

**REGULATIONS & COURSES OF STUDIES OF 4 & ½ YEARS
BACHELOR OF OCCUPATIONAL THERAPY (BOT): 2023**

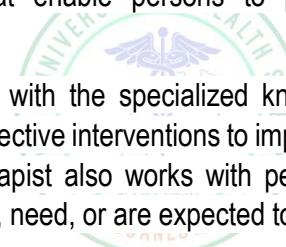


**THE ODISHA UNIVERSITY OF HEALTH SCIENCES,
BHUBANESWAR- 751009**

REGULATIONS & COURSES OF STUDIES FOR THE 4 AND ½ YEARS BACHELOR OF OCCUPATIONAL THERAPY (BOT) DEGREE - 2023

- 1. Title and commencement of the Program:**
 - These regulations may be called "Bachelor of Occupational Therapy (In short BOT) Regulations 2023".
 - They shall come into force from the current academic year 2023-24.
 - The Regulations and courses of studies prescribed are subject to modification by the Academic Council and Executive Board of the Odisha University of Health Sciences, Bhubaneswar from time to time.
- 2. Introduction:** Medicine adds days to life, and occupational therapy adds life to days. The Occupational Therapy is associated with the study of subjects and therapies for assessment and intervention to maintain the meaningful activities of individuals with any injury or disease specially with infants with developmental problems, older persons facing health challenges, persons with disabilities and persons with mental illness.

Occupational Therapy professionals generally work for the rehabilitation of physical and mental health challenges, injuries and impairments. Occupational therapists help people of all ages regain, develop, or master everyday skills in order to live independent, productive, and satisfying lives. Therapists are skilled in analysing daily activities and tasks, and they work to construct therapy programs that enable persons to participate more satisfactorily in daily occupations.



This program equips students with the specialized knowledge and clinical skills required for assessing and implementing effective interventions to improve individuals' abilities to perform daily activities. An occupational therapist also works with persons who are unable to carry out the various activities that they want, need, or are expected to perform.

- 3. Goal:** The goal is to produce efficient Occupational Therapists who can help the treatment of physically or mentally challenged people.
- 4. Objective:** The objective is to equip the students with knowledge and skills to;
 - Assess & identify problems related to functional performance & use clinical reasoning skills in problem-solving & develop need-based strategies to address the problems.
 - Use appropriate advanced therapeutic modalities for effective OT intervention to enhance ability of individuals, groups and communities to participate in purposeful occupational tasks.
 - Adhere to the professional code of ethics, contribute to profession, participate in the ongoing learning processes & create and maintain high standards of practice.
 - Use early intervention programme for high-risk infants & developmental disabilities to promote typical development and prevent/ address secondary changes, learning disabilities and others.
 - Demonstrate competency in OT intervention of patients in intensive care units (NICU, PICU, MICU & SICU).
 - Provide unique contribution in Occupational Therapy practice through bio-medical and social sciences concepts.
 - Inculcate the various skills in patient care handling including communication skills, confidence, clinical reasoning, counseling and research.

5. Eligibility for admission to the Course:

- (i) +2 Science with Physics, Chemistry & Biology or equivalent degree with 50% aggregate.
- (ii) **Physical fitness Certificate:** Every candidate before admission to the course shall be required to submit College Leaving Certificate, Migration Certificate (if applicable) in original, Physical Fitness Certificate and a declaration before the Principal / Director of the Institution that
- I am not continuing in any Degree Course under any State, Deemed, Central University and Autonomous Body.
 - I have not been involved in any kind of criminal and unlawful activities in the past.

Provided further, after fulfilment of all condition (s), the University on receipt of student detail with prescribed fees, shall issue University Registration Number as per OUHS First Statute-2023, which shall be used as Roll Number for all Examination (s).

6. Duration: The duration of the programme is of four and half academic years (inclusive of 6 months of compulsory rotatory internship), which can be completed in a maximum of 8 years from the date of admission to the programme. Each academic year consists of two semesters i.e. Odd and Even Semester.

