regional Director of IGNOU concerned. Similarly, SC/ST students have to submit their scholarship forms to the

respective State Directorate of Social Welfare or Office of the Social Welfare Officer, through the Regional Director of IGNOU concerned for suitable reimbursement.

The Application for reimbursement of Programme Fee to SC/ST students can be downloaded from the link:

http://ignou.ac.in/userfiles/Application%20form%20for%20Reimbursement%20of%20fee.pdf

Fee Exemption for SC/ST Students under the SCSP and TSP Schemes:

Detail information regarding this scheme may be obtained from the link:

http://www.ignou.ac.in/userfiles/Joint%20Notification%20of%20SCSP%20TSP.pdf

SC and ST students who are availing any kind of fellowship or fee exemption from other agencies are not eligible for fee exemption under SCSP/TSP scheme. The exemption of fee is confined to Programme Fee mentioned in this Admission Prospectus. The scheme will not exempt late fee, term-end-exam fee, convocation fee, etc. Eligible and interested students may contact the Regional Centre concerned. Details of the scheme and notification are uploaded onwww.ignou.ac.in

8.6 Waiver of IGNOU Programme Fee to Inmates lodged in Prisons

Inmates lodged in Prisons in the country are exempted from payment of programme fee, including cost of Prospectus. The under-trial/short term prisoners are also eligible for the same benefit of FREESHIP as is extended to other prisoners with the condition that when they go out of jail, they will be treated as normal students and shall pay subsequent fees wherever applicable (examination fee, re-registration fee, registration fee for convocation etc.).

8.7 Study Material and Assignments

The University has a provision to provide softcopy of the self-learning material in place of printed material. A student opting for the softcopy will be given a discount of 15% in the Programme Fee. The Option to this effect has to be indicated by the students while filling in the Online Admission Form. Such students will not be given printed self-learning material.

The University sends study materials by Registered post/ Speed Post/ Courier etc. and if a student does not receive the same for any reason, whatsoever, the University shall not be held responsible for that. You can check status of dispatch of study materials on the IGNOU website using the web link: www.ignou.ac.in/ignou/aboutignou/division/mpdd/material, provided by MPDD.

The assignments for each semester can be downloaded from the Student Zone of the University website-www.ingou.ac.in. For non-receipt of study material, students are required to write to the Registrar, Material Production and Distribution Division, IGNOU, Maidan Garhi, New Delhi –110 067 or e-mail to mpdd@ignou.ac.in.

8.8 Change of Programme/ Medium

The students will not be allowed programme change from B.Sc. to BA and vice versa. However, students may get the admission to one programme cancelled and register for another programme. For FYUP Based Bachelor's Degree Programme, Change of medium will be allowed as per current practice on payment of applicable fee. Change of Medium is permitted within 30 days from the receipt of first set of course material in the first year ONLY,

on payment of Rs.350/- plus Rs.350/- per 2/4 credit course and Rs.700/- per 6/8 credit course for undergraduate courses. For Master's Degree Programme it is Rs.350/- plus Rs.600/- per 2/4 credit course and Rs.1200/- per 6/8 credit course. Payment should be made by way of a Demand Draft drawn in favour of "IGNOU" payable at the place of concerned Regional Centre. All such requests for change of Medium should be addressed to the concerned Regional Centre only, as per schedule.

8.9   Credit Transfer

Students who want to avail of credit transfer shall get registered with IGNOU for the programmes they want to study. All the applications for this purpose should be addressed to The Registrar, Student Registration Division, IGNOU, Maidan Garhi, New Delhi-110068. Such cases of internal/external credit transfer will be examined on individual basis. The SRD may refer all such cases to the Schools concerned for a decision.

The Internal Credit Transfer Form and guidelines are available on the following link:

http://www.ignou.ac.in/ignou/studentzone/download/InternalCredittransferscheme

8.10   Counselling and Examination Centre

All study centres, Programme study centres, special study centres are not Examination centres. Practical Examination need not necessarily be held at the centre where the learner has undergone counselling or practicals.

8.11   Correction of Address and Study Centre Change

Students can initiate the request for change of address, Study Centre and regional centre online from their user account. The user account is to be created at https://ignou.samarth.edu.in by clicking 'New Registration'.

8.12   Change of Region

When a learner wants transfer from one region to another, he/she has to write to that effect to the Regional Centre from where he/she is seeking a transfer marking copies to the Regional Centre where he/she would like to be transferred to. Further, he/she has to obtain a certificate from the Coordinator of the Study Centre from where he/she is seeking transfer regarding the number of assignments submitted. The Regional Director from where the learner is seeking the transfer will transfer all records including details of fee payment to the new Regional Centre under intimation to the Registrar, Student Registration Division (SRD) and the learner as well. For change of Region in practical oriented Programmes like computer programmes, B.Sc. etc., 'No Objection Certificate' is to be obtained from the concerned Regional Centre/Study Centre where the learner wishes his/her transfer.

In case any learner is keen for transfer from Army/Navy/ Air Force Regional Centre to any other Regional Centre of the University during the cycle/session, he/she would have to pay the fee-share money to the Regional Centre. In case the learner seeks transfer at the beginning of the session/cycle, the required programme course fee for the session/cycle shall be deposited at the Regional Centre. However, the transfer shall be subject to availability of seats wherever applicable.

The learner can seek transfer to any other overseas study centre only after six months of Registration or submission of first year/semester assignments for the programme of one year or longer duration.

8.13 Official Transcripts

The University provides the facility of official transcripts on request made by the learners on plain paper addressed to Registrar, Student Evaluation Division (SED), Block12, IGNOU, Maidan Garhi, and New Delhi–110068. The fee for official transcripts is as under:

For Indian Students:

₹ 300/-for each transcript, if to be sent to the Student/Institute **within India**

₹ 500/- for each transcript, if to be sent to the Student/Institute **out of India**

For SAARC Countries Students:

₹ 1200/- for each transcript, if to be sent to the Student/institute of **SAARC Countries.**

For Non-SAARC Countries Students:

$ 120 for each transcript, if to be sent to the Student/Institute of **Non-SAARC Countries.**

Format is available in the Programme Guide or IGNOU website: **www.ignou.ac.in**

8.14 Correction/Change of Name/Surname of Learner

Spelling mistakes, if any, committed at the time of data entry stage will be rectified at the Regional Centre and corrected data transmitted to Student Registration Division for updating in the database. However, Learners are expected to write their correct name (as indicated in the High School Certificate) in the Admission Form. In case any change in the name (other than the one mentioned in his/her High School Certificate), then it is mandatory for the prospective learners to furnish legal evidence of having changed his/her name/ surname while submitting the admission form.

For Change of Name/Surname, after confirmation of admission, the learners are required to submit the following documents at the Regional Centre, for onward transmission to Registrar, SRD:

a) Original copy of Notification in a daily newspaper notifying the change of name;

b) Affidavit, in original, on non-judicial Stamp Paper of the appropriate value sworn in before 1st Class Magistrate specifying the change in the name;

c) MarriageCard/MarriageCertificateincaseofwomencandidatesforchangeinsurname;

d) Gazette Notification, in original, reflecting the change of name/surname;

e) Demand Draft of Rs. 500/- drawn in favour of IGNOU payable at New Delhi.

Request for correction and/or change of Name / Surname will be entertained only before award of the Degree/Diploma/Certificate. For change/correction of name after completion of programme, but before award of degree please see the guidelines available at:

http://www.ignou.ac.in/userfiles/Notification%20(4)(3).pdf

8.15 Disputes on Admission and Other University Matters

The place of jurisdiction of filing of suit, if necessary, will be New Delhi/Delhi ONLY.

8.16 Recognition

GNOU Degrees/Diplomas/Certificates are recognized by all member universities of the Association of Indian Universities (AIU) and are at par with Degrees/Diplomas/ Certificates of all Indian Universities/Institutions, as per UGC Circular letter No. F.1-52/2000(CPP-II) dated 5th May, 2004, AIU Circular No. EV/11(449/94/176915- 177115 dated January 14, 1994, AICTE Circular No. AICTE/Academic/ MOU-DEC/2005 dated May 13, 2005 and UGC/DEB/2013 dated 14.10.2013**.**

8.17 Pre-admission Counselling of Persons with Disabilities

Persons with disabilities before opting for a programmes for admission may please go through the category of perspective jobs for persons with disabilities and the physical requirements of jobs by visiting the link (http:/www.disabilityaffair.gov.in/content/page/rules--and-regulations.php#ipd2013)of Department of Empowerment of Persons with Disabilities, Ministry of Social Justice and Empowerment, Government of India. After having made this informed decision, the person with disability seeking admission must give an undertaking in the prescribed proforma available on IGNOU Website**.**

8.18   Prevention of Malpractice/Notice for General Public

Students seeking admission to various academic programmes of Indira Gandhi National Open University are advised to directly contact IGNOU headquarters at New Delhi or Regional Centres of IGNOU only. Students interacting with intermediaries shall do so at their own risk and cost. However, in case of any specific complaint regarding fraudulent institutions, fleecing students etc., please contact any of the following members of the Malpractices Prevention Committee:

1.   Director, Research Unit (Tele: 29534336)

2.   Director, SSC (Tele: 29535714)

3.   Director, RSD (Tele: 2953 2118, 29572412)

4.   Registrar, SED (Tele: 2953 5828, 29572204)

5.   Registrar, SRD (Tele: 2953 2741,9571302)

6.   Registrar, MPDD (Tele: 29534521,29572002)

7.   Deputy Registrar, F&A (Tele: 29534934)

8.   Registrar (SRD) (Tele: 29571302)

Alternatively, complaints may be faxed on 29532312.

Email : ignouregistrar@ignou.ac.in

Website: http://www.ignou.ac.in

Note : Except the above mentioned complaints, no other queries will be entertained at the above phone numbers.

As per directions of Hon'ble Supreme Court of India ragging is prohibited. If any incident of ragging comes to the notice of the authority the concerned student shall be given liberty to explain and if his explanation is not found satisfactory, authority would expel him from the University. IGNOU admissions are made strictly on the basis of merit. Only those learners who satisfy the eligibility criteria fixed by the university will be admitted. Learners will not be admitted if they are not eligible as per the eligibility criteria. Therefore, the candidates should not be misled by the false promises of admission made by any private individuals or institution.

8.19   Placement Services

In order to further extend learner support services to its geographically distributed student population who are pursuing various IT and Non-IT related Degree, Diploma and Masters Programme, the university has established the Campus Placement Cell (CPC). The mission and endeavour of CPC is to enhance and facilitate the process of prospective suitable employment opportunities that are commensurate with the personal profiles of our learners. All students interested in seeking the assistance of CPC for procuring suitable job opportunities are requested to send their current resume/bio-data to campusplacement@ignou.ac.in. They are further advised to visit our home page www.ignou.ac.in for regular updates on placement related activities.

8.20   Grievance Redressal: Whom to Contact

IGNOU has a robust mechanism in place for redressal of student grievances. A Special Online Portal –IGNOU Grievance Redress and Management (iGRAM) has been developed for this purpose. Students can submit their grievances on iGRAM online and track the response. iGRAM can be accessed at,

 http://igram.ignou.ac.in/.

A dedicated Student Service Centre has been set up at the HQ to respond to the queries and grievances of the students. The Student Service Centre can be contacted at the contact details provided below.

Contact Details of Student Service Centre	
General Enquiry (Student Support Services and Student Grievances, pre-admission Inquiry of various Programmes in IGNOU, etc)	Phone: 011-29572514, 29572513, 29572516
Director, SSC, IGNOU, Maidan Garhi, New Delhi – 110068	Phone: 011-29572505 Email: directorssc@ignou.ac.in, ssc@ignou.ac.in

For specific queries related to Admission, Study Material, Assignment, Examination, Counselling etc. the students may contact the following:

Sl. No.	Issues	Authority to be contacted
1	Identity Card, Fee Receipt, Bonafide Certificate, Migration, Certificate, Scholarship Forms, change of name, correction of name/address	Concerned Regional Centre
2	Non-receipt of study material	Registrar (MPDD), IGNOU, Maidan Garhi, New Delhi-110068 Email: mpdd@ignou.ac.in, Ph: 011-29572008, 29572012
3	Change of Elective/Medium/opting of left over electives/ Deletion of excess credits	Concerned Regional Centre
4	Credit Transfer	Student Registration Division, Block No. 1 & 3, IGNOU, Maidan Garhi, New Delhi-110068 Email: registrarsrd@ignou.ac.in
5	Purchase of Audio/Video CDs	Marketing Unit, EMPC, IGNOU, Maidan Garhi, New Delhi-110068 Email: empcmktunit@ignou.ac.in
6	Academic Content	Director of the School concerned (www.ignou.ac.in)

7	Approval of a Project Synopsis	Project Co-ordinator in the Concerned School of Studies/ Regional Centres
8.	International Students residing in India should contact	Director, International Division, IGNOU, Block-15, Section K, Maidan Garhi, New Delhi. Tel. Nos. : 29533987; 29571681 E-mail : internationaldivision@ignou.ac.in
9	Issue of Degree/ Diploma Certificate/ Despatch of returned Degrees/ Verification of Degrees/Convocation	Asstt. Registrar 011-29572224, 011-29572213, 011-29535438 convocation@ignou.ac.in
10	Issue of Hall Ticket/ Correction in the hall ticket for handicapped student s/ Non-receipt of hall tickets for term-end-examination & Entrance Test/Entrance, Test Results/Queries related to dispatch of attendance, list of examinees etc./ writer	Asstt. Registrar 011-29535064, 011-29572209, 011-29572202 bhavna@ignou.ac.in ssbhandari@ignou.ac.in examiii@ignouac.in
11	Declaration of results of Masters & Bachelors degree level programme/Issueof grade card and provisional certificate of Masters and Bachelors degree level prog./ Practical marks of all programmes	Section Officer 011-29536103, 011-29572212 mdresult@ignou.ac.in bdresult@ignou.ac.in practicalsed@ignou.ac.in
12	Declaration of results of Masters, Bachelor and Diploma programme/Issue of grade card and provisional certificate of Masters, Bachelor and Diploma level programme	Section Officer 011-29536743, 011-29572211 bdresult@ignou.ac.in dpresult@ignou.ac.in
13	Declaration of results of DPE and Certificate programme/ Issue of grade card and provisional certificate of DPE & Certificate level programme	Section Officer 011-29536405, 011-29572208 Email: cpresult@ignou.ac.in
14	Verification of genuineness ofprovisional certificate and grade card/ Issue of Transcript	Section Officer 011-29536405, 011-29572210 Email: gcverification@ignou.ac.in
15	Queries related to UFM cases	Section Officer 011-29572208, 011-29576405 ufmgroup@ignou.ac.in
16	Status of Project Report of all Programmes/ Dissertation and Viva marks	Asstt.Registrar 011-29532294, 011-29571324, 011-29571321 projects@ignou.ac.in
17	Queries related to Assignment Marks	Asstt.Registrar 011-29571313, 011-29571325, 011-29571319 assignment@ignou.ac.in
18	Students general enquiries and grievances/ Issue of duplicate mark sheet	Asstt. Registrar 011-29572218, 011-29571313 sedgrievance@ignou.ac.in
29	Discrepancy in grade card, non updation of grade/marks in the grade card etc.	Dy. Director/ Asstt.Director, 011-29572208, 011-29572211, 011-29572212 mdresult@ignou.ac.in bdresult@ignou.ac.in bdpresult@ignou.ac.in dpresult@ignou.ac.in cpresult@ignou.ac.in

You are also advised to get in touch with the Coordinator of your study centre for timely information.

8.21   IGNOU Policy Regarding Sexual Harassment at the Work Place

In compliance with the guidelines of the Supreme Court, IGNOU has adopted a policy that aims to prevent/ prohibit/ punish sexual harassment of women at the workplace. Academic/non-academic staff and students of this University come under its purview. Information on this policy, rules and procedures can be accessed on the IGNOU website (www.ignou.ac.in). Incidents of sexual harassment may be reported to the Regional Director of the Regional Centre you are attached to or to any of the persons whose details are available in following link:

http://ignou.ac.in/userfiles/IGNOU%20CASH.pdf

9.   Some Forms for your use and their Links

In this section, we are enclosing the IGNOU website links to various forms, which are useful for you. Whenever you have to correspond with the university, please download the form from the Website and fill it carefully and send as per instructions therein. The detailed instructions for all these-forms are provided in form itself. Some of these links may change, in those cases please use search option to find the desired link.

9.1 Assignments related links

https://webservices.ignou.ac.in/assignments/

9. 2 Re-registration

https://onlinerr.ignou.ac.in/

9.3 Term End Examination and related links

Link to online Term End Examination form

https://exam.ignou.ac.in/

Link to form for Early Declaration of Result

http://www.ignou.ac.in/userfiles/APPLICATION%20FORM%20FOR%20EARLY%20DECLARATION%20OF%20RESULT%20OF%20TERM-END%20EXAMINATION.pdf

Link to Application Form for Obtaining Photocopy of the Answer Script

http://www.ignou.ac.in/userfiles/Application%20form%20for%20Reevaluation%20of%20Answer%20Scripts(1).pdf

Link to form for Re-evaluation of Answer script

http://www.ignou.ac.in/userfiles/Application%20form%20for%20Reevaluation%20of%20Answer%20Scripts(1).pdf

Link to Application form for Improvement of Division/Class

http://www.ignou.ac.in/userfiles/Improvement%20form.pdf

Link to form for Duplicate Grade Card/Mark-sheet

http://www.ignou.ac.in/userfiles/Duplicate%20mark%20sheet%20form.pdf

Link to form for Issue of Official Transcript

http://www.ignou.ac.in/userfiles/Official%20Transcript%20form.pdf

Link to form for Issue of Migration Certificate

http://ignou.ac.in/userfiles/Migration%20Certificate.pdf

Link to form for Date sheet of all Programme

http://ignou.ac.in/userfiles/DATE%20SHEET(1).pdf

9.4 Other important links

Link for Old Question Papers

https://webservices.ignou.ac.in/Pre-Question/

Link for Checking Study Material Status

http://ignou.ac.in/ignou/aboutignou/division/mpdd/materials

In case the student does not receive the study material from the Regional Centre concerned, the student may approach *Regional Director, IGNOU, Regional Centre where they stand enrolled/admitted* through e-mail/fax/letters along with proof of depositing of fee for the course of study.

Link for eGyankosh for Online Course Materials

http://egyankosh.ac.in/

Forms

Note: You may download the Forms from the Website

We are enclosing some samples of the following forms for your use.

1. Assignment Submission-cum-Acknowledgement form (Form No.1)

2. Request for Change of Programme/Medium /Course/Elective (Form No.2)

Whenever you have to correspond with the University for any of the above listed subjects, it is better to **retain the original form for reuse and get a photocopy of the relevant form**, fill it carefully and send as per instruction therein. The detailed instructions for all the above listed subjects are provided in the Programme Guide.

ASSIGNMENTS REMITTANCE -CUM-ACKNOWLEDGEMENT CARD

Enrol. No._____
Programme Title: _____

Name : _____

Course Code: _____Medium: _____

S.No.	Assignment No.	
		For Office Use Only
		S .No. _____
		Date of Receipt: ____ Name of Evaluator: _

Signature of the Student
Date . _____

Date of despatch to the Evaluator: _____

Date of receipt from the Evaluator: _____

INDIRA GANDHI NATIONAL OPEN UNIVERSITY
ASSIGNMENTS REMITTANCE CUM ACKNOWLEDGEMENT CARD

Enrol. No._____   Programme Title: _____

Name : _____   Medium : _____

Course Code: _____

S.No.	Assignment No.	
		For Office Use Only
		S.No. _____
		Signature of the recevier _____
		Date : _____

Signature of the Student   Seal

Name : _____
Address of the Student : _____
Date : _____
(Please write your complete address and affix adequate postal stamp on reverse)

Affix
Stamp
Here

From: To

The Coordinator   (ADDRESS OF THE STUDENT)
Study Centre concerned

....

