GONDWANA UNIVERSITY GADCHIROLI

FACULTY OF SCIENCE

Direction No. 114 Of 2012

DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE OF

BACHELOR OF COMPUTER APPLICATION UNDER THE FACULTY OF SCIENCE

SEMESTER PATTERN WITH CREDIT-GRADE SYSTEM

WHEREAS, The University Grants commission, New Delhi vide D.O. No. F-2.2008.(XI Plan), dated 31 January 2008 regarding new initiatives under the XI plan- Academic reforms in the University has suggested for improving quality of higher education and to initiate the academic reform at the earliest,

AND

WHEREAS, the Board of studies in the faculty of science in their meeting held during 23.04.12 prepared the syllabi and scheme of examination for Bachelor of Computer Application under the faculty of science, under Graduate Degree course and recommended for introducing the Credit Grade Semester pattern in faculty of science from the academic session 2012-13,

AND

WHEREAS in the Faculty of Science in its meeting held on 02.05.12 considered and approves the recommendation of board of studies regarding the syllabi and the scheme of examination passed by the respective board of studies for the award for Bachelor of Computer Application degree in the Faculty of Sciences.

AND

WHEREAS, the Academic council in its meeting held on 09/05/12 considered and approved the recommendations of Faculty of Science for introducing credit grade semester pattern for award of Bachelor of Computer Application Degree in the Faculty of Science

AND

WHEREAS, the matter is required to be regulated by Ordinance,

AND

WHEREAS, ordinance making is a time consuming process, therefore, I, Dr.V.S.Ainchwar, Vice Chancellor of Gondawana University Gadchiroli in the exercise of powers conferred upon me under section 14(8) of the Maharashtra University Act, 1994 do hereby issue the following Direction.

1. This direction may be called as Examination leading to the Degree of **Bachelor of Computer Application** (Three years degree course semester pattern), Direction, 2012.
2. The Direction shall come in to force with effect from the date of its issuance.
3. The course for Degree of B.Sc (Information Technology) under this Direction shall extend over a period of three academic years. At the end of each semester there shall be a university examination known respectively as
   a. The **Bachelor of Computer Application** Semester-I & II examination.
   b. The **Bachelor of Computer Application** Semester III & IV examination
   c. The **Bachelor of Computer Application** Semester V & VI examination.
4. The examination specified in the preceding paragraph shall be held semester vise at such places and such dates as may be appointed by the university.
5. Subject to their compliance with the provisions of this Direction and of other directions/ordinances in force from time to time, the candidate who has prosecuted a regular course of study for not less than one academic year prior to the examination shall be eligible for admission to the examination.
6. Every applicant for admission to examination shall-
   A. **In case of the Bachelor of Computer Application Part-I examination:**
      Have passed not less than one academic year previously the 12th standard examination of the Maharashtra State Board of Secondary and Higher secondary Education with English and Mathematics or an examination recognized as equivalent thereto in such subjects and with such standards of attainments as may be prescribed.

      Provided that students passing the 12th standard examination of the Maharashtra state Board of secondary and higher secondary Education and offering Vocational Stream with Mathematics shall be eligible for admission to the Bachelor of Computer Application Part-I.
   B. **In case of the Bachelor of Computer Application Part II examination:**
      Have passed not less than one academic year previously the Bachelor of Computer Application Part-II examination of the University or an examination recognized as equivalent thereto, and
   C. **In case of the Bachelor of Computer Application Part III examination:**
      Have passed not less than one academic year previously the Bachelor of Computer Application Part- III examination of the University or an examination recognized as equivalent thereto.
7. Without prejudice to the other provisions of ordinance No. 6 relating to the examination in the General the provisions of paragraph 5, 8, 10, 31 and 32 of the said ordinance shall apply to every collegiate candidate.
8. The fees for the examination shall be as prescribed by the university from time to time.
9. The scope of the subject of Bachelor of Computer Application Part-I, part-II, and final shall be as indicated in the respective syllabi in force from time to time. The medium of the instruction shall be English.
10. The paper and practical in which an examinee is to be examined, the maximum marks prescribed for each paper and practical and the minimum pass mark which the examinee

must obtain in order to pass in the subject and the examination shall be as prescribed in **Appendix A and B**.

