



GOVERNOR'S SECRETARIAT, BIHAR  
RAJ BHAVAN, PATNA-800022

Letter No.-PU(Regulation)-08/2005(Part)- /GS(I), Dated-  
From,

R.V.S. Parmar,  
Law Officer-cum-Incharge OSD(J)

To,

The Registrar,  
Patna University,  
Patna.

Sub:- Regarding approval of the Ordinance and Regulations under Choice Based Credit System (i) B.A. (Hons.) in Mass Communication (ii) Bachelor of Business Administration (Hons.) (iii) B.A. (Hons.) in Computer Applications (iv) B.Sc. (Hons.) in Biotechnology (v) B.Sc. (Hons.) in Computer Applications (vi) B.A. (Hons.) in Functional English, a self-financing programme to be effective from the session 2019-2022 onwards.

Sir,

I am directed to invite a reference to the University's Letter No.- Acad/9209, Letter No.- Acad/9293, Letter No.- Acad/9183, Letter No.- Acad/9203, Letter No.- Acad/9185, Letter No.- Acad/9199, all dated 16-10-2019 on the subject mentioned above and to inform that the Hon'ble Chancellor after due consideration of the proposal of the University and advice of the Advisory Committee and in exercise of the powers vested in him u/s 38(2) and 39(2)(ii) of Patna University Act, 1976 as amended up to date, has been pleased to approve the draft Ordinance and Regulations of the following courses under self-financing programme to be effective from the session 2019-2022 and onwards:-

- (i) B.A. (Hons.) in Mass Communication
- (ii) Bachelor of Business Administration (Hons.)
- (iii) B.A. (Hons.) in Computer Applications
- (iv) B.Sc. (Hons.) in Biotechnology
- (v) B.Sc. (Hons.) in Computer Applications
- (vi) B.A. (Hons.) in Functional English

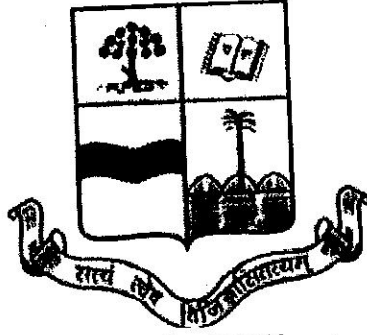
However, Ordinance and Regulations if any, approved earlier in respect of the above courses /programmes shall deem to be **repealed** to the extent aforesaid.

Further necessary action may kindly be taken accordingly.

Yours faithfully,  
Sd/-

Encl:-As above.

(R.V.S. Parmar)  
Law Officer-cum-Incharge OSD(J)



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# PATNA UNIVERSITY

## ORDINANCE & REGULATION

for

The 3 yr (Six Semester)  
Under Graduate Degree Programme

**B.Sc.(Hons) in Computer Applications**  
in the faculty of Science  
under

**CHOICE BASED CREDIT SYSTEM (CBCS)**  
(To be effective from 2019 - 20)

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Annexure 2

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# PATNA UNIVERSITY

## Part A : ORDINANCE

### The 3 yr (Six Semester) Under Graduate Degree Programme B.Sc. (Hons) in Computer Applications in the faculty of Science under CHOICE BASED CREDIT SYSTEM (CBCS)

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#### PREAMBLE:

The CBCS provides an opportunity for the students to choose courses from the prescribed list of courses comprising core, elective and ability enhancement courses. The courses 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 of universities of Bihar to move across institutions within India to begin with and across countries. The uniform grading system will also enable potential employers in assessing the performance of the candidates. The Universities 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 Under Graduate degree programme for subjects under Faculty of Science shall be of six semesters spread over three years duration. The programme shall be named as the 'Bachelor of Science Honours' programme and shall be abbreviated as B.Sc.(Hons).