....

Form 2

To

The Regional Director

_____

_____

_____

Sub: 1. **Change of Medium Study**
        2. **Change of Courses of Study**

Enrolment No.: ☐☐☐☐☐☐☐☐☐

1. Change of Medium: From _____ to _____
2. Change of courses of study as per following details:

Title of the Course offered at the time of Regitration	Medium	New Course to be offered	Medium

Fee Details: Demand draft is to be made in the name of IGNOU payable at the city of your Regional Centre.

Demand Draft No. _____ Dated _____

Amount Rs. _____ Drawn on _____

Signature:
Name: _____

Address: _____

            _____

            _____

Phone & Email: _____

10. Syllabi

10.1 Syllabus of Discipline Specific Core (DSC) Courses

Discipline Specific Course-1: Calculus (BMTC-131)

Sets and Functions: Definition and examples of sets and subsets, Venn diagrams, Complementation, Intersection, Union, Distributive laws, De Morgan's laws, Cartesian product, relations and functions, composition of functions and binary operation, graph, operations (inverse, composite).Coordinate Systems: Cartesian system, equation of a line, symmetry, change of axis, polar coordinates and and parametric representation of curve. Complex Numbers: What is a complex number?, Geometric representation and polar representation, algebraic operations, De Moivre's theorem, trigonometric identities, roots of a complex numbers. Basic Theory of Equations: Relations between roots and coefficients; Descartes rule of signs, Solution of equations up to bi-quadratic equations; conjugate roots, rational roots of equations.

Real number line, Absolute value, Interval and some special types of functions (even, odd, monotonic, periodic). Limits: Algebra of limits, one-sided limits, The concept of infinite limits (infinite limits as the independent variable $a \to \infty$, one-sided infinite limits, limits as the independent variable tends to ∞ or $-\infty$, algebra of limits). Continuity: Continuity, algebra of continuous functions, Types of discontinuity. Derivative of a function: Derivatives of some simple functions, algebra of derivatives, the chain rule, continuity versus derivability. Derivatives of the various trigonometric functions, derivative of inverse of a function. The inverse function theorem, derivatives of inverse trigonometric functions, use of transformations. Derivative of exponential function, logarithmic functions, hyperbolic functions, inverse hyperbolic functions, methods of differentiation (derivative of x^r, logarithmic differentiation, derivatives of functions defined in terms of a parameter, derivatives of implicit functions).

Higher order derivatives: Second and third order derivatives, nth order derivatives, Leibnitz Theorem, Series expansion (Taylor and Maclaurin) and approximation. Indeterminate forms:L'Hopital's rule for $\frac{0}{0}$ form (Simplest form of L'Hopital's Rule, Another form of L'Hopital's rule for $\frac{0}{0}$ form), L'Hoptal's rule for $\frac{\infty}{\infty}$ form, other types of indeterminate forms (indeterminate forms of the type $\infty - \infty$, indeterminate forms of the type $0.\infty$, indeterminate forms of the type$0^0, \infty^0, 1^\wedge\infty$) . Leibniz theorem. Ups and Down: Rolle's Theorem, Lagrange's mean value theorem, Maxima-minimaof functions (Definitions and examples, a necessary condition for the existence of extreme points, Sufficient conditions for the existence of extreme points, first derivative test, second derivative test), Monotonicity. Curvature: Concavity/convexity, points of inflection. equation of tangents and normals, angles of intersection of two curves, tangents at the origin. Asymptotes: Classifying singular points, Asymptotes (Parallel to the axes, Oblique asymptotes). Tracing of curve: Graphing a function, Tracing a curve (given its Cartesian equation, or in parametric form, or Polar equation) curvature, radius of curvature.

Introduction to Integration: UPF, LPF, Integration as the inverse of differentiation. Definite integral, Fundamental theorem of calculus. Standard integrals, Algebra of integrals. Methods of Integration: Integration by substitution, integrals using rigonometric formulas, trigonometric and hyperbolic substitutions, Two properties of definite integrals. Evaluation of $\int (a^2 - x^2)dx, \int (a^2 + x^2)dx, \int (x^2 - a^2)dx, \int e^x(f(x) + f'(x))dx.$ Reduction formulas for $\int \sin^x dx, \int \cos^n x\, dx, \int \tan^n x\, dx$ and $\int \sec^n x\, dx,$ Integrals involving products of trigonometric functions (Integrand of the type $\sin^m x \cos^n x, e^{ax} \sin^n x),$ integrals involving hyperbolic functions. integration of some simple rational functions, partial fraction decomposition, method of substitution, integration of rational trigonometric functions, integration of irrational functions. Applications of Calculus: Area under a

curve (cartesian equation, polar equations), area bounded by a closed curve, length of a plane curve (cartesian form, parametric form, polar form).

Tutorials: Miscellaneous examples will be added for practice.

References:

1. H. Anton, I. Birens and S. Davis, *Calculus*, John Wiley and Sons, Inc., 2002.
2. G.B. Thomas and R.L. Finney, *Calculus*, Pearson Education, 2007
3. James Stewart, *Essential Calculus*, *Early Transcendentals*, Second Edition, Cengage, 2012

Discipline Specific Course-2: Differential Equations (BMTC-132)

3D-Cartesian Coordinate System, Spherical Coordinate System and Cylindrical Coordinate System, Cartesian products, Properties of $\mathbf{R^n}$ (Linear Space Properties), Distance in $\mathbf{R^2}$ and $\mathbf{R}^3$, Functions from $\mathbf{R^n}$ to $\mathbf{R}$ (n = 2, 3), Limit of functions from $\mathbf{R^2} \rightarrow \mathbf{R}$ and from $\mathbf{R^3} \rightarrow \mathbf{R}$, Repeated Limits, Properties of Limits, Continuity of functions from $\mathbf{R^2} \rightarrow \mathbf{R}$ and from $\mathbf{R^3} \rightarrow \mathbf{R}$, Algebra of continuous functions.

First Order Partial Derivatives, Geometrical Meaning, Continuity and Partial Derivatives, Differentiability of functions from $\mathbf{R^2} \rightarrow \mathbf{R}$, Differentiability of functions from $\mathbf{R^3} \rightarrow \mathbf{R}$, Higher Order Partial Derivatives, Equality of Mixed Partial Derivatives (Euler's , Schwarz's and Young's Theorem without proof), Chain rule for finding partial derivatives of composite functions, Total Derivative, Homogeneous functions and Euler's theorem.

Basic concepts in the theory of differential equations, Family of curves and differential equations, Differential Equations arising from physical situations. Separation of Variables, Homogeneous equations, Exact equations, Integrating factors. Classification of first order differential equations (DE), General solutions of linear non-homogeneous equation, Method of Undetermind coefficient, Method of Variation of Parameters, Equations reducible to linear form, Applications of linear DEs. Equations which can be factorized, Equations which cannot be factorized (solvable for x, y, independent or dependent variable is absent, homogeneous in x and y, Clairaut's and Riccati's equations).

General form of linear ordinary differential equation, Condition for the existence of unique solution, linear dependence and independence of the solution of DEs, Method of solving homogeneous equation with constant coefficients; Method of undetermined coefficients – Types of non-homogeneous terms for which the method is applicable (polynomial, exponential, sinusoidal etc.), Observations and Constraints of the method. Variation of parameters, Reduction of order, Euler's equations. Differential operators, General method of finding Particular Integral (PI), Short method of finding PI, Applications – Mechanical Vibrations, Electric Circuits.

Curves and surfaces in space, Formation of simultaneous DEs, Methods of solution – Method of Multipliers, One Variable absent, Applications – Particle motion in phase-space, Electric Circuits. Total Differential Equations – Definition and examples, Integrability condition (only statement and illustration), Methods of Integration (By Inspection, Variable separable, One variable separable, Homogeneous equation). Origin, Classification (order, degree, linear, semi-linear, non-linear) of linear first order PDEs, Formation of Linear Equations of the First Order and types of their solutions, Lagranges Method, Solutions of non-linear PDEs – The

Complete integral, Compatible system of first order equations, Charpits method, Standard forms.

Tutorials: Miscellaneous examples and exercises will be added for practice.

Reference:

1. G.B. Thomas and R.L.Finney, *Calculus*, Pearson Education, 2015.
2. W. E. Boyce and Richard C. DiPrima, Elementary Differential Equations and Boundary Value Problems by, Wiley.
3. I. Sneddon,*Elements of Partial Differential Equations*, McGraw Hill International Student edition.
4. Differential Equations with Applications and Historical Notes by George F. Simmons, 2nd edition, Tata McGraw-Hill edition.

Discipline Specific Course-3: Introduction to Probability and Statistics (BMTC-101)

Data, Presentation of data, Frequency Distributions, Ungrouped Frequency Distributions, Grouped Frequency Distribution, Diagrammatic Representation of Frequency Distributions (Frequency Curve, Histogram and Ogives), Examples with real data. Mean, Mode, Median, Quantiles and Percentiles, Algebraic Properties of the Measures, Relation between these Measures. Range, Quartile Deviation, Mean Deviation, Standard Deviation, Algebraic Properties of these Measures, Coefficient of Variation. Moments, Skewness and Kurtosis. Tabular Representation of Bivariate Data, Scatter Diagram, Karl Pearson coefficient of Correlation and its limits, Lines of Regressions, Properties of Regression Coefficients.

Random experiment, Sample space, Events, Algebra of events, Probability (classical, empirical and axiomatic). Conditional Probability, Additive and Multiplicative laws of probability, Independence of events, Bayes' Theorem, Random Variables, Discrete and Continuous, pmf, pdf ,cdf, and their properties. Mathematical expectation, properties of expectations, Variance, Moments and moment generating functions. Bernoulli distribution, Binomial distribution, Negative binomial distribution, Geometric distribution, Poisson distribution. Computation of mean, variance and moment generating functions of these distributions, Uniform distribution, Normal distribution, Exponential distribution, Computation of mean and variance of these distributions.

Two or more discrete and continuous random variables, Joint distribution of random variables, marginal distributions, conditional distributions and independence, Joint expectations, variance, Covariance and correlation coefficient.(An introduction to Double Integration).

Chebyshev's inequality and weak law of large numbers, Poisson approximation to binomial, Normal approximation to binomial, Central limit theorem (Statement only), Random sampling, Sample mean and Sample variance and their independence, Chi-square distribution, t-distribution, F-distribution. Null and alternative hypothesis, Type I and Type II errors, Critical region and Level of Significance, Large sample test, Tests of significance based on chi-square, t and F statistics.

References:

1. Robert V. Hogg and Allen T. Craig *Introduction to Mathematical Statistics*, Macmillan Pub. Co.
2. S. C. Gupta, V. K. Kapoor, *Fundamentals of Mathematical Statistics*,.Sultan Chand and Sons
3. Miller and Miller, *Mathematical Statistics,* Pearsons.

Discipline Specific Course-4: Multivariable Calculus (BMTC-102)

The Space $\mathbf{R}^n$ (Cartesian products, algebraic structure of $\mathbf{R}^n$, distance in $\mathbf{R}^n$), functions from $\mathbf{R}^n$ to $\mathbf{R}^m$.

Definition and geometrical representation of vectors, norm of vector, unit vector, null vector sum and scalar multiplication of vectors, (analytical and geometrical treatment to be done side by side.) dot product, cross product, geometrical projection and analytical properties, scalar and vector projection, direction cosines and direction ratios, vector equation of lines and plane. Gradient, divergence and curl of vectors. Limit and continuity of functions from $\mathbf{R}^n \rightarrow \mathbf{R}^m$, repeated limits.

Taylor's theorem - (Taylor's theorem for functions of two variables), Maxima and Minima - local extrema, Second derivative test for local extrema, Lagrange's multipliers; Jacobians - definition and examples, computation of partial derivatives of two or more variables using jacobians, chain rule, functional dependence; Implicit Function Theorem for two and three variables – statement, sketch of the proof, verification; inverse Function Theorem for n variables – only the statement, verification for two and three variables.

Double Integration - double Integral over a Rectangle, repeated Integrals, definition of double Integral over a Bounded set, computation of integrals over bounded regions of "Type I and Type II", change of variables; triple integration- triple integral over a rectangular box , triple integral over a bounded, computation of triple integral over regions of "Type I and Type II', change of variables (Cylindrical Coordinates); Applications of double integrals (area of a planar region and volume of a solid, Surface area, Mass and moments), Applications of triple integrals; Volume, mass, centre of gravity, moments of inertia; line integral in R^2- definition of line integral and computation, path independence, conservative force, Green's Theorem, Stokes theorem and divergence theorem.

References:

1. James Stewart, *Multivariable Calculus*, *Early Transcendentals*, Second Edition, Cengage, 2020.
2. Bruce Edwards,*Multivariable Calculus,* Tenth Edition, Cengage, 2020.
3. David Widder, *Advanced Calculus,* Dover, 1989.

Discipline Specific Course-5: Discrete Mathematics (BMTC-103)

Introduction to Logic: Propositional Calculus, proposition, logical connectives, disjunction, conjunction, negation, exclusive or, logical equivalence, Truth Tables, What is a proof, Direct Proof, Indirect proof, counter examples, principal of induction.

Boolean algebra; Boolean expressions; Logic circuits; Boolean functions.Multiplication and Addition Principles; Permutations: Notations, Circular Permutations, Permutation of objects not necessarily distinct; Combinations: Formula for C(n,r), Combination with repetition.

Algorithms: What is an algorithm? Prime number generation, computing nth Fibonacci number, k^{th} smallest element of an array, selection sort, insertion sort, merge sort, binary search, Growth rate of functions, Complexity of Algorithms.

Introduction to Combinatorics: Pascal's formula for C(n,r), Some identities involving binomial coefficients; The multinomial expansion: Applications to combinatorial probability, Elements of classical probability theory, Addition theorem in probability.

Partitions and Distributions: Integer Partitions: Recurrence Relation for P_n^k , Ferrar's graph, A recurrence relation for the number of partitions, generating function for P_n's.
Distributions: Distinguishable objects into distinguishable containers, Generating function Approach, containers with at most one object, Distinguishable objects into indistinguishable containers, Stirling numbers of the second kind, Pigeon hole principle.

Recurrence relation for S_n^m, A Generalization of the recurrence relation for Stirling numbers of the second kind, Generating function for Stirling number of second kind, Bell Numbers, Indistinguishable objects into distinguishable containers, Indistinguishable objects into indistinguishable containers.

More about counting: Pigeon-Hole principle; Inclusion and exclusion principle: Application to number theory - Euler's totient function, Application to onto maps, Application to Probability, Applications to Derangements,

Recurrence Relations Three recurrent problems, Divide and conquer.

Generating functions: Exponential generating function; Applications: Combinatorial identities, Linear equations, Partitions, Recurrence relations.
Solving Recurrences:Linear homogeneous recurrences, Linear non-homogeneous recurrences; Some other methods; Method of inspection, Method of telescoping sums, Method of iteration, Method of substitution.

References:

1.   C.L. Liu,*Elements of Discrete Mathematics*, McGraw-Hill, 1985.

2.   David J. Hunter, *Essentials of Discrete Mathematics*, Jones and Bartlett, 2010.

3.   K. H. Rosen, *Discrete Mathematics and its Applications*, Seventh Edition, Tata McGraw Hill, 2012.

Discipline Specific Course-6: Linear Algebra (BMTE-141)

Matrices, Examples of Matrices, Addition, Scalar Product, Transpose and Conjugate, Symmetric , Skew-Symmetric , Hermitian Matrices, Matrix Multiplication, Matrix Form of Linear Equations.

Vector spaces, Plane and Space Vectors, Matrices as examples , their properties.
Subspaces, Linear Span of Vectors, Intersection, Sum, Union and Direct Sum of Subspaces.
Linear Independence, some elementary results on Linear Independence, Bases, Dimension,
Geometric Characterisation of Subspaces of R^3 as Points , Lines and Planes.
Elementary Row operations, Elementary matrices, Row Echelon Form, Gaussian Elimination for System of Linear Equations, Completing a Linearly Independent Set to a Basis using Row Reduction, Inverse of a matrix, Inverse of a Matrix using Row Reduction, Elementary Matrices are Invertible and their Inverse is also Elementary, Characterisation of Invertible Matrices.

Computing the Bases and Dimension of Subspaces using Row Reduction, Dimensions of Sum and Intersection.

Row rank, Column rank and their equality, Computing rank using Row Reduction, Criterion for Consistency of Linear Non-Homogeneous System of Equations using Row Reduction. Linear Transformation, Linear Operators and Linear Functionals, Range and Kernel of a Linear Transformation, Injective and Surjective Transformations, Rank and Nullity, Rank-Nullity Theorem, Computing bases for Kernel and Range of a Matrix using Row Reduction (As an Application of earlier material on Computing Bases of Subspaces using Row Reduction).

Algebra of Linear Transformations including Composition of Linear Transformations, L(U,V) is a vector space, Quotient Spaces, Fundamental Theorem of Homomorphism.
Matrix of a Linear Transformation, Matrix of the Composition of Linear Transformations,

Matrix of Change of Basis, Similar Matrices.

Definition of Determinants, Properties of Determinants, Determinantal Rank of a Matrix, Determinantal Rank is the same as the Rank (without proof), Adjoint of Matrix, Inverse of a Matrix, Systems of Linear equations (Cramer's Rule).

The Algebraic Eigenvalue Problem, Obtaining Eigenvalues and Eigenvectors of Matrices and Linear Transformations, Diagonalisation, Criterion for Diagonalisation.

Minimal Polynomial, Application of `If the minimal polynomial has distinct roots, the matrix is diagonalisable' (without proof), Characteristic Polynomial of an Operator, Cayley Hamilton Theorem with proof, Computing the inverse of an operator using Cayley Hamilton Theorem.
Inner Product, Norm, Orthogonality, Gram-Schmidt Orthogonalisation process.
Linear functionals of inner product space, Adjoint of an Operator, Self Adjoint Operators, Unitary Operators, Hermitian and Unitary Matrices, Eigenvalues of Hermitian and Unitary Operators/Matrices, Orthogonality of Eigenvectors of Hermitian Matrices.

Definition and Standard Equation of a Conic, Representation of Equation of a Conic in Matrix Form, Determination of the conics using eigenvalues and eigenvectors, Orthogonal Canonical Reduction, Normal Canonical Reduction.

References:
1. Friedberg, Insel and Spence, *Linear Algebra*, by Fourth Edition, Prentice Hall of India Learning.
2. S. Kumaresan, *Linear Algebra: A Geometric Approach*, PHI learning.
3. Serge Lang, *Introduction to Linear Algebra*, University Texts in Mathematics, Springer.
4. Howard Anton and Chris Rorres, *Elementary Linear Algebra with Supplemental Applications*, Eleventh Edition, Wiley.

Discipline Specific Course-7: Real Analysis (BMTC-133)

Mathematical Statements and Symbols, Terms (necessary, sufficient, converse, negation, if, only if, if and only if, there exists, for all), Mathematical reasoning, Methods of Proof (Contrapositive, Counter example, Contradiction), Field Structure, Ordered Field, Boundedness, Supremum and Infimum, Order Completeness, Archimedian property, Countable and uncountable subsets of **R**, Neighbourhood, Limit Point, Open and Closed sets, Bolzano Weierstrass Theorem.