11. There will be 6 theory papers in each semester
12. In each semester there will be 2 practical papers based on Computer papers.
13. **Scheme and Passing Criteria**
    1) Min. Passing marks is 35% separately in Theory, Practical and Internal Assessment. Student must pass separately in Practical by scoring min. marks in Internal and External.
    2) Marks are rounded to next integer for fraction values >= 5. Otherwise ignore the fraction value for deciding passing criteria.
    3) Each theory paper is consisting of 80 marks and min. passing marks in Theory paper is 28.
    4) Min. passing marks in Practical examination is 18 (9 + 9) out of 50 (25 + 25) Marks.
    5) Each theory paper has 20 marks for Internal Assessment and min. passing marks is 07.
    6) Internal Assessment marks compromise of at least 4 activities of the following,
        a. Home Assignment
        b. Class Test Examination Performance
        c. Seminar
        d. Case Studies
        e. Group Discussion
        f. Field Work
        g. Study Tour
        h. Paper Presentation
        i. Book Review
        j. Involvement in Departmental and College Activities
14. **Practical Examination Scheme**
    i) **Time:** Minimum 2 Hours 30 Min. for conducting the practical examination subject to condition number of computers and printers available at the center ie if ratio of student and number of computer are same.
        a. If there are less number of computer (50%) than total Enroll students for practical examination then additional 2 hours
        b. If there is less number of computer (25%) than total Enroll students for practical examination then additional 4 hours.
    ii) **Practical Examination Evaluation Scheme**
    1) One question to Write and Execute for Taking Printout of Program   20 Marks

    2) One question to Write Program or from Practical Index   10 Marks

    3) Record   10 Marks

    4) Viva   <u>10 Marks</u>
                                                                           50 Marks

15. **Absorption Scheme from Yearly Pattern to Semester Pattern (From Other University to Gondwana University)**
    1) Admission to 3rd Semester if student cleared 1st year of BCA
    2) Admission to 5th Semester if Student cleared 1st year and at least two papers of 2nd year of BCA along with practicals.

Sr. No.	Semester	Promotion Rule
1	I	---
2	II	Must Clear all Internal Assessment and practical examination of Semester I and at least appear in one Theory paper of semester I of University Examination.
3	III	Must clear at least 2 Theory Papers of Semester I and 2 Theory Papers of Semester II
4	IV	Must Clear all Internal Assessment and practical examination of Semester III and at least appear in one Theory paper of semester III of University Examination.
5	V	Must clear Semester I and Semester II and should clear at least 2 Papers of Semester III and 2 Papers of Semester IV
6	VI	Must Clear all Internal Assessment and practical examination of Semester V and at least appear in one Theory paper of semester V of University Examination

16. ATKT/Promotion Rules

Sr. No	Paper Code	Papers/Practicals	CREDIT	Teaching Scheme per week (hrs.)			Examination Scheme			
				Th	Pr	Total	Max. Marks		Total Marks	Minimum Passing
							External Marks (T) / (E)	Internal Marks (I)		
1	1BCA1	English	3	4	-	4	80	20	100	28 (T) 07 (I)
2	1BCA2	Supplementary English / Hindi/Marathi	3	4	-	4	80	20	100	28 (T) 07 (I)
3	1BCA3	Trends in Information Technology	3	4	-	4	80	20	100	28 (T) 07 (I)
4	1BCA4	Programming Tools and Techniques	3	4	-	4	80	20	100	28 (T) 07 (I)

Sr. No	Paper Code	Papers/Practicals	CREDIT	Th	Pr	Total	External Marks (T)/(E)	Internal Marks (I)	Total Marks	Minimum Passing
5	1BCA5	Digital Electronics and Microprocessor	3	4	-	4	80	20	100	28 (T) 07 (I)
6	1BCA6	Discrete Mathematics	3	4	-	4	80	20	100	28 (T) 07 (I)
7	1BCA7	Practical - I based on IT, Office Automation (MS-Word, MS-Power Point, MS-Excel) and Paper 3	2	-	4	4	25	25	50	09+ 09 = 18 (E) + (I)
8	1BCA8	Practical-II based on Theory Paper- 5	2	-	4	4	25	25	50	09+ 09 = 18 (E) + (I)
		Total	22	24	8	32	530	170	700	246

