# UNIVERSITY OF MUMBAI

# INSTITUTE OF DISTANCE AND OPEN LEARNING (IDOL)

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# **Providing Higher Education through Distance mode since 1971**

50 successful years in Distance Education

# Prospectus 2020-21

Website: https://old.mu.ac.in/distance-open-learning/

http://idoloa.digitaluniversity.ac/

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# **SECTION-ONE**

### 1.1 THE UNIVERSITY OF MUMBAI:

The University of Mumbai (earlier known as University of Bombay) is one of the oldest and premier Universities in India. Established on 18<sup>th</sup>July, 1857, it is one amongst the first three universities in India, other being Calcutta and Madras universities. It is a University with Potential for Excellence Award accorded by the UGC.

### The University has been reaccredited with 'A' grade by the NAAC.

University of Mumbai has five campuses (i.e. Fort campus (Main), Kalina, Ratnagiri, Thane and Kalyan). 742 affiliated colleges and 55 departments with an enrolment of more than 7 lakh Students are engaged in the teaching-learning process. It has established its name in industrial collaboration and runs various professional programmes. The university is leading at national level in sports, cultural and other activities.

### 1.2 THE INSTITUTE:

The university started its correspondence education on 24thMarch 1971. It was known as "Directorate of Correspondence Programmes." In 1985 it was upgraded as "Directorate of Distance Education" which was further in 1993, upgraded as "Institute of Distance Education" (IDE). In the academic year 2008-09 the "The Institute of Distance Education" is now named as "INSTITUTE OF DISTANCE AND OPEN LEARNING" (IDOL). Since its inception IDOL has been giving high priority to human resource development by introducing various traditional Degree Programmes as well as Technical and Professional Programmes through distance mode.

University of Mumbai is the 7<sup>th</sup> University in the country which has started a Distance Education Program in a conventional set up. Initially it started with the registration of 845 students which has grown up to a staggering figure of 76,495 (2016-2017) in the last academic year. Students are also doing well by topping the merit list of the university examination and have bagged Gold Medal in M.A. Sanskrit, M.A. Marathi and Chancellor's Medal in M.A. Hindi. There are a good number of students securing FirstClass B.A./B.Com. and M.A. / M.Com. Many students of IDOL have gone abroad seeking higher education in the USA, UK, Australia, Canada, New Zealand etc. Many well known film personalities have also been enrolled in IDOL.

All Programmes offered by the Institute are approved by the Distance Education Bureau, UGC, New Delhi.

### 1. Ratnagiri Subcentre

University of Mumbai at Plot No. P-61, MIDC, Mirjole, Ratnagiri. Students counselling / guidance is available at this center.

### 2. IDOL learning centre at Thane Sub Campus

University of Mumbai at Balkum, Runwal Garden, Thane-Bhiwandi Road, Balkum Octroi Naka, Thane  $-400\,608$ . Students counselling / guidance is available at this center.

### 3. Kalyan Subcentre –

. University of Mumbai at Gandhar Road Vasant Valley, Khadak Pada Kalyan (West) Thane-421103 Students counselling / guidance is available at this center.

### 1.3 AIMS AND OBJECTIVES:

The main objectives of the Institute are:

- 1. To provide facilities of higher education to the working population, women and adults, who wish to upgrade their education or acquire knowledge in various disciplines.
- 2. To provide education for poor and such other people who cannot attend regular face to face classroom teaching.
- 3. To help the students upgrade educational qualification for academic achievements in the process of lifelong education.
- 4. To develop education as a lifelong activity so that the individual can refresh his/her knowledge or can acquire knowledge in new areas.

#### Vision:

To position IDOL as a premier ODL institute responsive to emerging needs of learners by providing education for all.

To produce high quality graduates and contribute towards sustainable development of the university by supporting creation of excellence in teaching, learning and research.

### **Mission:**

The institute shall strive to promote innovative strategies for creation and dissemination of knowledge using available media and technologies so that university graduates acquire relevant capabilities to contribute with diligence to national development and global knowledge pool through their caliber, professionalism, value system and sense of service.

This will be achieved by providing high quality self learning materials with extensive learner support services and to take education to the unreached and promote community participation for local development.

### 1.4 SPECIAL FEATURES:

- \* The institute is presently located in its own building of about 77,000 square feet area with connectivity.
- \* Curricular contents, mode of examination and the degrees to be awarded are the same as applicable to the students of the colleges affiliated to the University of Mumbai.
- \* The learning process of the Institute is mainly through the medium of printed study materials.
- \* The audio-visual and electronic aids are being added in some subjects as a reference resource.
- \* The institute is also developing the Virtual Learning Class-rooms (VLC) facility for the students as an additional facility.
- \* The institute has an independent library and two reading rooms for the students.

  Fifty thousand books are available with a good number of journals of national and international repute.
- \* Guidance lectures (Personal Contact Programmes) are conducted every year at about 76 centers in Mumbai and around.
- \* Counseling to the students during office hours at Head quarters is given by the core faculty.

### 1.5 INSTRUCTIONAL SYSTEM:

The methodology of instructions at Institute of Distance and Open Learning of the University of Mumbai is different from that of the conventional university/college. Our system is more learner oriented in which the learner is an active participant in the teaching learning process.

IDOL follows the multimedia approach in instructions. It comprises:

1. Printed study materials are basically in English and wherever possible in Marathi also. The question-papers in the subject other than languages are printed in English with Marathi version. The

students can write their answers in English, Marathi, Hindi or Gujarati if they indicate their choice for medium of answering in their Examination Form, if a student writes his /her answers in any language other than Marathi, Hindi, English and Gujarati, their answers will not be assessed and ZERO marks will be awarded. Students will have to collect their study materials from Room No.005 (Backside), ground floor, IDOL Building on Monday to Friday (11.00am to 5:00pm). However, for the students who are unable to make it, the study materials will be sent through post if he/ she makes a written request to the office along with the Xerox copy of Admission Form and complete postal address.

2. Face to face interaction with teachers and Counseling at IDOL by the core faculty is available between the times 3.00 p.m. to. 5 p.m. from Monday to Saturday (excluding  $2^{nd}$  &  $4^{\circ}$ Saturday of every month and public holidays) in Room No. 106 A, IDOL.

# 2. ADMISSION

### 2.1. ADMISSION SCHEDULE

Kindly check the admission schedule on the website <a href="https://old.mu.ac.in/distance-open-learning/">https://old.mu.ac.in/distance-open-learning/</a>

### 2.2 ONLINE ADMISSION PROCEDURE:

From the academic year 2017-18, admissions to all programmes are done through an online process. For details the students have to visit our website: <a href="https://old.mu.ac.in/distance-open-learning/&http://idoloa.digitaluniversity.ac/">https://old.mu.ac.in/distance-open-learning/&http://idoloa.digitaluniversity.ac/</a> and follow the procedure given on the website.

### **PAYMENT OF FEES**

The fees can be paid through any one of the following modes of payment:

1. Online payment option through Debit/ Credit Cards/ Internet Banking.

**Attestation of Documents** 

The self-attested copies of documents/papers will be accepted.

It is made clear that if any false attestation / falsified record is detected, the student will be debarred from the University / institute and in addition a criminal case under relevant section of IPC (viz., 471, 474 IPC etc.) will be instituted against him/her.

# 2.3. COURSES OFFERED UNDER SCIENCE FACULTY AND ELIGIBILITY CRITERIA AT A GLANCE

 $\{(CBCS\ pattern\ scheme\ implemented\ from\ the\ academic\ year\ 2020-21\ for\ the\ programs\ of\ B.Sc.IT\ \&\ MCA)$ 

(Semester Pattern & CBCS pattern is available for M.Sc. Maths & I.T programs)}

Sr.	Course & Eligibility					
No.						
1.	B. Sc. [Information Technology] (Three Years)					
	<b>F.Y. B. Sc. (IT)</b>	Students must PASSED HSC (XII std.) with Mathematics & Statistics.				
		(As per the Circular No. UG/67 of 2016/17) and (Ordinance No. 6302 & 6303)				
recognized F.Y.B.Sc. UG/235 o Sem – III The studed Semester		Passed in F.Y.B. Sc. IT or ATKT in OR passed three years' diploma from any recognized state and central board students should have passed in all subjects of F.Y.B.Sc. (IT) and failed not more 200 marks from University of Mumbai No. UG/235 of 2005.  Sem – III  The student is eligible for admission to Semester III if either the student passes Semester I & II  OR  The students fail in combination of Theory and / or practical taken in Semester I or Semester II or together. Where the total marks do not exceed 200.  Sem – IV				
	A student is eligible to be admitted to Semester IV irrespective of no. heads of					

	failure in the Third Semester. However, the student has to clear Semester I and II in order to appear for Semester IV examination.
	in order to appear for Semester IV examination.
T.Y. B. Sc. (	IT) Passed in all subjects of F. Y. & S.Y. B. Sc. (IT) or equivalent examination of other universities.
	Students should have passed in all subjects of FY B. Sc. (IT) and failed not more than 200 marks in SY B.Sc. (IT) from University of Mumbai. No. UG/235 of 2005.
	A student is eligible for admission to Semester V if either the student passes Semester III & IV. 5t
	OR
	The student fails in a combination of Theory and / or practical taken in Semester III or Semester IV or together, where the total marks does not exceed 200.
	OR
	A student is eligible to be admitted to Semester VI irrespective of no. of heads of failure in the fifth Semester. The results of Semester VI should be kept in abeyance until the students clears Semesters III, IV and V in full.
2.	B. Sc. [Computer Science] (Three Years)
T.Y. B. So (CS)	Students should have passed in all subjects of F. Y. & S.Y. B. Sc. (Comp. Sc.) or equivalent examination of other universities.  Students should have passed in all subjects of FY B. Sc (Comp. Sc.) and failed not more than 200 marks in SYB. Sc (Comp. Sc.) from University of Mumbai.
3.	M. Sc. [Mathematics] (Two Year/4 Semesters from 2021-21)
Part – I	Must have Passed T.Y. B.A./ B.Sc. with Mathematics as a <b>Major Subject</b> of this University OR Any Other Statutory University.  (As per the ordinance O.2447)
Part – II	M.A./M.Sc.(Maths.) Part-I Students can take admission to M.A./M.Sc.(Maths.) Part-II Course irrespective of Pass or Fail in M.A./M.Sc.(Maths.) Part-I examination. However, they will not be allowed to write Part-II examination held in the month of Oct/Nov. and submission of M.A./M.Sc.(Maths.) Part-I mark sheet within 10 days from the date of declaration of results.  O.2443: No candidate will be permitted to appear for the M.A./M.Sc.(Maths.) Part - II examination unless he/she has taken the Bachelors Degree earlier, in person or in absentia at convocation.
	<b>O.2451:</b> Students will not be allowed to appear for the M.A./M.Sc.(Maths.) Part-II examination unless he/she has passed the M.A./M.Sc.(Maths.) Part- I examination, previously.
4.	M. Sc. [Information Technology] (Two Year)
Part – I	Students must PASSED B. Sc. with IT/ Comp. Sc./ Maths/ Physics/ Statistics/ Electronics or BCS or BE (in any branch) ( <b>As per the Circular No. UG/67 of 2016/17</b> ) and (Ordinance No. 6302 & 6303)
Part – II	