Real Sequences, Bounded Sequences, Monotonic Sequences, Subsequences , Convergent Sequences, Cauchy Sequences, Criteria for the convergence of Sequences, Algebra of Convergent Sequences, Cauchy's First Theorem on limits, Cauchy's Second Theorem on Limits, Squeeze Theorem, Monotone Convergence Theorem.

Infinite Series, Convergence criteria, Cauchy Convergence criteria, Comparison test, Cauchy Root Test, D'Alembert's ratio test, Integral Test, Raabe's test, Gauss's test, Alternating Series, Leibniz test, Absolute and Conditional Convergence, tests for convergence (Abel test and Dirichlet Test), rearrangement of terms.

Concept of limit, Continuous functions, Algebra of Continuous functions, Types of discontinuity, Uniform Continuity, Existence of Derivative, Differentiability versus Continuity, Inverse function theorem, Algebra of derivatives, Darboux's Theorem, Intermediate Value Theorem for Derivatives, Rolle's theorem, Mean Value Theorems (Lagrange, Cauchy and Generalized Mean Value Theorems) Increasing and Decreasing Functions and Sign of the

Derivative, Taylor's Theorem, Maxima and Minima (necessary and sufficient conditions for maxima and minima).

Integral as a Limit of Riemann Sums, Necessary and sufficient conditions for Riemann integrability, Algebra of Integrable functions, Special class of integrable functions (monotone functions and continuous functions), The Fundamental Theorem of Calculus, Mean Value theorems.

Sequences of functions, Point-wise Convergence, Uniform Convergence, Series of functions, Point-wise Convergence, Uniform Convergence, Term by term Integration, Term by term differentiation, Power series, radius of convergence **.**

References:

1. R.G. Bartle and D. R Sherbert, *Introduction to Real Analysis,*John Wiley and Sons (Asia) P. Ltd., 2000.
2. K.A. Ross, *Elementary Analysis- The Theory of Calculus Series-* Undergraduate Texts in Mathematics, Springer Verlag, 2003.
3. T. M. Apostol,*Calculus*(Vol. I), John Wiley and Sons (Asia) P. Ltd., 2002.
4. E. Fischer, *Intermediate Real Analysis*, Springer Verlag, 1983.

Discipline Specific Course-8: Algebra (BMTC-134)

Integers, divisibility, well ordering principle, division algorithm, Fundamental Theorem of Arithmetic, Principle of induction, binary operation, equivalence relations, partitions, examples (including $\mathbf{Z}_n$); Introduction to operations on Matrices and symmetries; Definition and of groups; properties of groups; Subgroups, centre, centralizer as examples, different characterisations of subgroups, intersection, union, sum, product of subgroups; condition for products of subgroups to be a subgroup; Order of an element, order of a^k vis-a-vis order of a, `$a$ and $gag^{-1}$ have the same order'; Cyclic groups, 'Subgroup of a cyclic group is cyclic.', `Order of a subgroup divides the order of a finite cyclic group.',` For each divisor *d* of the order *n* of a finite cyclic group, there is a unique subgroup with that order.', number of elements of a particular order in a finite cyclic groups; number of generators for finite and infinite cyclic groups.

Left and right cosets, Lagrange's theorem, converse is true for cyclic groups, not true in general, applications of Lagrange's theorem (Fermat's little theorem, etc.); normal subgroups, properties and characterisation of normal subgroups, Simple groups, `Simple subgroups of abelian groups are cyclic of prime order.'; quotient groups; group homomorphism and isomorphism, automorphism, Fundamental Theorem of Homomorphism, correspondence between subgroups of G/H and subgroups of G that contain H, three isomorphism theorems;
Permutation groups, cycle decomposition, alternating group and Cayley's theorem;
Rings, elementary properties, $\mathbf{Z_n}$**,** polynomial rings, matrix rings over **R**, **C**, $\mathbf{Z_n}$ and rings of the

form $a+b\sqrt{n}$, a, b, n are integers and n is not a square, ring of continuous functions, differentiable functions, product of rings is again a ring. Commutative and non-commutative rings; subrings, examples of subrings in matrix rings, polynomial rings, characterisation, properties, algebra of subrings(Intersection, direct product are rings, etc.); ideals, properties of ideals (sum, product, intersection), prime ideal, maximal ideal; quotient rings; Ring homomorphism and isomorphism, properties, isomorphism theorems.

Zero divisors, integral domain, definition of a field, `Every finite integral domain is a field.', characteristic of an integral domain, field of quotients of an integral domain; Ring of Polynomials, properties of R[x] (the polynomial ring over a ring R), the division algorithm in F[X], F a field; roots of polynomials, statement of the Fundamental Theorem of Algebra, field of rational functions.

Euclidean Domains, Gaussian Integers, primes, factorisation into primes; principal ideal domains, units, irreducible and prime elements, associates, unique factorisation domains, Eisenstein's criterion for irreducibility of polynomials over Q.

References:
1. "A First Course in Abstract Algebra", by Fraleigh, 7[th]Edition,Pearson
2. "Contemporary Abstract Algebra", by J.Gallian, Narosa
3. "Concepts in Abstract Algebra", by Charles Lanski, Universities Press

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Discipline Specific Course-9: Numerical Analysis (BMTE-144)

Taylors theorem, Errors (round-off and truncation), Bounds on Error. Initial approximation to a root (tabulation method, Graphical method) Bisection method, Fixed point Iteration method. Secant Method, Regula-Falsi method, Newton-Raphson method, Convergence criterion. Synthetic Division, Birge-Vieta method for finding Roots of Polynomial Equations.

Solving system of linear equations - Gauss elimination method with pivoting, LU decomposition method. Finding inverse of a square matrix - The Gauss-Jordan reduction method with pivoting, LU decomposition method. Iterative methods of finding solutions - The Jacobi iteration method, The Gauss-Seidal Iteration method. Successive over Relaxation (SOR) Method and their rates of convergence. The eigenvalue methods - The power method, The inverse power method, Gerschgorin bounds.

Lagrange's form of interpolation, Inverse Interpolation, Divided differences, Newton's general form of interpolating polynomials, Divided difference and derivatives, Backward Interpolation at equally spaced points - Forward and Central Differences, Newtons forward difference formula, Newton's backward difference formula, Strirling's central difference formula
Numerical differentiation - Methods based on Lagrange Interpolation, Richardson's

Extrapolation, Numerical Integration – Trapezoidal rule, Simpson's rule $\left(\frac{1}{3}rd \ \& \ \frac{3}{8}th \right)$, Romberg

Integration, Numerical solutions of ODEs – Taylor series method, Euler's method, Runge-Kutta methods of second, third and fourth order.

Reference:

1. Numerical Method for Scientific and Engineering Computation by M. K. Jain, S. R. K. Iyengar and R.K. Jain, 5th edition, New Age International Publisher, India
2. Numerical Methods in Engineering and Science with Programming in C, C++ and Matlab by B. S. Grewal,10th edition, Khanna Publishers

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Discipline Specific Course-10: Programming and Data Structures (MMT-001)

Introduction: An Overview, A C Program, Escape Sequences, Getting a "feel" for C.
Data Types in C: Variables of type **int**, Variables of type **char**, Variables of type **float**, Variables of type **double**, Enumerated types, The**typedef** Statement, Identifiers, reading

keyboard input with **scanf()**.

Operators and Expression in C: Elementary Arithmetic Operations and Operators, Expressions, lvalues and rvalues, Promotion and Demotion of Variable Types: The Cast Operator, Format Control in the **printf()** Function.

Decision Structures in C: Boolean Operators and Expressions, The **goto** Statement, The **if()** Statement, The **if()**-**else** Statement.

Control Structures-I: The **while()** and **do-while()** Loops, The Comma Operator, The Transfer of Control from Within Loops, The **if()**-**then**-else or Ternary Operator, The **switch**-**case**-**default** statement.

Control Structures-II: The **for(;;)** Loop, Unidimensional Arrays, The initialisation of Arrays and the **sizeof**Operator, Storage Classes and Scope.

Pointers and Arrays: Pointer Variables and Pointer Arithmetic, Pointers, Arrays and the Subscript Operator, A Digression on **scanf()**, Multidimensional Arrays.

Functions I: Function Prototypes and Declarations, Functions and Scope, Pointers as Function Arguments, Unidimensional Arrays as Function Arguments: String Functions, Multi-Dimensional Arrays as Function Arguments.

Functions II: Recursive Functions, Macros, Conditional Compilation, Macros with Parameters, Command-line Arguments, Variable-length Argument Lists, Complicated Declarations, Dynamic Memory Allocation.

Files and Structs, Unions and Bit-fields Files and File I/O, Structs, The Dot Operator, Structs and Files: **fseek()**, Structs and Functions: The Arrow Operator, Unions, Bit Fields: the Bitwise Operators.

Introduction to Data Structures; Array) Program Analysis, One Dimensional Arrays, Array Declaration, Storage of Arrays in Main Memory, Sparse Arrays.

Lists: Basic Terminology, Static Implementation of Lists, Pointer Implementation of Lists, Doubly Linked Lists, Circular Linked List, Storage Allocation, Storage Pools, Garbage Collection, Fragmentation, Relocation and Compaction.

Stacks and Queues: Defining stack and queue; Stack applications; Queues; Operations and implementation; Queue applications; Priority queues.

Trees: Basic Terminology, Binary Trees, Traversals of a Binary Tree, Binary Search Trees (BST).

Files: Terminology, File Organisation, Sequential Files, Direct File Organisation, Indexed Sequential File Organisation.

List of practical sessions

Session 1: Familiarisation with compiling process

The aim of this session and the next session is to familiarise the student with the process of compiling and running C programs.

Program 1

Modify the program in unit1-prog1.c so that it outputs
```
This is very easy!!
```

Program 2

Modifying the values in the file unit1-prog8.c to the following, compiling, running and seeing the output:

1.   x = 12, y = 13 and x = 11, y = 14
2.   x = 1.2, y = 4.1 and x = 0.2 and y = 5

Program 3

1. Calculating the integral $\int_0^1 \frac{1}{1+x^2}\,dx$ by actual integration and comparing it with values obtained from the program unit1-simpsonf.c.

3. Changing the function to a) x^2 b) e^x and comparing the values given by the program with the values got by actual integration.

Session 2:Familiarisation with compiling process

Program 1

Inserting `printf()` statements in unit3-prog1.c page 53, Block 1, compiling and running it to check the answer.

Program 2

Compiling and running the file unit3-prog2.c in page 54 of Block 2 to check the answer for the exercise E3) of Unit 3.

Program 3

Completing the program unit3-prog0.c in page 71 of Block 1, which is given as the solution to exercise E1) of Unit 3, by giving values for the remaining 3 cases and compiling and running the program to check the output.

Program 4

Modifying the program in unit3-prog0.c so that it reads the value of a and b using scanf() instead of including the values in the program itself, modify it so that

it reads the values of a and b using `scanf()`. Checking the program by compiling and running it with 4 different values of a and b covering all the 4 cases.

Program 5

Writing a program that prompts the user for basic pay and calculates and prints basic +

HRA(30% of basic)+DA(46% of basic).

Session 3

Program 1

Writing a program similar to unit2-ex7ans.c in page 45 of Block 1that checks for overflow in multiplication when the two operands are **unsigned long** and when they are **long double**. The program should also print the overflow when it occurs.

Program 2

Writing a program that prompts for a natural number n and prints the nth Fibonacci

number. It should also print an error message if the Fibonacci number is bigger than

`ULONG_MAX`.

Program 3

Writing a program that find all primes less than `ULONG_MAX` and saves it in a file called primes.

Session 4

Writing a C function to determine the number of days between two dates passed to it.

Session 5

Program 1

Writing a function that evaluates the polynomial by Horner's method. Horner's method is

as follows: If

$f(x) = a_n x^n + a_{n-1} x^{n-1} + \cdots + a_1 x + a_0$,the Horner's method is given by the equation

$$f(x) = ((\ldots((a_n x + a_{n-1})x + a_{n-2})x + \cdots + a_1)x + a_0)$$

It should prompt for the coefficients of the polynomial, store the values in an array,

prompt the value for which the polynomial is to be evaluated and evaluate and print the

value. The function should be able to evaluate any polynomial of degree less than 20. The function should be checked by writing a program that calls it.

Program 2

Writing functions similar to Horner's method for evaluating $f_o(x)$ and $f_e(x)$ where $f_o(x)$ and $f_e(x)$ are defined as follows: If $f(x) = a_n x^n + a_{n-1} x^{n-1} + \cdots + a_1 x + a_0$, then

$$f_o = \sum_{\substack{0 \le i \le n \\ i \ odd}} a_i x^i, f_e(x) = \sum_{\substack{0 \le i \le n \\ i \ even}} a_i x^i$$

Note that $f(a) = f_e(a) + f_o(a)$ and $f(-a) = f_e(a) - f_o(a)$. It is easy to show that, if the polynomial $f(x)$ has integer coefficients and has a rational root $\frac{p}{q}$, then p $|a_0$ and q$|a_n$. In particular, it has an integer root a, then a $|a_o$. Writing a function for checking whether a polynomial $f(x)$ has integer roots by finding the value of $f(\pm a)$ for all divisors of a of a_o

Program 3

Writing a program that computes the value of $\tan^{-1} x$ using the power series expansion

$$x - \frac{x^3}{3} + \frac{x^5}{5} - \cdots$$

Session 6

Program to evaluate definite integrals of a function for arbitrary number of intervals using Simpson's one third rule.

Session 7

Program 1

Program for solving equations by bisection method.

Program 2

Program for solving algebraic equations by false position(regulafalsi) method.

Session 8

Program to solve an intermediate value problem by Runge-Kuttamethod

Session 9

Program 1

Currency converter program using **switch ( )**

Program 2

Program for finding maximum number of real roots using Descartes Rule of Signs.

Session 10

Program 1

Program for binary powering algorithm

Program 2

Program for finding the order of $a \in \frac{Z}{pZ}$ for a prime p.

Session 11

Program 1

Program for linear regression

Program 2

Program to fit a transcendental curve of the form $Y = aX^b$ for a given set ofdata.

Session 12

Program for creating a n × n array of float using calloc().

Session 13

Program for finding the inverse of a matrix using Gauss-Jordan method.

Session 14

Program for working with rational number using **struct.**

Session 15

Program that maintains a telephone directory in a file.

Session 16

Program for administering an objective type test.

Session 17

Program to create a linked list which holds the names of the cities, sorts the list and prints the list.

Session 18

Program 1

Program for reversing a string using a stack.

Program 2

Program to check whether the brackets are properly matched.

Session 19

Program for implementing a queue containing integers as a linked list by implementing functions for creation of the queue, enqueue and dequeue.

Session 20

Program to create a binary search tree, insert words, do an in-order, pre-order and post-order traversals of the trees and list the keys in each node traversed.

References:

1. Yashwant Kanetkar Let Us C: Authentic guide to C programming language - 19th Edition
2. Kernighan and Ritchie, The C programming language, Second Edition, 2003
3. C: The Complete Reference, Herbert Schild, Tata McGraw Hill, Fourth Edition, 2017

Discipline Specific Course-11: Linear Programming (BMTC-104)

Inequalities and their graphical representation, Convex sets (Definition, examples, definition of extreme point, half spaces, hyperplanes), Convex combination of finite number of points is a convex set (no proof), definition of convex hull, convex hull of a finite set is the convex combination of its points (no proof).

Formulation of problem as LPPs. Feasible solutions, Graphical solution (two variables), bounded sets, unbounded sets, alternative optimum. General linear programming Problem (GLPP)--- Slack

variables, surplus variables, unrestricted variables, reduction of a GLPP to its standard form --- Matrix formulation of the standard form, canonical form of a LPP, reducing a GLPP to its canonical form. Types of solutions (basic solutions, basic feasible solutions(BFS)), finding basic solutions of a system of linear equations, degeneracy (definition and illustration with example only.) Relationship between BFS and extreme points usingfollowing theorems (without proofs); If there is a feasible solution to a LPP, there is also a basic feasible solution; Every basic feasible of an LPP corresponds to one of the extreme points of the set of feasible solutions; If a minimum or a maximum exists for a LPP, it is attained at one of the extreme points of feasible region.

Meaning of algorithm, why it is called simplex method?, explanation of the steps in simplex algorithm, examples. Artificial variable, Big M method Two- phase method, Definition of the dual of a LPP. Writing the dual of a given GLPP, Dual of the Dual is the primal, Weak duality and strong duality theorems (statements only), illustration of duality theorems through examples; Complementary slackness principle, economic significance of duality.

Sensitivity analysis –Cost vectors, Resource Vectors, Coefficient matrices, addition & deletion of a variable, addition & deletion of a constraint . Mathematical formulation of Transportation Problems, balanced Transportation Problems, tabular representation of Transportation Problems, special structure of the Transportation Problem, North-West corner Method, Matrix-Minima method, Vogel's approximation method, checking whether a feasible solution to a Transportation Problem is a basic feasible solution using closed chain rule, degenerate basic feasible solutions. Solving balanced Transportation Problem by U-V method, solving an unbalanced transportation problem, solving maximizing transportation problems, Formulation of an Assignment Problem, Statement of Konig-EgervaryTheorem and its justification, Solving an assignment problem by Hungarian method.

Two person-zero sum games, pure strategy, mixed strategies, principle of dominance, solution of games using algebraic method, graphical method and linear programming method.

References:
1. Linear Programming, G. Hadley, Narosa publishing House.
2. Linear Programming: Foundations and Extensions, Robert J. Vanderbei, Princeton. http://www.princeton.edu/~rvdv/LPbook/
3. Operations Research-Theory and Applications, J.K. Sharma, Macmillan.
4. Operations Research, An Introduction, Hamdy A. Taha, PHI.

Discipline Specific Course-12: Mathematical Modelling (MTE-14)

Mathematical Modelling – what and why?, Types of modelling, Limitations of a Mathematical Model. Identifying the Essentials of a problem, Mathematical Formulation (Motion of a simple pendulum, growth of phytoplanktons, motion of a raindrop). Solution of formulated problems (Motion of A Simple Pendulum, phytoplankton growth), Interpretation of the solutions.

Free fall of a body, Upward Motion Under Gravity, Simple Harmonic Motion, Projectile Motion. Noewton's Law of Gravitation, Escape Velocity, Central forces – Basic Concepts, Modelling Planetary Motion, Kepler's laws, Limitations of the model. Physical Process, Mathematical Model of Plume Rise, Gaussian Model of Dispersion, Applications of Gaussian Model. Modelling Blood Flow problem and Oxygen transfer in Red cells. Formulation, solution, Interpretation and Limitations of the Models.

Exponential growth model and Logistic growth model – Formulation, solution, Interpretation and Limitations of the models, Extension of the Logistic Model. Types of Interactions between two species, Prey-Predator and Competing Species Models – Formulation, solution, Interpretation and Limitations of the models. Basic definitions and fundamental concepts, Simple epidemic model, General epidemic model, Recurrent epidemic model without and with Undamped waves – Formulation, Solution, Interpretation and Limitations of the models.

Utility, demand, production, cost and supply functions, Market Equilibrium, Monopoly, Duopoly and Oligopoly. Some games and their characteristics, Two-person zero sum game, Co-operative and Non-co-operative game theory – "Prisoner's Dilemma", "Battle of Sexes" games, Duopoly, some generalisations, applications and Limitations of the models. Understanding the problem of Investments, Markowitz Model – Return Valuations, risk valuations, diversification, Portfolio Selection, - feasible set, efficient and optimal portfolio, Limitations of the models developed.Queuing – what and why? Basic concepts, structure and techniques, Modelling random phenomena, two queueing models, why forecasting? - Basics and time series analysis, Forecasting Models.