#### 1. General

- 1.1 The ORDINANCE and the REGULATIONS shall be called the 'Admission Ordinance' and 'Regulations of Examination' for Under-Graduate degree courses to be applicable in Patna University.
- 1.2 The programme may be run in any College/ Department/ Centre under Patna University.
- 1.3 These ordinance and regulations shall be effective from the academic session 2019-20 & onwards.
- 1.4 The B.Sc. (Hons.) in Computer Applications programme shall consist of 26 papers spread over six semesters consisting of Core Courses (CC), Generic Courses (GE), Discipline Specific Elective Courses (DSE), Skill/ Ability Enhancing Courses (SEC) and Ability Enhancing Compulsory Courses (AECC) as described in Table.
  1. There shall be four courses/ papers in 1<sup>st</sup> semester, four courses/papers in 2<sup>nd</sup> semester, five courses/papers in 3<sup>rd</sup> semester and five courses/papers in 4<sup>th</sup> semester; four courses/papers in 5<sup>th</sup> semester and four courses/papers in 6<sup>th</sup> semester

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each course carrying 100 marks. The entire curriculum shall be of 2600 marks taken together. However, the CGPA/class shall be awarded on the performance of the candidate on 18 papers which includes the 14 CC papers and four (04) DSE papers having an aggregate of 1800 marks. The various types of courses under CBCS are defined in section 3.

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## 2. The subjects:

The Under Graduate Degree 'Bachelor of Science Honours' [B.Sc. (Hons)] in Computer Applications in the Faculty of Science shall be offered with the Core subject/ Major subject as Computer Applications.

## 3. OUTLINE OF THE CHOICE BASED CREDIT SYSTEM (CBCS):

It consists of a number of courses i.e. Core Course (CC), Generic Elective Course (GE), Discipline Specific Elective Course (DSE), Skill/ Ability Enhancement Courses (SEC), and Ability Enhancement Compulsory Courses(AECC). Each course is equivalent to a paper. The nature of these courses is defined below:

### 3.1.1 Core Course (CC):

A course which should compulsorily be studied by a candidate as a core requirement on the basis of subject of B.Sc. studies and is termed as a Core course.

### 3.1.2 Discipline Specific Elective Course (DSE):

Elective courses may be offered by the main discipline/subject of study is referred to as Discipline Specific Elective. The University/Institute may also offer discipline related Elective courses of interdisciplinary nature (to be offered by main discipline/subject of study).

### 3.1.3 Generic Elective (GE) Course:

An elective course chosen generally from an unrelated discipline/subject, with an intention to seek wide exposure is called a Generic Elective.

P.S.: A core course offered in a discipline/subject may be treated as an elective by other discipline/subject and *vice versa* and such electives may also be referred to as Generic Elective.

### 3.1.4 Skill Enhancement Courses (SEC):

The Skill Enhancement Courses (SEC). "SEC" courses are the courses based upon the content that leads to life skill enhancement.

### 3.1.5 Ability Enhancement Compulsory Courses(AECC):

University will run a number of Ability Enhancement Compulsory Courses(AECC) which is qualifying in nature and student from all faculties have to qualify in all such courses.

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### 6.6 Dissertation/Project/ Internship/ Industrial Training:

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An elective course designed to acquire special/advanced knowledge, such as supplement study/support study through a project work. A candidate studies such a course on his own with an advisory support by a teacher / faculty member is called dissertation/project. Student may join an Industrial/ Service Sector/ Research organization to acquire hands on training and/ or research training.

### 3.2 CREDIT

The total for completing a UG program is 148 (Take from B.Sc. (H) Env. Sc.).

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

**Table 1: Structure of the 3 Yrs (Six Semesters) Under Graduate Degree Programme under Choice Based Credit System (CBCS):**

Semester	No of COURSE /Papers	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 Course/ paper
I	04	2X06 1X06 1X04	22	220	2	2	GE-1 AECC-1
SEMESTER BREAK							
II	04	2X06 1X06 1X04	22	220	2	2	GE-2 AECC-2
SEMESTER BREAK							
III	05	3X06 1X06 1X04	28	280	3	2	GE-3 SEC-1
SEMESTER BREAK							
IV	05	3X06 1X06 1X04	28	280	3	2	GE-4 SEC-2
V	04	2X06 2X06	24	240	2	2	DSE-1 DSE-2
VI	04	2X06 2X06	24	240	2	2	DSE-3 DSE-4
<b>Total</b>	<b>26</b>		<b>148</b>	<b>1480</b>	<b>14</b>	<b>12</b>	

#For Tutorial (T)/ Practical (P)/ Field Work (FW)/ Internship etc. extra working hour to be added as per requirement and will be decided by the BOCS of the respective subject.

