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PATNA UNIVERSITY, PATNA
ORDINANCE
&
REGULATION

For

Two Years (Four Semesters)
Post Graduate Degree Program

M.Sc. in Biotechnology

(Faculty of Science)

A self financing program

under

Choice Based Credit System (CBCS)

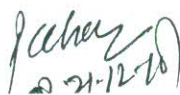
(To be effective from the academic session commencing from 2018)



Co-ordinator
M. Sc. Degree Course in Biotechnology
Patna University



Head of the Department of Botany
Patna University
PATNA-800 005.



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PATNA UNIVERSITY, PATNA
ORDINANCE AND REGULATION
Two Years (Four Semesters) Post Graduate Degree Program

M.Sc. Biotechnology (a self financing program)
in the Faculty of Science
Under
CHOICE BASED CREDIT SYSTEM (CBCS)

PREAMBLE:

The CBCS provides an opportunity for the students to choose program comprising core, elective and ability enhancement course. The programs can be evaluated following the grading system, which is considered to be better than the conventional marks system. Therefore, it is necessary to introduce uniform grading system in the entire higher education in India. This will benefit the students to move across institutions within India to begin with and across countries. The uniform grading system will enable potential employers in assessing the performance of the candidates; the program shall follow the guidelines formulated by the UGC in order to bring uniformity in evaluation system and computation of the Cumulative Grade Point Average (CGPA) based on student's performance in examinations.

The Post Graduate degree program for Biotechnology (a self financing program) under Faculty of Science shall be four semesters spread over two years duration. The program shall be named as the 'Master of Science' program and shall be abbreviated as M.Sc.

1. General

1.1 The ORDINANCE and the REGULATIONS shall be called the 'Admission Ordinance' and 'Regulations of Examinations' for M.Sc. Biotechnology, Post Graduate Degree Program to be applicable in the Patna University.

1.2 The ordinance and regulation shall be effective from the academic session 2018-19.

1.3 The M.Sc. Program of Biotechnology shall consist of 20 papers spread over four semesters consisting of **Core Courses (CC)**, **Elective Courses (EC)**, **Discipline Specific Elective Courses (DSE)**, **Ability/Skill Enhancement Courses (AEC/SEC)** and **Ability Enhancement Compulsory Courses (AECC)** as described in **Table 1**. There shall be five courses/ papers in first semester, six courses/ papers in second semester, six courses/ papers in third semester and three courses/ papers in fourth semester, each course carrying 100 marks. The entire curriculum shall be of 2000 marks taken together. However, the CGPA / class shall be awarded on the performance of the candidate on 16 courses/papers which include the 14 CC courses/papers and two EC courses/papers having an aggregate of 1600 marks. The various types of courses under CBCS are defined in **section 3**.

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3.1.7. Dissertation/ Project/ Internship/ Industrial Training:

An elective course designed to acquire special/advanced knowledge, such as supplement study/support study to a project work and a candidate studies such a course on his own with an advisory support by a teacher/ faculty member/scientist of own university/other university or any institution/statutory body is called dissertation/ project.

3.2. CREDIT

3.2.1 The total minimum credits, required for completing the PG program is 100.

The details of credits for individual components and individual courses are given in Table 1 .

Table-1: Structure of the 2 Yrs (Four Semesters) Post Graduate Degree Program under CBCS.

Semester	No. of Course/ Paper	Credit per Course/ Paper	Total Credit	Minimum No. of Learning Hours	No. of Core Course/ Paper	No. of Elective Course/ Paper	Code & Nature of Elective Courses/ Paper
I	05	05	25	250	4	1	AECC-1
SEMESTER BREAK							
II	06	05	30	300	5	1	AEC/SEC-1
SEMESTER BREAK							
III	06	05	30	300	5	1	AECC-2
SEMESTER BREAK							
IV	03	05	15	150	0	3	EC-1* EC-2* DSE-1 or GE-1
Total	20		100	1000	14	6	

For Tutorial (T)/ Practical (P)/ Project Work (PW)/ Field Work (FW)/ Internship etc., extra working hours may be added as per requirement and will be decided by the BOCS of the respective subject.

