

TILKA MANJHI BHAGALPUR UNIVERSITY

BHAGALPUR - 812 007, BIHAR (INDIA)

ORDINANCE & REGULATION

For

The 2 years (Four Semesters)

Master of Computer Applications (MCA) Course

In the University Department of Computer Applications,

(Computer Centre), Faculty of Science

Under

CHOICE BASED CREDIT SYSTEM (CBCS)

(To be effective from 2020-2021)

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Univ. Dept. of Computer Applications
T.M.B.U., Bhagalpur-812007

The 2 yr (Four Semesters) MCA course
in the University Department of Computer Applications
(Computer Centre), Faculty of Science
CHOICE BASED CREDIT SYSTEM (CBCS)

ORDINANCE

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 T.M. Bhagalpur University 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 University 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 students' performance in examinations.

The postgraduate degree course for subject under faculty of science shall be of Four Semester spread over two years duration. The course shall be named as the "Master of Computer Applications" course and shall be abbreviated as MCA.

General

- 1.1 The ORDINANCE and the REGULATIONS shall be called the "Admission Ordinance" and "Regulations of Examination" for MCA courses to be applicable in the Tilka Manjhi Bhagalpur University, Bhagalpur.
- 1.2 These ordinance and regulations shall be effective from the academic session 2020-21.
- 1.3 The MCA. Course shall consist of 20 papers spread over four semesters consisting of Core Courses (CC), Elective- Courses (EC), Discipline Specific Elective Courses (DSE), Ability Enhancing Courses (AEC) and Ability Enhancing Compulsory Courses (AECC). 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 papers which includes the 14 CC papers and two EC papers having an aggregate of 1600 marks. The various types of courses under CBCS is defined in section 3.

The Subject: Master of Computer Applications (MCA)

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3. OUTLINE OF THE CHOICE BASED CREDIT SYSTEM (CBCS) for MCA courses:

It consists of a number of courses i.e. **Core Course (CC)**, **Elective Course (EC)**, **Discipline Specific Elective Course (DSE)**, **Ability Enhancement Courses (AEC)**, and **Ability Enhancement Compulsory Courses (AECC)**. Each course is equivalent to a paper. The natures of these courses are 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 MCA studies and is termed as a Core course.

3.1.2 Elective Course (EC):

Generally a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the subject/discipline of study or which provides an extended scope or which enables an exposure to some other subject/discipline/domain or nurtures the candidate's proficiency/skill is called an Elective Course.

3.1.3 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).

3.1.4 Generic Elective (GE) Course:

An elective course chosen generally from an unrelated discipline/subject, with an intention to seek 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 Ability Enhancement Courses (AEC):

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

3.1.6 Ability Enhancement Compulsory Courses (AECC): (Qualifying and Non-CGPA course):

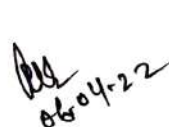
University will run a number of Ability Enhancement Compulsory Courses (AECC) which is qualifying in nature and student from all faculties have to qualify in all courses.

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 is called dissertation/project.


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3.2 CREDIT

The total minimum credits, required for completing a MCA program is 100.

The details of credits for individual components and individual courses are given in Table.2.

Table 2: Structure of the 2 Yrs (Four Semesters) MCA course under CBCS

Semester	No. of Course/Papers	Credit Per Course/Paper	Total Credit	Minimum No. of Learning Hours #	No. of Core Course Papers	No. of Elective /Course/ Paper	Code & Nature of Elective Course/paper
I	05	05	25	250	4	1	AECC-1
Semester Break							
II	06	05	30	300	5	1	AEC-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* /Project work DSE-1 Or GE-1
Total	20		100	1000	14	6	

#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.

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

/ One Theory paper and One Project work

/ Both Industrial 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 six elective papers shall be - two EC or Industrial Project Work, one DSE or one GE, two AECC, one AEC. Students may opt for any elective course out of a list of elective papers offered by the parent department or any other department/s 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 16 courses' papers including the 14 Core Courses (CC)/ papers and Industrial Project Work.

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3.2.3 The one DSE or one GE, two AECC, one AEC 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 elective courses papers will not be considered for awarding the final CGPA/ class.