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Discipline Specific Elective Courses (DSE-3 & DSE-4) to be studied in the 6<sup>th</sup> semester may be

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Both theory papers  
/ 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.

3.2.1 The distribution of the ten elective papers shall be – two (2) SEC, Four (4) GE, four (4) DSE. Students may opt for any elective course out of a list of elective papers (**Basket**) offered by the University/ parent department or any other department/ 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 as decided by the Board of Courses of Studies (BOCS) of the concerned subject/ department.

3.2.2 The final CGPA/ class will be decided on the performance of the student in the 18 courses/ papers including the 14 Core Courses (CC) / papers and 04 DSE papers.

3.2.3 The four (04) GE courses, two (02) AECC, two (02) SEC courses/ papers will be qualifying in nature and a student has to score at least 45% marks in these papers. Grade will be awarded separately for these courses, however, performance in these courses/ papers will not be considered for awarding the final CGPA.

3.2.4 **Ability Enhancement Compulsory Courses (AECC):**

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

**Table 2: Ability Enhancement Compulsory Courses (AECC-1 & AECC-2)**

AECC-1 : Language Proficiency (English/ Hindi) (4 Credit)

AECC-2 : Environmental Sustainability (4 Credit)

Students may be encouraged to do assignments/project work related to institutional social responsibilities including Swachchha Bharat Abhiyan Activities during SEMESTER BREAK.

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3.2.5 University will run a number of Skill Enhancement Courses (SEC); a student can choose one from these in Sem III and one in Sem IV. For example:

Table 3: Basket of Skill Enhancement Courses (SEC-1 & SEC-2)

- Food Processing Technology
- Mushroom Culture
- Environmental Law
- Financial Risk Management
- Solid Waste Management
- Retail Management
- Tourism & Hospitality Management
- Life skill & skill development
- Yoga Studies
- Weather Forecasting
- Applied Optics
- Robotics
- Renewable Energy & Energy Harvesting  
etc.

### 3.2.6 Generic Elective (GE) Course:

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

Table 4: Basket of Generic Elective (GE) Course

- Mathematics
- Physics
- Statistics
- Earth Science
- Environmental Law
- Electronics
- Economics
- Business Economics
- Disaster Management
- Any other course offered by SWAYAM/NPTL/MOOC & approved by the BOCS

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3.2.7 Discipline Specific Elective (DSE):

A student may select as a DSE paper from a set of courses run by the department.

Table 5: Basket of Discipline Specific Elective (DSE) Courses

- Website Design with HTML and PHP
- Python Programming
- Android Programming Statistics
- Programming in MATLAB
- VB.NET Programming
- Arduino Sensors
- Microprocessor
- Information Security
- Modelling and Simulation
- Operational Research
- Combinatorial Optimization
- Numerical Methods
- Design Image Processing
- Data Sciences
- Data Mining
- Any other course offered by SWAYAM/NPTL/MOOC & approved by the BOCS

4. ELIGIBILITY CRITERIA for ADMISSION in B.Sc. (Hons) Programme in Computer Applications:

4.1 A candidate seeking admission to B.Sc. (Hons) in Computer Applications (Semester System) must have passed/ appearing the Intermediate Science (I.Sc.) examination of Bihar board or 12<sup>th</sup> examination of 10 +2 system offered by any other approved board (CBCS/ ISC).

4.2 Admission to B.Sc. (Hons) in Computer Applications Part-I (First Semester), shall be made in order of merit. The merit list shall be prepared on the basis of marks obtained by an applicant in the Admission Entrance Test (AET) to be conducted by the University/ College.