Reference:

1.   J.N. Kapur,*Mathematical Modelling*, Third Edition, 2023, New Age Publications.
2.   Edward Bender, *An introduction to Mathematical Modelling,*2003,Dover Publications.
3.   Sandeep Banerjee, *Mathematical Modelling,* 2014, CRC Press.

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14.	DEHRADUN RC CODE:31	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE NANOOR KHERA, TAPOVAN, RAIPUR ROAD DEHRADUN - 248 008 UTTRAKHAND PH.OFF : 0135-2789200/2789205 E-MAIL : rcdehradun@ignou.ac.in	STATE OF UTTARAKHAND (DISTRICT: DEHRADUN, PAURI, CHAMOLI, TEHRI, UTTARAKASHI, RUDRAPRAYAG, HARIDWAR, NAINITAL, ALMORA, PITHORAGARH, US NAGAR, CHAMPAWAT, BAGESHWAR)
15.	DELHI 1 RC CODE: 07	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE PLOT NO J-2-1 BLOCK- B 1, MOHAN COOPERATIVE INDUSTRIAL ESTATE, ATHURAROAD, NEW DELHI - 110 044 PH.OFF : 011-26990085, 26990089 FAX :011-26990084 E-MAIL : rcdelhi1@ignou.ac.in	STATE OF DELHI (COVERING AREAS OF MEHRAULI, CHANAKYAPURI, LODHI COLONY, SOUTHEXTENSION, R.K. PURAM, VASANT KUNJ, SAKET, GREEN PARK, LAJPAT NAGAR, G.K., MALVIYA NAGAR, BHOGAL, ASHRAM, HAUZ KHAS, MUNIRIKA, OKHLA, SANGAM VIHAR, FRIENDS COLONY, BADA RPUR) STATE OF HARYANA (DISTRICT: FARIDABAD, PALWAL)
16.	DELHI 2 RC CODE: 29	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE C/O IAEA HOUSE, 17-B, INDRAPRASTHA ESTATE, MAHATMA GANDHI MARG, NEW DELHI - 110 002 PH.OFF : 011-23392374/ 23392376, 23392737 FAX :011-23392375 E-MAIL : rcdelhi2@ignou.ac.in	STATE OF DELHI (COVERING AREAS OF KARALA, PRAHLADPUR, BANAGAR, LIBASPUR, RAMA VIHAR, RANI BAGH, SULTAN PURI, BUD VIHAR, MANGOLPURI, PITAMPURA, JAHANGIR PURI, JHARODA MAJA, BURARI, DR. MUKHERJEE NAGAR, MODEL TOWN, SHAKURPUR COLONY, GTB NAGAR,ASHOK VIHAR, SHASTRI NAGAR, CIVIL LINES, YAMUNA VIHAR, NAND NAGRI BHR)
17.	DELHI 3 RC CODE: 38	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE DELHI LIBRARY ASSOCIATION BUILDING, RANGANATHAN BHAWAN NEAR, _C' BLOCK, COMMUNITY CENTRE, NARAINA VIHAR, NEW DELHI - 110 028 PH.OFF : 011-25774255/25774256 E-MAIL : rcdelhi3@ignou.ac.in	STATE OF DELHI (COVERING AREAS OF MUNDKA, NANGLOI JAT, PEERAGARHI, PUNJABI BA GH, BAKA RWALA, MEERA BAGH, MOTI NAGAR, TILAK NAGAR, TILANGPUR, KOTLA, VIKASPURI, SUBHASH NAGAR, UTTAM NAGAR, JANAKPURI, NAZAFGARH, MAHAVIR ENC., SAGARPUR, DWARKA,PALAM, PALAM FARMS, KAPASERA, DHAULA KUAN, NARAINA, MAHIPALPUR, MANSAROVAR GARDEN) STATE OF HARYANA (DISTRICT: GURGAON, MEWAT)
18.	DEOGHAR RC CODE: 87	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE MANDAKINI SADAN BASUWA DIH, ROHINI ROAD, DEOGHAR, JASIDIH, JHARKHAND- 814142 PH.OFF : 06432-34448 E-MAIL : rcdeoghar@ignou.ac.in	STATE OF JHARKHAND COVERING (DISTRICTS DEOGHAR, GODDA, SAHIBGANJ, PAKUR, DUMKA, JAMTARA, & GIRIDIH)

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19.	GANGTOK RC CODE: 24	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE 5TH MILE TADONG, NH-10, BELOW CENTRAL REFERAL HOSPITAL, GANGTOK - 737102 SIKKIM PH.OFF :03592-231102 FAX : 03592-231103 E-MAIL : rcgangtok@ignou.ac.in	STATE OF SIKKIM (DISTRICT:GANGTOK,PAKYONG,GYALSHING,SORENG,MANGAN,NAMCHI)
20.	GUWAHATI RC CODE:04	REGIONAL DIRECTOR IGNOU REGIONALCENTRE HOUSE NO 71, GMCH ROAD, CHRISTIAN BASTI GUWAHATI-781005, ASSAM PH.OFF : 0361-2343771/ 2343785 FAX :0361-2343784 E-MAIL : rcguwahati@ignou.ac.in	STATE OF ASSAM (DISTRICT: KARBIANGLONG, MARIGAON, DARRANG, KAMRUP, NALBARI, BARPETA, BONGAIGAON, GOALPARA, KOKRAJHAR, DHUBRI, NORTH CACHAR HILLS, CACHAR, HAILAKANDI,KARIMGANJ, KAMRUP METROPOLITAN, BAKSA, UDALGURI, CHIRANG,BAJALI)
21.	HYDERABAD RC CODE: 01	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE First Floor, M-5 Block, Manoranjan Complex, Telangana State Housing Board Complex, (Adjacent To Gandhi Bhavan Metro Station, M J Road Nampally, HYDERABAD - 500001,Telangana PH.OFF : 040-23117550, Mob.No.9492451812 FAX :NA E-MAIL : rchyderabad@ignou.ac.in	STATE OF TELENGANA (DISTRICT: ADILABAD,BHADRADRI-KOTHAGUDEM, HYDERABAD, JAGTIAL,JANGAON,JYAYASHANKAR BHOOPALPALLY,JOGULAMBA-GADWAL,KARIM NAGAR, KAMAREDDY,KOMARAM BHEEM ASIFABAD,KHAMMAM, MEDAK, MAHABUB NAGAR, MAHABUBABAD,MANCHERIAL, MEDCHAL,MEDAK, NALGONDA, NAGARKURNOOL, NIZAMABAD,NIRMAL,PEDDAPALLE,RAJANNA SIRCILLA, RANGA REDDY,SANGAREDDY,SIDDIPET,SURYAPET,VIKA RABAD,WANAPARTHY,WARANGAL (RURAL), WARANGAL (URBAN),YADADRI-BHUVANAGIRI, MULUGU,NARAYANPET
22.	IMPHAL RC CODE: 17	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE ASHA JINA COMPLEX, NORTH AOC IMPHAL-795001MANIPUR PH.OFF : 0385-2421190/2421191 FAX :0385-2421192 E-MAIL : rcimphal@ignou.ac.in, ignouimp@gmail.com	STATE OF MANIPUR (DISTRICT: BISHNUPUR, CHURACHANDPUR, CHANDEL, IMPHAL EAST, IMPHAL WEST, SENAPATI, TAMENGLONG, THOUBAL, UKHRUL)
23.	ITANAGAR RC CODE: 03	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE HORNBILL COMPLEX, '_C' SECTOR (NEAR CENTRAL SCH.) NAHARLAGUN ITANAGAR -791110, ARUNACHAL PRADESH PH.OFF : 0360-2247536, 0360-2351705 FAX :0360-2350990 E-MAIL : rcitanagar@ignou.ac.in	STATE OF ARUNACHAL PRADESH (DISTRICT: ANJAW, CHANGLANG, EAST KAMENG, EAST SIANG, KURUNG KUMEY, LOHIT, LOWER DIBA NG VALLEY, LOWER SUBANSIRI, PAPUM PARE, TAWANG, TIRAP, UPPER DIBANG, UPPER SUBANSIRI, UPPER SIANG, WEST KAMENG, WEST SIANG)
24.	JABALPUR RC CODE: 41	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE 2ND FLOOR, RAJSHEKHAR BHA VAN, RANI DURGAVATI VISHVAVIDYALAYA CAMPUS, PACHPEDHI, JABALPUR - 482001 PH.OFF : 0761-2600411/2609896 / 2600219 FAX :0761-2609919 E-MAIL : rcjabalpur@ignou.ac.in	STATE OF MADHYA PRADESH (DISTRICT: ANNUPUR BALAGHAT, CHHINDWARA, DINDORI, JABALPUR, KATNI, MANDLA, NARSINGAPUR, SEONI, SHAHDOL, SIDDHI, SINGRAULI, UMARIA, DAMOH, PANNA, SAGAR, CHHATARPUR, REWA , SATNA,TIKAMGARH)

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25.	JAIPUR RC CODE: 23	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE 70/ 79, SECTOR-7, PATEL MARG, MANSAROVAR, JAIPUR - 302 020 RAJASTHAN PH.OFF : 0141-2785730 FAX : E-MAIL : rcjaipur@ignou.ac.in	STATE OF RAJASTHAN (DISTRICT: AJMER, ALWAR, BARAN, BHARATPUR, BHILWARA, BUNDI, CHITTORGARH, CHURU, DAUSA, DHOLPUR, HANUMANGARH, JAIPUR, JHALAWAR, JHUNJHUNU, KARAULI, KOTA, SAWAI MADHOPUR, SIKAR, SRI GANGANAGAR & TONK)
26.	JAMMU RC CODE: 12	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE SPMR COLLEGE OF COMMERCE, PREMISES AUROBINDO BLOCK, 1ST FLOOR,CANAL ROAD, JAMMU - 180 001, JAMMU & KASHMIR PH.OFF : 0191-2546529 FAX :0191-2585154 E-MAIL : rcjammu@ignou.ac.in	STATE OF JAMMU & KASHMIR (JAMMU REGION – DISTRICT: DODA, JAMMU, KATHUA, KISHTWAR, POONCH, RAJOURI, RAMBAN, REASI, SAMBA, UDHAMPUR)
27.	JODHPUR RC CODE:88	REGIONAL DIRECTOR IGNOU REGIONALCENTRE, PLOT NO. 439, OPP. PAL LINK ROAD, KAMLA NAGAR HOSPITAL, JODHPUR-342008 RAJASTHAN PH.OFF : 0291-2012987 E-MAIL : rcjodhpur@ignou.ac.in	STATE OF RAJASTHAN COVERING DISTRICTS JODHPUR, BARMER, JAISALMER, RAJASMAND, UDAIPUR, BIKANER, JALORE, SIROHI, NAGOUR, DUNGARPUR, PALI, PRATAPGARH,BANSWARA
28.	JORHAT RC CODE: 37	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE P.O. KOROKATOLY,BALIGAON, JORHAT-785015, ASSAM PH.OFF : 0376-2951116, 2951114 E-MAIL : rcjorhat@ignou.ac.in	STATE OF ASSAM (DISTRICT: NAGAON, GOLAGHAT, JORHAT, SHIVASAGAR, DIBRUGA RH, TINSUKIA, LAKHIMPUR, DHEMAJI, SONITPUR, BISWANATH, CHARAIDEO, HOJAI & MAJULI
29.	KARNAL RC CODE: 10	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE KARNAL PLOT No.05,SECTOR-12 (PART 1) URBAN ESTATE KARNAL -132001 (HARYANA) PH.OFF :0184-2271514 E-MAIL : rckarnal@ignou.ac.in	STATE OF HARYANA (DISTRICT: BHIWANI, FATEHABAD, HISAR, JHAJJAR, JIND, KAITHAL, KARNAL, KURUKSHETRA, MAHENDRAGARH, PANIPAT, REWARI, ROHTAK, SIRSA, SONIPAT, CHARKHI DADRI, YAMUNANAGAR)
30.	KHANNA RC CODE: 22	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE I.T.I. BUILDING BULEPUR, (DISTRICT LUDHIANA) KHANNA – 141401 PUNJAB PH.OFF : 01628-229993/237361 E-MAIL : rckhanna@ignou.ac.in	STATE OF PUNJAB (DISTRICT: GURDASPUR, AMRITSAR, TARN TARAN, KAPURTHALA,MALERKOTLA,PATHANKOT,SRI MUKTSAR SAHIB, JALANDHAR, HOSHIARPUR, SBS NAGAR/NAWANSHAHR, BARNALA, SANGRUR, BATHINDA, MANSA, MUKTSAR, LUDHIANA, FAZILKA,FEROZEPUR, FARIDKOT,MOGA)
31.	KOHIMA RC CODE: 20	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE NEAR MOUNT HERMON SCHOOL, DON BOSCO, HR. SEC SCHOOL ROAD, KENDOUZOU, KOHIMA – 797001 NAGALAND PH.OFF : 0370-2260366/2260167 FAX :0370-2260216 E-MAIL : rckohima@ignou.ac.in	STATE OF NAGALAND (DISTRICT: KOHIMA, DIMAPUR, WOKHA, MOKOKCHUNG, ZUNHEBOTO, TUENSANG, LONGLENG, KIPHIRE, MON, PEREN, PHEK)

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32.	KOLKATA RC CODE: 28	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE BIKASH BHAWAN, 4TH FLOOR, NORTH BLOCK, SALT LAKE, BIDHAN NAGAR, KOLKATA - 700 091 WEST BENGAL PH.OFF : 033-23349850, 23592719, 033-23589323(RCL) FAX :033-23347576 E-MAIL : rckolkata@ignou.ac.in	STATE OF WEST BENGAL (DISTRICT: KOLKATA, NORTH 24 PARAGANAS, SOUTH 24 PARAGANAS, PURBA, MEDINIPUR, PASCHIM MEDINIPUR, BANKURA, HOWRAH, HOOGHLY, PURULIA, BURDWAN, NADIA)
33.	KORAPUT RC CODE: 44	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE DISTRICT AGRICULTURE OFFICE ROAD, BEHIND WOMEN'S COLLEGE AT/PO/DISTT.- KORAPUT-764020, ORISSA PH.OFF : 06852-251535 FAX : 06852-252503 E-MAIL : rckoraput@ignou.ac.in	STATE OF ORISSA (DISTRICT: KORAPUT, MALKANGIRI, RAYAGADA, NABARANGPUR, KALAHANDI, NUAPADA, BALANGIR)
34.	LUCKNOW RC CODE: 27	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE 5-C/INS-1, SECTOR-5, VRINDAVAN YOJNA, TELIBAGH LUCKNOW-226029 PH. OFF : 0522-2442832 E-MAIL : rclucknow@ignou.ac.in	STATE OF UTTAR PRADESH (DISTRICT: AURAIYA, BAHRAICH, BALRAMPUR, BANDA, BARABANKI, BAREILLY, BASTI, CHITRAKUT, FAIZA BAD, FARUKHABAD (FATEHGARH), FATEHPUR, GONDA, HAMIRPUR, HARDOI,JALAUN (ORAI), JHANSI, KANNAUJ, KANPUR RURAL, KANPUR URBAN, KAUSHAMBI, LAKHIMPUR(KHERI), LALITPUR, LUCKNOW, MAHOBA, PILIBHIT,RAEBAREILY, SHAHJANANPUR, SHRAVASTI, SIDHARTHNAGAR, SITAPUR, UNNAO)
35.	MADURAI RC CODE: 43	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE SIKKANDAR CHAVADI, ALANGANALLUR ROAD, MADURAI-625018 TAMIL NADU PH.OFF : 0452-2380733 : 0452-2380775 FAX : 0452-2380588 E-MAIL : rcmadurai@ignou.ac.in	STATE OF TAMIL NADU (DISTRICT: COIMBATORE, DINDIGUL, ERODE, KARUR, MADURAI, NILGIRIS, PUDUKKOTTAI, RAMA-NATHPURAM, SIVAGANGAI, THANJAVUR, THENI, THIRUVARUR, THOOTHUKUDI, TIRUNELVELI AND TENKASI TIRUCHIRAPPALLI, TIRUPUR, VIRUDHUNAGAR AND ARIYALUR)
36.	MUMBAI RC CODE: 49	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE PLOT NO.43, SECTOR 09, OPP.DAV PUBLIC SCHOOL, NEW PANVEL EAST, TALUKA-PANVEL,DISTT-RAIGAD, MUMBAI-410206, MAHARASHTRA PH.OFF : 022-27489764 FAX :022-25925411 E-MAIL : rcmumbai@ignou.ac.in	STATE OF MAHARASHTRA (DISTRICT: MUMBA I, THANE, RAIGARH, RATNAGIRI PALGHAR, MUMBAI SUBURBAN)

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37.	NAGPUR RC CODE: 36	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE GYAN VATIKA 14, HINDUSTAN COLONIY AMARAVATI ROAD NAGPUR 440033 MAHARASHTRA PH. OFF : 0712-2536999, 2537999, 0712-202200 FAX :0712-2538999 E-MAIL : rcnagpur@ignou.ac.in	STATE OF MAHARASHTRA (DISTRICT: AMRAVATI, BULDHA NA, AKOLA, WASHIM, HINGOLI, PARBHANI, NANDED, YAVATMAL, WARDHA, CHANDRAPUR, NAGPUR, BHA NDARA, GONDIA,GADCHIROLI)
38.	NOIDA RC CODE: 39	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE C- 53, SECTOR 62 INSTITUTIONAL AREA NOIDA 201305 UTTAR PRADESH PH.OFF : 0120-2405012/2405014 FAX :0120-2405013 E-MAIL : rcnoida@ignou.ac.in	STATE OF UTTAR PRADESH(DISTRICT: GAUTAM BUDH NAGAR, GHAZIABAD, MEERUT, BA GHPAT, BULA NDSHAHR,HAPUR) STATE OF DELHI (MAYUR VIHAR PH – I & II, MAYUR VIHAR EXTN., VASUNDHARAENCLAVE)
39.	PANAJI RC CODE: 08	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE H. NO. 1576, NEAR P&T STAFF QUARTERS, ALTO PORVORIM P.O. POVORIM-403521 GOA PH.OFF : 0832-2414553 E-MAIL : rcpanaji@ignou.ac.in	STATE OF GOA (DISTRICT: NORTH GOA, SOUTH GOA), STATE OF KARNATAKA (DISTRICT: UTTARAKANNAD) STATE OF MAHARASHTRA (DISTRICT: SINGDHDURG)
40.	PATNA RC CODE: 05	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE INSTITUTIONAL AREA, MITHAPUR PATNA-800 001, BIHAR PH.OFF : 0612-2219539/2219541 FAX :0612-2219538 E-MAIL : rcpatna@ignou.ac.in	STATE OF BIHAR (DISTRICT: ARWAL, AURANGABAD, BHOJPUR, BUXAR, GAYA, JAMUI, JEHANABAD, KAIMUR, LAKSHISARAI, NALANDA, NAWADA, PATNA, ROHTAS, SHEIKHPURA, VAISHALI, SIWAN, SARAN)
41.	PORT BLAIR RC CODE: 02	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE KANNADA SANGHA BUILDING, OPPOSITE CENTRAL WORKSHOP APWD, 18, TAGORE ROAD, MOHANPURA, PORT BLAIR, SOUTH-744104 ANDAMAN & NICOBAR, ISLANDS PH.OFF :03192-242888 FAX : 03192-230111 E-MAIL : rcportblair@ignou.ac.in	ANDAMAN & NICOBA R ISLANDS (U.T.) (DISTRICT: NORTH & MIDDLE ANDAMAN, SOUTH ANDAMAN, NICOBA R)
42.	PUNE RC CODE: 16	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE 1ST FLOOR, MSFC BUILDING 270, SENAPATI BAPAT ROAD PUNE - 411 016 MAHARASHTRA PH.OFF : 020-25671867/25651321 FAX :020-25671864 E-MAIL : rcpune@ignou.ac.in	STATE OF MAHARASHTRA (DISTRICT: NANDURBA R, DHULE, JALGAON, AURANGABAD, NASIK, JALNA, AHMADNAGAR, BID, PUNE, OSMANABAD, , SANGLI, SATARA, KOLHAPUR)