7. Medium of instruction: English shall be the medium of instruction for all the subjects of study and for examination of the course.

8. Commencement of the Course: The course will commence from August / September 1st of every year.

9. Academic Year: The academic year shall be twelve months and commencing on the first day of enrolment into the course.

10. Attendance: The component wise attendance percentage shall be as under;

Subjects	Eligibility criteria
Subjects taught in one phase (Theory)	75 %
Subjects taught in more than one phase (Theory)	75 %
Clinical / Practical Training	80 %
Rotatory Internship	100 %

11. Course Cycle, Codes and Structure: The four-year full-time programme consists of eight semesters excluding 6 (six) months compulsory rotatory internship. There shall be 51 (Fifty-One) Numbers of Theory, Practical / Clinical including Project in all eight semesters followed by six months internship after passing all semester examinations. The total marks for the Course is 4300 including the Project.

The total number of digits used in the course is 08 (Eight).

- The 1st two digits (Numerical) indicates the Year of Courses of Studies.
- The 3rd digit (Letter) indicates the "Faculty" Allied Health Sciences.
- The 4th & 5th digits (Letters) indicate the Course Code "BOT".
- The 6th digit (Numerical) indicates the Year.
- The 7th & 8th digits (Numerical, Numerical and Letter) indicate sequence of the Theory Subject (s) of the Year or Practical.

Table No 01 Course Structure:

Sub Code	Sub Title	Contact Hours		Internal Assessment		U- Assessment		Total
		Theory	Practical	SE	Prac / Viva	Theory	Prac / Oral	
First Semester								
23AOT101	Basic Occupational Therapy	140	--	25	--	75	--	100
23AOT102	Psychology	50	--	10	--	40	--	50
23AOT103	Sociology	50	--	10	--	40	--	50
23AOT1P1	Basic Occupational Therapy	--	100	--	25	--	75	100
Non-University Examination								
23AOT105	English and Communication Skill	30		25	25	--	--	50
Total		270 (+80)	100 (+70)	70	50	155	75	350
Second Semester								
23AOT201	Therapeutic I	100	--	25	--	75	--	100
23AOT202	Therapeutic II	100	--	25	--	75	--	100
23AOT203	Human Anatomy	100 (50+50)	--	25	--	75	--	100
23AOT204	Human Physiology	60 (30+30)	--	25	--	75	--	100
23AOT205	Biochemistry	50	--	10	--	40	--	50
23AOT2P1	Therapeutic I	--	100	25	--	--	75	100
23AOT2P2	Human Anatomy	--	100 (50+50)	--	25	--	75	100
23AOT2P3	Human Physiology	--	60 (30+30)	--	25	--	75	100
Non-University Examination								
23AOT105	Introduction to Health Care Delivery System in India	30		25	25	--	--	50
Total		440 (-80)	260 (70)	160	75	340	225	800
Third Semester								
23AOT301	Pathology and Microbiology	40	--	10	--	40	--	50
23AOT302	Pharmacology	40	--	10	--	40	--	50
23AOT303	Community Medicine	40	--	10	--	40	--	50
23AOT304	Biomechanics & Kinesiology	100	--	25	--	75	--	100
Non-University Examination								
23AOT305	First Aid & Emergency Care	30	--	25	25	--	--	50
Total		250 (+138)	(+138)	80	25	195		300
Fourth Semester								
23AOT401	Medicine-I (Gen Medicine including Gerontology)	100 (50+50)	--	25	--	75	--	100
23AOT402	Surgery I (General Surgery, OB & Gyn, Cardiothoracic, Plastic Surgery)	100 (50+50)	--	25	--	75	--	100
23AOT403	Cardiology	50 (25+25)	50 (25+25)	10	--	40	--	50
23AOT404	Pediatrics	25 (13+12)	25 (13+12)	10	--	40	--	50