AET will consist of written test of 100 marks and interview carrying 20 marks. The final merit list shall be prepared on the basis of the performance of the applicant in the written test and the interview in the AET.

4.3 A merit list will be prepared for different category of candidates on the basis of marks obtained in the written test (AET).

4.4 The candidates within only 3 times the actual number of seats available for each category will be called for appearing in the Interview.

4.5 Final merit list will be prepared on the basis of total marks obtained in written test and the interview. i.e on 120 marks.

4.6 Only those candidates selected on the basis of performance in the AET and passed with 45% marks in the aggregate and pass in all subjects in 12<sup>th</sup> level examination will be admitted.

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### 5. The Admission Entrance Test (AET)

AET will consist of written test of 100 marks and interview carrying 20 marks. The final merit list shall be prepared on the basis of the performance of the applicant in the written test and the interview in the AET i.e. on 120 marks.

#### 5.1 Structure of the Admission Entrance Test AET (Written):

Questions shall be of multiple choice type with four options with a single correct answer. The entrance test shall be held on OMR sheet. The duration of the test shall be of 2:00 hour. The total marks will be 100 marks. There shall be no negative marking. There shall be five parts in the question paper as mentioned in Table.6.

Table.6. Details of entrance test

Part A	General Aptitude Test & Reasoning	20 marks	20 questions	1 mark for each question
Part B	English Language Proficiency	20 marks	20 questions	1 marks for each question
Part C	Mathematics	35 marks	35 questions	1 mark for each question
Part D	Science : Physics, Computers	20 marks	20 questions	1 marks for each question
Part E	General knowledge	05	5 questions	1 marks for each question

5.2 The Applications fee for applying for admission to B.Sc. (Hons) programme will be Rs.750/- only. This will include the fee for admission entrance test and the cost of the prospectus.

On the recommendation of the Academic Council and with the approval of the statutory bodies of the respective university, Applications fee may be revised whenever required.

### 6. No. of seats

At present the number of seats available in B.Sc. (Hons) in Computer Applications in various colleges of Patna University are as follows :

- Patna Women's College (An Autonomous College) – 40, Magadh Mahila College – 40
- Patna Science College - 30 , Bihar National College - 30

Any change in the number of seats in a particular subject shall be decided by the respective University in accordance with the guidelines received from the State Government from time to time.

### 7. Reservation of Seats

i. The reservation of seats in each programme shall be as per reservation rules of the Government of Bihar.

ii. Reservation for Persons with Disabilities (PwD) candidates will be followed as per notification of the Government of Bihar issued from time to time.

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iii. 2% seats of the sanctioned strength in any subjects may be filled with NRI/Foreign students. These seats will be treated as over and above the normal sanctioned strength. NRI candidates under this category shall submit their applications duly recommended by M.E.A. (Ministry of External Affairs) alongwith the copies of the documents showing NRI status. NRI candidates will be exempted from the written test. However, they have to appear in before the Interview board.

iv. A candidate seeking admission against under various reserved category i.e. SC/ST/EBC/OBC/WBC/EWS etc. has to mention about the category to which he/she belongs to at the time of submitting the main admission application form and attach the supporting document to substantiate his/ her claim. Applications received separately later on shall not be entertained.

v. No student shall be entertained to two weightage for the purpose of admission under special quota.

8. No applicant shall be admitted to the programme who has not applied for admission within the notified time period.

9. The admitted students will have to register themselves with the Patna University to be able to appear in the Patna University examination within the stipulated period to be notified by the University at the time of admission.

10. During the tenure of the Programme, if it is found that any document/documents or submission made by a student in support of his/her admission to B.Sc. (Hons) programme is/are forged or fake, his/her admission shall automatically stand cancelled. The concerned candidate shall be solely responsible for the cancellation of his/her admission and other punitive action/actions. The fee deposited by the candidate will be forfeited.

11. The Vice Chancellor of the University has the absolute right to reject /deny admission to any candidate without assigning any reason if he/she judges that this is in the best interest of the University.

12. No candidate shall be allowed to register for any other degree programme in the same University or any other university during the same academic session of his/her study of B.Sc. (Hons) programme in Computer Applications.

