

**APPENDIX-A**  
**THREE YEAR POST GRADUATE DEGREE COURSE IN MASTER IN COMPUTER APPLICATION**  
**SEMESTER PATTERN**  
**CREDIT GRADE SYSTEM**  
**FIRST YEAR SEMESTER-I**

Sr.No.	Subject Code		Teaching Scheme					Examination Scheme								
			Hours/Week					Theory			Practical					
			Lecture	Tutorial	P/D	Total Hours/Week	Credits	Duration of Paper (Hr.)	Max. Marks Theory Paper	Max. Marks College Assessment	Total	Min. Passing Marks	Max. Marks External	Max. Marks Internal	Total	Min. Passing Marks
1	1MCA1	Computer Organization	4	0	0	4	4	3	80	20	100	40	-	-	-	-
2	1MCA2	Problem Solving Using C++	4	0	0	4	4	3	80	20	100	40	-	-	-	-
3	1MCA3	Computer Oriented Statistical Methods	4	0	0	4	4	3	80	20	100	40	-	-	-	-
4	1MCA4	Principles of Management	4	0	0	4	4	3	80	20	100	40	-	-	-	-
5	1MCA5	Communication Skills	4	0	0	4	4	3	80	20	100	40	-	-	-	-
6	1MCA6	Problem Solving Using C++-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
7	1MCA7	Computer Oriented Statistical Methods-Lab	0	0	2	2	1	-	-	-	-	-	25	25	50	25
8	1MCA8	Communication Skills-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
9	1MCA9	Computer Lab-I	0	0	4	4	2	-	-	-	-	-	50	50	50	50
<b>TOTAL</b>			<b>20</b>	<b>0</b>	<b>10</b>	<b>30</b>	<b>25</b>				<b>500</b>				<b>250</b>	
<b>TOTAL : 750</b>																

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**FIRST YEAR SEMESTER-II**

Sr.No.	Subject Code		Teaching Scheme					Examination Scheme								
			Hours/Week				Credits	Duration of Paper (Hr.)	Theory			Practical				
			Lecture	Tutorial	P/D	Total Hours/ Week			Max. Marks Theory Paper	Max. Marks College Assessment	Total	Min. Passing Marks	Max. Marks External	Max. Marks Internal	Total	Min. Passing Marks
1	2MCA1	Data Structure & Algorithms	4	0	0	4	4	3	80	20	100	40	-	-	-	-
2	2MCA2	Object Oriented Programming	4	0	0	4	4	3	80	20	100	40	-	-	-	-
3	2MCA3	System Analysis & Design	4	0	0	4	4	3	80	20	100	40	-	-	-	-
4	2MCA4	Data Communication	4	0	0	4	4	3	80	20	100	40	-	-	-	-
5	2MCA5	Business Systems	4	0	0	4	4	3	80	20	100	40	-	-	-	-
6	2MCA6	Data Structure & Algorithms-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
7	2MCA7	Object Oriented Programming-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
8	2MCA8	System Analysis & Design-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
9	2MCA9	Computer Lab-II	0	0	4	4	2	-	-	-	-	-	50	50	100	50
TOTAL			20	0	10	30	25				500				250	
													<b>TOTAL : 750</b>			

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**SECOND YEAR SEMESTER-I**

Sr.No.	Subject Code		Teaching Scheme					Examination Scheme								
			Hours/Week				Credits	Duration of Paper (Hr.)	Theory			Practical				
			Lecture	Tutorial	P/D	Total Hours/Week			Max. Marks Theory Paper	Max. Marks College Assessment	Total	Min. Passing Marks	Max. Marks External	Max. Marks Internal	Total	Min. Passing Marks
1	3MCA1	Operating Systems	4	0	0	4	4	3	80	20	100	40	-	-	-	-
2	3MCA2	File Structure & Data Processing	4	0	0	4	4	3	80	20	100	40	-	-	-	-
3	3MCA3	Java Programming	4	0	0	4	4	3	80	20	100	40	-	-	-	-
4	3MCA4	Computer Networks	4	0	0	4	4	3	80	20	100	40	-	-	-	-
5	3MCA5	Computer Oriented Optimization Techniques	4	0	0	4	4	3	80	20	100	40	-	-	-	-
6	3MCA6	File Structure & Data Processing-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
7	3MCA7	Java Programming-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
8	3MCA8	Computer Oriented Optimization Techniques-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
9	3MCA9	Computer Lab-III	0	0	4	4	2	-	-	-	-	-	50	50	100	50
<b>TOTAL</b>			<b>20</b>	<b>0</b>	<b>10</b>	<b>30</b>	<b>25</b>				<b>500</b>				<b>250</b>	
														<b>TOTAL : 750</b>		