* The two **Elective Courses (EC)** to be studied in semester IV may be

- One Theory paper and One Practical paper
- / One Theory paper and One Project work
- / One Theory paper and One Field work
- / Both Project work/ Internship

IMP: It is desirable that all students of all courses be given adequate exposure over and above the class room teaching to enhance the scope of employability.

3.2.2 The distribution of the six elective courses/papers shall be two EC, one DSE or one GE, two AECC; one AEC/SEC. Students may opt for any elective course out of a list of elective papers (**Basket**) offered by the parent department or any other departments as per his/her choice with the prior permission of the parent department. The list of elective papers, syllabus and prerequisite of the elective course will be decided by the Board of Courses of Studies (BOCS) of the concerned subject/department.

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3.2.3 The final CGPA/ class will be decided on the performance of the student in the courses/ papers including the 14 core courses (CC)/ papers and two elective courses (EC)/ papers.

3.2.4 The one DSE or one GE, two AECC, one AEC/SEC course /paper will be qualifying in nature and a student has to score at least 45% marks in these courses/papers. Grade will be awarded separately for these courses, however, performances in these elective courses/ papers will not be considered for awarding the final CGPA / class.

3. 2. 5 Ability Enhancement Compulsory Courses (AECC):

University will run two **Ability Enhancement Compulsory Courses (AECCs)** which are qualifying in nature and a student has to qualify in both these courses. The courses are:

AECC-1

Environmental Sustainability (3 Credit) & Swachcha Bharat Abhiyan Activities (2 Credit)

AECC-2

Human Values & Professional Ethics (3 credits) and Gender sensitization (2 credits)

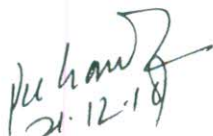
Students will do assignments/project work related to institutional social responsibilities including Swachcha Bharat Abhiyan Activities during SEMESTER BREAK.

3.2.6 University will run a number of **Ability Enhancement Courses (AEC)/ Skill Enhancement Courses (SEC)**; a student can choose one from these. For example:

Basket of Ability/Skill Enhancement Courses (AEC/SEC)

- Computers and ICT
- Web Designing
- Derivatives and Risk Management
- Solid Waste Management
- Mushroom Technology
- Biofertilizer Technology
- Environmental Law and Policy
- Tourism and Hospitality Management
- Life and Communication Skill Development
- Yogic Sciences
- Any other course decided by the University / Department




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3.2.7 Discipline Specific Elective (DSE):

In each program the Core Course-5 (CC-5) being taught in the second semester will be open and can be selected as a DSE course by other Department in 4th Semester. In the first phase a student will be allowed to choose a DSE course/paper from any subject other than his/ her Core Course (CC) from the same faculty in the same university.

3.2.8 Generic Elective (GE) Course:

University will run a number of **Generic Elective Courses (GE)**; a student can choose one from these. For example:

Basket of Generic Elective (GE) courses
<ul style="list-style-type: none">• Music• Dramatics• Fine Arts• Graphic Design• Inclusive Policies• Human Rights• Any such course run by any department

4. Admission to M. Sc. Biotechnology Program is open to candidates who have passed Bachelor or an equivalent examination conducted by a University established or incorporated by law, are eligible to apply for admission.
5. **Eligibility Criteria for Admission:** To be eligible for admission to this program, a candidate must have:

Graduate degree in Life Sciences (Botany, Zoology, Biotechnology, Microbiology, Industrial Microbiology) and Environmental Science

Or

Graduate degree in Biochemistry, Bioinformatics and Chemistry with Life Science subjects as subsidiary

Or

B.Sc.(Ag.), B.V.Sc. Or M.B.B.S. degree Or B.Tech in Biotechnology

Every candidate must have obtained at least 55% marks in aggregate at the graduate level examination. However, this limit is relaxed to 45% for SC, ST and EBC

6. **Written aptitude / Entrance Test & Viva-Voce :**

Admission to the Post Graduate Program in Biotechnology shall be made on the basis of the marks obtained at the written aptitude /entrance test (100 marks) followed by Viva-Voce (2 marks) conducted by the Department. The merit list for admission will be made on the basis of performance in the written test and viva-voce marks taken together i.e.125 marks. It is mandatory for a candidate to appear both in entrance test followed by a viva-voce.