23AOT405	Fundamental of OT Practice	50	--	25	--	75	--	100
23AOT4P1	Medicine-I (Gen Medicine including Gerontology)	--	100 (50+50)	--	25	--	75	100
23AOT4P2	Surgery I (General Surgery, OB & Gyn, Cardiothoracic, Plastic Surgery)	--	100 (50+50)	--	25	--	75	100
23AOT4P3	Fundamental of OT Practice	50	100	--	25	--	75	100
Non-University Examination								
23AOT406	Environmental Science	30		25	25	--	--	50
Total		355 (-138)	375 (-138)	120	100	305	225	750
Fifth Semester								
23AOT501	OT in Surgical Condition	100	--	25	--	75	--	100
23AOT502	OT in Medical Condition	100	--	25	--	75	--	100
23AOT51P	OT in Surgical Condition	--	150	--	25	--	75	100
23AOT52P	OT in Medical Condition	--	150	--	25	--	75	100
Non-University Examination								
23AOT503	Computer Science	20	10	25	25	--	--	50
Total		220 (+125)	310 (+125)	75	75	150	150	450
Sixth Semester								
23AOT601	Neuroscience (Neurology & Neurosurgery)	100 (50+50)	--	25	--	75	--	100
23AOT602	Orthopaedics	50 (25+250)	--	25	--	75	--	100
23AOT603	Psychiatry	100 (50+50)	--	25	--	75	--	100
23AOT604	OT in Rehabilitation	100	150	25	--	75	--	100
23AOT60P1	Neuroscience (Neurology & Neurosurgery)	--	150 (75+75)	--	25	--	75	100
23AOT6P2	Orthopaedics	--	100 (50+50)	--	25	--	75	100
Non-University Examination								
23AOT605	Research Methodology & Biostatistics	30		25	25	--	--	50
Total		380 (-125)	400 (-125)	125	75	300	150	650
Seventh Semester								
23AOT701	Rehabilitation Science	50	100	25	--	75	--	100
23AOT702	OT in Psychiatric Condition	50	150	25	--	75	--	100
23AOT703	OT in Paediatric Condition	100	--	25	--	75	--	100
23AOT7P1	OT in Paediatric Condition	--	150	--	25	--	75	100
Non-University Examination								
23AOT704	Yoga & Naturopathy	10	20	25	25	--	--	50
Total		210	420	100	50	225	75	450
Eighth Semester								
23AOT801	OT in Neuroscience	100	--	25	--	75	--	100
23AOT802	OT in Orthopedic Condition	100	--	25	--	75	--	100
23AOT8P1	OT in Neuroscience	--	150	--	25	--	75	100
23AOT8P2	OT in Orthopedic Condition	--	150	--	25	--	75	100

23AOT8P3	Project	--	200	--	--	--	100	50
Non-University Examination								
23AOT803	Professional Management & Ethics	30	--	25	25	--	--	50
Total		230	500	75	75	150	250	550
Grand Total 4300								
	Internship	--	400					

12. Plan of Studies (Teaching, Training & Practice): The plan of studies consists of classroom lectures, practical and laboratory demonstrations, bed side clinics, discussions, self-directed academic activities and clinical postings. The first year odd and even semesters of this program combine studies in theoretical and practical occupational therapy, with biological and behavioural sciences. In second year, students develop this knowledge and apply theory to practical problems of occupational therapy. Third-year students shall focus on occupational therapy techniques, with clinical practice in teaching units in hospitals and community health agencies. There are few theory and practical subjects which shall be taught and practized over multiple semesters, and will be assessed at the end of higher (s). The final year extends clinical experience in the form of assessment, planning, and treatment of the persons with occupational dysfunction.

12.1. First Semester: During the first semester, the student shall be required to undertake 350 hours of lectures, and 170 hours of practical and laboratory demonstrations, bed side clinics, discussions, self-directed academic activities. The subjects of studies are Basic Occupational Therapy, Psychology, and Sociology. In addition, s/he will be also be required to study English and Communication Skills. During this semester, a student shall be required to attend theory and practical classes of Human Anatomy, Human Physiology, and Biochemistry with an objective of being oriented with the fundamentals of basic occupational therapy.