**13. Medium of Instruction/Teaching**

Medium of instruction for teaching-learning is English.  
The examination question paper will be in English and a student has to present answer in English.

**14. Fee Structure**

The Fee Structure for the B.Sc. (Hons) programme shall be as mentioned in Table 7.

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Annexure 7 FEE STRUCTURE PER SEMESTER

Under Graduate Degree [B.Sc. (Hons)] in Computer Applications under Self Financing

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Sl. No.	Head/ Item	For Indian Resident Fee in Indian Rupees.	Non-Residents Indian (NRI) and Foreign Students in US dollar(\$)
			90
I.	Admission Fee(Per semester)	150/-	20
II.	Registration fee(one time) if applicable	200/-	200
III.	Caution Money(one time)	2000/-	2000
IV.	Tuition fee(per semester)	10000/-	25
V.	Eklavya & Tarang (one time in each Academic Session)	10/-	
VI.	<b>Total</b>	<b>12360/-</b>	<b>2335</b>
VII.	Miscellaneous (Per semester)		
	Central library	100/-	10
	Electricity fee	100/-	10
	Identity card fee	50/-	5
	Medical fee	50/-	5
	NSS fee	50/-	5
	Parking	50/-	5
	Parking	300/-	25
	Internal Examination fee	100/-	5
	Library Maintenances Fund	100/-	10
	Building Maintenance Fund	100/-	5
	Medical fee	100/-	5
	Athletic Fund(for College)	50/-	5
	Athletic Fund(for University)	50/-	5
	Common room Fund	50/-	5
	Extra-curricular Fee(Cultural)	50/-	5
	Environmental Protection Fee	20/-	5
	Student's Welfare Fee	10/-	5
	Poor student's fund	10/-	5
	Student's Union Fund	20/-	5
	Society Subscription	50/-	5
	Magazine Fund	50/-	5
	Hand Book/Directory	50/-	5
VIII.	<b>Total</b>	<b>1360/-</b>	<b>135</b>
IX.	<b>Grand total</b>	<b>13720/-</b>	<b>2470</b>
X.	Less Registration fee	200/-	20
XI.	<b>Total amount 1<sup>st</sup> semester</b>	<b>13520/-</b>	<b>2450</b>
XII.	Total amount in subsequent semesters excluding caution money & Registration. Charges	11520/-	2250
XIII.	Practical fee per semester wherever applicable	500/-	50
XIV.	Field work wherever applicable(one time)	1000/-	100
XV.	1. The order of the GOB issued from time to time in regards to fee structure will be followed strictly.		

The fee structure may be revised from time to time by the University only after the approval of the State Government.

15. If need arises, the University with the approval of relevant Statutory bodies and the Governor's Secretariat may modify / add or delete any provision of this ordinance.

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# PATNA UNIVERSITY

## Part B : REGULATION

### The 3year (Six Semester) Under Graduate Degree Programme B.Sc. (Hons) in Computer Applications in the faculty of Science under CHOICE BASED CREDIT SYSTEM (CBCS)

#### 1. General

1.1 These regulations shall be called the "Regulations of Examination" for B.Sc. (Hons) in Computer Applications.

1.2 These regulations shall come into force from the academic year 2019-2020.

#### 2. Programme of Study

2.1 The University shall offer B.Sc. (Hons) in Computer Applications degrees in the Faculty of Science

2.2 The durations of B.Sc. (Hons) in Computer Applications (CBCS System) programme shall be of six semesters spread over three academic years. Each semester shall be of ninety teaching days.

2.3 Each academic session shall consist of two semesters

- Odd Semesters (I, III, V) from July to December

- Even Semesters (II, IV, VI) from January to June.

2.4 The B.Sc. (Hons) in Computer Applications Course shall consist of 26 papers spread over six semesters. There shall be four papers in first semester, four papers in second semester, five papers in third semester and five papers in fourth semester, four papers in fifth semester and four papers in sixth semester carrying 100 marks in each paper. The entire curriculum shall be of 2600 marks taken together. However, the class shall be awarded on the performance of the candidate on 18 papers including 14 CC and four DSE papers having an aggregate of 1800 marks.