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**SECOND YEAR SEMESTER-II**

Sr.No.	Subject Code		Teaching Scheme					Examination Scheme								
			Hours/Week				Credits	Duration of Paper (Hr.)	Theory			Practical		Total	Min. Passing Marks	
			Lecture	Tutorial	P/D	Total Hours/Week			Max. Marks Theory Paper	Max. Marks College Assessment	Total	Min. Passing Marks	Max. Marks External			Max. Marks Internal
1	4MCA1	Database Management Systems	4	0	0	4	4	3	80	20	100	40	-	-	-	-
2	4MCA2	Client Server Computing	4	0	0	4	4	3	80	20	100	40	-	-	-	-
3	4MCA3	Multimedia Technologies	4	0	0	4	4	3	80	20	100	40	-	-	-	-
4	4MCA4	Electronic Commerce	4	0	0	4	4	3	80	20	100	40	-	-	-	-
5	4MCA5	Elective-I	4	0	0	4	4	3	80	20	100	40	-	-	-	-
6	4MCA6	Database Management Systems-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
7	4MCA7	Client Server Computing-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
8	4MCA8	Multimedia Technologies-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
9	4MCA9	Electronic Commerce-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
10	4MCA10	Seminar	2	0	0	2	1	-	-	-	-	-	--	50	50	25
<b>TOTAL</b>			<b>22</b>	<b>0</b>	<b>8</b>	<b>30</b>	<b>25</b>				<b>500</b>				<b>250</b>	
<b>TOTAL : 750</b>																

Elective-I : 1) Computer Graphics 2) Modelling & Simulation

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**THIRD YEAR SEMESTER-I**

Sr.No.	Subject Code	Subject Name	Teaching Scheme					Examination Scheme								
			Hours/Week					Theory			Practical					
			Lecture	Tutorial	P/D	Total Hours/Week	Credits	Duration of Paper (Hr.)	Max. Marks Theory Paper	Max. Marks College Assessment	Total	Min. Passing Marks	Max. Marks External	Max. Marks Internal	Total	Min. Passing Marks
1	5MCA1	Artificial Intelligence	4	0	0	4	4	3	80	20	100	40	-	-	-	-
2	5MCA2	Software Project Management	4	0	0	4	4	3	80	20	100	40	-	-	-	-
3	5MCA3	System Administration & Security	4	0	0	4	4	3	80	20	100	40	-	-	-	-
4	5MCA4	Management Information System	4	0	0	4	4	3	80	20	100	40	-	-	-	-
5	5MCA5	Elective-II	4	0	0	4	4	3	80	20	100	40	-	-	-	-
6	5MCA6	Artificial Intelligence-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
7	5MCA7	Software Project Management-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
8	5MCA8	System Administration & Security-Lab.	0	0	2	2	1	-	-	-	-	-	25	25	50	25
9	5MCA9	Mini Project	0	0	4	4	2	-	-	-	-	-	25	25	50	25
<b>TOTAL</b>			<b>20</b>	<b>0</b>	<b>10</b>	<b>30</b>	<b>25</b>				<b>500</b>				<b>250</b>	

**TOTAL : 750**

Elective-II : 1) Data Warehousing 2) Bioinformatics

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**THIRD YEAR SEMESTER-II**

Sr.No.	Subject Code	Teaching Scheme					Examination Scheme							
		Hours/Week					Theory			Practical				
		Lecture	Tutorial	P/D	Total Hours/Week	Credits	Duration of Paper (Hr.)	Max. Marks Theory Paper	Max. Marks College Assessment	Total	Min. Passing Marks	Max. Marks External	Max. Marks Internal	Total
1	6MCA1	PROJECT & DISSERTATION		FULL TIME		25	--	--	--	--	150	100	250	150
<b>TOTAL : 250</b>														

**DIRECTION**

No. 33/2010

Date: 24/6/2010

**Subject : Examinations leading to the Degree of Master in Computer Application (Three Year Course .... Bi-Annual Pattern .... Credit Grade System)**

Whereas the schemes of teaching & examinations of Master in Computer Application course has been accepted by the Academic Council vide Item No. 49 (J) in its meeting held on 28-05-2010 as per the Credit Grade System for its implementation from the Academic Session 2010-2011,

AND

Whereas admissions to the First Year of Master in Computer Application course are to be made in the Academic Session 2010-2011,

AND

Whereas the matter for admission of the students at the examinations is required to be regulated by an Ordinance,

AND

Whereas the schemes of teaching & examinations of I and II Semesters of Master in Computer Application course are to be implemented from the academic session 2010-2011,

AND

Whereas the schemes of teaching & examinations are required to be regulated by the Regulation,

AND

Whereas the process of making an Ordinance and the Regulation is likely to take some time,

AND

Whereas syllabus for I and II Semesters of Master in Computer Application course is to be sent for printing.