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7. Number of Seats and Reservation:

- (a) The total number of seats available for admission to the course is 20 (Twenty) including both general and reserves categories.
- (b) The reservation of seats belonging to SC, ST, EBC (BC I) and OBC (BC II)'s categories will be provided as per the Patna University rules.

8. Fee Structure:

8.1 The application fee for applying for admission to this course will be Rs. 500/- (Five hundred only). This will include the fee for admission test. On the recommendation of the Academic Council and with the approval of the statutory bodies of the Patna University, application fee may be revised whenever required.

8.2 The fee structure (In Indian Rupees) for the course per semester is mentioned in **Table 2**. The fee structure may be revised from time to time by the Patna University with the consultation of course director and course coordinator. Fee for non residents Indian (NRI) and foreign students will be in US Dollar equivalent to usually ten times of the Indian rupees at the time of admission.

8.3 The candidates of other university admitted in the 1st Semester of the program have to pay the registration fee as decided by the Patna University.

8.4 The university examination fee (ESE) in each semester will be same as the ordinance and regulation of regular mode of M.Sc. in the Faculty of Science, Patna University, Patna effective from 2018 (**Vide PU Letter No. Acad./3864, Dated: 21.6.2018**). It may be changed by the Patna University time to time.

9. Course structure & Syllabus may be changed by the consent of the Hon'ble Vice-Chancellor, P.U. in consultation with the Director/ Head and the Course Coordinator.

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Table 2. Fee structure per semester for M. Sc. Biotechnology

Sl. No.	Head/ Item	For Indian Resident Fee in Indian Rupees
I	Admission fee (Per semester)	150
II	Tuition fee (Per Semester)	6000
III	Laboratory Fee (Per Semester)	6000
IV	Departmental Library Fee (Per Semester)	4000
V	Development Fee (Per Semester)	2500
VI	Total	18650
VII	Miscellaneous (Per semester)	
	(a) Central Library	100
	(b) Electricity fee	300
	(c) Identity card fee	60
	(d)NSS fee	50
	(e) Parking	50
	(f) Internal Examination fee	300
	(g) Building Maintenance Fund	100
	(h) Medical Fee	100
	(i) Athletic Fund (for University)	100
	(j) Common Room fund	50
	(k) Extra-curricular Fee (Cultural / Day Celebration etc.)	100
	(l) Environmental Protection Fee	20
	(m) Student's Welfare Fee	10
	(n) Poor Student's Fund	10
	(o) Student's Union Fund	100
	(p) Society Subscription	50
	(q) Magazine Fund	50
	(r) Hand Book / Directory	50
VIII	Total	1600
X	Eklavya & Tarang (One time in each academic session)	10
IX	Grand Total	
XI	Total amount (1st semester)	20260
XII	Total amount in subsequent semesters	20250
	2 nd Semester (excluding Eklavya & Tarang)	20260
	3 rd Semester (including Eklavya & Tarang)	20250
	4 th Semester (excluding Eklavya & Tarang)	

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REGULATIONS FOR EXAMINATION OF POST GRADUATE (M. Sc.) COURSE (SEMESTER SYSTEM)
IN BIOTECHNOLOGY

1. General

- 1.1 These regulations shall be called the "Regulations of Examinations" for M.Sc. (Science) Biotechnology Program.
- 1.2 These regulations shall come into force from the academic year session commencing from 2018.