2.5 The eight elective papers - two AECC, two SEC and four 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 eight papers. A complete description of papers is given in table 1.

2.6 The distribution of papers like theory, practical, field work, project, internship, dissertation etc. with number of credits is specified in the syllabus of each subject/ programme and made available to the student by the respective department.

2.7 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 B.Sc. programme shall be of 148 credits divided as 22 credit in first semester, 22 credit in second semester, 28 credit in third semester, 28 credit in fourth semester, 24 credit in fifth semester and 24 credit in sixth semester. The number of credit for each paper of the Bachelors degree programme shall be specified in the syllabus of the subject concerned.

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**Table. I. Description of papers for B. Sc. (Hons) degree in Computer Applications the faculty of Science under CBCS**

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Semester	Course/ Paper Code	Nature of Course/ Paper	Marks	Marks of CIA	Marks of ESE	Passing criterion	Qualifying Criterion
I	CC-1	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
	CC-2	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
	GE-1	Generic Elective	100	30	70	45% in CIA 45% in ESE	Qualifying
	AECC-1	Ability Enhancing Compulsory	100	30	70	45% in CIA 45% in ESE	Qualifying
	CC-3	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
	CC-4	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
	GE-2	Generic Elective	100	30	70	45% in CIA 45% in ESE	Qualifying
	AECC-2	Ability Enhancing Compulsory	100	30	70	45% in CIA 45% in ESE	Qualifying
	CC-5	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
	CC-6	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
	CC-7	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
	GE-3	Generic Elective	100	30	70	45% in CIA 45% in ESE	Qualifying
	SEC-1	Skill Enhancement Course (Elective)	100	30	70	45% in CIA 45% in ESE	Qualifying
	CC-8	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
	CC-9	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
	CC-10	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
GE-4	Generic Elective	100	30	70	45% in CIA 45% in ESE	Qualifying	
SEC-2	Skill Enhancement Course (Elective)	100	30	70	45% in CIA 45% in ESE	Qualifying	

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CC-11	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
CC-12	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
DSE-1	Discipline Specific Elective	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
DSE-2	Discipline Specific Elective	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
CC-13	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
CC-14	Core Course Subject related Compulsory	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
DSE-3	Discipline Specific Elective	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA
DSE-4	Discipline Specific Elective	100	30	70	45% in CIA 45% in ESE	Marks decide class/ CGPA

**3 Evaluation of Performance Under Semester System**

3.1 The performance of a student in each paper 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 C.I.A. are follows :

- (i) Two mid-semester written tests of one hour duration each (2X7.5)= 15 Marks = 05 Marks
- (ii) Seminar/Quiz/ Presentation = 05 Marks
- (iii) Assignment = 05 Marks
- (iv) Attendance and conduct = 30 Marks

**Total**

3.3 The components of C.I.A. in papers having practical shall be as follows:

- (i) Two mid-semester written tests of one hour duration each (2X5) = 10 Marks = 10 Marks
- (ii) Practical Record Book = 05 Marks
- (iii) Seminar/Quiz/ Presentation = 05 Marks
- (iv) Attendance and conduct = 30 Marks

**Total**

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

3.5 The ESE will be written examination examinations of 3-hours duration conducted by the University.

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

3.7 The ESE Practical examination of 3-hours duration will be conducted by the University.

3.8 All such examination 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 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 examination.

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**Examinations :**

- 1.1 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.
- 1.2 The practical examinations wherever applicable shall be conducted at the department. The Director/ Coordinator of the Programme will appoint external examiner(s) for End Semester Practical Examination with the approval of the University. The mid-semester tests and Practical Record Book will be conducted and evaluated by the concerned teacher.
- 1.3 The answer scripts of the mid-semester tests shall be shown to students by the concerned teacher.