17. Minimum marks of passing will be 35% of the total marks allotted to that paper/internal assessment/practical. A candidate has to pass individuality in theory papers/internal assessment/practical separately.
18. The course is based on credit grade semester pattern and therefore, it will also regulated by guideline and regulation given in **Appendix-C** which are part of this direction.
19. As soon as possible after the examination, Board of examination will publish a list of successful examines at the Bachelor of Computer Application of Sem I, II, III, IV, V and VI. The result of all examinations shall be classified on the basis of Semester Grade Point Average 'SGPA' evaluated as specified in the adopted model Credit-grade system (**Appendix-C**)

Sr. No	Paper Code	Papers/Practicals	CREDIT	Teaching Scheme per week (hrs.) Th	Pr	Total	Max. Marks External Marks (T) / (E)	Max. Marks Internal Marks (I)	Total Marks	Minimum Passing
1	2BCA1	English	3	4	-	4	80	20	100	28 (T) 07 (I)
2	2BCA2	Supplementary English / Hindi/Marathi	3	4	-	4	80	20	100	28 (T) 07 (I)
3	2BCA3	Structured Programming With C	3	4	-	4	80	20	100	28 (T) 07 (I)
4	2BCA4	Data Base Management System	3	4	-	4	80	20	100	28 (T) 07 (I)
5	2BCA5	PC – Maintenance	3	4	-	4	80	20	100	28 (T) 07 (I)

6	2BCA6	Principles of Operating System and Linux	3	4	-	4	80	20	100	28 (T) 07 (I)
7	2BCA7	Practical-I based on Theory Paper-3 and 4	2	-	4	4	25	25	50	09+ 09 = 18 (E) + (I)
8	2BCA8	Practical-II based on Theory Paper- 5 and 6	2	-	4	4	25	25	50	09+ 09 = 18 (E) + (I)
	Total		22	24	8	32	530	170	700	246

20. The examinees who have secured pass grade in all subjects prescribed for all the examination shall be eligible for the award of the Degree of Bachelor of Computer Application. The classification of division of examines for the award of Degree of Bachelor of Computer Application under the Faculty of Science shall be on the basis of Cumulative Grade Point Average 'CGPA' evaluated by accounting SGPA of I,II,III,IV,V and VI semester as demonstrated in the **Appendix C.**

21. No person shall be admitted to the Bachelor of Computer Application Part- I Part-II and final examination, if he has already passed the corresponding or an equivalent examination of other statutory university.

22. Successful examinee at the Bachelor of Computer Application final examination shall on payment of the prescribed fee, receive a degree in the prescribed form, signed by the Vice-Chancellor.

                                                                    Sd/-
Place: Gadchiroli   Dr. V.S. Ainchwar
Date: 27-6-2012   Vice Chancellor

B.C.A. Part I (Semester – I)

Sr. No	Paper Code	Papers/Practicals	CREDIT	Teaching Scheme per week (hrs.)			Examination Scheme		Total Marks	Minimum Passing
			T	Th	Pr	Total	Max. Marks			
							External Marks (T) / (E)	Internal Marks (I)		
1	1BCA1	English	3	4	-	4	80	20	100	28 (T) 07 (I)
2	1BCA2	Supplementary English / Hindi/Marathi	3	4	-	4	80	20	100	28 (T) 07 (I)
3	1BCA3	Trends in Information Technology	3	4	-	4	80	20	100	28 (T) 07 (I)
4	1BCA4	Programming Tools and Techniques	3	4	-	4	80	20	100	28 (T) 07 (I)
5	1BCA5	Digital Electronics and Microprocessor	3	4	-	4	80	20	100	28 (T) 07 (I)
6	1BCA6	Discrete Mathematics	3	4	-	4	80	20	100	28 (T) 07 (I)
7	1BCA7	Practical - I based on IT, Office Automation (MS-Word, MS-Power Point, MS-Excel) and Paper 3	2	-	4	4	25	25	50	09+ 09 = 18 (E) + (I)
8	1BCA8	Practical-II based on Theory Paper- 5	2	-	4	4	25	25	50	09+ 09 = 18 (E) + (I)
		Total	22	24	8	32	**530**	**170**	**700**	**246**

- **Internal Theory Paper Marks:** It includes Seminar, Assignment, Unit Test, Book Reviews etc

B.C.A. I (Semester – II)