2. Program of Study / Course structure

- 2.1 Student shall undergo a certified study extending to four semesters of two years Post Graduate degree. Each semester will consist at least 90 teaching days of four to six hours each.
- 2.2 Didactic lectures shall not exceed two third of the time schedule. Regular Seminar/symposium / workshop, group discussions and problem concern discussion / activities related to International/National day, week will be held regularly.
- 2.3 The durations of M.Sc. (Semester System) Program shall be of four semesters spread over two academic years. Each semester shall be of at least ninety teaching days.
- 2.4 Each academic session shall consist of two semesters I and III from July to December and II and IV from January to June
- 2.5 The M.Sc. program shall consist of 20 courses/papers spread over four semesters. There shall be five courses/papers in first semester, six courses/papers in second semester, six courses/papers in third semester and three courses/papers in fourth semester carrying 100 marks in each course/paper. The entire curriculum shall be of 2000 marks taken together. However, the class/ grade shall be awarded on the performance of the candidate on 16 courses/papers including 14 CC and two EC courses/ papers having an aggregate of 1600 marks.
- 2.6 In each semester each elective course shall carry 100 marks. The four elective courses – one AEC/SEC, two AECC and one DSE or one GE will be qualifying in nature. A student shall not be considered pass and eligible for award of the final degree unless he/she obtains minimum qualifying marks in these four courses. A complete description of courses is given in **Table-3**.
- 2.7 The distribution of courses/papers like theory, practical, field work, project, internship, dissertation etc. with number of credits is specified in each subject in the program structure of the subject concerned of the department.

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Table : 3
Course Structure for M.Sc. Biotechnology (Choice Based Credit System)

Semester	Course/ Paper Code	Nature of Course/ Paper	Credit	Marks	Marks of CIA	Marks of ESE	Passing criterion	Qualifying Criterion
SEMESTER I	MSBTCCC-1	Cell & Molecular Biology and Genetics	5	100	30	70	45% in CIA 45% in ESE	Marks de class/ CGP
	MSBTCCC-2	Microbiology	5	100	30	70	45% in CIA 45% in ESE	Marks de class/ CGP
	MSBTCCC-3	Biomolecule and Basic Enzymology	5	100	30	70	45% in CIA 45% in ESE	Marks de class/ CGP
	MSBTCCC-4	Practical (Based on MBTCC 1, 2 & 3)	5	100	30	70	45% in CIA 45% in ESE	Marks de class/ CGP
	MSBTCAECC-1	Environmental Sustainability & Swachhcha Bharat Abhiyan Activities	5	100	50	50	45% in CIA 45% in ESE	Qualifying
SEMESTER II	MSBTCCC-5	Biofertilizer and Mushroom Technology	5	100	30	70	45% in CIA 45% in ESE	Marks dec class/ CGPA
	MSBTCCC-6	Biophysics and Instrumentation	5	100	30	70	45% in CIA 45% in ESE	Marks dec class/ CGPA
	MSBTCCC-7	Biology of Immune System	5	100	30	70	45% in CIA 45% in ESE	Marks dec class/ CGPA
	MSBTCCC-8	Bioprocess Technology	5	100	30	70	45% in CIA 45% in ESE	Marks deci class/ CGPA
	MSBTCCC-9	Practical (Based on MBTCC 5, 6, 7 & 8)	5	100	30	70	45% in CIA 45% in ESE	Marks deci class/ CGPA
	MSBTCAEC-1 /MSBTCSEC-1	One selected from basket	5	100	50	50	45% in CIA 45% in ESE	Qualifying
SEMESTER III	MSBTCCC-10	Biostatistics and Bioinformatics	5	100	30	70	45% in CIA 45% in ESE	Marks deci class/ CGPA
	MSBTCCC-11	Recombinant DNA Technology	5	100	30	70	45% in CIA 45% in ESE	Marks deci class/ CGPA
	MSBTCCC-12	Plant and Animal Biotechnology	5	100	30	70	45% in CIA 45% in ESE	Marks deci class/ CGPA
	MSBTCCC-13	Environmental Biotechnology	5	100	30	70	45% in CIA 45% in ESE	Marks deci class/ CGPA
	MSBTCCC-14	Practical (Based on MBTCC 10, 11, 12 & 13)	5	100	30	70	45% in CIA 45% in ESE	Marks deci class/ CGPA
	MSBTCAECC-2	Human Values & Professional Ethics and Gender sensitization	5	100	50	50	45% in CIA 45% in ESE	Qualifying
SEMESTER IV	MSBTCEC-1	Subject specific elective	5	100	Will be decided by the BOCS	Will be decided by the BOCS	Will be decided by the BOCS	Marks deci class/ CGPA
	MSBTCEC-2	Subject specific elective	5	100	Will be decided by the BOCS	Will be decided by the BOCS	Will be decided by the BOCS	Marks deci class/ CGPA
	MSBTCDSE-1	Opt a Course (CC-5) of other Program/Department.	5	100	30	70	45% in CIA 45% in ESE	Qualifying