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

- (a) B.Sc. Part (I) - Semester I Examination  
Semester II Examination respectively
- (b) B.Sc. Part (II) - Semester III Examination  
Semester IV Examination respectively
- (c) B.Sc. Part (III) - Semester V Examination  
Semester VI Examination respectively
- (d) Syllabus for each paper 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 in Table 2 below :

**Table 2: (Questions shall be picked up from the whole syllabus)**

Part	Nature of questions	Number of questions to be asked	Number of questions to be answered	Marks of each question	Total marks
Part-A	i. Objective type questions with multiple choice	05	05	01	10
	ii. Fill in the blank	05	05	01	
Part-B	Short answer type questions [To be answered in not more than 200 words]	06	04	05	20
Part-C	Long answer type questions	06	04	10	40
<b>Total Marks</b>					<b>70</b>

(Questions shall be picked up from the whole syllabus)

**Part - A**

- Ten objective type Questions-All questions to be answered
- Q.1. Multiple Choice Type (Preferably one question from each unit) 1 x 5 = 05 marks
- Q.2. Fill in the Blank (Preferably one question from each unit) 1 x 5 = 05 marks

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**Part-B**

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

**Part – C**

Six long answer Questions–Four questions to be answered.  
(Questions shall be picked up from the whole syllabus preferably one question from each unit) 10 x 04 = 40 marks

(e) In the courses/papers with PRACTICAL component the distribution of marks will be –

- CIA - 30 marks
- ESE (written) - 50 marks
- ESE (Practical) - 20 marks

(f) The ESE written paper, the pattern will be as mentioned in the Table. 3 below :

**Table.3.**

Part	Nature of questions	Number of questions to be asked	Number of questions to be answered	Marks of each question	Total marks
Part-A	i. Objective type questions with multiple choice	05	05	01	10
	ii. Fill in the blank	05	05	01	
Part-B	Short answer type questions [To be answered in not more than 200 words]	04	02	05	10
Part-C	Long answer type questions	05	03	10	30
Total Marks					50

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

4.6 In formulating the entire programme of studies, each Department shall be guided by the consideration that at the graduate level, students should be familiar with all the sub-disciplines, 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 papers, 4-DSE papers and other 4- Generic electives papers.

4.7 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.

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4.8 In Subjects, where there is Practical/Project/Field Study/Internship/Dissertation etc. the distribution of marks for CIA and ESE for such papers shall be decided by the Board of Courses and Study (BOCS) of the respective subject with the approval of the University and details mentioned the syllabus for which up to 50% marks may be for CIA and 50% marks for ESE.

4.9 All practical papers shall be evaluated by two examiners – one internal and one external. The distribution of CIA marks in practical papers shall be as per the course structure.

## 5. Passing of Examinations and Promotions Rules

### Promotion Rules

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

5.2 The candidates who have been admitted to the First Semester of a three year Under graduate Programme in a session can be placed in the following categories on the basis of their attendance in the Semester.

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

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

5.3 After appearing at the Semester Examination, 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 atleast 45% marks in each paper separately in CIA, theory and practical, wherever applicable.

(ii) If a candidate secures 45% marks in atleast 50% papers in his/her CIA and First/Second/Third/ Fourth/ Fifth Semester End Semester Examinations (ESE), he/she shall be promoted to next higher semester.

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

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

(v) Final result of B.Sc.(Hons)programme shall be published on the basis of candidate's performance in the 18 papers spread over six semesters provided he/she has passed with minimum qualifying marks of 45% in the AECC, SEC and GE papers/ courses of each semester.

(vi) The Final result will be published only after he/she has cleared all the 26 papers securing minimum qualifying marks.

(vii) Since it is a continuous evaluation programme, student shall be awarded Grade Point (GP) at the End of each Semester Examination and Cumulative Grade Point (CGP) at the End of 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.

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- (ix) If students fail to secure minimum 45% marks in CIA of any 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 subject.
- (xi) A promoted candidate, if he has passed in CIA but fails in theory paper/papers, he/she shall retain his/her CIA score and will reappear in the theory paper only of the semester whenever available. However, if a candidate is declared fail in any End Semester Examination, he/she 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 ESE - written and practical (if applicable) examination.