		II Exam.). Students will not be permitted to appear for M.Sc. (IT) Part - II			
5.	examination unless he/she has passed the Part -I examination, previously.				
	M. Sc. [Computer Science] (Two Year)				
	Part – II	Passed in M.Sc. Part I (on or before the commencement of M.Sc. (Comp. Sc.) Part –II Exam.)			
		Students will not be permitted to appear for M.Sc.(Comp. Sc) Part - II examination unless he/she has passed the M.Sc. (Comp. Sc) Part - I examination, previously			
6.		M.C.A. (Three Year)			
	First Year	Graduate in any faculty with minimum 45% marks (40% for reserved category) and Mathematics at XII or higher level. Admission through Entrance Test.			
		• <b>0.2652</b> : No candidate will be allowed to appear for semester II examination by itself unless he has passed previously in all the subject of semester I.			
		• <b>0.2653</b> : Candidate will have the option to appear in the subject of semester of I simultaneously with subject of semester II.			
		(I) In view of their having obtained less than 45 percent of the full marks:			
		(II) In view of their failure to appear for semester I examination for any reason deemed Satisfactory by the Head of the institution.			
	Second Year	• 0.2655: A student who has passed the semester I examination and has			
	(Sem III)	satisfactorily completed the terms for the semester II. Provided, however, a student who has passed the semester II examination but has failed in semester I will also be permitted to enter upon the course for			
		<ul> <li>• 0.2656: A student who has appeared simultaneously for semester I/II and semester III examination and has failed to pass semester I/II examination but has, however, obtained passing marks in all the subject of semester III examination of the Second year examination will not be declared to have passed the Semester III examination unless he passes semester I/II examination in accordance with 0.213.</li> <li>• Such a student will however be allowed to keep term for semester IV examination.</li> </ul>			
	(Sem IV)	<ul> <li>0.2658: A candidate who has passed the semester I/II examination and has satisfactorily completed the course for the semester III, will be permitted to enter upon the course for the semester IV. Such a candidate will not be permitted to appear for semester IV examination unless he passes the Semester III examination in accordance with 0.213 Such a candidate will, however, be allowed to keep term for Semester V examination.</li> <li>0.2659: A candidate who has appeared simultaneously for Semester III and Semester IV examinations and has failed to pass Semester III examination but has, however, obtained passing marks in all the subjects of Semester IV examination of the Second Year examination will not be declared to have passed the Semester IV examination unless he passes the Semester III examination in accordance with 0.213</li> <li>Such a candidate will, however, be allowed to keep term for Semester V examination.</li> </ul>			

Third Year	• 0.2661: A student who has passed the semester III examination and has
Sem – V	satisfactorily completed the course for semester IV will be permitted to enter upon the course for semester V, provided, however, a student who has passed semester IV examination but has failed in the semester III will also be permitted to enter upon the course for semester V.  (As per the ordinance O.2661)  • 0.2662: A student who has appeared simultaneously for semester III/IV and semester V examination and has failed to pass semester III/IV examination but has, however, obtained the passing marks in all the subjects of semester V examination of Third Year examination will not be declared to have passed semester V examination unless he passes semester III/IV examination in accordance with 0.213.
Sem – VI	<ul> <li>0.2664: A candidate who has passed the semester III/IV examination and has satisfactorily completed the course for semester V will be permitted to enter upon the course for semester VI. Such a candidate will not be permitted to appear for semester VI examination unless he has passed semester III/ IV previously.</li> <li>0.2665: A candidate who has appeared simultaneously for semester V and semester VI examination and has failed to pass semester V examination but has, however, obtained passing marks in all the subjects of semester VI examination of Third Year for the degree of Master of computer Application will not be declared to have passed semester VI examination unless he passes semester V examination in accordance with 0.213.</li> </ul>

# 2.4 COURSE WISE FEES

Sr.			Fees	
No.	o. Course		Fees for	Fees for
			General	Reserve
			Category	Category
1.	B.Sc. (I. T.) (Three Years)	F.Y.B.Sc. (I. T.)	Rs.12725/-	Rs.1485/-
		S.Y.B.Sc. (I. T.)	Rs.14705/-	Rs.1485/-
		T.Y.B.Sc. (I. T.)	Rs. 16955/-	Rs.1735/-
2.	<b>B.Sc.</b> (Computer Science)	T.Y.B.Sc. (Computer	Rs. 16955/-	Rs.1735/-
	(Three Years)	Science)		
3.	M.Sc. (Mathematics)	Part-I	Rs. 5990/-	Rs.2005/-
		Part - II	Rs.5315/-	Rs.2255/-
4.	M.Sc.(Information	Part-I	Rs.12590/-	Rs.2005/-
	Technology)	Part - II	Rs.11815/-	Rs.2255/-
5.	M.Sc. Computer Science)	Part - II	Rs.11815/-	Rs.2255/-
6.	M.C.A.	First Year	Rs.17025/-	Rs. 3630/-
		Second Year	Rs.16525/-	Rs. 3630/-
		Third Year	Rs.15775/-	Rs. 3880/-

- Document Verification Charges Rs. 400/- for those students who have passed their Board Examination from other than Maharashtra State Higher Secondary Certificate Board (Examination).
- Those Students are taking admission in IDOL from Affiliated Colleges of University of Mumbai shall pay Rs.100/- for Transference Certificate Fees.
- Eligibility Fees of Rs.220/- for the students who have passed their Examination from Maharashtra State University/Board & Rs.320/- Other than Maharashtra State University/Board.

### **Cancellation of Admission and Refund of Fees**

- Administrative Charges of Rs. 250/- only will be deducted if admission is cancelled within 30days.
- No refund of fees if admission is cancelled after 30days.

# **SECTION-TWO**

# 3. DETAILS OF PROGRAMMES IN FACULTY OF SCIENCE

### 3.1 B.SC. COMPUTER SCIENCE

<u>T.Y.B.SC. COMPUTER SCIENCE</u> (Old Course- Yearly Pattern with 80:20 Scheme of examination circular no. UG/ICD/2015-16/137) (**Study Material Available**)

#### **SUBJECT: -**

Sr. No.	Paper			
1.	Data Communication, Networking and Security (With Study Material)			
2.	Advanced Java (With Study Material)			
3.	Operating Systems and Linux (With Study Material)			
4.	DBMS II & Software Engineering. (With Study Material)			
	APPLIED COMPONETS (THEORY AND PRACTICAL)			
5.	Principles of Web Design & Web Technologies (Without Study Material)			
6.	Dot NET Technologies (Without Study Material)			

### Note:

- 1. In 80:20 Scheme of Examination, for every subject there is an internal assessment of 20% of total marks (maximum marks) allotted for the paper (theory as well as for practical). e.g. Foundation Course I (FYCS-paper 1) has maximum marks of 100 then for external assessment 80 and for internals assessment 20 marks are allotted. there are no minimum passing marks for the internal assessment.
- 2. Internal assessment is of objective type.
- 3. Practical Internal assessment is based on problem solving ability and practical skill assess during contact sessions.

### **STANDARD OF PASSING: - (FY, SY and T.Y)**

- 1. In 80:20 Scheme of examination, every paper and practical is consider as separate head of passing.
- 2. Minimum passing marks require in every head is 40% (theory as well as in practical).
- 3. To pass the examination the student must secure minimum 40 marks out of 100 marks paper and minimum 24 marks out of 60 marks paper
- 4. For practical component (F.Y. and S.Y.), student need to score minimum 16 marks out of 40 marks in each practical.

For practical component (of T.Y.), student need to score minimum 20 marks out of 50 marks in each practical.

### **Documents required:**

### Photo & Signature has to be scan & upload during the Registration process

Third Year: - B.Sc. (Comp. Sci.)

### Documents required for admission to the old students of IDOL

- 1 Original mark sheet of First year & Second Year (In case of more than one attempt student should scan & upload first and last mark sheet of the respective class)
- 2 Previous years Identity Card.
- 3 Marriage Certificate/ Gazette Notification (For female married students) in case of name change of the student

### Documents required for the students from affiliated colleges of University of Mumbai

- 1 Original mark sheet of First year & Second Year (In case of more than one attempt student should scan & upload first and last mark sheet of the respective class)
- 2 No Objection Certificate from the last attended college
- 3 Marriage Certificate/ Gazette Notification (For female married students) in case of name change of the student

### **INSTRUCTIONS FOR ELIGIBILITY CASE STUDENTS: -**

The students from CBSE, ICSE, DIPLOMA from MSBTE/other state, NIOS, HSC Boards other than Maharashtra State, IB, CIE, D. ED and Degree from other than University of Mumbai will have to obtain the Eligibility Certificate which will be issued online after approval from Eligibility Unit, Room No. 108 (A), Institute of Distance and Open Learning, Dr. Shankar Dayal Sharma Bhavan, Vidyanagari, Santacruz (E), Mumbai-400 098.

Migration certificate in original shall be submitted within 2 months from date of admission in respective Department of IDOL.

Equivalence certificate shall be submitted by the students wherever required.

<u>Note: -</u> The students who have passed 3/4yr Bachelor's Degree from other University and completed another degree course viz. B. ED, L.L.B., MMS etc. form college affiliated to University of Mumbai and wish to pursue M.A./M.COM/M.Sc./MCA from the University of Mumbai are required to obtain Eligibility Certificate from University of Mumbai, IDOL. Such students should submit their Eligibility 9 Confirmation letter from the earlier College / Institute affiliated to Mumbai University from where he / she has passed B.Ed. /LLB/ MMS / etc.