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:

AECC-1: Environmental Sustainability (3Credit) &
Swachchha Bharat Abhiyan Activities (2
Credit)

AECC- 2 : Human Values & Professional Ethics (3 Credit) &
Gender Sensitization (2 Credit)

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

3.2.5 University will run a number of Ability Enhancement Courses (AEC) and Skill Enhancement Course; a student can choose one from these. For example:

Ability Enhancement Courses (AEC)

- Financial Risk Management
- Solid waste Management
- Mushroom Culture
- Bio-fertilizer production
- Environmental Law
- Tourism & Hospitality Management
- Life skill& skill Development
- Yoga Studies
- Any other courses run by the Department.

3.2.6 Discipline Specific Elective (DSE)

In each subject the CC paper -5 being taught in the second semester will be open to be selected as a DSE paper. In the first phase a student will be allowed to choose a paper from any subject other than his/ her Core Course (CC) from the science faculty in the university.

3.2.7 Generic Elective (GE) Course:

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

G.E. Course:

- Music
- Dramatics
- Human Right
- Any other courses run by the Department.

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4. Admission to MCA Part-I (First Semester):

- 4.1. A candidate seeking admission to MCA (Semester System) must be a graduate having passed BCA/ Bachelor Degree in Computer Science Engineering or equivalent Degree. OR passed B.Sc. / B.Com./ B.A. with Mathematics at 10+2 Level or at Graduation Level.
- 4.2 Admission to MCA. Part-1 (First Semester), shall be made in order of merit. The merit list shall be prepared on the basis of marks obtained by the applicant in the Bachelor Degree Course or through Entrance test. In case of Entrance Test it will be organized by the University to be named as 'T.M. Bhagalpur University' – MCA Entrance Test in the faculty of Science. The merit list shall be prepared on the basis of marks obtained by the applicant in the Entrance Test.

5. Eligibility Criteria

5.1 The Eligibility Criterion for Applying for Admission in MCA are as follows:

- (i) Passed BCA/ Bachelor Degree in Computer Science Engineering or equivalent Degree with 50% marks (45% marks for reserved category) in the qualifying examination.
- (ii) Passed B.Sc. / B.Com./ B.A. with Mathematics at 10+2 Level or at Graduation Level with 50% marks (45% marks for reserved category) in the qualifying examination.

5.2 Admission to MCA Course will be taken on the basis of marks obtained in Bachelor Degree Course or performance in MCA Entrance Test.

5.3 Structure of the entrance test:

Entrance test shall be held on OMR sheet. The duration of the test shall be of 90 minutes. The entrance marks will be 100 marks. There shall be no negative marking. There shall be two.

Table.3. Details of entrance test

Part A	REASONING 20%	18 marks	18 questions	1 marks for each question
	MATHEMATICS 40%	36 marks	36 questions	1 marks for each question
	COMPUTER SCIENCE 20%	18 marks	18 questions	1 marks for each question
	ENGLISH 20%	18 marks	18 questions	1 marks for each question
Part B	Interview/Group Discussion	10 marks		

Note:

- (i) NRI and Donor candidates are exempted from written test. However, if more than 5 applications each under NRI & Donor categories are received the applicants will have to appear at interview/group discussion.
- (ii) Selected candidates will be called for interview/Group Discussion before the final selection is made and the final selection for admission shall be made strictly on the basis of Entrance Test and interview/group discussion.

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5.4 The application fee for applying for admission to MCA courses will be Rs.750/- (Seven fifty) only for this University and students of other University shall be deposit Rs. 850/- (eight fifty) only. On the recommendation of the Academic Council and with the approval of the statutory bodies of the respective university, application fee may be revised whenever required.

6. **No. of seats:**

Total No. of Seat is 60 (sixty). Any change in the number of seals in a particular subject shall be decided by the University in accordance with the guidelines received from the State Government/AICTE from time to time.