12.2. Second Semester: During this semester, the student shall be required to undertake 360 hours of lectures, and 270 hours of practical and laboratory demonstrations, bed side clinics, discussions, self-directed academic activities. The subjects of studies are Therapeutics- I, Therapeutics- II, Human Anatomy, Human Physiology, and Biochemistry. In addition, s/he will be also be required to study Introduction to Health Care Delivery System in India.

12.3. Third Semester: During this semester, the student shall be required to undertake 388 hours of lectures, and 138 hours practical and laboratory demonstrations, bed side clinics, discussions, self-directed academic activities. The subjects of studies are Pathology and Microbiology, Pharmacology, Community Medicine, and Biomechanics & Kinesiology. In addition, s/he will be also be required to study First Aid & Emergency Care. In addition, s/he will be also be required to study English and Communication Skills. During this semester, a student shall be required to attend theory and practical classes of Medicine -I, Surgery- I, Cardiology, and Paediatrics with an objective to familiarize with the on-site medical conditions.

12.4. Fourth Semester: During this semester, the student shall be required to undertake 217 hours of lectures, and 237 hours of practical and laboratory demonstrations, bed side clinics, discussions, self-directed academic activities. The subjects of studies are Medicine-I (General Medicine including Gerontology), Surgery- I (General Surgery, Obstetrics & Gynaecology, Cardiothoracic, Plastic Surgery), Cardiology, Paediatrics, and Fundamentals of Occupational Therapy Practice. In addition, s/he will be also be required to study Environmental Science.

12.5. Fifth Semester: During this semester, the student shall be required to undertake 345 hours of lectures, and 435 hours of practical and laboratory demonstrations, bed side clinics, discussions, self-directed academic activities. The subjects of studies are Occupational Therapy in Surgical Condition, and Medical Condition. In addition, s/he will be also be required to study Computer Science. During this semester, the student shall be required to undertake his / her theory and practical / clinical training in Neuroscience, Orthopaedics, and Psychiatry whose assessment shall be made in 6th semester.

12.6. Sixth Semester: During this semester, the student shall be required to undertake 255 hours of lectures, and 275 hours of practical and laboratory demonstrations, bed side clinics, discussions, self-directed academic activities. The subjects of studies are Neuroscience (Neurology & Neurosurgery), Orthopaedics, Psychiatry, Occupational Therapy in Rehabilitation. In addition, s/he will be also be required to study Research Methodology & Biostatistics.

12.7. Seventh Semester: During this semester, the student shall be required to undertake 210 hours of lectures, and 420 hours of practical and laboratory demonstrations, bed side clinics, discussions, self-directed academic activities. The subjects of studies are Rehabilitation Science, Occupational Therapy in Psychiatric Condition, and Paediatric Condition. In addition, s/he will be also be required to study Yoga & Naturopathy.

12.8. Eighth Semester: During this semester, the student shall be required to undertake 230 hours of lectures, and 500 hours of practical and laboratory demonstrations, bed side clinics, discussions, self-directed academic activities. The subjects of studies are Rehabilitation Science, Occupational Therapy in Neuroscience, and Orthopaedic Condition. In addition, s/he will be also be required to study Professional Management & Ethics. In addition, s/he shall be required to prepare and submit a Project Report consisting of not more than 50 (Fifty) pages. The guidelines for preparation of the Project report shall be pre-defined, and prescribed by the Department at the time of commencement of the semester.

12.9. Internship: After successful completion and passing in relevant theory and practical / clinical subject (s) of first to eighth semester (s), the student shall be required to undertake compulsory six months equivalent to one semester for internship programme on rotation. The internship shall be done in any hospital recognized by the College / Institution (under intimation to the University) or will be allowed to undertake his / her internship in the college of study. The Internship should cover clinical branches concerned with occupational therapy such as Orthopaedics, Cardiothoracic including ICU, Neurology, Paediatrics, General Medicine, General Surgery, Burn and plastic surgery, Psychiatry, Oncology, Obstetrics and Gynaecology both at the inpatient and outpatient services. The candidates shall abide by the internship program rules framed by the institutes from time to time. On completion s/he shall submit the Internship Completion Certificate along with Log Book to the Head of the Department for acceptance and onward intimation to the University for award of Degree.