Now, therefore, I, Dr. Ku. Kamal Singh, Vice-Chancellor of Sant Gadge Baba Amravati University in exercise of powers confirmed upon me under sub section (8) of Section 14 of the Maharashtra Universities Act, 1994, hereby direct as under :

1. This Direction may be called "Examinations leading to the Degree of Master in Computer Application (Three Year Course .... Bi-Annual Pattern .... Credit Grade System) Direction, 2010.
2. This Direction shall come into force w.e.f. the session :-
  - i) 2010-2011 for First Year,
  - ii) 2011-2012 for Second Year, and
  - iii) 2012-2013 for Third Year

3. Subject to their compliance with the provisions of this Direction and other ordinances in force from time to time, the following person shall be eligible for admission to MCA.
  - (a) Graduate in any Discipline with minimum 50% marks and Math upto 10+2 level (5% Relaxation for B.C.)
  - (b) A person passing a PGDCS Exam. of Sant Gadge Baba Amravati University, satisfying the condition given in "a" above are eligible to take admission directly at second year of MCA (subject to condition of availability of seats, in total intake capacity) subject to condition that he will pass the subject heads of 1st MCA not covered at PGDCS level.
4.
  - (i) Duration of the course shall be three academic years.
  - (ii) Courses of First year MCA, Second year MCA and Third year MCA are divided into two parts every year i.e. part-I and part-II and the University shall held Examination in Winter and in Summer every year for both the Part-I & II.
  - (iii) The main Examination of Part-I shall be held in Winter & the Main Examination of Part-II shall be held in Summer every year. The Supplementary examination for Part-I shall be held in Summer and the Supplementary Examination for Part-II shall be held in Winter every year.
5. For purposes of instruction and examination the student shall study sequentially.
6. The period of academic session/term shall be such as may be notified by the University.
7. The Examinations shall be held at such places and on such dates as may be notified by the University.
8. Subject to his/her compliance with the provisions of this Direction and of other Ordinances (Pertaining to Examinations in General) in force from time to time, the applicant for admission, at the end of the course of study of a particular term shall be eligible to appear at it, if,
  - i) He/She satisfied the condition in the table and the provision thereunder.
  - ii) He/She was prosecuted a regular course of study in the University/College affiliated to the University.
  - iii) He/She has in the opinion of the Head of the Department/Principal shown satisfactory progress in his/her studies.

Name of Exam	The student should have passed the examination of	The student should have completed the session / term satisfactorily
1.	2.	3.
First Year MCA Part-I	The qualifying Examination mentioned in para-3	First Yr. MCA Part-I
First Year MCA Part-II		First Yr. MCA Part-I & II
Second Year MCA Part-I		Second Year MCA Part-I
Second Year MCA Part-II		Second Year MCA Part I & II
Third Year MCA Part - I	Shall have cleared Ist of MCA & qualified for admission to Third Year as per para-4	Third year MCA Part-I
Third Year MCA Part - II		Third Year MCA Part-I & II

9. The schemes of teaching & examinations shall be as provided under "Appendix-A" appended with this Direction.
10. i) The scope of the subject is as indicated in the syllabus.  
ii) The medium of instruction and examination shall be English.
11. The fees for each M.C.A. Examinations (Theory & Practical) shall be as prescribed by University from time to time.
12. The computation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) of an examinee shall be as given below :-

The marks will be given in all examinations which will include college assessment marks and the total marks for each Theory / Practical shall be converted into Grades as per Table II.

SGPA shall be calculated based on Grade Points corresponding to Grade as given in Table II and the Credits allotted to respective Theory / Practical shown in the scheme for respective semester.

SGPA shall be computed for First Year (Part I & II), Second Year (Part I & II) and Third Year (Part I & II) and CGPA shall be computed in Third Year (Part II) based on SGPA's of First Year (Part I & II), Second Year (Part I & II) and Third Year (Part I & II). :-

$$SGPA = \frac{C_1 \times G_1 + C_2 \times G_2 + \dots + C_n \times G_n}{C_1 + C_2 + \dots + C_n}$$

Where  $C_1$  = Credit of individual Theory / Practical  
 $G_1$  = Corresponding Grade Point obtained in the respective Theory / Practical

$$CGPA = \frac{(SGPA)_{\text{First Year Part-I}} \times (Cr)_{\text{First Year Part-I}} + \dots + (SGPA)_{\text{Third Year Part-II}} \times (Cr)_{\text{Third Year Part-II}}}{(Cr)_{\text{First Year Part-I}} + \dots + (Cr)_{\text{Third Year Part-II}}}$$