### REQUIRED DOCUMENTS FOR OBTAINING ELIGIBILITY CERTIFICATE:

- 1. S.S.C. and onwards all examination (F.Y., S.Y. & T.Y.)
- 2. Equivalent Certificate from MSBTE/Tech Board of the concern state (in case of diploma students)
- 3. Passing/ Convocation/ Degree Certificate
- 4. Marriage Certificate/ Gazette Notification (For female married students)

5. Migration / Transfer Certificate (shall be submitted within 2 months)

### **FEES FOR ELIGIBILITY CASE:**

Document Verification fees of Rs. 400/- will be charged from UG/PG programmes students who have passed their Board/ University Examinations from other than Maharashtra State Higher Secondary Board / other than University of Mumbai (Only for Eligibility Case).

Eligibility fees of Rs. 220/- for the students who have passed their examination from Maharashtra State Universities and Diploma from MSBTE and Rs. 320/- for out of Maharashtra State Universities /Boards other than Maharashtra /Technical Boards of other State.

# 3.2 B.SC. INFORMATION TECHNOLOGY

**FYBSc (Information Technology)**: - (Semester Pattern (w.e.f. Academic Year 2020-2021) with 75:25 Scheme of examination circular no. UG/176). Revised syllabus from 2020-21.

Semester – 1				
Course Code	Course Type	Course Title	Credits	
USIT101	Core Subject	Imperative Programming	2	
USIT102	Core Subject	Digital Electronics	2	
USIT103	Core Subject	Operating Systems	2	
USIT104	Core Subject	Discrete Mathematics	2	
USIT105	Ability Enhancement Skill Course	Communication Skills	2	
USIT1P1	Core Subject Practical	Imperative Programming Practical	2	
USIT1P2	Core Subject Practical	Digital Electronics Practical	2	
USIT1P3	Core Subject Practical	Operating Systems Practical	2	
USIT1P4	Core Subject Practical	Discrete Mathematics Practical	2	
USIT1P5	Ability Enhancement Skill Course Practical	Communication Skills Practical	2	
19		Total Credits	20	

Semester – 2				
Course Code	Course Type	Course Title	Credits	
USIT201	Core Subject	Object oriented Programming	2	
USIT202	Core Subject	Microprocessor Architecture	2	
USIT203	Core Subject	Web Programming	2	
USIT204	Core Subject	Numerical and Statistical Methods	2	
USIT205	Ability Enhancement Skill Course	Green Computing	2	
USIT2P1	Core Subject Practical	Object Oriented Programming Practical	2	
USIT2P2	Core Subject Practical	Microprocessor Architecture Practical	2	
USIT2P3	Core Subject Practical	Web Programming Practical	2	
USIT2P4	Core Subject Practical	Numerical and Statistical Methods Practical	2	
USIT2P5	Ability Enhancement Skill Course Practical	Green Computing Practical	2	
		Total Credits	20	

### Photo & Signature has to be scan & upload during the Registration process

### FY BSc (Information and Technology)

### Documents required for admission to the old students of IDOL

Date of Birth Proof-two copies

- 1. Proof of residence
- 2. Affix three passport size photographs on each of the following: admission form, examination form, and identity card.
- 3. Statement of marks (all attempts of all lower exams) is required to be submitted.
- 4. XII std. Original mark sheet and Original passing certificate. If the students belong to another board, studentsneed to submit their Migration Certificate after the completion of the admission process.
- 5. Original leaving certificate +tree Xerox copies.
- 6. Marriage Certificate/ Gazette Notification (For female married students) in case of name change of the student

# • Documents required for the students from affiliated colleges of University of Mumbai

- 1. Original mark sheet of first year and in case of more than one attempt student Should scan &upload the first and last mark sheet of the respective class.
- 2. No Objection Certificate from the last attended college
- 3. Marriage Certificate/ Gazette Notification (For female married students) in case of name change of the student.

### Note:

- 1. The 75% 25% pattern has been introduced for BSc.IT from the academic year 2020-2021(circular no. UG/176)
- 2. For theory per paper is 100 marks: 75 marks out of 100 marks will be external and 25 marks out of 100 marks would be internals
- 3. For practical, per paper is 50 marks: 40 marks out of 50 marks will be practicals and 10 marks out of 50 will be viva and journal report.
- 4. Theory internal assessment is of objective type/test based on the subject knowledge
- 5. Practical internal assessment if based on problem solving ability and practical skill assess during lecture sessions

### **Standard of Passing:**

- 1. In the 75:25 scheme of examination every paper is considered as a separate head of passing.
- 2. Minimum passing marks required in every head is 40% (Theory + Practical)
- 3. To pass the theory examination student must secure minimum 30 marks out of 75 marks
- 4. To pass the internal examination student must secure minimum 10 marks out of 25 marks
- 5. To pass the practical examination student must secure minimum 20 marks out of 50 marks

**SYBSc Information Technology:** - (Semester Pattern (wef Academic Year 2011-2012) with 80:20 Scheme of examination circular no. UG/ICD/2015-16/137) (Study Material Available)

	Semester-III			
Sr. No.	Paper			
1	Logic and Discrete Mathematics (With Study Material)			
	Lo			
2	Computer Graphics (With Study Material)			
3	Advanced SQL (With Study Material)			
4	Object Oriented Programming using C++ (With Study Material)			
5	Modern Operating Systems (With Study Material)			
	Semester-IV			
1	Software Engineering (Without Study Material)			
2	Multimedia (With Study Material)			
3	Java and Data Structures (Without Study Material)			
4	Quantitative Techniques (With Study Material)			
5	Embedded Systems (With Study Material)			

### • Documents required:

Photo & Signature has to be scan & upload during the Registration process

### F.Y. B. Sc. (Information Technology)

### Documents required for admission to the old students of IDOL

- 1. Original mark sheet of First year and in case of more than one attempt student should scan & upload first and last mark sheet of the respective class.
- 2. Previous year Identity Card.
- 3. Marriage Certificate/ Gazette Notification (For female married students)

### • Documents required for the students from affiliated colleges of University of Mumbai

- 1. Original mark sheet of first year and in case of more than one attempt student Should scan & upload first and last mark sheet of the respective class.
- 2. No Objection Certificate from the last attended college.
- 3. Marriage Certificate/ Gazette Notification (For female married students) in case of name change of the student.

For the current academic year, student has to submit their Diploma passing certificates at the time of admission. The student those passed their Diploma examination in March of the current year have to submit their Diploma passing Certificate in the month of December in the current academic year.

# Student admitted on provisional on eligibility Certificate required to submit their original Migration Certificate.

<sup>\*</sup> Original certificate will be returned after verification of form.

**TYBSc Information Technology:** - (Semester Pattern (wef Academic Year 2012-2013) with 80:20 Scheme of examination circular no. UG/ICD/2015-16/137) (Study Material Available)

	Semester-V			
Sr. No.	Paper			
1	Network Security (Softcopy available)			
2	ASP.NET with C++ (With Study Material)			
3	Software Testing (With Study Material)			
4	Advanced Java (Softcopy available)			
5	Linux Administration (With Study Material)			
	Semester-VI			
1	Internet Technologies (With Study Material)			
2	Digital Signals and Systems (With Study Material)			
3	Data Warehousing (With Study Material)			
4	Elective: 1. IPR and Cyber Laws, 2. Project Management (With Study Material) and 3. GIS			
5	Project Report			
6	Project Viva-voce			

### • **Documents required:**

### Photo & Signature has to be scan & upload during the Registration process

### **FY B. Sc. (Information Technology)**

### Documents required for admission to the old students of IDOL

- 1 Original mark sheet of First year & Second Year (In case of more than one attempt student should scan & upload first and last mark sheet of the respective class)
- 2 Previous years Identity Card.
- 3 Marriage Certificate/ Gazette Notification (For female married students) in case of name change of the student

### • Documents required for the students from affiliated colleges of University of Mumbai

- 1 Original mark sheet of First year & Second Year (In case of more than one attempt student should scan & upload first and last mark sheet of the respective class)
- 2 No Objection Certificate from the last attended college
- 3 Marriage Certificate/ Gazette Notification (For female married students) in case of name change of the student

#### Note:

- 1. The 80%:20% pattern has been introduced for BSc-IT from the Academic year 2015-2016. (As per the Circular no.: UG/ICD/2015-2016/137)
- 2. For theory, per paper is of 100 marks: 80 marks out of 100 marks will be the External and 20 marks out of 100 marks will be the Internal.
- 3. For practical, per paper is 50 marks: 40 marks out of 50 marks will be the External and 10 marks out of 50 marks will be the Internal.
- 4. There is no minimum passing for Internal Assessment.
- 5. Theory Internal Assessment is of objective types/test based on previous question papers.
- 6. Practical Internal assessment is based on problem solving ability and practical skill assess

during contact sessions.

### **Standard of Passing:**

- 1. In 80:20 scheme of examination, every paper and practical is considered as separate head of passing.
- 2. Minimum passing marks required in every head is 40% (theory as well as practical).
- 3. To pass the theory examination, student must secure minimum 40 marks out of 100 marks.
- 4. To pass the practical examination, student must secure minimum 20 marks out of 50 marks.
- 5. Project Viva-voce comprises of 100 marks; students are required to secure 40 marks out of 100 marks.
- 6. Project Report comprises of 100 marks; students are required to secure 40 marks out of 100 marks.

### REQUIRED DOCUMENTS FOR OBTAINING ELIGIBILITY CERTIFICATE:

- 1. S.S.C. and onwards all examination (F.Y., S.Y. & T.Y.)
- 2. Equivalent Certificate from MSBTE/Tech Board of the concern state (in case of diploma students)
- 3. Passing/Convocation/Degree Certificate
- 4. Marriage Certificate/ Gazette Notification (For female married students)
- 5. Migration / Transfer Certificate (shall be submitted within 2 months)

### FEES FOR ELIGIBILITY CASE:

Document Verification fees of Rs. 400/- will be charged from UG/PG programme students who have passed their Board/ University Examinations from other than Maharashtra State Higher Secondary Board / other than University of Mumbai (Only for Eligibility Case).

Eligibility fees of Rs. 220/- for the students who have passed their examination from Maharashtra State Universities and Diploma from MSBTE and Rs. 320/- for out of Maharashtra State Universities /Boards other than Maharashtra /Technical Boards of other State.