13. Scheme of Internal Assessments, Practical / Clinical, Assignment, Project, & Internship - and passing criteria:

13.1. Theory & Practical / Clinical:

- (i) There shall be a minimum of 2 periodic assessments, for theory and practical including viva separately, and is mandatory for the student.
- (ii) Average of the marks of the best two periodic assessment shall be taken as internal assessment mark of the candidate.
- (iii) The class average of internal assessments mark of theory and practical should not exceed

- 80 % of Maximum marks.
- (iv) The class average of internal assessment for an examination shall be calculated based on the total number of candidates in a particular batch appearing for that internal assessment examination.
 - (v) The candidate must secure the minimum 50 % marks for internal assessment in theory and practical separately in each subject in order to be eligible to appear in the university examination of the subject.
 - (vi) Each student should maintain a logbook and record the procedures they do and the work patterns they are undergoing. It shall be based on periodical assessment, evaluation of student assignment, preparation for seminar, clinical case presentation, assessment of candidate's performance in the sessional examinations, routine clinical works, logbook and record keeping etc.

13.2. Examiners: One Internal Examiner, and one External Examiner shall evaluate the Practical / Clinical including viva voce who must be a Post Graduate in concerned speciality with 3-years' teaching experience / UG in the concerned speciality with 5 years teaching experience.

13.3. The following guidelines are suggested for periodical assessment to be conducted from time to time by the Institution. They are Personal Attitudes, Acquisition of Knowledge, Journal Review Meeting (Journal Club), Seminars / Symposia, Clinico-pathological conferences, Medical Audit, Practical and Laboratory skills, Day to Day work, Teaching skills Periodic tests, Work diary / Log Book and other Records.

13.4. Project: The Project report shall be evaluated by an Internal Examiner, and one External Examiner appointed by the University.

13.5. Internship: Marks will be awarded for regularity, punctuality, responsibility, dedication, subject knowledge, assessment and treatment skills, interpersonal relationship, leadership skills and ability to function in a multi-specialty team. The Head of the Department, and Head of the Institution shall jointly certify the successful completion of the compulsory rotatory internship programme, evaluate the Project report, and submit the marks to the University.

14. Eligibility criterions for appearing University Examinations:

A candidate shall be eligible to carry forward all the courses if a s/he fulfills the following criterions and hereafter prescribed under Regulation 18.1.

In addition,

- (i) Attended 80 % theory and 90% Clinical / practical training classes,
- (ii) Passed in Internal Assessment (s) with minimum 50% marks, and
- (iv) Not been debarred for any objectionable mis-conduct or malpractice by the Institution, and University.

15. Examinations [University (Theory & Practical)]:

15.1. There shall be semester examination at the end of each semester. A candidate securing a minimum of 50% marks in internal assessments of individual subjects and 50% marks in internal clinical evaluations (clinical assessment, client contact hours and internal viva) to be conducted by the College / Institution will only be eligible and allowed to appear for university examinations of the respective year.

Provided, the College / Institution shall submit the internal marks to the University before registering the eligible students for appearing semester examinations of the semester. In the event, a College / Institution fail or does not submit the mark (s) before the cut-off date, it shall be treated

that no examination (s) have been conducted, and thereby the students shall not be allowed to register for respective University semester Examinations.

Provided further each candidate will be given maximum 3 attempts to clear the theory or practical / clinical examination. However, absent or non-availing a chance shall be treated as a chance.

15.2. Theory examinations: Each theory paper of the examinations conducted by the University shall be valued by external examiner and marks rounded to the next integer shall be awarded to the candidate.

15.3. Clinical / Practical (Semester) Examinations: The University practical / clinical Examination (s) carrying 75 (Seventy-five) marks shall be conducted by one internal examiner and one external examiner (s) appointed by the University.