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43.	RAGHUNATHGANJ RC CODE: 50	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE KARMATIRTHA COMPLEX,1st FLOOR, B-9,UMARPUR, (NEAR UMARPUR CROSSING HAAT BAZAR), P.O-GHORSHALA, P.S-RAGHUNATHGANJ, DIST- MURSHIDABAD WEST BENGA L-742 235 PH.OFF : 03483-271555/271666 E-MAIL : rcraghunathganj@ignou.ac.in	STATE OF WEST BENGAL (DISTRICT: MURSHIDABAD, BIRBHUM, MALDA)
44.	RAIPUR RC CODE: 35	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE IGNOU COMPLEX, KACHNA RAIPUR - 492014 CHHATTISGARH PH.OFF : 0771-2283285, 2971322 FAX :0771-2971323 E-MAIL : rcraipur@ignou.ac.in	STATE OF CHHATTISGARH (DISTRICT: BILA SPUR, DHAMTARI, DURG, JANJGIR-CHAMPA, JASHPUR, KANKER, KAWARDHA, KORBA, KORIYA,MAHASAMUND, RAJGARH, RAIPUR, RAJNANDGAON, SURAJPUR, SARGUJA, BALOD, BALODBAZAR, BA LRAMPUR, BEMETARA, GARIABA NDH, MUNGELI, BASTA R, NARAYANPUR, DANTEWADA, BIJAPUR, SUKMA, KUNDAGOAN)
44.	RAIPUR RC CODE: 35	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE IGNOU COMPLEX, KACHNA RAIPUR - 492014 CHHATTISGARH PH.OFF : 0771-2283285, 2971322 FAX :0771-2971323 E-MAIL : rcraipur@ignou.ac.in	STATE OF CHHATTISGARH (DISTRICT: BILA SPUR, DHAMTARI, DURG, JANJGIR-CHAMPA, JASHPUR, KANKER, KAWARDHA, KORBA, KORIYA,MAHASAMUND, RAJGARH, RAIPUR, RAJNANDGAON, SURAJPUR, SARGUJA, BALOD, BALODBAZAR, BA LRAMPUR, BEMETARA, GARIABA NDH, MUNGELI, BASTA R, NARAYANPUR, DANTEWADA, BIJAPUR, SUKMA, KUNDAGOAN)
45.	RAJKOT RC CODE: 42	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE SAURASHTRA UNIVERSITY CAMPUS RAJKOT-360005, GUJARAT PH.OFF : 0281-2572988 FAX : 0281-2571603 E-MAIL : rcrajkot@ignou.ac.in	STATE OF GUJARAT (DISTRICT: RAJKOT, KACHCHH, JAMNAGAR, PORBANDAR, JUNAGADH, AMRELI, BHAVNAGAR, SURENDRANAGAR, DEV-BHOOMI DWARKA, GIR-SOMNATH, BOTAD, MORBI), & DIU(U.T.)
46.	RANCHI RC CODE: 32	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE 2nd FLOOR, KRISHNA MALL, ASHOK NAGAR RANCHI - 834022, JHARKHAND PH.OFF : 0651-2244688, 2244699, 2244677 FAX :NA E-MAIL : rcranchi@ignou.ac.in	STATE OF JHARKHAND (DISTRICT: RANCHI, LOHARDAGA, GUMLA, SIMDEGA, PALAMU, LATEHAR, GARHWA, WEST SINGHBHUM, SARAIKELA KHARSAWAN, EAST SINGHBHUM, HAZARIBAGH, CHATRA, KODERMA, KHUNTI, RAMGARH,BOKARO, DHANBAD)
47.	SAHARSA RC CODE: 86	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE KOSHI CHOWK SHARSHA-852201, BIHAR PH.OFF : 06478-219015/295252 FAX : E-MAIL : rcsaharsa@ignou.ac.in	STATE OF BIHAR COVERING (DISTRICTS: KHAGARIYA, SAHARSA, SUPAUL, MADHEPURA, KATIHAR, ARARIYA, KISHANGANJ & PURNEA)
48.	SHILLONG RC CODE: 18	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE UMSHING, MAWKYNROH, NEHU CAMPUS, SHILLONG - 793 022 MEGHALAYA PH.OFF : 0364-521117/2521271/0364-2520503 FAX :0364-2521271 E-MAIL : rcshillong@ignou.ac.in	STATE OF MEGHALAYA (DISTRICT: EAST GARO HILLS, EAST JAINTIA HILLS , EAST KHASI HILLS, NORTH GARO HILLS, RI-BHOI, SOUTH GARO HILLS, SOUTH WEST GARO HILLS, SOUTH WEST KHASI HILLS, WEST GARO HILLS, WEST JAINTIA HILLS, WEST KHASI HILLS)

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49.	SHIMLA RC CODE: 11	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE BLOCK NO. 9,SDA COMPLEX,KASUMPTI SHIMLA-171 009, HIMACHAL PRADESH PH.OFF : 0177-2624612/2624613 FAX :0177-2624611 E-MAIL : rcshimla@ignou.ac.in	STATE OF HIMACHAL PRADESH (DISTRICT: BILASPUR, CHAMBA, HAMIRPUR, KANGRA, KINNAUR, KULLU, LAHUL & SPITI, MANDI, SHIMLA, SIRMAUR, SOLAN, UNA)
50.	SILIGURI RC CODE: 45	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE 17/ 12 J. C. BOSE ROAD, SUBHAS PALLY, SILIGURI - 734001 WEST BENGAL PH.OFF :0353-2526818 FAX : NA E-MAIL : rcsiliguri@ignou.ac.in	STATE OF WEST BENGAL (DISTRICT: COOCHBEHAR, JALPAIGURI, DARJEELING, UTTAR DINAJPUR, DAKSHIN DINAJPUR, ALIPURDUAR)
51.	SRINAGAR RC CODE:30	REGIONAL DIRECTOR STATE IGNOU REGIONAL CENTRE KURSOO RAJ BAGH, SRINAGAR - 190008 JAMMU & KASHMIR(UT) PH.OFF : 0194-2953017 FAX :0194-2311259 E-MAIL : rcsrinagar@ignou.ac.in	STATE OF JAMMU & KASHMIR (SRINAGAR REGION-DISTRICT: ANANTNAG, BANDIPORE, BARAMULLA , BUDGAM, GANDERBAL, KARGIL, KULGAM, KUPWARA, LEH, PULWAMA SHOPIAN, SRINAGAR)
52.	TRIVANDRUM RC CODE: 40	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE RAJADHANI COMPLEX OPP PRS HOSPITAL, KILLI PPALAM KARAMANA PO, TRIVANDRUM -695002 KERALA PH.OFF : 0471-2344113/2344120 FAX :0471-2344121 E-MAIL : rctrivandrum@ignou.ac.in	STATE OF KERALA (DISTRICT: KOLLAM, PATHANAMTHITTA, THIRUVANANTHAPURAM) STATE OF TAMILNADU (DISTRICT: KANYAKUMARI)
53.	VARANASI RC CODE: 48	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE GANDHI BHAWAN B.H.U. CAMPUS VARANASI-221005 , UTTAR PRADESH PH.OFF : 0542 2368622/2369629/2368448 FAX : NA E-MAIL : rcvaranasi@ignou.ac.in	STATE OF UTTAR PRADESH (DISTRICT: AMBEDKAR NAGAR, AZAMGARH, BALLIA, CHANDAULI, DEORIA, GHAZIPUR, GORAKHPUR, JAUNPUR, KUSHINAGAR, MAHARAJGANJ, MAU, MIRZAPUR, SANT KABIR NAGAR, SANT RAVIDAS NAGAR, SONEBHADRA, VARANASI, ALLAHABAD, PRATAPGARH, SULTANPUR)
54.	VATAKARA RC CODE: 83	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE NO.14/329 B-E,(ADJ.TO 110 KV.KSEB SUBSTATION), ARAKKILAD ROAD, PUTHUR, KOZHIKODE VATAKARA-673104, KERALA PH.OFF : 0496-2516055/2515413/2525281 E-MAIL : rcvatakara@ignou.ac.in	STATE OF KERALA (DISTRICT: KANNUR, KASARAGOD WAYANAND, KOZHIKODE, MALAPPURAM, MAHE, (UNION TERRITORY OF PUDUCHERRY)
55.	VIJAYAWADA RC CODE: 33	REGIONAL DIRECTOR IGNOU REGIONALCENTRES. S.K.P.V.V HINDU HIGH SCHOOL PREMISES, KOTHAPET, VIJAYWADA 520 001, ANDHRA PRADESH PH.OFF : 0866-2565253/2565959 FAX :0866-2565353 E-MAIL : Rcvijayawada@Ignou.Ac.In	STATE OF ANDHRA PRADESH (DISTRICTS: KRISHNA, GUNTUR, PRAKASHAM, NELLORE, CHITTOOR,KADAPA, KURNOOL, ANANTAPUR)
56.	VISAKHAPATNAM RC CODE: 84	REGIONAL DIRECTOR IGNOU REGIONAL CENTRE 2nd FLOOR,VUDA COMPLEX USHODAYA JUNCTION SECTOR-12, MVP COLONY VISAKHAPATNAM- 530017 ANDHRA PRADESH PH.OFF :0891-2511200 FAX : NA E-MAIL : rcvisakhapatnam@ignou.ac.in	STATE OF ANDHRA PRADESH COVERING (DISTRICTS : EAST GODAVARI, WEST GODAVARI, PARVATHIPURAM MANYAM,ALLURI SITHA RAMARAJU, ANAKAPALLI, KAKINADA, DR.AMBEDKAR KONASEEMA, WEST GODAVARI, VISAKHAPATNAM, VIZIANAGARAM & SRIKAKULAM, ELURU INCLUDING YANAM OF PUDUCHERRY)

12. Address and Codes of Regional and Study Centres

List of existing Study Centres for B.Sc. Programes

Regional Centre	Study Centre
HYDERABAD	0111: AURORA DEGREE COLLEGE (111)
HYDERABAD	01ITI008: Govt. ITI, Utnoor
HYDERABAD	01ITI012: Govt. ITI, Bhadrachalam
HYDERABAD	01ITI007: Govt. ITI, DINDI
HYDERABAD	01ITI013: Govt. ITI, Kalwakurthy
HYDERABAD	01ITI011: Govt. ITI, Karimnagar
HYDERABAD	01ITI014: Govt. ITI, Khammam
HYDERABAD	01ITI015: Govt. ITI, Kothagudem
HYDERABAD	01ITI005: Govt. ITI, Mahaboobnagar (Girls)
HYDERABAD	01ITI010: Govt. ITI, Mahabubnagar
HYDERABAD	01ITI004: Govt. ITI, Mancherial
HYDERABAD	01ITI009: Govt. ITI, Mannanur
HYDERABAD	01ITI001: Govt. ITI, Nalgonda (Boys)
HYDERABAD	01ITI006: Govt. ITI, Patancheru
HYDERABAD	01ITI003: Govt. ITI, Shadnagar
HYDERABAD	01ITI002: Govt. ITI, Vikarabad
HYDERABAD	01JSS005: Jan Shikshan Sansthan (JSS) Adilabad
HYDERABAD	01JSS002: Jan Shikshan Sansthan (JSS) Hyderabad
HYDERABAD	01JSS001: Jan Shikshan Sansthan (JSS) Khammam
HYDERABAD	01JSS003: Jan Shikshan Sansthan (JSS) Mahabubnagar
HYDERABAD	01JSS004: Jan Shikshan Sansthan (JSS) Warangal
KARNAL	1005: CHOTU RAM COLLEGE OF EDUCATION (1005)
KARNAL	1009: GOVERNMENT P.G. COLLEGE (1009)
SHIMLA	1101: GOVERNMENT DEGREE COLLEGE (1101)
SHIMLA	1104: GOVERNMENT DEGREE COLLEGE (1104)
SHIMLA	1105: GOVERNMENT DEGREE COLLEGE (1105)
SHIMLA	1102: GOVERNMENT P.G. COLLEGE (1102)
SHIMLA	1133: GOVT. DEGREE COLLEGE GDC. Poanta Sahib (1133)
SHIMLA	11ITI034: Govt. ITI, Rampur BSR
SHIMLA	11ITI035: Govt. ITI, Sujanpur Tihra
SHIMLA	11ITI006: Govt. ITI, Baijnath
SHIMLA	11ITI013: Govt. ITI, Bangana
SHIMLA	11ITI010: Govt. ITI, Bani

SHIMLA	11ITI014: Govt. ITI, Baroti
SHIMLA	11ITI031: Govt. ITI, Berthin
SHIMLA	11ITI001: Govt. ITI, Bhoranj
SHIMLA	11ITI002: Govt. ITI, Chamba
SHIMLA	11ITI015: Govt. ITI, Dadasiba
SHIMLA	11ITI016: Govt. ITI, Deegal
SHIMLA	11ITI011: Govt. ITI, Dharamshala
SHIMLA	11ITI017: Govt. ITI, Garnota
SHIMLA	11ITI019: Govt. ITI, Hamirpur
SHIMLA	11ITI018: Govt. ITI, Jubbal
SHIMLA	11ITI007: Govt. ITI, Junga
SHIMLA	11ITI029: Govt. ITI, Kaffota
SHIMLA	11ITI030: Govt. ITI, Maina
SHIMLA	11ITI004: Govt. ITI, Mandi
SHIMLA	11ITI020: Govt. ITI, Mashobra
SHIMLA	11ITI009: Govt. ITI, Mohin
SHIMLA	11ITI022: Govt. ITI, Nehranpukhar
SHIMLA	11ITI026: Govt. ITI, Nehrian
SHIMLA	11ITI023: Govt. ITI, Nihri
SHIMLA	11ITI021: Govt. ITI, Patta- Mehlog
SHIMLA	11ITI033: Govt. ITI, Pubowal
SHIMLA	11ITI027: Govt. ITI, Rail
SHIMLA	11ITI012: Govt. ITI, Reckong Peo
SHIMLA	11ITI003: Govt. ITI, Salooni
SHIMLA	11ITI024: Govt. ITI, Sandhole
SHIMLA	11ITI005: Govt. ITI, Sunder Nagar
SHIMLA	11ITI025: Govt. ITI, Sunni
SHIMLA	11ITI032: Govt. ITI, Utpur
SHIMLA	11ITI008: Govt. Model ITI Nalagarh
SHIMLA	1113: GOVT. P.G. COLLEGE GDC. Bilaspur (1113)
SHIMLA	11ITI028: Govt., ITI, Sansarpur Terrace
SHIMLA	11JSS005: Jan Shikshan Sansthan (JSS), Bilaspur, (HP)
SHIMLA	11JSS010: Jan Shikshan Sansthan (JSS), Chamba
SHIMLA	11JSS008: Jan Shikshan Sansthan (JSS), Dev Bhumy Group of Institution
SHIMLA	11JSS002: Jan Shikshan Sansthan (JSS), Hamirpur
SHIMLA	11JSS009: Jan Shikshan Sansthan (JSS), Kangra

SHIMLA	11JSS004: Jan Shikshan Sansthan (JSS), Kullu
SHIMLA	11JSS007: Jan Shikshan Sansthan (JSS), Maa Saraswati Educational Trust, Sirmour
SHIMLA	11JSS006: Jan Shikshan Sansthan (JSS), Mandi
SHIMLA	11JSS001: Jan Shikshan Sansthan (JSS), Shimla
SHIMLA	11JSS003: Jan Shikshan Sansthan (JSS), Solan
JAMMU	1267: GOVT DEGREE COLLEGE (1267)
JAMMU	1232: GOVT. M.A.M. COLLEGE (1232)
BANGALORE	1390: HASANATH COLLEGE FOR WOMEN,BANGALORE (1390)
BANGALORE	13JSS002: Jan Shikshan Sansthan (JSS), Bengaluru
BANGALORE	13JSS001: Jan Shikshan Sansthan (JSS), Chitradurga
BANGALORE	13JSS005: Jan Shikshan Sansthan (JSS), Davanagere
BANGALORE	13JSS003: Jan Shikshan Sansthan (JSS), Mysuru
BANGALORE	13JSS006: Jan Shikshan Sansthan (JSS), Shimogajss
BANGALORE	13JSS004: Jan Shikshan Sansthan (JSS), Tumkur, Karnataka
BANGALORE	13PMKK001: PMKK, Rooman Technologies PVT Ltd, Begur Hobli
BANGALORE	13PMKK012: PMKK, Rooman Technologies PVT Ltd, Belgaum
BANGALORE	13PMKK006: PMKK, Rooman Technologies PVT Ltd, Chikkaballapur
BANGALORE	13PMKK007: PMKK, Rooman Technologies PVT Ltd, Davangere
BANGALORE	13PMKK013: PMKK, Rooman Technologies PVT Ltd, Haveri
BANGALORE	13PMKK008: PMKK, Rooman Technologies PVT Ltd, Kolar
BANGALORE	13PMKK005: PMKK, Rooman Technologies PVT Ltd, Nelamangala
BANGALORE	13PMKK004: PMKK, Rooman Technologies PVT Ltd, Rajaji Nagar
BANGALORE	13PMKK009: PMKK, Rooman Technologies PVT Ltd, Ramanagara
BANGALORE	13PMKK010: PMKK, Rooman Technologies PVT Ltd, Shivamogga
BANGALORE	13PMKK011: PMKK, Rooman Technologies PVT Ltd, Udupi
BANGALORE	13PMKK002: PMKK, UTL Technologies Ltd, Bangalore South
BANGALORE	13PMKK003: PMKK, UTL Technologies Ltd, Yeswanthpura
BANGALORE	1319: SRI SIDDARTHA INSTT. OF TECH., TUMKUR (1319)
COCHIN	14JSS003: Jan Shikshan Sansthan (JSS), Kottayam
COCHIN	14JSS001: Jan Shikshan Sansthan (JSS), Palakkad
COCHIN	14JSS002: Jan Shikshan Sansthan (JSS), Thrissur
COCHIN	1402: SACRED HEART COLLEGE (1402)
BHOPAL	15ITI030: Divisional Govt. ITI, Naramadapuram (Hoshangabad)
BHOPAL	15ITI041: Dr. Ambedkar Govt. Women ITI Sehore
BHOPAL	15ITI022: Govt. Div. ITI Jabalpur
BHOPAL	15ITI009: Govt. Divisional ITI Bhopal