# POST GRADUATE PROGRAMMES

# 3.3 M.Sc. (Mathematics)

# Eligibility for Admission to MSc (Mathematics)-I

As per University of Mumbai circular **No. PG/ Univ./VCD/ ICC / 2012-13/ 8,** A learner for being eligible to apply for admission to the M.Sc. degree course by papers must have passed: The B.Sc. degree examination of this university or degree of any other university recognized as equivalent thereto with minimum 46 credits or its equivalent (i.e, the minimum credits required for majoring in a subject and excluding the credits for optional courses) of the subject which he wants to offer for the M.Sc. degree course by papers.

# **Part** – I (Revised 2020-21)

(There will be 5 Papers for Each Semester in Part I, 80 Marks Theory and 20 Marks Internal assessments per Paper. Total Marks per Semester 500)

SEMESTER I		SEMESTER II	
Paper No.	Name of the Papers	Paper No.	Name of the Papers
PSMT101	Algebra - I	PSMT201	Algebra - II
PSMT102	Analysis - I	PSMT202	Topology
PSMT103	Complex Analysis	PSMT203	Analysis - II
PSMT104	Ordinary Differential Equations	PSMT204	Partial Differential Equations
PSMT105	Discrete Mathematics	PSMT205	Probability Theory

# Part - II (Revised)

(There will be 5 Papers for Part – II, 500 Mark with 20 Marks Internal assessments per Paper)

Paper No.	Name of the Papers
Paper I	Algebra - II and Field Theory
Paper II	Advanced Analysis II and Fourier Analysis
Paper III	Differential Geometry and Functional Analysis
Paper IV	Numerical Analysis
Paper V	Graph Theory

1. As per the M. Sc. (Maths) Class Improvement ordinance 0.2462 student has to appear for class Improvement within 5 years from the passing years. (Please see link <a href="http://archive.mu.ac.in/myweb\_test/M.A.%20MSc.%20%28Maths%29%20Class%20Improvement%20Ordinance.pdf">http://archive.mu.ac.in/myweb\_test/M.A.%20MSc.%20%28Maths%29%20Class%20Improvement%20Ordinance.pdf</a>)

# <u>Documents required: Students should scan & upload all the required documents in</u> Original.

# Photo & Signature has to be scan during the Registration process

# Part- I: - M. A. / M.Sc. (Maths.)

### Documents required for admission to the old students of IDOL

- 1. Original mark sheet of First year and in case of more than one attempt student should upload the first and last mark sheet of the respective class.
- 2. Previous year Identity Card.
- 3. Marriage Certificate/ Gazette Notification (for female married students) in case of name change of the student

### Documents required for the students from affiliated colleges of University of Mumbai

- 1. Original mark sheet of first year and in case of more than one attempt student should upload first and last mark sheet of the respective class
- 2. Marriage Certificate/ Gazette Notification (For female married students) in Case of name change of the student

### **Documents required:**

## Photo & Signature has to be scan & upload during the Registration process

### Part- II: - M.A/M.Sc. (Maths.)

### Documents required for admission to the old students of IDOL

- 1. Original mark sheet of First year and in case of more than one attempt student should scan & upload first and last mark sheet of the respective class.
- 2. Previous year Identity Card.
- 3. Convocation certificate
- 4. Marriage Certificate/ Gazette Notification (for female married students) in case of name change of the student

### Documents required for the students from affiliated colleges of University of Mumbai

- 1. Original mark sheet of first year and in case of more than one attempt student Should scan & upload first and last mark sheet of the respective class.
- 2. Current Year No Objection Certificate from the last attended college
- 3. Convocation certificate
- 4. Marriage Certificate/ Gazette Notification (For female married students) in case of name change of the student

### INSTRUCTIONS FOR ELIGIBILITY CASE STUDENTS: -

The students from CBSE, ICSE, DIPLOMA from MSBTE/other state, NIOS, HSC Boards other than Maharashtra State, IB, CIE, D. ED and Degree from other than University of Mumbai will have to obtain the Eligibility Certificate which will be issued online after approval from Eligibility Unit, Room No. 108

(A), Institute of Distance and Open Learning, Dr. Shankar Dayal Sharma Bhavan, Vidyanagari, Santacruz (E), Mumbai-400 098.

Migration certificate in original shall be submitted within 2 months from date of admission in respective Department of IDOL.

Equivalence certificate shall be submitted by the students wherever required.

Note: - The students who have passed 3/4yr Bachelor's Degree from other University and completed another degree course viz. B. ED, L.L.B., MMS etc. form college affiliated to University of Mumbai and wish to pursue M.A./M.COM/M.Sc./MCA from the University of Mumbai are required to obtain Eligibility Certificate from University of Mumbai, IDOL. Such students should submit their Eligibility 9 Confirmation letter from the earlier College / Institute affiliated to Mumbai University from where he / she has passed B.Ed. /LLB/ MMS / etc.

### REQUIRED DOCUMENTS FOR OBTAINING ELIGIBILITY CERTIFICATE:

- 1. S.S.C. and onwards all examination (F.Y., S.Y. & T.Y.)
- 2. Equivalent Certificate from MSBTE/Tech Board of the concern state (in case of diploma students)
- 3. Passing/ Convocation/ Degree Certificate
- 4. Marriage Certificate/ Gazette Notification (For female married students)
- 5. Migration / Transfer Certificate (shall be submitted within 2 months)

### **FEES FOR ELIGIBILITY CASE:**

Document Verification fees of Rs. 400/- will be charged from UG/PG programmeω students who have passed their Board/ University Examinations from other than Maharashtra State Higher Secondary Board / other than University of Mumbai (Only for Eligibility Case).

Eligibility fees of Rs. 220/- for the students who have passed their examination from Maharashtra State Universities and Diploma from MSBTE and Rs. 320/- for out of Maharashtra State Universities /Boards other than Maharashtra /Technical Boards of other State.

### 3.4 M.Sc. (COMPUTER SCIENCE)

(Two Year Post Graduate Degree Course with 80:20 Scheme of examination [circular no. UG/ICD/2015-16/137])

### **SUBJECTS**

M.Sc. Comp. Sci. Part II		
Paper No.	Paper Name	
Paper 1	Artificial Intelligence	
	Image Processing	
Paper 2	Distributed Computing	
	Embedded Systems	
Paper 3	Elective I- Enterprise Networking and Satellite Communication	
Paper 4	Elective II-Optimization Techniques and	
	Customer Resources Management	
	Project	

### Note:

- 1. In 80:20 Scheme of Examination, for every subject there is an internal assessment of 20% of total marks (maximum marks) allotted for the paper (theory as well as for practicals).
  - E.g. Paper 1 has maximum marks of 75 then for external assessment 60 and for internals assessment 15 marks are allotted, there are no minimum passing marks for the internal assessment.
- 2. Internal assessment is of objective type.
- 3. Practical Internal assessment is based on problem solving ability and practical skill assess during contact sessions.

### STANDARD OF PASSING: - (M.Sc. Comp. Sci. and I.T.)

- 1. In 80:20 Scheme of examination, every paper and practical is consider as separate head of passing.
- 2. Minimum passing marks require in every head is 40% (theory as well as in practical).
- 3. To pass the examination the student must secure minimum 30 marks out of 75 marks in each theory paper separately
- 4. For practical component, student need to score minimum 20 marks out of 50 marks in each practical.
- 5. Project has 100 marks and student need to score minimum 40% marks for passing.

### Documents required: Students should scan & upload all the required documents in Original.

Photo & Signature has to be scan during the Registration process

Part- I: - M.Sc. (I. T.) / Comp. Sci.

### Documents required for admission to the old students of IDOL

- 4. Original mark sheet of First year and in case of more than one attempt student should upload first and last mark sheet of the respective class.
- 5. Previous year Identity Card.
- 6. Marriage Certificate/ Gazette Notification (for female married students) in case of name change of the student

### Documents required for the students from affiliated colleges of University of Mumbai

- 1. Original mark sheet of first year and in case of more than one attempt student should upload first and last mark sheet of the respective class
- 2. Marriage Certificate/ Gazette Notification (For female married students) in case of name change of the student.

### **Documents required:**

### Photo & Signature has to be scan & upload during the Registration process

Part- II: - M.Sc. (I. T.) / Comp. Sci.

### Documents required for admission to the old students of IDOL

- 5. Original mark sheet of First year and in case of more than one attempt student should scan & upload first and last mark sheet of the respective class.
- 6. Previous year Identity Card.
- 7. Convocation certificate
- 8. Marriage Certificate/ Gazette Notification (for female married students) in case of name change of the student

### Documents required for the students from affiliated colleges of University of Mumbai

- 1. Original mark sheet of first year and in case of more than one attempt student Should scan & upload first and last mark sheet of the respective class.
- 2. No Objection Certificate from the last attended college
- 3. Convocation certificate
- 4. Marriage Certificate/ Gazette Notification (For female married students) in case of name change of the student

### **Documents required:**

Documents required for admission for all students of other universities (Applicable only for Part- I of M.Sc. (I. T.)/ Comp. Sci.)

### **ELIGIBILITY CRETIRIA**

### INSTRUCTIONS FOR ELIGIBILITY CASE STUDENTS: -

The students from CBSE, ICSE, DIPLOMA from MSBTE/other state, NIOS, HSC Boards other than Maharashtra State, IB, CIE, D. ED and Degree from other than University of Mumbai will have to obtain the Eligibility Certificate which will be issued online after approval from Eligibility Unit, Room No. 108 (A), Institute of Distance and Open Learning, Dr. Shankar Dayal Sharma Bhavan, Vidyanagari, Santacruz (E), Mumbai-400 098.

Migration certificate in original shall be submitted within 2 months from date of admission in respective Department of IDOL.

Equivalence certificate shall be submitted by the students wherever required.

<u>Note: -</u> The students who have passed 3/4yr Bachelor's Degree from other University and completed another degree course viz. B. ED, L.L.B., MMS etc. form college affiliated to University of Mumbai and wish to pursue M.A./M.COM/M.Sc./MCA from the University of Mumbai are required to obtain Eligibility Certificate from University of Mumbai, IDOL. Such students should submit their Eligibility 9 Confirmation letter from the earlier College / Institute affiliated to Mumbai University from where he / she has passed B.Ed. /LLB/ MMS / etc.