16. Registration: A candidate shall be eligible to register for Semester (Regular / Back) Examination only when s/he has fulfilled college and corresponding university criterions.

- (i) The College / Institution shall register the subjects of eligible students with the University on payment of a fee as to be notified by the University towards conduct of Regular / Back Theory examinations. The College / Institution shall retain 15 % of the University Examinations fees to meet the expenditure of Examination Centre. However, such retention of fees shall not be applicable in case of Back Paper or Supplementary Examinations.
- (ii) The College / Institution shall follow uniform Question pattern / template / Answer Booklets and Records for conducting Internal Assessment and Clinical / Practical Tests.

17. Passing Heads: The passing head (Theory and Practical / Practicum) is as under;

- (i) A Student is required to obtain a minimum of 50% in each of the theory papers, internal assessment, practical and clinical exams for a pass.
- (ii) A Students will not be able to appear for University theory exam if they do not pass in their practical, internal assessment or clinical component.
- (iii) A Students will have to pass the clinical examination of the given semester to proceed to the next year.
- (iv) A candidate failing in one or more subject (s) shall appear for the subject(s) as a whole in the next appearance (i.e. Theory, Practical, and Viva).
- (v) A student shall be declared to have passed the examination if he/she obtains the following minimum qualifying marks: -
 - (a) 50% of Marks in Internal Assessment (I.A) – Theory & Practical / Clinical.
 - (b) 50% of Marks in the University Practical / Clinical Examination.
 - (c) 50% of Marks in the University Theory Examination,
 - (d) Fail in University Clinical / Practical subject Examination (s) shall be treated as fail in Theory of the Subject.

18. Promotion to Higher Year, Re-admission after discontinuation or Break of Study into the Course:

- (i) A candidate having 80% attendance in theory and practical in all the subjects,
- (ii) Passed in internal assessment, registered and appeared the semester subjects (Theory & Clinical / Practical) will be allowed to keep terms up to Sixth Semester.
- (iii) The candidate shall be eligible to register and appear seventh and eighth semester examinations only after clearing all the papers of the first, second, third, fourth, fifth, and sixth semester. Examinations if any.
- (iv) The candidates shall be eligible for internship only after clearing the seventh and eighth semesters examinations.

18.2. A candidate will be allowed for re-admission;

- a) If s/he did / could not register for the two consecutive semester examinations.
- b) If a candidate, failed any theory / practical / clinical University examinations availing three chances, s/he shall be required to take re-admission
- c) if the candidate is eligible, and has permissible tenure to complete the remaining tenure / years of six year to complete the course.

Provided further, s/he shall be required to apply in the prescribed form with fees as prescribed for the purpose, and shall be admitted in the course in force (Dual Syllabus).

19. Supplementary Examination: There will be a supplementary examination for final year theory subjects within three months from the date of publication of eighth semester examination to extend a chance to clear the failed theory subjects of 7th & 8th Semester if any only. However, a candidate shall not be eligible; if s/he has not registered for the 7th & 8th Semester Examinations, and accordingly has not appeared the respective semesters Examinations.

A student having more backlog after availing the chance, shall not be allowed to re-appear in the subsequent years Supplementary Examination meant for the regular final year students only. Such student (s) will be allowed re-appear back theory subjects only with the student in Regular Examinations.

20. Classification of successful candidates and award of Degree: The University shall adopt Marking and division practice.

20.1. Candidate will be awarded division after successful completion and internship at the end of four years. The percentage of marks will be calculated from aggregate of total marks obtained in all the four years University examinations.

- (i) First Class with Distinction: 75 % and above in aggregate of marks of all subjects including theory, clinical / practical with Internship -Project in the first attempt.
- (ii) First Division - 60% and above in the aggregate marks of all subjects.
- (ii) Second Division – 50% or more but less than 60% in the aggregate of marks of all subjects.

20.2. A candidate will be awarded Bachelor Degree in Occupational Therapy (B.O.T.) to a candidate who complete the prescribed period, four academic years courses of Studies, and has passed in all subjects (Theory & Practical / Clinical) , Project with 6 months compulsory Rotatory Internship.