BHOPAL	15ITI019: Govt. Divisional ITI Gwalior
BHOPAL	15ITI039: Govt. Divisional ITI Sagar
BHOPAL	15ITI010: Govt. ITI Burhanpur
BHOPAL	15ITI013: Govt. ITI Damoh
BHOPAL	15ITI014: Govt. ITI Datia
BHOPAL	15ITI016: Govt. ITI Dhar
BHOPAL	15ITI017: Govt. ITI Dindori
BHOPAL	15ITI018: Govt. ITI Guna
BHOPAL	15ITI020: Govt. ITI Harda
BHOPAL	15ITI023: Govt. ITI Jhabua
BHOPAL	15ITI024: Govt. ITI Katni
BHOPAL	15ITI025: Govt. ITI Khandwa
BHOPAL	15ITI027: Govt. ITI Mandla
BHOPAL	15ITI031: Govt. ITI Narsinghpur
BHOPAL	15ITI034: Govt. ITI Panna
BHOPAL	15ITI035: Govt. ITI Raisen
BHOPAL	15ITI037: Govt. ITI Ratlam
BHOPAL	15ITI040: Govt. ITI Satna
BHOPAL	15ITI043: Govt. ITI Shahdol
BHOPAL	15ITI044: Govt. ITI Shajapur
BHOPAL	15ITI046: Govt. ITI Shivpuri
BHOPAL	15ITI049: Govt. ITI Tikamghar
BHOPAL	15ITI050: Govt. ITI Ujjain
BHOPAL	15ITI052: Govt. ITI Vidisha
BHOPAL	15ITI003: Govt. ITI Anuppur
BHOPAL	15ITI004: Govt. ITI Ashoknagar
BHOPAL	15ITI005: Govt. ITI Balaghat
BHOPAL	15ITI006: Govt. ITI Barwani
BHOPAL	15ITI007: Govt. ITI Betul
BHOPAL	15ITI008: Govt. ITI Bhind
BHOPAL	15ITI011: Govt. ITI Chhatarpur
BHOPAL	15ITI015: Govt. ITI Dewas
BHOPAL	15ITI028: Govt. ITI Mandsaur
BHOPAL	15ITI029: Govt. ITI Morena
BHOPAL	15ITI033: Govt. ITI Orchha
BHOPAL	15ITI036: Govt. ITI Rajgarh
BHOPAL	15ITI038: Govt. ITI Rewa

BHOPAL	15ITI047: Govt. ITI Sidhi
BHOPAL	15ITI048: Govt. ITI Singrauli
BHOPAL	15ITI001: Govt. ITI Susner
BHOPAL	15ITI051: Govt. ITI Umaria
BHOPAL	15ITI021: Govt. ITI, Alirajpur
BHOPAL	15ITI012: Govt. ITI, Chhindwara
BHOPAL	15ITI002: Govt. ITI, Indore
BHOPAL	15ITI026: Govt. ITI, Khargone
BHOPAL	15ITI045: Govt. ITI, Sheopur
BHOPAL	15ITI032: Govt. Neemuch
BHOPAL	1506: HOLKAR SCIENCE COLLEGE (1506)
BHOPAL	1500: IGNOU REGIONAL CENTRE BHOPAL LSC Code 1500
BHOPAL	15ITI042: ITI Seoni
BHOPAL	15JSS012: Jan Shikshan Sansthan (JSS), Dhar
BHOPAL	15JSS002: Jan Shikshan Sansthan (JSS), Bhind
BHOPAL	15JSS006: Jan Shikshan Sansthan (JSS), Bhopal
BHOPAL	15JSS003: Jan Shikshan Sansthan (JSS), Datia
BHOPAL	15JSS007: Jan Shikshan Sansthan (JSS), Dewas
BHOPAL	15JSS013: Jan Shikshan Sansthan (JSS), Gwalior
BHOPAL	15JSS008: Jan Shikshan Sansthan (JSS), Hoshangawed
BHOPAL	15JSS014: Jan Shikshan Sansthan (JSS), Indore
BHOPAL	15JSS004: Jan Shikshan Sansthan (JSS), Khandwa
BHOPAL	15JSS009: Jan Shikshan Sansthan (JSS), Morena
BHOPAL	15JSS015: Jan Shikshan Sansthan (JSS), Raisen
BHOPAL	15JSS010: Jan Shikshan Sansthan (JSS), Ratlam
BHOPAL	15JSS016: Jan Shikshan Sansthan (JSS), Sehore
BHOPAL	15JSS005: Jan Shikshan Sansthan (JSS), Shajapur
BHOPAL	15JSS011: Jan Shikshan Sansthan (JSS), Sheopur
BHOPAL	15JSS001: Jan Shikshan Sansthan (JSS), Ujjain
BHOPAL	1501: MOTILAL VIGYAN MAHAVIDYALAYA (1501)
PUNE	16144: ABEDA INAMDAR SENIOR COLLEGE OF ARTS SCIENCE AND COMMERCE PUNE 16144
PUNE	16ITI002: Govt. ITI, Beed
PUNE	16ITI003: Govt. ITI, Jalna
PUNE	16ITI001: Govt. ITI, Sangli
PUNE	16ITI004: ITI, Aurangabad
PUNE	16137: JALNA EDUCATION SOCIETYS RG BAGDIA ARTS SB LAKHOTIA COMMERCE and R BEZONIJ SCIENCE COLLEGE JALNA

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PUNE	16JSS002: Jan Shikshan Sansthan (JSS), Ahmednagar
PUNE	16JSS003: Jan Shikshan Sansthan (JSS), Aurangabad
PUNE	16JSS008: Jan Shikshan Sansthan (JSS), Beed
PUNE	16JSS005: Jan Shikshan Sansthan (JSS), Dhule, Maharashtra
PUNE	16JSS004: Jan Shikshan Sansthan (JSS), Jalgaon
PUNE	16JSS006: Jan Shikshan Sansthan (JSS), Nandurbar-1
PUNE	16JSS007: Jan Shikshan Sansthan (JSS), Nandurbar-II
PUNE	16JSS001: Jan Shikshan Sansthan (JSS), Pune
PUNE	1608: KTHM COLLEGE (1608)
PUNE	1639: M.S.P MANDALS BALBHIM ARTS,SCIENCE&COMMERCE COLLEG (1639)
PUNE	1610: VIVEKANAND ARTS & SDS COMMERCE COLLEGE (1610)
IMPHAL	1707: D.M. COLLEGE OF SCIENCE (1707)
IMPHAL	17JSS001: Jan Shikshan Sansthan (JSS) Manipur
IMPHAL	17JSS002: Jan Shikshan Sansthan (JSS) Manipur
IMPHAL	17JSS004: Jan Shikshan Sansthan (JSS), Imphal West
IMPHAL	17JSS003: Jan Shikshan Sansthan (JSS),Senapati
IMPHAL	1703: PRESIDENCY COLLEGE (1703)
IMPHAL	1705: THOUBAL GOVERNMENT COLLEGE (1705)
SHILLONG	1877: IGNOU STUDY CENTRE (1877)
SHILLONG	1802: TURA GOVERNMENT COLLEGE (1802)
AIZWAL	1903: GOVERNMENT KOLASIB COLLEGE (1903)
AIZWAL	19ITI001: Govt. ITI, Aizawl
AIZWAL	1923: PACHHUNGA UNIVERSITY COLLEGE (1923)
AIZWAL	19PMKK001: PMKK, Medhavi Foundation
PORT BLAIR	0201: JNR MAHAVIDYALALA (201)
BHUBANESHWAR	2111: B.J.B. AUTONOMOUS COLLEGE; BHUBANESWAR (2111)
BHUBANESHWAR	2106: F.M. COLLEGE, BALASORE (2106)
BHUBANESHWAR	21ITI010: Govt. I.T.I Rasanpur
BHUBANESHWAR	21ITI009: Govt. I.T.I, Talcher
BHUBANESHWAR	21ITI013: Govt. I.T.I, Balasore
BHUBANESHWAR	21ITI014: Govt. I.T.I, Jajpur
BHUBANESHWAR	21ITI011: Govt. I.T.I, Jharsuguda
BHUBANESHWAR	21ITI005: Govt. ITI Purushottampur
BHUBANESHWAR	21ITI008: Govt. ITI Sheragada, Ganjam
BHUBANESHWAR	21ITI017: Govt. ITI, Anandapur

BHUBANESHWAR	21ITI001: Govt. ITI, Bargarh
BHUBANESHWAR	21ITI006: Govt. ITI, Barkote
BHUBANESHWAR	21ITI002: Govt. ITI, Berhampur
BHUBANESHWAR	21ITI004: Govt. ITI, BHUBANESHWAR
BHUBANESHWAR	21ITI018: Govt. ITI, Chatrapur
BHUBANESHWAR	21ITI003: Govt. ITI, Cuttack
BHUBANESHWAR	21ITI007: Govt. ITI, Dhenkanal
BHUBANESHWAR	21ITI015: Govt.. Purna Chandra ITI, Baripada
BHUBANESHWAR	21JSS006: Jan Shikshan Sansthan (JSS) Jagatsinghpur, Odisha
BHUBANESHWAR	21JSS002: Jan Shikshan Sansthan (JSS), Bhadrak
BHUBANESHWAR	21JSS001: Jan Shikshan Sansthan (JSS), BHUBANESHWAR
BHUBANESHWAR	21JSS005: Jan Shikshan Sansthan (JSS), Cuttack
BHUBANESHWAR	21JSS010: Jan Shikshan Sansthan (JSS), Deoghar (Odisha)
BHUBANESHWAR	21JSS007: Jan Shikshan Sansthan (JSS), Dhenkanal
BHUBANESHWAR	21JSS009: Jan Shikshan Sansthan (JSS), Jajpur
BHUBANESHWAR	21JSS003: Jan Shikshan Sansthan (JSS), Kendrapara
BHUBANESHWAR	21JSS008: Jan Shikshan Sansthan (JSS), Keonjhar
BHUBANESHWAR	21JSS004: Jan Shikshan Sansthan (JSS), Sansthan, Angul, Odisha
BHUBANESHWAR	2141: KENDRAPADA COLLEGE (2141)
BHUBANESHWAR	2104: KHALIKOTE COLLEGE (2104)
BHUBANESHWAR	2135: KSUB COLLEGE, BHANJANAGAR (2135)
BHUBANESHWAR	21MS2: Skill Development Institute (SDI), BHUBANESHWAR
BHUBANESHWAR	21ITI012: Special ITI for PWDs, Jatni
BHUBANESHWAR	21ITI016: State Institute of Plumbing Technology, ITI, Pattamundai, Kendrapara
KHANNA	2212: DOABA COLLEGE (2212)
KHANNA	2206: GURU NANAK GIRLS COLLEGE (2206)
JAIPUR	2310: D.A.V. COLLEGE, SRIGANGANAGAR (2310)
JAIPUR	23193: Government College Gandhi Circle
JAIPUR	2306: GOVT COLLEGE, AJMER (2306)
JAIPUR	2385: GOVT P.G.COLLEGE (2385)
JAIPUR	23135: GOVT. ARTS PG COLLEGE, KOTA (23135)
JAIPUR	23ITI055: Govt. ITI (PC), Jaipur
JAIPUR	23ITI070: Govt. ITI Ajmer
JAIPUR	23ITI075: Govt. ITI Anupgarh (Sri Ganganagar)
JAIPUR	23ITI069: Govt. ITI Banipark jaipur (Women)
JAIPUR	23ITI074: Govt. ITI Chemical, Kota (Raj.)

JAIPUR	23ITI072: Govt. ITI Fatehpur (Sikar)
JAIPUR	23ITI065: Govt. ITI Masuda Ajmer
JAIPUR	23ITI073: Govt. ITI Phagi
JAIPUR	23ITI071: Govt. ITI Sujangarh
JAIPUR	23ITI041: Govt. ITI, Alwar
JAIPUR	23ITI063: Govt. ITI, Amer (Rajawas)
JAIPUR	23ITI027: Govt. ITI, Anta
JAIPUR	23ITI051: Govt. ITI, Bansur
JAIPUR	23ITI037: Govt. ITI, Baran
JAIPUR	23ITI059: Govt. ITI, Bari
JAIPUR	23ITI062: Govt. ITI, Baswa
JAIPUR	23ITI012: Govt. ITI, Bayana (Bharatpur)
JAIPUR	23ITI034: Govt. ITI, Beawar
JAIPUR	23ITI017: Govt. ITI, Bhawani Mandi
JAIPUR	23ITI018: Govt. ITI, Bhilwara
JAIPUR	23ITI047: Govt. ITI, Bhiwadi
JAIPUR	23ITI029: Govt. ITI, Bundi
JAIPUR	23ITI030: Govt. ITI, Chhabra
JAIPUR	23ITI008: Govt. ITI, Chirawal (Jhunjhunu)
JAIPUR	23ITI032: Govt. ITI, Chittorgarh
JAIPUR	23ITI068: Govt. ITI, Chomu
JAIPUR	23ITI019: Govt. ITI, Dausa
JAIPUR	23ITI042: Govt. ITI, Dholpur
JAIPUR	23ITI050: Govt. ITI, Dudu
JAIPUR	23ITI006: Govt. ITI, Gulabpura, Bhilwara
JAIPUR	23ITI007: Govt. ITI, Hanumangarh
JAIPUR	23ITI001: Govt. ITI, Jaipur
JAIPUR	23ITI054: Govt. ITI, Jhunjhunu
JAIPUR	23ITI040: Govt. ITI, Kaman, Bharatpur
JAIPUR	23ITI021: Govt. ITI, Kapasan
JAIPUR	23ITI022: Govt. ITI, Karauli
JAIPUR	23ITI024: Govt. ITI, Kekri
JAIPUR	23ITI045: Govt. ITI, Keshoraipatan
JAIPUR	23ITI039: Govt. ITI, Khandar Sawai Madhopur
JAIPUR	23ITI049: Govt. ITI, Kho-Nagoriyan
JAIPUR	23ITI066: Govt. ITI, Khoor (Sikar)
JAIPUR	23ITI067: Govt. ITI, Kishangarh (Ajmer)

JAIPUR	23ITI028: Govt. ITI, Kota
JAIPUR	23ITI053: Govt. ITI, Kotputli
JAIPUR	23ITI015: Govt. ITI, Lakheri
JAIPUR	23ITI031: Govt. ITI, Mandalgarh
JAIPUR	23ITI056: Govt. ITI, Nadauti
JAIPUR	23ITI009: Govt. ITI, Nawalgarh (Jhunjhunu)
JAIPUR	23ITI060: Govt. ITI, Neemrana
JAIPUR	23ITI064: Govt. ITI, PADAMPUR, GANGANAGAR
JAIPUR	23ITI035: Govt. ITI, Pahari
JAIPUR	23ITI004: Govt. ITI, Rajgar, Alwar
JAIPUR	23ITI061: Govt. ITI, Ramgarh
JAIPUR	23ITI011: Govt. ITI, Ratangarh (Churu)
JAIPUR	23ITI033: Govt. ITI, Rawatbhata
JAIPUR	23ITI046: Govt. ITI, Reni
JAIPUR	23ITI058: Govt. ITI, Saipau
JAIPUR	23ITI052: Govt. ITI, Sanganer
JAIPUR	23ITI036: Govt. ITI, Sangaria
JAIPUR	23ITI020: Govt. ITI, Sangod (Kota)
JAIPUR	23ITI057: Govt. ITI, Sapotra
JAIPUR	23ITI025: Govt. ITI, Sawai Madhopur
JAIPUR	23ITI002: Govt. ITI, Shahpura
JAIPUR	23ITI048: Govt. ITI, Sikar
JAIPUR	23ITI043: Govt. ITI, Sikrai
JAIPUR	23ITI005: Govt. ITI, Sri Karanpur
JAIPUR	23ITI003: Govt. ITI, Sriganganagar
JAIPUR	23ITI026: Govt. ITI, Sultanpur
JAIPUR	23ITI013: Govt. ITI, Thanagazi, Alwar
JAIPUR	23ITI044: Govt. ITI, Todaraisingh
JAIPUR	23ITI010: Govt. ITI, Tonk
JAIPUR	23ITI023: Govt. ITI, Uncha
JAIPUR	23133: GOVT. PG COLLEGE, BARAN (23133)
JAIPUR	23132: GOVT. PG COLLEGE, KARAULI (23132)
JAIPUR	23138: GOVT. PG COLLEGE, RAJGARH (23138)
JAIPUR	23ITI014: Govt. Women ITI, Ajmer
JAIPUR	23ITI038: Govt. Women ITI, Bhilwara
JAIPUR	23ITI016: Govt. Women ITI, Kota
JAIPUR	23JSS003: Jan Shikshan Sansthan (JSS) , Ajmer

JAIPUR	23JSS001: Jan Shikshan Sansthan (JSS) , Jaipur
JAIPUR	23JSS005: Jan Shikshan Sansthan (JSS) , Jhalawar
JAIPUR	23JSS002: Jan Shikshan Sansthan (JSS) , Kota
JAIPUR	23JSS004: Jan Shikshan Sansthan (JSS) , Sikar
JAIPUR	2331: MAHARANA PRATAP PG GOVT COLLEGE, CHITTORGARH (2331)
JAIPUR	2308: RAJRISHI COLLEGE, ALWAR (2308)
JAIPUR	23192: Seth Gyaniram Bansidhar Podar College Nawalgarh
JAIPUR	23195: Shri Sant Sundar Das Govt Girls College Gupteshwar Road 23195
GANGTOK	24ITI001: Govt ITI Gyalshing
GANGTOK	24ITI002: Govt. ITI Namchi
GANGTOK	24ITI003: Govt. ITI Rangpo
CHENNAI	2534: ER. PERUMAL MANIMEKALAI P'NIC (2534)
CHENNAI	2578: GURU NANAK COLLEGE (2578)
CHENNAI	25JSS003: Jan Shikshan Sansthan (JSS), Kanchipuram
CHENNAI	25JSS001: Jan Shikshan Sansthan (JSS), Nagapattinam
CHENNAI	25JSS002: Jan Shikshan Sansthan (JSS), Nagapattinam
CHENNAI	2509: SACRED HEART COLLEGE (2509)
CHENNAI	2593: VOORHEES COLLEGE (2593)
AGARTALA	26ITI011: GOVT ITI, INDRANAGAR
AGARTALA	26ITI013: GOVT. ITI, AMBASSA
AGARTALA	26ITI004: GOVT. ITI, BELONIA
AGARTALA	26ITI005: GOVT. ITI, BISHRAMGANJ
AGARTALA	26ITI006: GOVT. ITI, BOXANAGAR
AGARTALA	26ITI007: GOVT. ITI, GANDACHERRA
AGARTALA	26ITI014: GOVT. ITI, JATANBARI
AGARTALA	26ITI016: GOVT. ITI, KAILASHAHAR
AGARTALA	26ITI008: GOVT. ITI, KAMALPUR
AGARTALA	26ITI003: GOVT. ITI, KHOWAI
AGARTALA	26ITI010: GOVT. ITI, KHUMULWNG
AGARTALA	26ITI015: GOVT. ITI, LT VALLEY
AGARTALA	26ITI002: GOVT. ITI, MANUBANKUL
AGARTALA	26ITI012: GOVT. ITI, TELIAMURA
AGARTALA	26ITI009: GOVT. ITI, UDAIPUR
AGARTALA	26ITI001: GOVT. WOMEN'S ITI, INDRANAGAR
AGARTALA	2607: ISWAR CHANDRA VIDYASAGAR COLLEGE (2607)
AGARTALA	26JSS001: Jan Shikshan Sansthan (JSS), AGARTALA