### REQUIRED DOCUMENTS FOR OBTAINING ELIGIBILITY CERTIFICATE:

- 1. S.S.C. and onwards all examination (F.Y., S.Y. & T.Y.)
- 2. Equivalent Certificate from MSBTE/Tech Board of the concern state (in case of diploma students)
- 3. Passing/ Convocation/ Degree Certificate
- 4. Marriage Certificate/ Gazette Notification (For female married students)
- 5. Migration / Transfer Certificate (shall be submitted within 2 months)

### **FEES FOR ELIGIBILITY CASE:**

Document Verification fees of Rs. 400/- will be charged from UG/PG programmes students who have passed their Board/ University Examinations from other than Maharashtra State Higher Secondary Board / other than University of Mumbai (Only for Eligibility Case).

Eligibility fees of Rs. 220/- for the students who have passed their examination from Maharashtra State Universities and Diploma from MSBTE and Rs. 320/- for out of Maharashtra State Universities /Boards other than Maharashtra /Technical Boards of other State.

# 3.5 M. Sc. (Information Technology)

Two years Post Graduate Degree course with 60:40 scheme of examination (Circular no. UG/ICD/2015-16/137) (Study Material Available)

Semester – I		
Course Code	Course Title	Credits
PSIT101	Research in Computing	4
PSIT102	Data Science	4
PSIT103	Cloud Computing	4
PSIT104	Soft Computing Techniques	4
PSIT1P1	Research in Computing Practical	2
PSIT1P2	Data Science Practical	2
PSIT1P3	Cloud Computing Practical	2
PSIT1P4	Soft Computing Techniques Practical	2
	Total Credits	24

Semester – II			
Course Code	Course Title	Credits	
PSIT201	Big Data Analytics	4	
PSIT202	Modern Networking	4	
PSIT203	Microservices Architecture	4	
PSIT204	Image Processing	4	
PSIT2P1	Big Data Analytics Practical	2	
PSIT2P2	Modern Networking Practical	2	
PSIT2P3	Microservices Architecture Practical	2	
PSIT2P4	Image Processing Practical	2	
	Total Credits	24	

Evaluation Scheme Internal Evaluation (40 Marks)

The internal assessment marks shall be awarded as follows:

- 1. 30 marks (Any one of the following):
  - a.Written Test or
  - b.SWAYAM (Advanced Course) of minimum 20 hours and certification exam completed or
  - c. NPTEL (Advanced Course) of minimum 20 hours and certification exam completed or
- d. Valid International Certifications (Prometric, Pearson, Certiport, Coursera, Udemy and the like)
  - e. One certification marks shall be awarded one course only. For four courses, the students will have to complete four certifications.

2. 10 marks The marks given out of 40 for publishing the research paper should be divided into four courses and should be awarded.

Out of 10 in each of the four course

Suggested format of Question paper of 30 marks for the written test

Syllabus Link: <a href="https://old.mu.ac.in/wp-content/uploads/2016/06/4.76-M.Sc">https://old.mu.ac.in/wp-content/uploads/2016/06/4.76-M.Sc</a>.-IT-Part-1-Syllabus-2019-20-onse-side-converted.pdf

	MSc- IT Part-2		
1	Software Testing (Study Material available) & Information Security (Study Material available)		
2	Artificial Intelligence (Study Material available) & Robotics (Study Material available)		
3	Elective-1 Intelligent Systems (Study Material available) & Neural Networks and Fuzzy Systems (Study Material available)		
4	Elective-2 Multimedia Systems and Convergence of Technology (Study Material available) & Java Technology (Study Material available)		
5	Project		

Syllabus: http://archive.mu.ac.in/myweb\_test/MSC-IT-Syllabus.pdf

### Note:

- 1. In 80:20 Scheme of Examination, for every paper, there is an internal assessment of 20% of total marks (maximum marks) allotted for the paper (theory as well as for practical).
- 2. E.g. Paper 1 has maximum marks of 75 then for external assessment 60 and for internals assessment 15 marks are allotted. There are no minimum passing marks for the internal assessment.
- 3. Internal assessment is of objective type/test based on previous question paper.
- 4. Practical Internal assessment is based on problem solving ability and practical skill assess during contact sessions.

### STANDARD OF PASSING: - (M.Sc. Comp. Sci. and I.T.)

- 1. In 80:20 Scheme of examination, every paper and practical is considered as separate head of passing.
- 2. Minimum passing marks require in every head is 40% (theory as well as in practical).
- 3. To pass the examination the student must secure minimum 30 marks out of 75 marks in each theory paper separately
- 4. For practical component, student needs to score minimum 20 marks out of 50 marks in each practical.
- 5. Project has 100 marks and student need to score minimum 40% marks for passing.

# <u>Documents required: Students should scan & upload all</u> the required documents in Original.

### Photo & Signature has to be scan during the Registration process

Part- I: - M.Sc. (I. T.) / Comp. Sci.

### Documents required for admission to the old students of IDOL

- 1. Original mark sheet of First year and in case of more than one attempt student should upload first and last mark sheet of the respective class.
- 2. Previous year Identity Card.
- 3. Marriage Certificate/ Gazette Notification (for female married students) in case of name change of the student

### Documents required for the students from affiliated colleges of University of Mumbai

- 1. Original mark sheet of first year and in case of more than one attempt student should upload first and last mark sheet of the respective class
- 2. Marriage Certificate/ Gazette Notification (For female married students) in case of name change of the student.

### **Documents required:**

### Photo & Signature has to be scan & upload during the Registration process

Part- II: - M.Sc. (I. T.) / Comp. Sci.

### Documents required for admission to the old students of IDOL

- 1. Original mark sheet of First year and in case of more than one attempt student should scan & upload first and last mark sheet of the respective class.
- 2. Previous year Identity Card.
- 3. Convocation certificate
- 4. Marriage Certificate/ Gazette Notification (for female married students) in case of name change of the student

### Documents required for the students from affiliated colleges of University of Mumbai

- 1. Original mark sheet of first year and in case of more than one attempt student should scan & upload first and last mark sheet of the respective class.
- 2. No Objection Certificate from the last attended college.
- 3. Convocation certificate
- 4. Marriage Certificate/ Gazette Notification (For female married students) in case of name change of the student

### **Documents required:**

Documents required for admission for all students of other universities (Applicable only for Part- I of M.Sc. (I. T.)/ Comp. Sci.)

### INSTRUCTIONS FOR ELIGIBILITY CASE STUDENTS: -

The students from CBSE, ICSE, DIPLOMA from MSBTE/other state, NIOS, HSC Boards other than Maharashtra State, IB, CIE, D. ED and Degree from other than University of Mumbai will have to obtain the Eligibility Certificate which will be issued online after approval from Eligibility Unit, Room No. 108 (A), Institute of Distance and Open Learning, Dr. Shankar Dayal Sharma Bhavan, Vidyanagari, Santacruz (E), Mumbai-400 098.

Migration certificate in original shall be submitted within 2 months from date of admission in respective Department of IDOL.

Equivalence certificate shall be submitted by the students wherever required.

Note: - The students who have passed 3/4yr Bachelor's Degree from other University and completed another degree course viz. B. ED, L.L.B., MMS etc. form college affiliated to University of Mumbai and wish to pursue M.A./M.COM/M.Sc./MCA from the University of Mumbai are required to obtain Eligibility Certificate from University of Mumbai, IDOL. Such students should submit their Eligibility 9 Confirmation letter from the earlier College / Institute affiliated to Mumbai University from where he / she has passed B.Ed. /LLB/ MMS / etc.

### REQUIRED DOCUMENTS FOR OBTAINING ELIGIBILITY CERTIFICATE:

- 1. S.S.C. and onwards all examination (F.Y., S.Y. & T.Y.)
- 2. Equivalent Certificate from MSBTE/Tech Board of the concern state (in case of diploma students)
- 3. Passing/ Convocation/ Degree Certificate
- 4. Marriage Certificate/ Gazette Notification (For female married students)
- 5. Migration / Transfer Certificate (shall be submitted within 2 months)

### **FEES FOR ELIGIBILITY CASE:**

Document Verification fees of Rs. 400/- will be charged from UG/PG program students who have passed their Board/ University Examinations from other than Maharashtra State Higher Secondary Board / other than University of Mumbai (Only for Eligibility Case).

Eligibility fees of Rs. 220/- for the students who have passed their examination from Maharashtra State Universities and Diploma from MSBTE and Rs. 320/- for out of Maharashtra State Universities /Boards other than Maharashtra /Technical Boards of other State.

# **DETAILS OF PROGRAMMES IN FACULTY OF TECHNOLOGY**

# 3.6 Master of Computer Application Course (MCA)

Three year (Six semesters) Post Graduate Programme

### MCA – SEM I & SEM II (Revised 2020-21)

**MCA SEM I** -80 Marks Theory and 20 Marks Internal assessments for each Subject i.e. From MCA 101 - MCA 105. Each Lab i.e. MCAL101-MCAL102 (Practical -50 marks, Oral-25 marks, Term work- 25). Total 700 Marks.

MCA SEM II -80 Marks Theory and 20 Marks Internal assessments for each Subject i.e. From MCA 201 - MCA 205. Each Lab i.e. MCAL201-MCAL202 (Practical -50 marks, Oral-25 marks, Term work- 25). Total 700 Marks.

SEMESTER I		SEMESTER II	
Subject	Name of the Papers	Paper No.	Name of the Papers
Code			
MCA101	Object Oriented Programming	MCA201	Data Structures
MCA102	Software Engineering & Project Management	MCA202	Operating System
MCA103	Computer Organization and Architecture	MCA203	Computer Networks
MCA104	Ordinary Differential Equations	MCA204	Financial accounting and Management
MCA105	Discrete Mathematics	MCA205	Decision making and Mathematical Modelling
MCAL101	Lab I – SEPM and OOP Lab	MCAL201	Lab I – OS and CN Lab
MCAL102	Lab II – Web Technologies and Mini Project-Lab	MCAL202	Lab II –DS and Web Application Development using Open source tools Lab

# SECOND YEAR M.C.A. SEMESTER III & IV

### **SUBJECTS (With Study material)**

Semester – III		Semester – IV	
Sr. No.	Paper	Sr. No.	Paper
1	Object Oriented Programming C++	1	Java Programming
2	Database Management Systems	2	Object Oriented Modeling and Design Using UML
3	Data Communication and Networking	3	Network Security
4	Operations Research	4	Advance Database Techniques
5	Software Engineering	5	Elective I: Customer Relationship Management
6	Management Information Systems	6	Software Project Management

### N.B.: - ASSIGNMENT SUBMISSION

1. Students are required to submit their respective term works/assignments at their respective PCP centers.

### THIRD YEAR M.C.A. SEMESTER V & VI

#### **SUBJECTS**

### (With Study material)

### **N.B.: - ASSIGNMENT SUBMISSION**

- 1. Students are required to submit their respective term works/assignments with respect to Sem. V at their respective PCP centers.
- 2. Students are required to submit their Project (Spiral Binding) with respect to Sem.-VI at I.D.O.L. in Room No. 12.