21. Record and Evaluation Guidelines: The Practical Answer Booklet, Project Assignment / Record Book shall be as per the guidelines to be issued in this regard shall be strictly followed by the Examiners while assessing a practical component.

22. Withdrawal from Course, Struck off from the rolls of the College / Institution Admitted and withdrawal of Degree:

22.1. The University upon application, shall cancel the registration number issued to the candidate, and issue migration certificate on payment of fee as to be prescribed by the University.

22.2. Any student who does not clear the Bachelor of Occupational Therapy Course in all the subjects within a period of 8 years (Excluding Rotatory Internship with Project) from the date of admission / academic year shall be discharged from the course.

22.3. Any student found to have obtained admission in fraudulent manner, if the documents furnished for gaining admission by any student are found to be forged / false / doctored at any stage of study.

- 22.4.** If any student is found to be involved in serious breach of discipline.
- 22.5.** A degree awarded by the University may be withdrawn if it is found at the later stage that the candidate has submitted any forged document or ineligible at the time of admission to the course.
- 23. Medal (s), Award (s) & Prize (s):** The University shall notify as and when decided by the Academic Council and Executive Body from time to time.
- 24. Discretionary Power:** Notwithstanding anything contained in the above, in case of any doubt or difficulty as to the interpretation of these Regulation (s), the matter shall be referred to the Vice Chancellor and his / her decision in this behalf, subject to the provisions of the OUHS Act - 2021, and OUHS 1st Statute - 2023 shall be final.



Registration no:

--	--	--	--	--	--	--	--	--

Total Number of Pages: (XX)		Course: BOT			
		SUB_CODE:			
(--- th) Year Regular / Back Examination: 20					
SUBJECT NAME:					
BRANCH:					
Max Time: 3 Hours		Sitting: 1st 10.00 AM to 1.00 PM			
Max Marks: 75					
Q. CODE: (To be allotted by the University)					
All Questions are compulsory. Illustrate answer with diagrams wherever relevant / required					
The figures in the right-hand margin indicate marks.					
Q 1		Long Answer Question (Answer any one out of two)			(1 X 15 marks)
	a)				
	b)				
Q 2		Long Answer Question (Answer any one out of two)			(1 X 15 marks)
	a)				
	b)				
Q 3		Long Answer Question (Answer any one out of two)			(1 X 15 marks)
	a)				
	b)				
Q 4		Short Answer Questions (Focused) (Answer any two out of three)			(2 x 5 marks)
	a)				
	b)				
	c)				
Q 5		Short Answer Questions (Applied) (Answer any two out of three)			(2 x 5 marks)
	a)				
	b)				
	c)				
Q 6		Short Answer Case based question (Answer any ONE out of two)			(1 x 5 marks)
	a)				
	b)				
Q 7		Objective Type (Selection / Supplied)			(5 x 1 mark)
	a)				
	b)				
	c)				
	d)				
	e)				

Registration no:

--	--	--	--	--	--	--	--	--	--

Total Number of Pages: (XX)		Course: BOT
		SUB_CODE:
(--- th) Year Regular / Back Examination: 20		
SUBJECT NAME:		
BRANCH:		
Max Time: 1 1/2 Hours		Sitting: 1st 10.00 AM to 11.30 AM
Max Marks: 40		
Q. CODE: (To be allotted by the University)		
All Questions are compulsory. Illustrate answer with diagrams wherever relevant / required		
The figures in the right-hand margin indicate marks.		
Q 1		Long Answer Question (Answer any one out of two)
		(1 X 10 marks)
	a)	
	b)	
Q 2		Long Answer (Answer any one out of two)
		(1 X 10 marks)
	a)	
	b)	
Q3		Short Answer Questions (Focused)
		(3 x 5 marks)
	a)	
	b)	
	c)	
Q 4		Objective Type (Selection / Supplied)
		(1 x 5 marks)
	a)	
	b)	
	c)	
	d)	
	e)	