AGARTALA	26JSS002: Jan Shikshan Sansthan (JSS), DHALAI
AGARTALA	2608: M.B.B. COLLEGE (2608)
AGARTALA	2606: R.K. MAHAVIDYALAYA (2606)
LUCKNOW	2704: BAREILLY COLLEGE, BAREILLY (2704)
LUCKNOW	27JSS014: Jan Shikshan Sansthan (JSS) , Kanpur Dehat
LUCKNOW	27JSS015: Jan Shikshan Sansthan (JSS) Shahjahanpur
LUCKNOW	27JSS017: Jan Shikshan Sansthan (JSS), ,Shrawasti
LUCKNOW	27JSS003: Jan Shikshan Sansthan (JSS), (AIMWA)
LUCKNOW	27JSS005: Jan Shikshan Sansthan (JSS), (Gonda)
LUCKNOW	27JSS004: Jan Shikshan Sansthan (JSS), (LH)
LUCKNOW	27JSS011: Jan Shikshan Sansthan (JSS), Amethi
LUCKNOW	27JSS012: Jan Shikshan Sansthan (JSS), Banda
LUCKNOW	27JSS013: Jan Shikshan Sansthan (JSS), Barabanki
LUCKNOW	27JSS001: Jan Shikshan Sansthan (JSS), Bareilly
LUCKNOW	27JSS016: Jan Shikshan Sansthan (JSS), Basti
LUCKNOW	27JSS020: Jan Shikshan Sansthan (JSS), Basti
LUCKNOW	27JSS006: Jan Shikshan Sansthan (JSS), Chitrakoot
LUCKNOW	27JSS008: Jan Shikshan Sansthan (JSS), Fatehpur
LUCKNOW	27JSS018: Jan Shikshan Sansthan (JSS), Hardoi
LUCKNOW	27JSS009: Jan Shikshan Sansthan (JSS), Kaushambi
LUCKNOW	27JSS002: Jan Shikshan Sansthan (JSS), Orai
LUCKNOW	27JSS010: Jan Shikshan Sansthan (JSS), Raebareli
LUCKNOW	27JSS007: Jan Shikshan Sansthan (JSS), Unnao
LUCKNOW	27JSS019: Jan Shikshan Sansthan (JSS),, Shrawasti
LUCKNOW	2720: LUCKNOW CHRISTIAN P G COLLEGE (2720)
LUCKNOW	2767: PT. JAWAHAR LAL NEHRU (PG) COLLEGE BANDA (2767)
KOLKATA	2809: BANWARILAL BHALOTIA COLLEGE (2809)
KOLKATA	2842: BHAIRAB GANGULY COLLEGE (2842)
KOLKATA	2814: DINABANDHU ANDREWS COLLEGE (2814)
KOLKATA	28165: Dr Kanailal Bhattacharyya College Howrah 28165
KOLKATA	2800: IGNOU REGIONAL CENTRE KOLKATA LSC CODE 2800
KOLKATA	28JSS002: Jan Shikshan Sansthan (JSS), Bagnan Uluberia
KOLKATA	28JSS004: Jan Shikshan Sansthan (JSS), Haldia (Purba Medinipur)
KOLKATA	28JSS003: Jan Shikshan Sansthan (JSS), Jalpaiguri
KOLKATA	28JSS001: Jan Shikshan Sansthan (JSS), North 24 Parganas
KOLKATA	28JSS005: Jan Shikshan Sansthan (JSS), Purulia
KOLKATA	2810: MAULANA AZAD COLLEGE (2810)

KOLKATA	2813: MIDNAPUR COLLEGE (2813)
DELHI 2	29052: HANSRAJ COLLEGE (29052)
DELHI 2	29ITI002: ITI, Pusa
DELHI 2	29ITI001: ITI, Sir C. V Raman, Dheerput Delhi
DELHI 2	29JSS001: Jan Shikshan Sansthan (JSS), Prayas
DELHI 2	29065: MIRANDA HOUSE UNIVERSITY OF DELHI
DELHI 2	0729: SWAMI SHRADHANAND COLLEGE (729)
DELHI 2	29058: ZAKIR HUSSAIN COLLEGE (29058)
ITANAGAR	0303: JAWAHARLAL NEHRU COLLEGE (303)
SRINAGAR	1211: GOVERNMENT DEGREE COLLEGE ANANTNAG (1211)
SRINAGAR	1248: GOVERNMENT DEGREE COLLEGE PULWAMA (1248)
SRINAGAR	1210: GOVERNMENT DEGREE COLLEGE SOPORE (1210)
SRINAGAR	30039: GOVT COLLEGE FOR WOMEN M A ROAD SRINAGAR LSC 30039
SRINAGAR	1202: GOVT. AMAR SINGH COLLEGE, SRINAGAR (1202)
SRINAGAR	1249: GOVT. DEGREE COLLEGE KARGIL (1249)
SRINAGAR	1209: SHRI PRATAP SINGH COLLEGE (1209)
DEHRADUN	2705: D.A.V. PG COLLEGE DEHRADUN (2705)
DEHRADUN	2762: D.S.B CAMPUS KUMAON UNIV., NAINITAL (2762)
DEHRADUN	2754: DR. P.D.B. GOVT. P.G. COLLEGE, KOTDWARA (2754)
DEHRADUN	2715: GOVERNMENT PG COLLEGE, GOPESHWAR (2715)
DEHRADUN	2748: GOVT PG COLLEGE UTTARKASHI (2748)
DEHRADUN	31031: GOVT. PG COLLEGE AGASTYAMUNI (31031)
DEHRADUN	31JSS005: Jan Shikshan Sansthan (JSS), Bageshwar
DEHRADUN	31JSS004: Jan Shikshan Sansthan (JSS), Bhimtal (Nainital)
DEHRADUN	31JSS001: Jan Shikshan Sansthan (JSS), Dehradun
DEHRADUN	31JSS006: Jan Shikshan Sansthan (JSS), Pithoragarh
DEHRADUN	31JSS003: Jan Shikshan Sansthan (JSS), Tehri Garhwal
DEHRADUN	31JSS002: Jan Shikshan Sansthan (JSS), Uttarkashi
DEHRADUN	2726: L.S.M. GOVERNMENT P.G. COLLEGE, PITHORAGARH (2726)
DEHRADUN	2711: MB PG COLLEGE HALDWANI (2711)
DEHRADUN	2717: SSJ CAMPUS KUMAON UNIVERSITY, ALMORA (2717)
RANCHI	0510: G.L.A. COLLEGE, DALTONGANJ (510)
RANCHI	32ITI001: Govt ITI, Jamshedpur
RANCHI	32ITI005: Govt. ITI, Barhi
RANCHI	32ITI003: Govt. ITI, Bokaro
RANCHI	32ITI002: Govt. ITI, Daltonganj

RANCHI	32ITI004: Govt. ITI, Hazaribag
RANCHI	32JSS003: Jan Shikshan Sansthan (JSS), Bokaro
RANCHI	32JSS004: Jan Shikshan Sansthan (JSS), Garhwa
RANCHI	32JSS002: Jan Shikshan Sansthan (JSS), Ramgarh
RANCHI	32JSS001: Jan Shikshan Sansthan (JSS), Ranchi
RANCHI	0525: MAHILA COLLEGE, CHAIBASA (525)
RANCHI	0513: MARWARI COLLEGE, RANCHI (513)
RANCHI	0503: P.K. ROY MEMORIAL COLLEGE, DHANBAD (503)
RANCHI	0528: ST. COLUMBA'S COLLEGE, HAZARIBAGH (528)
VIJAYAWADA	33ITI045: Govt ITI Chittor
VIJAYAWADA	33ITI037: Govt ITI KBR Gudivada
VIJAYAWADA	33ITI038: Govt. DLTC/ITI Guntur
VIJAYAWADA	33ITI029: Govt. DLTC/ITI, Kurnool
VIJAYAWADA	33ITI011: Govt. ITI
VIJAYAWADA	33ITI032: Govt. ITI
VIJAYAWADA	33ITI034: Govt. ITI (B), Anantapur
VIJAYAWADA	33ITI009: Govt. ITI (B), Nellore
VIJAYAWADA	33ITI006: Govt. ITI (Boys), Ongole
VIJAYAWADA	33ITI010: Govt. ITI (Girls), Nellore
VIJAYAWADA	33ITI007: Govt. ITI (Girls), Ongole
VIJAYAWADA	33ITI048: Govt. ITI Alur
VIJAYAWADA	33ITI035: Govt. ITI for Girls, Ananatpuramu
VIJAYAWADA	33ITI030: Govt. ITI for Girls, Kurnool
VIJAYAWADA	33ITI023: Govt. ITI for Minorities, Kadapa
VIJAYAWADA	33ITI018: Govt. ITI for Minorities, Punganur
VIJAYAWADA	33ITI031: Govt. ITI Guntakal
VIJAYAWADA	33ITI039: Govt. ITI Markapur
VIJAYAWADA	33ITI047: Govt. ITI Piler
VIJAYAWADA	33ITI041: Govt. ITI Podalkur
VIJAYAWADA	33ITI044: Govt. ITI Santhipuram
VIJAYAWADA	33ITI049: Govt. ITI Srisailam
VIJAYAWADA	33ITI046: Govt. ITI Tirupati
VIJAYAWADA	33ITI050: Govt. ITI Uravakonda
VIJAYAWADA	33ITI042: Govt. ITI Vedurukuppam
VIJAYAWADA	33ITI021: Govt. ITI Vemula
VIJAYAWADA	33ITI043: Govt. ITI Vijayapuram
VIJAYAWADA	33ITI014: Govt. ITI, A. S. Peta

VIJAYAWADA	33ITI016: Govt. ITI, B. Narasingarayanipet, Chittoor
VIJAYAWADA	33ITI028: Govt. ITI, Dhone
VIJAYAWADA	33ITI036: Govt. ITI, Gudivada (KBR)
VIJAYAWADA	33ITI025: Govt. ITI, Jammalamadugu
VIJAYAWADA	33ITI008: Govt. ITI, Kandukar
VIJAYAWADA	33ITI017: Govt. ITI, Karvetinagaram
VIJAYAWADA	33ITI022: Govt. ITI, Lingala
VIJAYAWADA	33ITI003: Govt. ITI, Macherla
VIJAYAWADA	33ITI020: Govt. ITI, Mylavaram, Kadapa
VIJAYAWADA	33ITI002: Govt. ITI, Nuzvid
VIJAYAWADA	33ITI027: Govt. ITI, OWK
VIJAYAWADA	33ITI012: Govt. ITI, Sangam
VIJAYAWADA	33ITI033: Govt. ITI, Tadipatri
VIJAYAWADA	33ITI005: Govt. ITI, Tenali
VIJAYAWADA	33ITI019: Govt. ITI, Thamballapalle (Sri TNVSR M)
VIJAYAWADA	33ITI015: Govt. ITI, Vakadu
VIJAYAWADA	33ITI013: Govt. ITI, Venkatagiri
VIJAYAWADA	33ITI001: Govt. ITI, Vijayawada
VIJAYAWADA	33ITI024: Govt. ITI, Yerraguntla
VIJAYAWADA	33ITI040: Govt. ITI(G) Chittedu
VIJAYAWADA	33ITI026: Govt. R ITI for Girls, Kadapa
VIJAYAWADA	33JSS004: Jan Shikshan Sansthan (JSS), Anantapur
VIJAYAWADA	33JSS002: Jan Shikshan Sansthan (JSS), Guntur
VIJAYAWADA	33JSS003: Jan Shikshan Sansthan (JSS), Tirupati
VIJAYAWADA	33JSS001: Jan Shikshan Sansthan (JSS), Vijayawada
VIJAYAWADA	33ITI004: TRC Govt. ITI, Gudavalli
RAIPUR	1505: GOVT ERR PG College Bilaspur
RAIPUR	35JSS002: Jan Shikshan Sansthan (JSS), Bastar
RAIPUR	35JSS008: Jan Shikshan Sansthan (JSS), Bijapur
RAIPUR	35JSS007: Jan Shikshan Sansthan (JSS), Bilaspur
RAIPUR	35JSS012: Jan Shikshan Sansthan (JSS), Dantewada
RAIPUR	35JSS011: Jan Shikshan Sansthan (JSS), Kanker
RAIPUR	35JSS009: Jan Shikshan Sansthan (JSS), Kondagaon
RAIPUR	35JSS005: Jan Shikshan Sansthan (JSS), Korba
RAIPUR	35JSS006: Jan Shikshan Sansthan (JSS), Koriya
RAIPUR	35JSS010: Jan Shikshan Sansthan (JSS), Mahasamund
RAIPUR	35JSS013: Jan Shikshan Sansthan (JSS), Naravanpur

RAIPUR	35JSS001: Jan Shikshan Sansthan (JSS), Raipur
RAIPUR	35JSS003: Jan Shikshan Sansthan (JSS), Rajnandgaon
RAIPUR	35JSS014: Jan Shikshan Sansthan (JSS), Sukma
RAIPUR	35JSS004: Jan Shikshan Sansthan (JSS), Surguja
NAGPUR	36009P: INSTITUTE OF SCIENCE R T ROAD CIVIL LINE NAGPUR MAHARASHTRA
JORHAT	0421: CHAIDUAR COLLEGE (421)
JORHAT	37015: DEBRAJ ROY COLLEGE LSC CODE 37015
JORHAT	37ITI001: Govt. ITI, Nagaon (Assam)
JORHAT	0409P: IGNOU PROG. STUDY CENTRE (409)
JORHAT	37JSS001: Jan Shikshan Sansthan (JSS), Jorhat
DELHI 3 Naraina	38042: Bhaskaracharya College of Applied Sciences (38042)
DELHI 3 Naraina	38044: DPG Degree College (38044)
DELHI 3 Naraina	1006: DRONACHARYA GOVERNMENT COLLEGE (1006)
DELHI 3 Naraina	38ITI002: Govt. ITI Nuh, Maroda
DELHI 3 Naraina	38ITI001: ITI, Hai Nagar
DELHI 3 Naraina	38JSS001: Jan Shikshan Sansthan (JSS) ,West Delhi, Peeragarhi
DELHI 3 Naraina	38JSS003: Jan Shikshan Sansthan (JSS) Gurugram (Haryana)
DELHI 3 Naraina	38JSS002: Jan Shikshan Sansthan (JSS) , Patel Nagar
DELHI 3 Naraina	38046: Rajdhani College Raja Garden LSC 38046
DELHI 3 Naraina	38045: Shivaji College (38045)
NOIDA	2764: BABU SHIVNATH AGRAWAL COLLEGE (2764)
NOIDA	2799: D.N. (PG) COLLEGE MEERUT (2799)
NOIDA	2739: GOVERNMENT P.G. COLLEGE (2739)
NOIDA	2714: HINDU COLLEGE (2714)
NOIDA	3900: IGNOU REGIONAL CENTRE NOIDA LSC Code 3900
NOIDA	2798: J.V. POST GRADUATE COLLEGE (2798)
NOIDA	39JSS001: Jan Shikshan Sansthan (JSS), Agra
NOIDA	39JSS006: Jan Shikshan Sansthan (JSS), Aligarh
NOIDA	39JSS004: Jan Shikshan Sansthan (JSS), Etawah
NOIDA	39JSS005: Jan Shikshan Sansthan (JSS), Firozabad
NOIDA	39JSS002: Jan Shikshan Sansthan (JSS), Gautam Budh nagar
NOIDA	39JSS003: Jan Shikshan Sansthan (JSS), Ghaziabad
NOIDA	2743: LAJPAT RAI (P.G.) COLLEGE SAHIBABAD (2743)
NOIDA	2718: M.M.H. COLLEGE GHAZIABAD (2718)
NOIDA	2707: M.M.P.G. COLLEGE MODINAGAR (2707)
NOIDA	3702: MAHARAJ SINGH COLLEGE, SAHARANPUR (3702)

NOIDA	07107: MAHARAJA AGARSEN COLLEGE (7107)
NOIDA	39010: NANAKCHAND ANGLO SANSKRIT COLLEGE MEERUT (39010)
NOIDA	39047: Rameshwari Devi Kanya Mahavidyalaya Agra _39047_
NOIDA	2749: S.D. COLLEGE, MUZAFFARNAGAR (2749)
NOIDA	2761: S.S.V. (P.G.) COLLEGE HAPUR (2761)
NOIDA	2702: ST. JOHN'S COLLEGE (2702)
GUWAHATI	0411: BAJALI COLLEGE (411)
GUWAHATI	0404: BIRJHORA MAHAVIDYALAYA (404)
GUWAHATI	0408: HANDIQUE GIRLS COLLEGE (408)
GUWAHATI	04196: Pragjyotish College
TRIVANDRUM	1404: CATHOLICATE COLLEGE (1404)
TRIVANDRUM	40ITI005: Govt. ITI Attingal
TRIVANDRUM	40ITI001: Govt. ITI for Women, Kazhakuttom
TRIVANDRUM	40ITI002: Govt. ITI, Aryanad
TRIVANDRUM	40ITI004: Govt. ITI, Chackai
TRIVANDRUM	40ITI003: Govt. ITI, Malayinkeezhu
TRIVANDRUM	40JSS002: Jan Shikshan Sansthan (JSS), Kollam
TRIVANDRUM	40JSS003: Jan Shikshan Sansthan (JSS), Pathanamthitta
TRIVANDRUM	40JSS001: Jan Shikshan Sansthan (JSS), Thiruvananthapuram
TRIVANDRUM	1441: MAR IVANIOS INSTITUTE OF ADVANCE STUDIES (1441)
JABALPUR	1589D: GOVT. A.B.COLLEGE BAIHAR (1589D)
JABALPUR	1589: GOVT. A.B.COLLEGE BAIHAR (1589D)
JABALPUR	1566D: GOVT. C.V. COLLEGE, DINDORI (1566D)
JABALPUR	1566: GOVT. C.V. COLLEGE, DINDORI (1566D)
JABALPUR	41016D: GOVT. DEGREE COLLEGE, JUNNARDEO (41016D)
JABALPUR	41016: GOVT. DEGREE COLLEGE, JUNNARDEO (41016D)
JABALPUR	1567: GOVT. J.S.T. PG COLLEGE, BALAGHAT (1567D)
JABALPUR	1560D: GOVT. P. G. COLLEGE, SEONI (1560D)
JABALPUR	1561D: GOVT. P.G.TILAK COLLEGE, KATNI (1561D)
JABALPUR	1565D: GOVT. PG COLLEGE, NARSINGHPUR (1565D)
JABALPUR	1565: GOVT. PG COLLEGE, NARSINGHPUR (1565D)
JABALPUR	1592D: GOVT. SCIENCE COLLEGE PANDHURNA (1592D)
JABALPUR	1592: GOVT. SCIENCE COLLEGE PANDHURNA (1592D)
JABALPUR	41JSS001: Jan Shikshan Sansthan (JSS), Chhatarpur
JABALPUR	41JSS002: Jan Shikshan Sansthan (JSS), Damoh
JABALPUR	41JSS003: Jan Shikshan Sansthan (JSS), Dindori (MP)