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2.8 The term 'credit' means weightage given to a course in relation with the instructional hours assigned to it. One credit will generally consist of ten hours of instruction. The M.Sc. Science program shall be of one hundred credits divided as 25 credits in first semester, 30 credits in second semester, 30 credits in third semester and 15 credits in fourth semester. The number of credit for each course/paper of the Master's Degree program shall be specified in the course structure of the subject.

3. Evaluation of Performance Under Semester System

3.1 The Performance of a student in each course (CC) will be assessed on the basis of a continuous Internal Assessment (CIA) of 30 marks and the End of Semester Examination (ESE) consisting of 70 marks.

3.2 The components of CIA (Core Course) shall be

a.	Two Mid-Semester Test of one hour duration	7.5 x 2 =	15 marks
		(Third repeat test for genuine absentees)	
b.	Seminar/ Quiz/ Viva-voce		5 marks
c.	Home assignment/ Field Work/ Report Writing		5 marks
d.	Regularity and Behavior		5 marks
			Total : 30 marks

Note: Marks for regularity and behavior will be awarded as follow:

Attendance	Marks
75%	1
Above 75% to 80%	2
Above 80% to 85%	3
Above 85% to 90%	4
Above 90%	5

3.3 The performance of a student in the elective courses /papers AEC/SEC and AECC in each semester addressing the issues of (i) Skill Development (ii) Human Values and Professional Ethics and Gender Sensitization (iii) Environment and Sustainability and Swachchha Bharat Abhiyan Activities shall be assessed on the basis of a Continuous Internal Assessment (CIA) of 50 marks and the End Semester Examination (ESE) consisting of 50 marks.

3.4 The components of C.I.A. in the courses/papers (mentioned in 3.4) shall be as follows :

(i) One mid-semester written tests of the hour duration each	= 10 Marks
(ii) Seminar/ Quiz	= 10 Marks
(iii) Assignment	= 15 Marks
(iv) Discharge of Institutional Social Responsibility / Community Services (report to be submitted)	= 15 Marks
Total	= 50 Marks

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3.5 The concerned teacher of the course/ paper shall be responsible for conducting the mid-semester tests and other components of the CIA.

3.6 The ESE will be written examinations of 3 hours duration conducted by the university.

3.7 The evaluation of laboratory course/paper and field work, wherever applicable will also be based on CIA and an end-semester practical examination.

3.8 All such examinations shall be as per the provisions of examination board and moderation board of the Patna University.

3.9 Only those students who secured minimum qualifying marks in of 45% in the CIA shall be allowed to fill up the End Semester Examination form.

3.10 The marks of CIA in each course/paper be submitted by the Department along with the End Semester Examination form failing which the student may not be issued admit card for the examinations.

4. Examinations:

4.1 The End Semester Examination will be conducted by the University. The Mid Semester examinations and other components of CIA shall be conducted and evaluated by the concerned departments. The practical examinations wherever applicable will be conducted in the department. The Director/Head of the department will appoint external examiners for practical End Semester Examinations with the approval of the Patna University, The mid semester tests will be conducted and evaluated by the teacher concerned. The answer scripts of the mid-semester tests shall be shown to students by the concerned teacher.

4.2 The End of Semester Examination (ESE) shall be named as follows

(a) M.Sc. Part (I)- Semester I Examination and Semester II Examination

(b) M.Sc. Part (II) - Semester III Examination and Semester IV Examination

(c) Syllabus for each paper/course shall be divided into at least 5 units. Based on this, the question paper pattern for the End Semester Examination shall have divided into three parts A, B, C comprising of objective type questions with multiple choice, short answer type questions and long answer type questions respectively as mentioned below.