7. **Reservation of Seats**

- i. The reservation of seats in each course shall be as per reservation rules of the Government of Bihar.
- ii. Reservation for Persons with Disabilities (PwD) candidates will be followed as per orders of the Government of Bihar issued from time to time.
- iii. A maximum of two seats in each subject over and above the sanctioned seats shall be filled by applicants who have distinguished themselves in sports. Under this category only those applicants shall be considered who have represented their University/State in different disciplines at state/national level events.
- iv. A maximum of two seats in each subject over and above the sanctioned seats shall be filled by applicants who have distinguished themselves in Fine Arts. Under this category only those applicants shall be considered who have represented their University/State in different disciplines at state/national level events.
- v. Two seats shall be reserved for NCC-C Certificate holders. This reservation will also be over and above the normal sanctioned strength of the subject.
- vi. Two seats shall be reserved for NSS Certificate holders representing University/state. The reservation will also be over and above the normal sanctioned seventh of the subject.
- vii. Reservation for son/daughter /spouse of Military personnel /defiance personnel will be followed as per provisions of the General Ordinance for Admission to Various Coues received from Governor secretariat, Bihar Patna vide the letter no. PUI8/99-3944GS(I) dated 8.8.1999.This reservation will also be over and above the normal sanctioned strength dated 28.8.1999.This reservation will also be over and above the normal sanctioned strength of the subject.
- viii. Reservation for sons/daughters of the respective university teachers will be followed as per provisions of the General Ordinance for Admission to Various Courses received from the Governor's Secretariat, Bihar, Patna vide its letter no. PUIS/99-3944/GS(I) dated 28.8.1999.This reservation will also be over and above the normal sanctioned strength of the subject.

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- ix. Reservation for sons/daughters of the respective university non-teaching staff will be followed as per provisions of the General Ordinance for Admission to Various Courses received from the Governor's Secretariat, Bihar, Patna vide its letter no. PU I 8/99-3944/GS(I) dated 28.8.1999. This reservation will also be over and above the normal sanctioned strength of the subject.
- x. 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) along with the copies of the documents showing NRI status.
- xi. A candidate seeking admission against under various reserved category i.e. SC/ST/EBC/ OBC/WBC etc. has to mention about the category 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.
- xii. A candidate seeking admission against seats under special quota as mentioned above [7.ii to 7.x] shall have to submit special quota application along with main admission application form and attach the supporting document to substantiate their claim. Applications received separately later on shall not be entertained.
- xiii. No student shall be provided two weight age for the purpose of admission under special quota from 7.ii to 7.x
8. No applicant shall be admitted to the course who has not applied for admission within the notified time period.
9. The admitted students will have to register themselves with the University to be able to appear in the University examination within the stipulated period /at the time of admission.
10. No such applicant shall be admitted who, in the opinion of the Head of the Department and endorsed by the Vice Chancellor, should not be admitted in the best interest of the University.
11. During the tenure of the course. if it is found that any document/documents or submission made by a student in support of his/her admission to MCA course is/are forged or fake, his/her admissions shall automatically stand cancelled. The concerned candidate shall be solely responsible for the cancellation of his/her admission and other punitive action/actions.
12. 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.
13. No candidate shall be allowed to register for any other degree course in the same University or any other university during the same academic session of his/her study of MCA under the subjects of the Faculty of Science.

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14. **Medium of Instruction/Teaching**
Medium of instruction for teaching-learning and examination will be English.
15. **Fee Structure**
The Fee Structure for the MCA shall be as mentioned in table 4
16. 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.

Tabl.4: FEE STRUCTURE PER SEMESTER for MCA

Semester wise fees to paid by the candidate shall be as follows. Fee may be revised by the University, if necessary.

Semester	First (Rs.)	Second (Rs.)	Third (Rs.)	Fourth (Rs.)
Admission Fee	2000/-	-	-	-
Academic Fee	18,000/-	18,000/-	18,000/-	18,000/-
Computer Lab	1000/-	1000/-	1000/-	1000/-
Miscellaneous	1000/-	1000/-	1000/-	1000/-
Total	22,000/-	20,000/-	20,000/-	20,000/-

Beside the above noted fees and charges, each candidate appearing in the University Examination will be required to pay the prescribed examination fee of Rs.1250/- per semester to the university. For NRI's Rs. 1,50,000/- to be paid in Six instalment of Rs.25,000/- per semester, for donor Rs.1,20,000/- to pay in six instalments of Rs.20,000/- per semester.