The students will be informed about it by the coordinator and the information will be uploaded on University website.

### Standard of passing M.C.A

To pass in the individual subject of each semester examination, a student must obtain a minimum 45 percent of the full marks in (a) theory paper and (b) term work, test and internal assessment separately of that subject.

Those of the students who obtained 45 percent of total marks obtainable in each theory paper, term work, test, class work and internal assessment, as the case may be, taken separately shall be declared to have passed the semester examination. A student who fails in an examination but has passed in any of the subjects of that examination may at his option be exempted from reappearing for the same at a subsequent attempt and will be declared to have passed the relevant semester examination when he has passed in the remaining subjects.

### Standard of passing M.C.A. Semester VI

0.2664: A student who has passed the semester IIII / IV examination and has satisfactorily completed the course for semester V will be permitted to enter upon the course for semester VI. Such a student will not be permitted to appear for semester VI examination unless he has passed semester III/ IV previously.

0.2665: A student who has appeared simultaneously for semester V and semester VI examination and has failed to pass semester V examination but has, however, obtained to passing marks in all the subject of semester VI examination of Third Year examination for the degree of Master of computer Application will not be declared to have passed semester VI examination unless he passes semester V examination in accordance with 0.213.

In order to be eligible for a class, the student must appear and pass each semester examination in not more than two sittings, further the student shall pass all the six semester examination in nut more than nine semesters after registration for the course.

### Award of the classes

Those students who obtain (i) 60 percent of marks on the aggregate of the FirstYear, Second Year and Third Year examination taken together will be placed in the First Class, (ii) 70 per cent marks on the aggregate will be declared to have passed the examination with first class with Distinction and (iii) 50 per cent marks on the aggregate will be declared to have passed the examination in the Second Class.

### SUBMISSION OF \_ M.C.A. ASSIGNMENTS

1. Students are asked to submit their respective term works, assignments at their respective PCP centers.

# <u>Documents required: Students should scan & upload all the required documents in</u> Original.

Photo & Signature has to be scanned during the Registration process

First Year: - M.C.A

### Documents required for admission to the old students of IDOL

- 7. Original mark sheets of First, Second & Third year of Degree examination and in case of more than one attempts student should upload first and last mark sheet of the respective class.
- 8. Mark sheet of HSC or Equivalent
- 9. Marriage Certificate/ Gazette Notification (for female married students) in case of name change of the student
- 10. Birth Proof (LC/AADHAR CARD)

### **Documents required:**

Photo & Signature has to be scanned & uploaded during the Registration process

Second Year: - M.C.A

Documents required for admission to the old students of IDOL

- 9. Original mark sheets of First year and in case of more than one attempts student should scan & upload first and last mark sheet of the respective class.
- 10. Previous year Identity Card.
- 11. Convocation Certificate
- 12. Marriage Certificate/ Gazette Notification (for female married students) in case of name change of the student.

### **Documents required:**

Photo & Signature has to be scanned & uploaded during the Registration process

Third Year: - M.C.A

### Documents required for admission to the old students of IDOL

- 1. Original mark sheet of First year & Second Year (In case of more than one attempts student should scan & upload first and last mark sheet of the respective class)
- 2. Previous years Identity Card.
- 3. Convocation Certificate
- 4. Marriage Certificate/ Gazette Notification (for female married students) in case of name change of the student.

### **Documents required:**

Documents required for admission for the students of other universities (Applicable only for MCA First Year)

## **INSTRUCTIONS FOR ELIGIBILITY CASE STUDENTS: -**

The students from CBSE, ICSE, DIPLOMA from MSBTE/other state, NIOS, HSC Boards other than Maharashtra State, IB, CIE, D. ED. and Degree from other than University of Mumbai will have to obtain the Eligibility Certificate which will be issued online after approval from Eligibility Unit, Room No. 108 (A), Institute of Distance and Open Learning, Dr. Shankar Dayal Sharma Bhavan, Vidyanagari, Santacruz (E), Mumbai-400 098.

Migration certificate in original shall be submitted within 2 months from date of admission in respective Department of IDOL.

Equivalence certificate shall be submitted by the students wherever required.

<u>Note: -</u> The students who have passed 3/4yr Bachelor's Degree from other University and completed another degree course viz. B. ED., L.L.B., MMS etc. form college affiliated to University of Mumbai and wish to pursue M.A./M.COM/M.Sc./MCA from the University of Mumbai are required to obtain Eligibility Certificate from University of Mumbai, IDOL. Such students should submit their Eligibility 9 Confirmation letter from the earlier College / Institute affiliated to Mumbai University from where he / she has passed B.Ed. /LLB/ MMS / etc.

### **REQUIRED DOCUMENTS FOR OBTAINING ELIGIBILITY CERTIFICATE:**

1. S.S.C. and onwards all examination (F.Y., S.Y. & T.Y.)

- 2. Equivalent Certificate from MSBTE/Tech Board of the concern state (in case of diploma students)
- 3. Passing/ Convocation/ Degree Certificate
- 4. Marriage Certificate/ Gazette Notification (For female married students)
- 5. Migration / Transfer Certificate (shall be submitted within 2 months)

### **FEES FOR ELIGIBILITY CASE:**

Document Verification fees of Rs. 400/- will be charged from UG/PG programmes students who have passed their Board/ University Examinations from other than Maharashtra State Higher Secondary Board / other than University of Mumbai (Only for Eligibility Case).

Eligibility fees of Rs. 220/- for the students who have passed their examination from Maharashtra State Universities and Diploma from MSBTE and Rs. 320/- for out of Maharashtra State Universities /Boards other than Maharashtra /Technical Boards of other State.

# **SECTION-THREE**

# 4. RULES, REGULATIONS, SERVICES AND FACILITIES

## 4.1 INSTRUCTIONS TO SCHOLARSHIP STUDENTS

- 1. The students who are applying for Post Matric Scholarship should first apply for admission through this website: http://mu.ac.in/portal/distance-open-learning/
- 2. Those student who will be opting for GOI Scholarship Schemes are required to visit at Room No. 108-A, IDOL, Dr. Shankar Dayal sharmaBhavan, Kalina Campus, Vidhyanagari,Santacruz (E), Mumbai- 400 098.between 11 am to 3.30 p.m. along with mandatory documents as mentioned below:
- Students should carry all Original Documents for Verification purpose. (Compulsory) at Room No- 108 A, IDOL.
- One set of self-attested Xerox copies of Admission form along with all necessary documents required for scholarship. (*Please see Annexure A, List of Documents* for SC/DT/NT/OBC/SBC)
- Thereafter they should apply for Scholarship (for SC/DT/NT/OBC/SBC) through the website of Department of Social Justice & Special Assistance <a href="http://mahadbt.gov.in">http://mahadbt.gov.in</a>
- And in case of <u>ST Category</u> students they should apply for Scholarship/\*freeship to E- Tribal Department on their website: <a href="http://etribal.maharashtra.gov.in/Please see Annexure B, List of Documents">http://etribal.maharashtra.gov.in/Please see Annexure B, List of Documents</a>)
- Freeships subject to clearance from E-Tribal Department.

# Online GOI Post Matric Scholarship Scheme SC/OBC/DT(VJ)/NT/SBC

# All the Following documents must be attested or self-attested for GOI Scholarship Scheme 2018-19.

- 1) Aadhar Card.
- 2) S.S.C. Mark sheet.
- 3) Caste Validity Certificate for M.C.A. Students only.
- 4) Caste Certificate.
- 5) Father's Income Certificate from Tahsildar.
- 6) Last Year's Mark sheet.
- 7) Gap Certificate (on ₹100/- Stamp paper)\* in case of gap in Education.
- 8) Ration Card.(Front & Back Side) (in Case Name of Student in other relative Ration card, Affidavit required on₹100/- Stamp paper.)

- 9) Father/Mother Death Certificate (in case of death).

  Marriage Certificate/ Gazette Certificate (for name defer).
- 11) Bank Account no. of any Nationalized bank (own saving Account)
- 12) Printout of Online scholarship from (Social Welfare Dept.)
- 13) Domicile Certificate.

# **Income Limits for various Caste.**

(As per Social Welfare Dept's Circular no.sa.Aa\lamauuuuu].\lambdaBaasaiSa¹iSaSau¹pSau\lambda2013¹14\lambda1917\hat{\hat{E}}\ id. 22\lambda07\lambda2013)

SC: - up to ₹2,00,000/-OBC/DT (VJ)/NT/SBC: - up to₹1,00,000/-

(Submit all documents in Scholarship Section IDOL, 108-A from Monday to Friday 11. 00 am to 3.30 pm.)

## 4.2 IMPORTANT CIRCULARS & ORDINANCES

Check the links given below for various circulars & Ordinances

- 1. M.A./M.Sc. (Maths) class improvement ordinance <a href="http://archive.mu.ac.in/myweb\_test/M.A.%20MSc.%20%28Maths%29%20Class%20Improvement%20Ordinance.pdf">http://archive.mu.ac.in/myweb\_test/M.A.%20MSc.%20%28Maths%29%20Class%20Improvement%20Ordinance.pdf</a>
- 2. Master Examination individual subject passing be implemented from academic year 2016-17 <a href="http://mu.ac.in/portal/wp-content/uploads/2014/06/Item-no-7.6-change-the-scheme-Master-of-ExaminationPG-courses.pdf">http://mu.ac.in/portal/wp-content/uploads/2014/06/Item-no-7.6-change-the-scheme-Master-of-ExaminationPG-courses.pdf</a>

# **4.3 SUPPORT SERVICES**

### **4.3.1 PERSONAL CONTACT PROGRAMMES:**

The Institute organizes guidance and Counseling sessions (lectures) under Personal Contact Programme in certain subjects in Mumbai for the benefit of Students, in the evening from 6.00 p.m. to 8.00 p.m. or on Sundays/Holidays for traditional courses and Attendance about 75% lectures and Practical are compulsory for B.Sc / M.Sc. IT / Comp. Sc. And MCA courses only. PCP it is an attempt to provide guidance and counseling to the Students in solving their academic difficulties.