Part	Nature of Questions	Number of Questions to be asked	Number of Questions to be answered	Marks of each question	Total Marks
Part-A	Objective type questions with 4 multiple choices	10	10	02	20
Part-B	Short answer type questions	05	04	05	20
Part-C	Long answer type questions	04	03	10	30
Total Marks					70

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Part-A

Ten objective type questions -All questions to be answered (Questions shall be picked up from the whole syllabus, two questions preferably from each unit) 10 x 2 = 20 marks

Part-B

Five short Answer Questions- Four questions to be answered (Questions shall be picked up form the whole syllabus, one question preferably from each unit) 4 x 5 = 20 marks

Part-C

Five long answer questions – Three questions to be answered. (Question shall be picked up form the whole syllabus, one question preferably from each unit) 3 x 10 = 30 marks

4.3 The examination of I and III semesters, shall be generally held in the month of November-December and that of II and IV semester shall be held in the month of May-June.

4.4 In formulating the entire program of studies, the Department shall be guided by the consideration that at the Post Graduate level, students should be familiar with all the sub-disciplines, trends, trends and paradigms of the subject contributing to the knowledge pool and also the value education and employability factor, Keeping this in view the Department will decide subject based 14 core course/ papers, 2 EC course/ papers and other 4 elective course/ papers.

4.5 Paper Setting, For ESE, 50 % examiners will be engaged from outside the university by the parent University as per the provisions of the examination board.

4.6 All practical courses/project/dissertation/internship shall be evaluated by two external examiners.

5. Passing of Examinations and Promotions Rules

Promotion Rules

5.1 There shall be no supplementary examination in any of the course/ papers in any semester (I, II, III, and IV).

5.2 The candidates who have been admitted to the First Semester of a two years Post Graduate Program in a session can be placed in the following categories on the basis of their attendance in the semester.

(i) Those candidates who have cleared the CIA and attended the required minimum percentage (75%) of attendance of lectures/ Practical courses separately.

(ii) Those who have not attended the required minimum percentage of attendance (75%) both in Theory and Practical courses shall in no case be permitted to appear in the End Semester Examinations.

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5.3 After appearing at the Semester Examinations, the candidates can be placed in following categories in the context of declaration of the results of the Semester Examination (ESE)

(i) To be declared passed in End Semester Examination in any subject, a candidate must secure at least 45% marks in each course/paper separately in CIA, theory and practical, wherever applicable.

(ii) If a candidate secures 45% marks in at least three course/papers in his/her First/Second/ Third End Semester Examination he/she shall be promoted to next higher semester.

(iii) Candidates shall have to clear their backlog course(s) /paper(s) in the next end semester examination of that semester whenever it is available.

(iv) Even if a student is promoted to Fourth Semester, his/her final result will only be declared when he/she has cleared all their backlog courses/papers.

(v) Final result of M.Sc. Program shall be published on the basis of candidate's performance in the 16 course / papers spread over four semesters provided he/she has passed with minimum qualifying marks of 45% in the elective courses/ papers of each semester.

(vi) The Final result will be published only after he/she has cleared all the 20 courses / papers securing minimum qualifying marks.

(vii) Since it is a continuous evaluation program, student shall be awarded Grade Point (GP) at the End of each Semester Examination and Cumulative Grade Point (CGP) at the End of the Final End Semester Examinations in 10 point scoring system.

(viii) There shall be no supplementary examination. A student has to score minimum 45% marks in his CIA. Failing to secure minimum marks he/she shall have to repeat the CIA along with the students of the same semester of the next academic session.

(ix) If students fail to secure minimum 45% marks in CIA of any course / paper, his/her result will be declared as failed in that paper. Students shall have to reappear in that paper in the same semester of next academic session.

(x) The name of the promoted candidate/ candidates will not be included in the merit list of that program/subject.

(xi) A promoted candidate, if he has passed in CIA but fails in theory course(s)/paper(s), he/she shall retain his/her CIA score and will reappear in the course /theory paper only of the semester whenever available. However if a candidate is declared fail in any End Semester Examination shall retain nothing and will have to redo the course work of failed semester again and he has to appear again in CIA as well as theory course / paper.