In addition, the selected students are to pay the Caution Money (Refundable) at the time of admission Rs.1000/-

1	Miscellaneous (per semester)		
	Central Library	100/-	10
	Electricity fee	300/-	10
	Identity fee	60/-	5
	NSS Fee	50/-	5

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Regulations
for
Examination of MCA (Semester System)
in the University Department of Computer Applications
(Computer Centre), Faculty of Science, T.M. Bhagalpur University

1. General

- 1.1 These regulations shall be called the "Regulations of Examination" for MCA (Master of Computer Application).
1.2 These regulations shall come into force from the academic year 2020-2021.

2. Programme of Study

- 2.1 The University shall offer MCA degrees in the Faculty of Science.
2.2 The durations of MCA (Semester System) course shall be of four semesters spread over two academic years. Each semester shall be of ninety teaching days.
2.3 Each academic session shall consist of two Semesters-
I and III : from **July to December &**
II and IV : from **January to June.**
2.4 The MCA Course shall consist of 20 papers spread over four semesters. There shall be five papers in first semester, six papers in second semester, six papers in third semester and two papers or Industrial Project in fourth semester carrying 100 marks in each paper or 200 marks in industrial project. The entire curriculum shall be of 2000 marks taken together, however, the class shall be awarded on the performance of the candidate on 16 papers including 14 CC and two EC papers /industrial project having an aggregate of 1600 marks.
2.5 In each semester each elective paper shall carry 100 marks. The four elective papers- one AEC, 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 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 each subject in the course structure of MCA
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 MCA course shall be of one hundred credits divided as 25 credit in first Semester, 30 credit in Second Semester, 30 credit in third Semester and 15 credit in fourth Semester. The number of credit for each paper of the MCA degree programme shall be specified in the course structure.

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Table. 1. Description of papers for MCA degree in the faculty of Science under CBCS

Semester	Course/Per Code	Name of the Course	Marks	Marks of CIA	Marks of ESE	Passing criterion	Qualifying Criterion
Semester I	CSC-1	Computer Organization & Architecture	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	CSC-2	OOPs in C++ & Data Structure	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	CSC-3	Operating System & Shell Programming	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	CSC-4	Practical based on CSC-2 & CSC-3	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	AECC-1	Environmental Sustainability & Swachchha Bharat Abhiyan Activities	100	50	50	45% in CIA 45% ESE	Qualifying
Semester II	CSC-5	Data Communication & Computer Network	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	CSC-6	Advance Java Programming	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	CSC-7	Database Management System	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	CSC-8	Design & Analysis of Algorithm	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	CSC-9	Practical based on CSC-6 & CSC-7	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	AEC-1	Ability Enhancement Courses	100	50	50	45% in CIA 45% ESE	Qualifying
Semester III	CSC-10	Software Engineering	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	CSC-11	Theory of Computation & Automata	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	CSC-12	Artificial Intelligence	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	CSC-13	.Net Programming	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	CSC-14	Practical based on CSC-13	100	30	70	45% in CIA 45% ESE	Marks decide class /CGPA
	AECC-2	Human Values, Professional Ethics & Gender Sensitization	100	50	50	45% in CIA 45% ESE	Qualifying
Semester IV	EC-1+EC-2	Major/Industrial Project	200	Decided by the BOCS	Decided by the BOCS	45%	Marks decide class /CGPA
	DSE-1	Discipline Specific Elective	100	50	50	45% in CIA 45% ESE	Qualifying

CSC- Core Courses AECC- Ability Enhancement Compulsory Courses EC- Elective Courses
AEC- Ability Enhancement Courses DSE- Discipline Specific Elective

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,

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- 3.2 The components of C.I.A. are follows :
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| (i) Two mid-semester written tests of one hour duration each | = 15 Marks |
| (ii) Seminar/Quiz | = 05 Marks |
| (iii) Assignment | = 05 Marks |
| (iv) Punctuality and conduct | = 05 Marks |
| Total | = 30 Marks |

3.3 The performance of a student in the elective papers AEC 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 CIA. in these papers shall be as follows:
- | | |
|---|------------|
| (i) One mid-semester written tests of one 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 |

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 examination examinations of 3-hours duration conducted by the University.