### **PCP Center List:**

Please note that the final list of PCP centre's of IT / Traditional Courses and detailed time table will be made available on university website: http://mu.ac.in/portal/distance-open-learning/ and on Notice Board of IDOL after completing the admission process.

### INSTRUCTIONS TO THE STUDENTS:

- 1. Students are requested to visit nearest centre from their residence. Detailed time table will be available with the Co-ordinator of the centre or on Notice Board of the College. No separate correspondence in this regard will be made.
- 2. PCP Programmes for undergraduate courses and post graduate courses are
- 3. likely to commence from November every year.
- 4. Students must always carry with them their valid identity cards every time when they attend their lectures or visit the Institute of Distance and Open Learning.
- 5. Students are requested to meet the center Co-ordinators for academic problem.
- 6. Students are requested to remain in contact with the center co-ordinator for any change in the Time Table.
- 7. Attendance and Practical's is compulsory for B.Sc./M.Sc. IT/Comp.Sc/ and MCA Programmes

Personal Contact Programme (PCP Lectures) will be conducted in PCP Centers.

### 4.3.2 Study Material

Study material is a soul of Distance Learner of the Student. In that point of view, the institute is providing maximum study material in Marathi and English. Our study materials are of the best quality materials which are prepared in SLM format that is prescribed by DEC. Every year, about 75-90 thousand Students are taking benefits of our study materials.

### 4.3.2.1 Virtual Learning Class Room (V.L.C. Studio)

The Students can avail the facility of virtual learning classroom through EDUSAT in the studio located at IDOL building, second floor, and room no. 204, or they can visit <u>mu.ac.in/portal/distance-open-learning/for</u> virtual class room lectures in the subjects of Commerce & Economics.

### 4.3.2.2 Audio – Video Center (A.V.)

While the print material is, by and large, complete in itself, to facilitate better comprehension and understanding, some concepts and their application have been explained through the audio and video programmes as well. The A.V. center has more than 100 video cassettes in the subjects of Commerce and Economics. The audio video cassettes will not be supplied to the Student individually, but will be made available for listening and viewing at the A.V. center of the institute. A catalogue of the cassettes is available in the center located at room no. 205, in the IDOL building.

### 4.3.2.3 Library Facilities

The Institute has an independent library having 415 thousand books including texts and references and 22 research journals and periodicals. The IDOL provides Air Conditioned reading hall and the book – lending facility for the Students at its building in room No. 203 and 215. It remains open during office

hours i.e. from 10:20 am to 06:00p.m. only on working days except 2<sup>nd</sup> and 4<sup>th</sup> Saturdays. During the Examination seasons the reading hall of the institute is open from 08:00 am. to 08:00 pm. on working days (Monday to Saturday).

Only the reading hall facility is also provided at Vidyapeeth Vidyarthi Bhavan, 'B' Road, Churchgate, Mumbai 400 020.

Book lending facility for home-study for 7 days is provided on payment of a deposit of Rs.200/- in cash at IDOL at Vidyanagari. The deposit can be claimed by the Student at the end of the academic year or latest before 31st December of the next calendar year, provided there are no dues or books outstanding in his/her name.

### 4.3.2.4 Xerox Facilities

From the academic year 2009-10 institute has given Xerox facilities to the Students/staff in our premises at a very low cost. Numbers of Students are taking benefits of this scheme.

### 4.3.2.5 Syllabus and Old Question Papers

For the reference, the institute provides old question papers and syllabus Copies to the Students. This facility is available in the study material unit in the IDOL library and on our website mu.ac.in/portal/distance-open-learning/

### 4.3.2.6 Guidance and counseling

IDOL conducts PCP lectures at various centers located in Mumbai and suburban areas and also in Konkan region. The institute has also appointed its own teaching faculties for various subjects. At the headquarters our teaching faculty regularly counsel to the Students during the office hours (Except 2<sup>nd</sup> and 4<sup>th</sup> Sat).

**4.3.2.7.** Separate computer lab available for students (for practical's and hand's on training for online learning (Only for online courses).

# **4.4 RULES AND REGULATIONS**

### RULES AND REGULATIONS OF CANCELLATION

### 6.3.1 Cancellation of Admission / Refund of Fees

If any Student wishes to cancel his/her admission, he/she should apply in the prescribed form within thirty days from the date of admission and his/her fees will be refunded as per following ordinances:

**0.2859(C)**: All the fees paid by a Student at the time of admission shall be refunded to him/her after deducting Rs.30/- (Rupees Thirty only) as administrative charges, if the Student informs the Professor-cum-Director, Institute of Distance and Open Learning, in writing within 30 days from the date of his/her admission.

**0.2859(D)**: All the fees paid by a Student at the time of admission shall be refundable to him/her after deduction of Rs.250/- (Rupees Two Hundred Fifty only) as administrative charges, provided that,

- i) At the time of applying for admission, he/she intimates in writing that he/she has also applied or intends to apply for admission to one or more of the professional courses conducted by the institutions or departments (including the Institute of Distance and Open Learning) of the University or affiliated Colleges to the University.
- ii) He/she withdraws his/her application within seven days from the date of his admission to a professional course as mentioned in (i) above, but not later than 30th September, if he/she is a Post-graduate/management Student of the same year. In such cases, it shall be binding on the Student to produce documentary proof of his/her being admitted to the professional course. Students admitted after above mentioned dates, if any, will not be entitled for the refund of the fees.

No. of Days	Amount Deducted
Up to 10 days of admission	Rs. 500/-
11 to 60 days of admission	20% of the total fees
61 to 90 days of admission	30% of the total fees
91 to 120 days of admission	50% of the total fees
After 120 days	No refund

**N.B.:** (Ordinance 0.2859 for UG programmes) and (Ordinance No(0.3574for PG Programmes) are amended. Fees will be refunded as per revised ordinance. (Please visit our website for these revised ordinances)

### **Important Notice**

Ragging is strictly prohibited in higher educational institutions, as per the directions of Hon'ble Supreme Court and University Grants Commission Has Made provision of 6.1 (0) of the UGC Regulation, 2009.

- 1. Incomplete forms without any of the required documents/information will be rejected.
- 2. The N.O.C., Statement of Marks / Provisional Statement of Eligibility etc. submitted by the Students will be sent for verification to their previous colleges / institutions and provisional admission will be granted only after the documents get authenticated. Otherwise, the provisional admission given to the Student will automatically get cancelled without any intimation/ notice to the Student. No refund of fees will be given. The matter will also be reported to the police.
- 3. The Circulars / Notifications giving details of the Personal Contact programme Lectures, dates of filling in the examination forms, declaration of results, submission of remaining documents, if any, change of subject granted etc. will be displayed on the Notice Boards of the Institute. Details of these will not be sent individually to any Student. It is responsibility of the Students to obtain information about such matters from time to time. Non-receipt of any such information cannot be accepted as an excuse for lapse on the part of the Student.

# 4.4.2 Changes in Name/ Address /Subject

- 1. For intimating changes in name and address, Student should apply to the Professor- cumdirector, IDOL, in the prescribed forms. Change in the name should be supported with documentary evidence such as a Gazette Notification, Marriage Certificate etc.;
- 2. For changing the subject once offered, the Students must apply for before 31st October of the same Academic Year. Learners are requested to fill up form for change in subject/ name at Room No 007 on or before 31st Oct., 2018.

# **4.4.3** Issue of Duplicate Identity Card / Mark sheet / Bonafide Certificate / Transcript Certificate etc..

### a) Duplicate Identity Card (Rs.50/-)

The prescribed fee for applying for Duplicate Identity Card is Rs.50/- to be paid in cash on any working day from Monday to Friday & odd Saturday (i.e..1<sup>st</sup>& 3<sup>rd</sup>) during cash transaction hours (11 a.m. to 2.30 p.m. with lunch break from 1.00 p.m. to 1.30 p.m.).

The Prescribed forms of the above certificates are available in Room No. 007. Only Old Students who were admitted before the academic year 2012-13.

### (b) Duplicate Statement of Marks. (Rs.100/-)

The prescribed fee for applying for Duplicate Mark sheet is Rs.100/- to be paid in cash during cash transaction days and hours. Please attach Affidavit on 100 Rupees Non Judicial stamp paper and also attach FIR copy of Police Station.

The prescribed application form which gives the details of documents required to be submitted with it, is available in the institute, in the case of F.Y./S.Y. examinations. In the case of T.Y. and other examinations, the prescribed application form is available with the examination section of the university at the Mahatma Jyotirao Phule Bhavan (Exam House) in Vidyanagari Campus.

# (c) Bonafide Certificate (Rs.20/-) and Transcript Certificate (Rs.750/- for U.G. and Rs.1000/-for P. G. Course.)

The prescribed fee for applying for the Bonafide Certificate is Rs.20/- and the Transcript

Certificate Under Graduate Programme is Rs.750/- and Post Graduate Programme is Rs.1000/- (per copy) to be paid in cash during cash transaction days and office hours.

The prescribed application forms for this purpose are available in the Dispatch Section of IDOL. The details of documents required to be submitted are given in these forms.

### 4.4.4 Examinations

# (CBCS pattern scheme implemented from the academic year 2020-21 for the programs of B.Sc.IT & MCA examination will be conducted semester wise)

- 1. Fresh/New Students are eligible to appear for the university examination only after satisfactory completion of one academic year.
- 2. Students are permitted to write their answers in English, Hindi, Marathi, and Gujarati if they indicate their choice in the examination form. However, the question papers will be printed in English with only Marathi Version.
- 3. In case Students do not appear or appear and fail or ALLOWED TO KEEP TERMS for the examination of higher class (awarded ATKT), can appear as
  - an Ex-Student/Repeater in the Second Half (October-November) examination. For this they are required to make enquiries in the month of July for filling in the Examination Form.
- 4. As an Ex-Student/Repeater if he/she wish to appear for the Feb/ March/ April examination of the next subsequent calendar year he/she is required to make enquiries in the month of December for submission of the examination forms.
- 5. The IDOL does not send any information to its Ex-Students/Repeaters.
- 6. The time-table of the examination will be put-up on IDOL Notice Board about 10 days before the date of commencement of the respective examination. The information regarding the examination, seat numbers and the hall ticket and the centre of the examination will be available about 4 days before the commencement of the examination, provided the same are received in time from the Controller of Examinations.
- 7. Documents required for filling in examination forms.
  - i) Identity Card of IDOL
  - ii) Statement of Marks of previous attempt with Xerox Copies.