Where  $(SGPA)_{\text{First Year Part-I to Third Year Part-II}} = SGPA \text{ of First Year Part-I to Third Year Part-II}$   
 $(Cr)_{\text{First Year Part-I to Third Year Part-II}} = \text{Total Credits for First Year Part-I to Third Year Part-II}$

CGPA equal to 6.00 and above shall be considered as equivalent to First Class which shall be mentioned on Grade Card of Third Year Part-II as a foot note. **TABLE II**

### THEORY

Grade	Percentage of Marks	Grade Points
AA	$80 \leq \text{Marks} \leq 100$	10
AB	$70 \leq \text{Marks} < 80$	9
BB	$60 \leq \text{Marks} < 70$	8
BC	$55 \leq \text{Marks} < 60$	7
CC	$50 \leq \text{Marks} < 55$	6
CD	$45 \leq \text{Marks} < 50$	5
DD	$40 \leq \text{Marks} < 45$	4
FF	$00 \leq \text{Marks} < 40$	0
ZZ	Absent in Examination	—

### PRACTICAL

Grade	Percentage of Marks	Grade Points
AA	$85 \leq \text{Marks} \leq 100$	10
AB	$80 \leq \text{Marks} < 85$	9
BB	$75 \leq \text{Marks} < 80$	8
BC	$70 \leq \text{Marks} < 75$	7
CC	$65 \leq \text{Marks} < 70$	6
CD	$60 \leq \text{Marks} < 65$	5
DD	$50 \leq \text{Marks} < 60$	4
FF	$00 \leq \text{Marks} < 50$	0
ZZ	Absent in Examination	—

13. Provisions of Ordinance No.18 of 2001 in respect of an Ordinance to provide grace marks for passing in a Head of passing and improvement of Division (Higher Class) and getting distinction in the subject and condonation of deficiency of marks in a subject in all the faculties prescribed by the Statute No.18, Ordinance, 2001 shall apply to each examination under this Direction.
14. An examinee who does not pass or who fails to present himself/herself for the examination shall be eligible for readmission to the same examination, on payment of fresh fees and such other fees as may be prescribed.
15. As soon as possible after the examination, the Board of Examinations shall publish a result of the examinees. The result of final MCA Examination shall be classified as above and meritlist shall be notified as per Ordinance No.6.
16. Notwithstanding anything to the contrary in this Direction, no person shall be admitted to an examination under this Direction, if he/she has already passed the same examination or an equivalent examination of any statutory University.
17.
  - i) The examinees who have passed in all the subjects prescribed for all the examinations shall be eligible for award of the Degree of Master in Computer Application.
  - ii) An examinee successful at the examination shall on payment of prescribed fees receive a degree in prescribed form signed by the Vice-Chancellor.

Sd/-  
Dr. Kamal Singh  
Vice-Chancellor

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**SANT GADGE BABAAMRAVATI UNIVERSITY.****SPECIAL NOTE FOR INFORMATION OF THE STUDENTS**

- (1) Notwithstanding anything to the contrary, it is notified for general information and guidance of all concerned that a person, who has passed the qualifying examination and is eligible for admission only to the corresponding next higher examination as an ex-student or an external candidate, shall be examined in accordance with the syllabus of such next higher examination in force at the time of such examination in such subjects papers or combination of papers in which students from University Departments or Colleges are to be examined by the University.
- (2) Be it known to all the students desirous to take examination/s for which this prospectus has been prescribed should, if found necessary for any other information regarding examinations etc., refer the University Ordinances Booklet the various conditions/provisions pertaining to examination as prescribed in the following Ordinances.

Ordinance No. 1	:	Enrolment of Students.
Ordinance No. 2	:	Admission of Students
Ordinance No. 4	:	National cadet corps
Ordinance No. 6	:	Examinations in General (relevent extracts)
Ordinance No. 18/2001	:	An Ordinance to provide grace marks for passing in a Head of passing and Improvement of Division (Higher Class) and getting Distinction in the subject and condonation of defficiency of marks in a subject in all the faculties prescribed by the Statute, No.18, Ordinance, 2001.
Ordinance No. 9	:	Conduct of Examinations (relevent extracts)
Ordinance No. 10	:	Providing for Exemptions and Compartments
Ordinance No. 19	:	Admission of Candidates to Degrees.

Ordinance No. 109	:	Recording of a change of name of a University student in the records of the University.
Ordinance No. 6/2008	:	For improvement of Division/Grade.
Ordinance No.19/2001	:	An Ordinance for Central Assessment Programme, Scheme of Evaluation and Moderation of answerbooks and preparation of results of the examinations, conducted by the University, Ordinance 2001.

**Dineshkumar Joshi**  
Registrar  
Sant Gadge Baba  
Amravati University.