JABALPUR	41JSS004: Jan Shikshan Sansthan (JSS), Katni
JABALPUR	41JSS005: Jan Shikshan Sansthan (JSS), Mandla
JABALPUR	41JSS006: Jan Shikshan Sansthan (JSS), Narsinghpur
JABALPUR	41JSS007: Jan Shikshan Sansthan (JSS), Rewa
JABALPUR	41JSS008: Jan Shikshan Sansthan (JSS), Sagar (M. P)
JABALPUR	41JSS009: Jan Shikshan Sansthan (JSS), Satna (M.P)
JABALPUR	41JSS010: Jan Shikshan Sansthan (JSS), Sidhi (M.P)
JABALPUR	41JSS011: Jan Shikshan Sansthan (JSS), Tikamgarh
JABALPUR	41JSS012: Jan Shikshan Sansthan (JSS), Umaria
JABALPUR	1599: MATA GUJARI MAHILA MAHIVIDYALYA, JABALPUR (1599)
RAJKOT	42JSS001: Jan Shikshan Sansthan (JSS), Kachchh
MADURAI	2504: BISHOP HEBER COLLEGE (2504)
MADURAI	2502: DR.G.R.D. COLLEGE OF SCIENCE (2502)
MADURAI	43JSS004: Jan Shikshan Sansthan (JSS) Kundrakudi, Sivaganga
MADURAI	43JSS001: Jan Shikshan Sansthan (JSS) Madurai
MADURAI	43JSS002: Jan Shikshan Sansthan (JSS) Sivakasi
MADURAI	43JSS005: Jan Shikshan Sansthan (JSS) Thiruvarur
MADURAI	43JSS003: Jan Shikshan Sansthan (JSS) Trichy
MADURAI	2503: THIYAGARAJAR COLLEGE (2503)
MADURAI	43016: VIVEKANANDA COLLEGE (43016)
KORAPUT	44ITI004: Gopabandhu Govt. I.T.I Ambaguda
KORAPUT	44ITI005: Govt I.T.I Mathili
KORAPUT	44ITI006: Govt. I.T.I Khariar road, Nuapada
KORAPUT	44ITI007: Govt. I.T.I Malkangiri`
KORAPUT	44ITI002: Govt. I.T.I Pottang
KORAPUT	44ITI003: Govt. I.T.I Rayagada
KORAPUT	44ITI011: Govt. ITI, Bolangir
KORAPUT	44ITI008: Govt. ITI, Khariar
KORAPUT	44ITI010: Govt. ITI, Laxmipur
KORAPUT	44ITI009: Govt. ITI, Raigahr
KORAPUT	44JSS004: Jan Shikshan Sansthan (JSS), Balangir
KORAPUT	44JSS007: Jan Shikshan Sansthan (JSS), Balangir
KORAPUT	44JSS006: Jan Shikshan Sansthan (JSS), Boudh
KORAPUT	44JSS003: Jan Shikshan Sansthan (JSS), Kalahandi
KORAPUT	44JSS001: Jan Shikshan Sansthan (JSS), Koraput
KORAPUT	44JSS002: Jan Shikshan Sansthan (JSS), Nuapada
KORAPUT	44JSS005: Jan Shikshan Sansthan (JSS), Subarnpur

KORAPUT	44034: Khariar Autonomous College LSC 44034
KORAPUT	2107: RAJENDRA COLLEGE (2107)
KORAPUT	2110: VIKRAM DEV COLLEGE (2110)
SILIGURI	45015: NORTH BENGAL ST. XAVIER"S COLLEGE (45015)
DARBHANGA	0504: BRA BIHAR UNIVERSITY (504)
DARBHANGA	0550: GANESH DUTT COLLEGE (550)
DARBHANGA	46JSS001: Jan Shikshan Sansthan (JSS), Begusarai
DARBHANGA	46JSS003: Jan Shikshan Sansthan (JSS), Champaran
DARBHANGA	46JSS007: Jan Shikshan Sansthan (JSS), Gopalganj
DARBHANGA	46JSS002: Jan Shikshan Sansthan (JSS), Madhubani
DARBHANGA	46JSS005: Jan Shikshan Sansthan (JSS), Mothiari
DARBHANGA	46JSS006: Jan Shikshan Sansthan (JSS), Muzaffarpur
DARBHANGA	46JSS008: Jan Shikshan Sansthan (JSS), Samastipur
DARBHANGA	46JSS004: Jan Shikshan Sansthan (JSS), Sitamarhi
DARBHANGA	0551: SAMASTIPUR COLLEGE (551)
ALIGARH	2713: ALIGARH MUSLIM UNIVERSITY, ALIGARH (2713)
VARANASI	48ITI001: Govt. ITI, Karaundi
VARANASI	48JSS004: Jan Shikshan Sansthan (JSS), Ambedkar Nagar
VARANASI	48JSS008: Jan Shikshan Sansthan (JSS), Ballia
VARANASI	48JSS006: Jan Shikshan Sansthan (JSS), Bhadohi
VARANASI	48JSS013: Jan Shikshan Sansthan (JSS), Chandauli
VARANASI	48JSS010: Jan Shikshan Sansthan (JSS), Gorakhpur
VARANASI	48JSS001: Jan Shikshan Sansthan (JSS), Jaunpur
VARANASI	48JSS014: Jan Shikshan Sansthan (JSS), Mau
VARANASI	48JSS015: Jan Shikshan Sansthan (JSS), Mirzapur
VARANASI	48JSS011: Jan Shikshan Sansthan (JSS), Newada Varanasi
VARANASI	48JSS005: Jan Shikshan Sansthan (JSS), Pratapgarh
VARANASI	48JSS007: Jan Shikshan Sansthan (JSS), Prayagraj
VARANASI	48JSS009: Jan Shikshan Sansthan (JSS), Prayagraj (Allahabad)
VARANASI	48JSS002: Jan Shikshan Sansthan (JSS), Sonebhadra
VARANASI	48JSS012: Jan Shikshan Sansthan (JSS), Sultanpur
VARANASI	48JSS003: Jan Shikshan Sansthan (JSS), Varanasi
VARANASI	2737: M.D.P.G. COLLEGE, PRATAPGARH (2737)
VARANASI	27101: PG COLLEGE GHAZIPUR (27101)
VARANASI	48028: ST ANDREWS COLLEGE, GORAKHPUR (48028)
VARANASI	2708: UDAI PRATAP AUTONOMOUS COLLEGE, VARANASI (2708)
MUMBAI	49JSS003: Jan Shikshan Sansthan (JSS) Dharavi

MUMBAI	49JSS001: Jan Shikshan Sansthan (JSS), Raigad, Maharastra
MUMBAI	49JSS002: Jan shikshan Sansthan (JSS), Worli, Mumbai
PATNA	0529: ANUGRAH NARAYAN COLLEGE (529)
PATNA	0524: BIHAR NATIONAL COLLEGE (524)
PATNA	0511: GAYA COLLEGE (511)
PATNA	05ITI001: Govt. ITI, Dehri-on-sone
PATNA	0509: J.P. UNIVERSITY (509)
PATNA	05JSS008: Jan Shikshan Sansthan (JSS), ADRI
PATNA	05JSS002: Jan Shikshan Sansthan (JSS), Arwal
PATNA	05JSS004: Jan Shikshan Sansthan (JSS), Aurangabad
PATNA	05JSS006: Jan Shikshan Sansthan (JSS), Buxar
PATNA	05JSS009: Jan Shikshan Sansthan (JSS), Gaya
PATNA	05JSS007: Jan Shikshan Sansthan (JSS), Nawada
PATNA	05JSS005: Jan Shikshan Sansthan (JSS), Patna
PATNA	05JSS003: Jan Shikshan Sansthan (JSS), Sonepur Saran
PATNA	05JSS001: Jan Shikshan Sansthan (JSS), Vaishali
PATNA	0591: M.V. COLLEGE (591)
PATNA	0588: MUSLIM SCIENCE COLLEGE (588)
PATNA	05204: Sardar Vallabhbhai Patel College Bhabua
PATNA	0568: T.P.S. COLLEGE (568)
RAGHUNATHGANJ	2820: RDK COLLEGE OF COMMERCE (2820D)
ARMY-KOLKATA	5114: HQ 111 SUB AREA (5114)
ARMY-KOLKATA	5108: HQ 17 MTN DIV (5108)
ARMY-KOLKATA	5105: IAEP STUDY CENTRE HQ BENGAL AREA (SC-5105)
ARMY-KOLKATA	5109: IAEP, HQ 20 MTN DIVISION (5109)
ARMY-CHANDIMANDIR	5201: WESTERN COMMAND HRDC (5201)
ARMY-UDHAMPUR	5501: HRDC HQ NORTHERN COMMAND (5501)
CHANDIGARH	06038: Government P G College Kabari Bazar 06038
CHANDIGARH	06ITI001: Govt. Model ITI, Chandigarh
CHANDIGARH	06JSS001: Jan Shikshan Sansthan (JSS), Chandigarh
CHANDIGARH	06JSS002: Jan Shikshan Sansthan (JSS), Mohali
CHANDIGARH	06007: SGGS COLLEGE, CHD (06007)
DELHI 1 (MOHAN ESTATE (SOUTH DELHI))	07191: Acharya Narendra Dev College
DELHI 1 (MOHAN ESTATE (SOUTH DELHI))	0711: GARGI COLLEGE (711)
DELHI 1 (MOHAN	07ITI002: Govt. ITI, Arab Ki Sarai, Nizamuddin

ESTATE (SOUTH DELHI))	
DELHI 1 (MOHAN ESTATE (SOUTH DELHI))	07ITI001: Govt. ITI, Jijubai, Sirifort
DELHI 1 (MOHAN ESTATE (SOUTH DELHI))	0765: JAMIA MILLIA ISLAMIA UNIVERSITY (765)
DELHI 1 (MOHAN ESTATE (SOUTH DELHI))	1007: PT. J.L. NEHRU GOVT. COLLEGE (1007)
DELHI 1 (MOHAN ESTATE (SOUTH DELHI))	07189: SRI AUROBINDO COLLEGE (MORNING) (7189)
NAVY-NEW DELHI	7101: IGNOU-NAVY RECOG. STUDY CENTRE (7101)
NAVY-VISAKHAPATNAM	7301: IGNOU NAVY VIZAG (7301)
PANAJI	0802: DHEMPE COLL. OF ARTS & SCIENCE (802)
PANAJI	08JSS001: Jan Shikshan Sansthan (JSS), Goa
PANAJI	08JSS002: Jan Shikshan Sansthan (JSS), Karwar
BHAGALPUR	0505: MARWARI COLLEGE (505)
BHAGALPUR	0571: RD & DJ COLLEGE (571)
VATAKARA	83ITI005: AITECC ITI, Sulthan Bathery, Wayanad
VATAKARA	83ITI001: Govt. I.T.I Maniyoor
VATAKARA	83ITI002: Govt. ITI, Kannur
VATAKARA	83ITI004: Govt. ITI, Kuthuparamba
VATAKARA	83ITI003: Govt. ITI, Vadakara
VATAKARA	83JSS001: Jan Shikshan Sansthan (JSS), Malappuram
VATAKARA	1403: JDT ISLAM (1403)
VATAKARA	1405: SREE NARAYANA COLLEGE (1405)
VATAKARA	1430: ST. MARRY'S COLLEGE (1430)
VISHAKHAPATNAM	84ITI023: Dr. V. Kanithis Govt.I.T.I, Palasa, Srikakulam
VISHAKHAPATNAM	84002: GOVERNMENT COLLEGE (AUTONOMOUS) (84002)
VISHAKHAPATNAM	84ITI005: Govt. DLTC/ITI, Eluru
VISHAKHAPATNAM	84ITI003: Govt. ITI, Achanta, Westgodavari
VISHAKHAPATNAM	84ITI002: Govt. ITI, Bhimavaram
VISHAKHAPATNAM	84ITI018: Govt. ITI, Bobbilli
VISHAKHAPATNAM	84ITI007: Govt. ITI, Chintalapudi
VISHAKHAPATNAM	84ITI020: Govt. ITI, Chintapalli
VISHAKHAPATNAM	84ITI021: Govt. ITI, Etcherla
VISHAKHAPATNAM	84ITI006: Govt. ITI, I. E. Eluru
VISHAKHAPATNAM	84ITI025: Govt. ITI, IE kancharapalem

VISHAKHAPATNAM	84ITI013: Govt. ITI, Jaggampeta
VISHAKHAPATNAM	84ITI004: Govt. ITI, K. R. Puram
VISHAKHAPATNAM	84ITI012: Govt. ITI, Kakinada
VISHAKHAPATNAM	84ITI001: Govt. ITI, Narava
VISHAKHAPATNAM	84ITI014: Govt. ITI, Narsipatnam
VISHAKHAPATNAM	84ITI015: Govt. ITI, Payakaraopeta
VISHAKHAPATNAM	84ITI016: Govt. ITI, Rajam
VISHAKHAPATNAM	84ITI008: Govt. ITI, Rajamahendravaram
VISHAKHAPATNAM	84ITI009: Govt. ITI, Saler
VISHAKHAPATNAM	84ITI011: Govt. ITI, Seethampeta
VISHAKHAPATNAM	84ITI022: Govt. ITI, Srikakulam
VISHAKHAPATNAM	84ITI024: Govt. ITI, Steel City Gujuwaka
VISHAKHAPATNAM	84ITI026: Govt. ITI,kancharapalem (OLD)
VISHAKHAPATNAM	84ITI017: Govt. ITI,Vizianagram
VISHAKHAPATNAM	84ITI019: Govt. Residential Industrial Training Institute
VISHAKHAPATNAM	84ITI010: Govt. RITI, Bhadragiri
VISHAKHAPATNAM	8400: IGNOU REGIONAL CENTRE VISAKHAPATNAM LSC Code 8400
VISHAKHAPATNAM	84JSS001: Jan Shikshan Sansthan (JSS), VISHAKHAPATNAM
VISHAKHAPATNAM	84JSS002: Jan Shikshan Sansthan (JSS), Vizianagaram
VISHAKHAPATNAM	84019: M V R Degree College Shramika Nagar 84019
BIJAPUR	1324: BASAVESHWAR SCIENCE COLLEGE BAGALKOT (1324)
BIJAPUR	1303: J.S.S. COLLEGE VIDYAGIRI DHARWAD (1303)
BIJAPUR	85JSS002: Jan Shikshan Sansthan (JSS), Bagalkote
BIJAPUR	85JSS003: Jan Shikshan Sansthan (JSS), Bidar
BIJAPUR	85JSS005: Jan Shikshan Sansthan (JSS), Gulbarga
BIJAPUR	85JSS006: Jan Shikshan Sansthan (JSS), Latur (MH)
BIJAPUR	85JSS004: Jan Shikshan Sansthan (JSS), Raichur
BIJAPUR	85JSS001: Jan Shikshan Sansthan (JSS), Yadgir
SAHARSA	0561: IGNOU STUDY CENTRE (561)
SAHARSA	0555: M L T College SAHARSA 0555
SAHARSA	0508: PURNEA COLLEGE PURNEA 0508
DEOGHAR	3609: A.S. COLLEGE (3609)
DEOGHAR	87009: B.S.K. COLLEGE, BARHARWA (87009)
DEOGHAR	87005: DEOGHAR COLLEGE, DEOGHAR (87005)
DEOGHAR	8700: IGNOU REGIONAL CENTRE DEOGHAR LSC Code 8700
DEOGHAR	87JSS001: Jan Shikshan Sansthan (JSS), Pakur
DEOGHAR	87JSS002: Jan Shikshan Sansthan (JSS), Vikas Bharti Dumka

DEOGHAR	3604: S.P. COLLEGE (3604)
DEOGHAR	3605: SAHIBGANJ COLLEGE (3605)
JODHPUR	88012: ARAVALI MAHAVIDHYALAY (88012)
JODHPUR	2361: GOVT. BANGUR P.G. COLLEGE (2361)
JODHPUR	2370: GOVT. COLL PRATGARH (2370)
JODHPUR	88ITI009: Govt. ITI (CETT), Udaipur
JODHPUR	88ITI001: Govt. ITI, Amet (Rajasamad)
JODHPUR	88ITI002: Govt. ITI, Baap
JODHPUR	88ITI003: Govt. ITI, Bagidora
JODHPUR	88ITI004: Govt. ITI, Balesar
JODHPUR	88ITI005: Govt. ITI, Banswara
JODHPUR	88ITI006: Govt. ITI, Barmer
JODHPUR	88ITI007: Govt. ITI, Bikaner
JODHPUR	88ITI008: Govt. ITI, Bilara
JODHPUR	88ITI010: Govt. ITI, Dungarpur
JODHPUR	88ITI011: Govt. ITI, Jail Bikaner
JODHPUR	88ITI012: Govt. ITI, Jaisalmer
JODHPUR	88ITI013: Govt. ITI, Jaitaran
JODHPUR	88ITI014: Govt. ITI, Jayal (Nagaur)
JODHPUR	88ITI015: Govt. ITI, Jodhpur
JODHPUR	88ITI016: Govt. ITI, Kuchaman City (Nagaur)
JODHPUR	88ITI017: Govt. ITI, Luni
JODHPUR	88ITI018: Govt. ITI, Mandore
JODHPUR	88ITI019: Govt. ITI, Merta City
JODHPUR	88ITI020: Govt. ITI, Nagaur
JODHPUR	88ITI021: Govt. ITI, Nathdwara
JODHPUR	88ITI022: Govt. ITI, Nawa City (Nagaur)
JODHPUR	88ITI023: Govt. ITI, Phalodi
JODHPUR	88ITI024: Govt. ITI, Pokran
JODHPUR	88ITI025: Govt. ITI, Production Center, Jodhpur
JODHPUR	88ITI026: Govt. ITI, Rajsamand
JODHPUR	88ITI027: Govt. ITI, Ramsar
JODHPUR	88ITI028: Govt. ITI, Salumber
JODHPUR	88ITI029: Govt. ITI, Siwana
JODHPUR	88ITI030: Govt. ITI, Udaipur
JODHPUR	88ITI032: Govt. Mahila ITI, Jodhpur
JODHPUR	2362: GOVT. P.G. COLLEGE (BOYS) (2362)

JODHPUR	88ITI031: Govt. Women ITI, Bikaner
JODHPUR	88ITI033: Govt. Women ITI, Udaipur
JODHPUR	88JSS001: Jan Shikshan Sansthan, (JSS), Barmer
JODHPUR	88JSS002: Jan Shikshan Sansthan, (JSS), Bikaner
JODHPUR	88JSS003: Jan Shikshan Sansthan, (JSS), Jaisalmer
JODHPUR	2311: KUCHAMAN COLLEGE (2311)
JODHPUR	88008: MAHILA P.G. MAHAVIDYALAYA (88008)
JODHPUR	2304: ONKARMAL SOMANI COLLEGE OF COM (2304)
JODHPUR	88014: SHRI TAGORE P.G. COLLEGE KUCHAMAN CITY (88014)
AHMEDABAD	09JSS009: Jan Shikshan Sansthan (JSS) DNH
AHMEDABAD	09JSS002: Jan Shikshan Sansthan (JSS), Ahmedabad
AHMEDABAD	09JSS003: Jan Shikshan Sansthan (JSS), Bharuch
AHMEDABAD	09JSS001: Jan Shikshan Sansthan (JSS), Gandhinagar
AHMEDABAD	09JSS006: Jan Shikshan Sansthan (JSS), Mehsana
AHMEDABAD	09JSS008: Jan Shikshan Sansthan (JSS), Patan
AHMEDABAD	09JSS005: Jan Shikshan Sansthan (JSS), Sabarkantha
AHMEDABAD	09JSS004: Jan Shikshan Sansthan (JSS), Surat
AHMEDABAD	09JSS007: Jan Shikshan Sansthan (JSS), Valsad
AHMEDABAD	0902: M.S. UNIVERSITY (902)
AHMEDABAD	0952P: MG SCIENCE INSTITUTE (952)
ANGUL	21235: Anchal College Padampur
ANGUL	2108: G M UNIVERSITY SAMBALPUR
ANGUL	2103: GOVT COLLEGE ROURKELA
ANGUL	44ITI001: Govt ITI Boudh
ANGUL	8900: IGNOU Regional Centre Angul

APPENDIX 1

QR Codes of Various Activities

S. No.	Activities	QR Code
1.	Admission https://ignouadmission.samarth.edu.in/	
2.	Assignments related links	
3.	Re-registration and Re-admission	
4.	Link to online Term End Examination form	
5.	Link to form for Early Declaration of Result	
6.	Link to Application Form for Obtaining Photocopy of the Answer Script	
7.	Link to form for Re-evaluation of Answer script	
8.	Link to Application form for Improvement of Division/Class	
9.	Link to form for Duplicate Grade Card/Mark-sheet	
10.	Link to form for Issue of Official Transcript	
11.	Link to form for Issue of Migration Certificate	
12.	Link to form for Date sheet of all Programme	

13.	Link for Old Question Papers	
14.	Link for Checking Study Material Status	
15.	Link for eGyankosh for Online Course Materials	