6. Improvement of Result:

If candidate passes in End Semester Examination (ESE), he/she may apply for the improvement of his/her result in maximum of two courses of the fourth semester. He/she can avail this facility only

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in theory course. Better of the two results will be treated as final result of candidates in those courses.

However, the name of such candidates with improved result will not be included in the merit list.

7. Declaration of Result:

The following grading system shall be used by Teacher/Examination Department:

Letter Grade	Percentage Range	Numerical of Letter Grade	Description of Grade
O	100-91	10	Outstanding
A++	90-81	9	Excellent
A+	80-71	8	Very Good
A	70-61	7	Good
B+	60-51	6	Average
B	50-45	5	Pass
F	Less than 45	Less than 5	Fail

8. Examinations:

8.1 The End Semester Examinations (ESE) shall be conducted by the University. The Continuous Internal Examinations (CIA) shall be conducted by the concerned department.

9. Passing of Examination:

9.1 A student shall be declared to have 'passed' and promoted to the next semester when he/she earns 'B' grade or above grade as mentioned in the table in **section 7** in the semester examination covering continuous evaluation, mid-term and end-term examinations in all the courses for which he/she was registered in the said semester.

(i) In order to be promoted from Semester I to Semester II, a candidate has to pass in at least three courses/papers in Semester I Examinations.

(ii) In order to be promoted to the Semester III, a candidate needs to pass in at least three courses/papers of Semester I and three courses/papers of Semester II.

(iii) In order to be promoted to the Semester IV, a candidate must clear all courses/papers of semester I, at least three courses/papers of semester II and three courses/papers of semester III.

(iv) In semester IV, a candidate needs to have cleared all the twenty courses/papers for the award of the Degree.

(v) A student passed or promoted to the next Semester shall be entitled to get admitted in the semester to which he/she has been declared passed/ promoted

9.2 A student will be deemed as 'FAILED' in a semester when he/he gets 'F' grade in more than 50% of the courses/papers offered in the examinations to meet the requirements. Such students will be

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advised by the University to repeat the semester on payment of semester fee or the half of the academic year fee.

9.3 A student who has secured less than 'B' Grade in one or more course may also be promoted to the next semester if he/she has not otherwise failed as per section above. However, he/she will have to re-appear at the examination of such courses one time only as and when it is held or at the time of regular End Semester Examination (ESE) in which he/she has been promoted.

9.4 A student shall be declared to have failed in the program when he/she fails to qualify for promotion to the next semester after two successive attempts.

9.5 Grades that may be shown in the award sheet of a student without any numerical value are N. A. (Not Applied) and S. P. (Satisfactory Performance) for course(s) extending beyond a semester such as project work.

9.6 There shall be a Grade Point Average (GPA) calculated for each semester on the basis of grades obtained in that semester. **The GPA will be calculated as per Patna University Ordinance & Regulation for the 2 yr (Four Semester) Post Graduate Degree Course M.Sc. in the Faculty of Science under Choice Based Credit System (CBCS) effective from 2018-19 approved vide letter no. Estb. 40/ 2017 – 1457 / GS (1) dated 29.05.2018 of the O.S.D. (Judl), Governor Secretariat, Raj Bhawan, Bihar Patna and Patna University letter no. Acad / -3864 – 65, Dated 21.06.2018.**

9.7 The award sheet of the students will show the grades obtained in all the courses offered in each semester, grades/ categories without numerical value (if applicable) the GPA and the promotion status.

9.8 To be eligible for the award of Master Degree, students must obtain a minimum final cumulative Grade Point Average (CGPA) of 5.0

9.9 To find percent equivalent to CGPA the following formula may be used, **percent = CGPA x 10.**

9.10 Answer books or sheets will be coded before being passed on the examiner and decoded before tabulation work.

10. Wherever this regulation is silent, such matter will be governed by the regulation already existing for the Post Graduate Science Program of the Patna University.

Signature
per hand
21.12.18

Signature
21/12/18