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

3.8 All such examination shall be as per the provisions of examination board and moderation board of the 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 Head of The Department along with the End semester Examination form failing which the student may not be issued admit card for the examination.

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 UDCA Department. The practical examinations wherever applicable shall be conducted at the Department. The Head of the Department will appoint external examiner(s) for practical End Semester Examination with the approval of the 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.

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- 4.2 The End of Semester Examination (ESE) shall be named as follows:
- MCA Part (I)-Semester-I Examination & Semester-II Examination respectively.
 - MCA Part (II)-Semester-III Examination & Semester-IV Examination respectively.
 - 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 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 multiple choice	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

Part-A

Ten Objective type Questions -All questions to be answered (Questions shall be picked up from the whole Syllabus preferably two Questions from each unit.

10x2=20 marks

Part-B

Five short Answer Questions -Four questions to be answered (Questions shall be picked up from the whole syllabus preferably one question from each unit)

4x5=20 marks

Part- C

Five long answer Questions -Three questions to be answered (Questions shall be picked up from the whole syllabus Preferably one question from each unit)

3x10=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 programme of studies, each Department shall be guided by the consideration that at the Postgraduate 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, 2 EC papers and other 4 electives papers.

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- 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 In Subjects, where there is Practical/Project/Field Study/Internship/Dissertation etc. generally not more than 4-5 credits should be allowed for such papers in each semester. 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 30 marks will be for CIA and 70 marks for ESE.
- 4.7 All practical papers shall be evaluated by two external examiners, The distribution of CIA marks in practical papers shall be as per the course structure.

5. Passing of Examinations and Promotions Rules

- 5.1 There shall be no supplementary examination in any of the papers in any semester.(I, II, III and IV).
- 5.2 The candidates who have been admitted to the First Semester of a two year MCA 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 Examinations.
- 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 at least three papers in his/her First/Second/Third End Semester Examination he/she shall be Promoted to next higher semester.
- (iii) Similarly, in Semester IV, if a candidate fail/absent in one paper in End Semester Examination, he/she shall be permitted to appear in Examination only in fail/absent paper, not all.
- (iv) Candidates shall have to clear their backlog paper(s) in the next end semester examination of that semester whenever it is available.
- (v) 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 papers.
- (vi) Final result of MCA Course shall be published on the basis of candidate's performance in the 16 papers spread over four semesters provided he/she has passed with minimum qualifying marks of 45% in the elective papers of each semester.

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- (vii) The Final result will be published only after he/she has cleared all the 20 papers securing minimum qualifying marks.
- (viii) 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 (COP) at the End of Final End Semester Examinations in 10 point scoring system.
- (ix) 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,
- (x) 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.
- (xi) The name of the promoted candidate/candidates will not be included in the merit list of that subject.
- (xii) 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, 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 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 papers of the fourth 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

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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, midterm 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 papers in Semester I Examinations.
- (ii) In order to be promoted to the Semester III, a candidate needs to pass in at least three papers of Semester I and three papers of Semester II.
- (iii) In order to be promoted to the Semester IV, a candidate must clear all papers of semester I, at least three papers of semester II and three papers of semester III
- (iv) In Semester IV, a candidate needs to have cleared all the twenty 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 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.

9.3 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 programme 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 for the jth Semester is calculate as:

$$GPA = \frac{\sum_{j=1}^n m_j \times o_j}{\sum_{j=1}^n o_j}$$

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Where n is the number of course in the j th semester, m_j denotes the numerical value of the grade obtained in the j th course of the semester denotes the number of credits for the j th course of the semester.

Example:

Let us consider the numerical grade and credit of a student given in the table below GP A for j th 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	1	6

The GPA for the j th 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_j is the total number of credits in the j th 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	16	20	18	16

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

$$CGPA = \frac{108+120+146+16+121.92}{70} = \frac{496.06}{70} = 7.08$$

- 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 MCA 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.

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