**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 papers of the sixth semester. He/she can avail this facility only in theory papers. Better of the two results will be treated as final result of candidates in those papers. 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

(Note: value 0.5 or more should be rounded off to 01)

**8 Examinations :**

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 at least '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 programme 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 50% of courses in Semester I Examinations.
- (ii) In order to be promoted to the Semester III, a candidate needs to pass in at least 50% of courses of Semester I and 50% of courses of Semester II.
- (iii) In order to be promoted to the Semester IV, a candidate must clear all papers of semester I, atleast 50% of courses of semester II and 50% of courses of semester III.

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- (iv) In order to be promoted to the Semester V, a candidate must clear all papers of semester I and II, at least 50% of courses of semester III and 50% of courses of semester IV.
- (v) In order to be promoted to the Semester VI, a candidate needs to have cleared all papers of Semester I. II. III and 50% of courses of Semester IV and 50% of courses of Semester V
- (vi) In order to consider for the award of the Degree in the programme, a candidate has to pass in all papers/ courses of all Semesters.
- (vii) 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 shall be entitled to get a maximum number of two (02) extra chances to clear a course/ paper over and above his/her original session.
- 9.3 A student will be deemed as 'FAILED' in a semester when he/he gets 'F' grade in more than 50% of the papers offered in the examinations to meet the requirements. Such students will be advised by the University to repeat the semester on payment of semester fee or the half of the academic year fee.
- 9.4 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 as and when it is held or at the time of regular End-semester examination (ESE) in which he/she has been promoted.
- 9.5 A student shall be declared to have failed in the programme when he/she fails to qualify for promotion to the next semester after three successive attempts.
- 9.6 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.
- 9.7 There shall be a Grade Point Average (GPA) calculated for each semester on the basis of grades obtained in that semester. The GPA for the Jth Semester is calculated as :

$$GPA = \frac{\sum_{i=1}^n m_i o_i}{\sum_{i=1}^n o_i}$$

Where n is the number of course in the Jth semester,  $m_i$  denotes the numerical value of the grade obtained in the Jth course of the semester denotes the number of credits for the Jth course of the semester.

Example:

Let us consider the numerical grade and credit of a student given in the table below GPA for Jth semester can be calculated.

Course	Paper I	Paper II	Paper III	Paper IV	Paper V
Credit	5	5	5	5	5
Numerical Grade	7	8	5	7	6

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GPA for the Jth semester is calculated as :

$$GPA = \frac{7 \times 5 + 8 \times 5 + 5 \times 5 + 7 \times 5}{5+5+5+5} = \frac{135}{20} = 6.75$$

The cumulative Grade Point Average (CGPA) for k semester is given as :

$$CGPA = \frac{\sum_{j=1}^k (GPA_j \times C_j)}{\sum_{j=1}^k C_j}$$

where C<sub>j</sub> is the total number of credits in the jth Semester.

For example, consider the GPA's obtain by a student in four semester along with total credit in each semester is given as follows.

Semester	First	Second	Third	Fourth
GPA	6.75	6.00	8.12	7.62
Total Credit	20	20	18	16

$$CGPA = \frac{(6.75 \times 16) + (6.00 \times 20) + (8.12 \times 18) + (7.62 \times 16)}{16+20+18+16}$$

$$= \frac{108+120+146+16+121.92}{70}$$

$$CGPA = \frac{496.08}{70} = 7.08$$

- 9.8 The award sheet of a student 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.
- 9.9 To be eligible for the award of B.Sc. (Hons.) in Computer Applications Bachelor Degree, a student must obtain a minimum final Cumulative Grade Point Average (CGPA) of 5.0.
- 9.10 To find percent equivalent to CGPA the following formula may be used; percent = CGPA x 9.5
- 9.11 Answer books or sheets will be coded before being passed on to the examiner and decoded before tabulation work.
- 10. "Other provisions not mentioned in this Regulation related to specific cases and mentioned in the approved and existing Regulations of the Regular Bachelor Degree programmes will be effective for this programme".

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