#### 4.4.5 Refund of Examination Fees

The Rules presently in force relating to refund of examination fees are as follows

- 1. Where a student expires in the period of the examination, the entire fee shall be refunded.
- 2. Where a student falls ill subsequent to the submission of his /her application for admission to the examination and is prevented on medical grounds from appearing at the examination, 50% of the fees shall be refunded to him /her provided an application of such refund, supported by a medical certificate, is submitted to the Professor-cum-Director of the Institute before three days from the date of commencement of the examination.

(Note: By the expression "date of commencement of the examination" is meant the date on which the first paper at the examination is set and not the date on which the student has to appear for his/her first paper. It is necessary that the application for refund should invariably be submitted through the Professor-cum-Director of the Institute. The amount, where refund is granted will be disbursed to the Student concerned through the Finance & Accounts section IDOL.

## 4.4.6 Transfer Certificate and Migration Certificate:

Whenever a Student who desires to leave the Institute either before completing the course for which he/she has been admitted or after completing the course, will be required to take the following certificate

from the Institute/University:

- 1. For seeking admission in another institution/college affiliated to this University, a Transference Certificate from the IDOL by paying the prescribed fees of Rs.100/- and applying on the prescribed application form with the necessary documents. (UG/108g1999 Date: 15/03/1999)
- 2. For seeking admission in other Universities within the country or abroad, the Student is required to obtain Migration Certificate by submitting an application in a prescribed form, from the Migration Certificate Section of the IDOL, University of Mumbai, which is situated in IDOL, Vidyanagari, Kalina, Santacruz (East), Mumbai 400 098.

The Migration Certificate Form, along with a Demand Draft for Rs.220/- drawn in favour of the Finance and Accounts Officer, University of Mumbai should be submitted in the office of the Asstt. Registrar (Administration), Institute of Distance and Open Learning. Before submitting the application for Migration Certificate, he/she should obtain a Transference Certificate from the Institute of Distance & Open Learning by filling the required form, along with the fees of Rs.100/- in cash from Monday to Friday from 11.00 a.m. to 2.30 p.m. excluding lunch break from 1.00 p.m. to

The prescribed form/s for obtaining above mentioned certificates will be available in the office of the IDOL.

### 4.4.7 Admission on Fake Certificates:

IF ANY DOCUMENT SUBMITTED BY THE STUDENT AT THE TIME OF ANY COURSE AT ANY ADMISSION CENTRE AND FOUND FALSE AND FAKE THEN THE ADMISSION WILL BE CANCELLED INSTANTLY AND THE MATTER WILL BE REPORTED TO POLICE FOR FURTHER NECESSARY ACTION.

### 4.4.8 Admission Validity:

The admission is valid for a period of 5 years only for the approved students from the date of admission after which she/he has to take a fresh admission to any course of the institute. Student must insure that he/she should get admission approval within the current academic year. If any student's does not receive any confirmation SMS/Email from IDOL office, he/she should immediately contact to the concern section of IDOL.

### 4.4.9 Convocation and Other certificates:

The Students who have completed the course (i.e. who have passed their degree exam from the University, they will get their degree certificate after the Convocation. Enquiries in this regard may be made with The Deputy/Asstt. Registrar, Examination Section, University of Mumbai, Mahatma Jyotirao Phule Bhavan, Examination House, Vidyanagari, Santacruz (East),

Mumbai 400 098 on Degree Examination of working days during office hours. Similarly, for duplicate copies of Statement of Marks, Passing Certificate or Degree Certificate, of Graduate examinations, the students have to apply in the prescribed form (during the money transaction hours) at the M. J. Phule Bhavan, Examination House, Accounts Section, Vidyanagari, Santacruz (East), Mumbai 400 098.

# 4.4.10 Standard of Passing (B. Sc. IT): Circular No. UG/235 of 2005 R. 4411:- Passing Standards:

- 1. A student is said to have passed if he/she secures 40% of marks allotted in each head of passing.
  - Theory of 100 marks and TW/Practical/Tutorial of 50 marks are treated as separate heads of passing.
- 2. A student is said have passed Semester I if the student passes in all heads of passing of the

Semester.

- 3. A student is eligible to be admitted to Semester II irrespective of no. of heads of failure in the First Semester.
- 4. A student is eligible for admission to Semester III if either the student passes Semester I & II

OR

The student Fails in a combination of Theory and/or Practical taken in Semester I or Semester II or together. Where the total marks do not exceed 200.

- 5. A student is eligible to be admitted to Semester IV irrespective of no. heads of failure in the Third Semester. However, the student has to clear Semester I and II in order to appear for Semester IV examination.
- 6. A student is eligible for admission to Semester V if either the student passes Semesters III & IV.

The student fails in a combination of Theory and/or Practical taken in Semester III or Semester IV or together, where the total marks does not exceed 200.

- 7. A student is eligible to be admitted to Semester VI irrespective of no. of heads of failure in the fifth Semester. The results of Semester VI should be kept in abeyance until the student clears Semesters III, IV and V in full.
- 8. The class in awarded Semesters-wise for Semesters I, II, III and IV. However, Semester V and VI will be taken together for award of class i.e. in the Final Year.
  - Award of class is based on passing in all theory papers at one sitting.
  - Passing in parts will be awarded Pass Class irrespective of the Cumulative percentage of marks.
  - Distinction is awarded for 75% and above.
  - First Class is awarded for 60% and above but below 75%.
  - Second Class is awarded for 50% and above but below 60%.
  - Pass Class is awarded for all below 50%
- 9. There will be one repeat examination (for Semester I, II, III and IV) for those who have failed of remained absent. The absent students will be allowed to appear for the examination by the head of the institution after following the necessary procedure. This examination will be held 30 days after the declaration of results but not later than 60 days.
- 10. The candidates who are repeaters the B. Sc. (I.T.) examination shall be granted exemption from Reappearing in term work, project and viva-voce they have secured minimum marks required for passing in these heads at their previous examinations.
  - Further that the amended R.4411 relation to the B.Sc.(IT) examination has been brought into force with effect from the examination held in the first half of 2005.

### 4.4.11 Standard of Passing for M.A./M.Sc. (Maths) examinations (Part – I and II) R.1967: -

Students shall be required to obtain 40 percent marks in each paper/practical of the part Examinations and 40 percent of the aggregate at each of the Part Examinations of the branches.

Those of the successful student who pass Part I and Part II examinations and obtain minimum of 60 percent of the total marks, will be placed in the First Class and those obtain minimum of 50 percent in Second Class.

### **Improvement of Class (M.A./M.Sc. (Maths)**

**O. 2260 :** Students who have passed the M.A./M.Sc.(Maths) degree examination of this University either by papers or by dissertation with the class mentioned below in Column 1 and who desire to improve their class or percentage as shown in Column 2 will be permitted to appear again for the same subject/s in both the parts simultaneously without being required to keep any terms within a period of five years, following the April or October examination at which they pass under provision of 0.2260.

Column 1	Column 2
Pass Class	(a) Second Class or at least 55 per cent marks or First Class
Second Class	(b) At least 55 per cent marks or First Class

If students who reappear for the two year M.A./M.Sc.(Maths) Degree examination under the provisions of this ordinance fail to improve their class, their performance at such reappearance will be ignored.

# 4.5 SELF STUDY TECHNIQUES

Since this programme is offered through Distance Education mode, it is quite likely that some of you may be wondering how to complete the programme successfully

It should not be difficult for you to complete the course if you plan your work schedule carefully. If you practice somewhat systematic way of studying the print materials, much of your job will become easy. We shall give you a few suggestions to make you studies easy and interesting.

We understand that you have many domestic and social commitments to attend to. Most of you are working in some schools, colleges or other institutes or work places. You may not have ample of time for studying. But it is possible to have some time regularly for your studies. Convince your colleagues and family members that you need some privacy to study and stick to a regular time table. As soon as you receive the study materials start-working on it and don't postpone studying the materials or writing your assignments/responses.

We suggest, you should know the techniques of self study. Your study materials contain a lengthy reading list for reference purpose and for deeper understanding of the content. One strategy that gained wide acceptance is the SQ3R technique;

SQ3R stands for the initial letters of the five steps in studying text. The five steps are: (i) Survey (ii) Question (iii) Read (iv) Recall (v) Review

#### Survey

Survey refers to the quick glance through the title page, preface, chapter headings, etc. of a text book. Surveying a text helps the Students grasps the main ideas. A glance at the title page may give you.

(i) the general subject area (ii) the level of approach (iii) the author's name and (iv) the date and place of publication

Preface helps you decide whether or not the book deserves your attention. Contents tell you what topics the author is dealing with and how he has organized the themes. An index survey will tell you instantly whether or not the text contains what you need. It also helps you save time and efforts by directing you straight to the relevant pages.

### Question

Your survey of the text will raise in you some questions. For example, glancing at the title page, preface and contents, you might ask yourself:

How far can I depend on this book?

Will the book be helpful to me as its preface suggests?

Why should the author devote a whole chapter for such and such topic?

Having made your survey and started to question, you are now ready for reading the text.

#### Read

Reading a text material demands a critical mind. When we read a text, we apply our mind with all its critical skills. Unless we read actively the questions which have been formulated cannot be answered satisfactorily.

It is not advisable to make notes at this stage.

This is not the stage to underline words or phrases either.

Keeping these two points in view, what perhaps, we can do at the first reading is just to look for the main ideas and the supporting details.

### Recall

Reading a text is not the final step in learning. It is, instead, the first step in learning. What is read needs to be recalled for intention. Regular attempts to recall will help improve our learning in three ways (i) better concentration (ii) chance to remedy misinterpretation and (iii) reactive reading. How often to recall chiefly depends on

'how good' a reader you are.

### Review

The purpose of reviewing is to check the validity of our recall. The best way to do this is to do a quick repeat of the other four steps i.e. Survey, Question, Read and Recall.

Although the steps of SQ3R are in the logical and natural order there may be overlapping and repetitions between them. Since Distance Learning Students have to work on their own most of the time during their academic career, in this situation, study skills become very important.