Sr. No	Paper Code	Papers/Practicals	CREDIT	Teaching Scheme per week (hrs.)			Examination Scheme		Total Marks	Minimum Passing
				Th	Pr	Total	Max. Marks			
							External Marks (T) / (E)	Internal Marks (I)		
1	2BCA1	English	3	4	-	4	80	20	100	28 (T) 07 (I)
2	2BCA2	Supplementary English / Hindi/Marathi	3	4	-	4	80	20	100	28 (T) 07 (I)
3	2BCA3	Structured Programming With C	3	4	-	4	80	20	100	28 (T) 07 (I)
4	2BCA4	Data Base Management System	3	4	-	4	80	20	100	28 (T) 07 (I)
5	2BCA5	PC – Maintenance	3	4	-	4	80	20	100	28 (T) 07 (I)
6	2BCA6	Principles of Operating System and Linux	3	4	-	4	80	20	100	28 (T) 07 (I)
7	2BCA7	Practical-I based on Theory Paper-3 and 4	2	-	4	4	25	25	50	09+ 09 = 18 (E) + (I)
8	2BCA8	Practical-II based on Theory Paper- 5 and 6	2	-	4	4	25	25	50	09+ 09 = 18 (E) + (I)
		Total	22	24	8	32	**530**	**170**	**700**	**246**

- **Internal Theory Paper Marks:** It includes Seminar, Assignment, Unit Test, Book Reviews etc

S.Y.B.C.A II (Semester – III)

Sr. No	Paper Code	Papers/Practicals	Teaching Scheme per week (hrs.)			Examination Scheme			
						Max. Marks		Total Marks	Minimum Passing (35%)
			Th.	Pr	Total	External Marks (T) / (E)	Internal Marks (I)		
1	3BCA1	Object Oriented Programming with C++	4	-	4	80	20	100	35
2	3BCA2	Statistics and Numerical Method	4	-	4	80	20	100	35
3	3BCA3	Database Programming With ORACLE	4	-	4	80	20	100	35
4	3BCA4	System Analysis And Design	4	-	4	80	20	100	35
5	3BCA5	Practical-I based on Theory Paper-1, 2 and Statics problems using Ms-Excel	-	4	4	25	25	50	18
6	3BCA6	Practical-II based on Theory Paper- 3	-	4	4	25	25	50	18
		Total	16	8	24	370	130	500	176

S.Y. B.C.A II (Semester – IV)

Sr. No	Paper Code	Papers/Practicals	Teaching Scheme per week (hrs.)			Examination Scheme			
						Max. Marks		Total Marks	**Minimum Passing (35%)**
			Th.	**Pr**	**Total**	External Marks (T) / (E)	Internal Marks (I)		
1	4BCA1	Event Driven Programming With Visual Basic	4	-	4	80	20	100	35
2	4BCA2	Communication Networks	4	-	4	80	20	100	35
3	4BCA3	Data Structures	4	-	4	80	20	100	35
4	4BCA4	System Software and Microprocessor 8086	4	-	4	80	20	100	35
5	4BCA5	Practical-I based on Theory Paper- 1	-	4	4	25	25	50	18
6	4BCA6	Practical-II based on Theory Paper- 3 and 4	-	4	4	25	25	50	18
		Total	16	8	24	**370**	**130**	**500**	**176**

Appendix-C

CREDIT-GRADE SYSTEM FOR U.G. (B.C.A)

Course credit:

It is the unit of measurement of course works. Each course shall have an integer number of credits which reflects its weightage. **One Credit means one period of one hour duration.**

The number of Credits of a course in a given semester shall ordinarily calculated as under

Number of Credits = L + T + P/2

Where L, T and P represent the number of Lecture, Tutorial and Practical hours per week. The fraction is to be rounded off to next integer value. One Practical / Lab without theory of one hour equal to one credit.

Grade:

It is the measure of performance quality. At the end of each semester, a student is awarded a letter grade in each of his/her course taking into account his/her performance based on the various component of evaluation i.e. on the basis of total marks in each theory course and in each laboratory course.

When the performance exhibited by examinees is assessed in qualitative terms and impressions so obtained by the examiners are directly expressed in terms of letter grades, it is called 'Direct grading'.

The method that is based on a predetermined standard which become a reference point for a learner's performance is called "Absolute grading".

The Absolute grading system of Seven (07) points is the most popular grading system.

Performance Grading Scale

Marks Obtained %	Grade	Grade Point
75 & above	O	6
65 to 74.99	A	5
55 to 64.99	B	4
45 to 54.99	C	3
40 to 44.99	D	2
35 to 39.99	E	1
34.99 & below	F	0

Grade Proposed Norms
O: Outstanding
A: Very Good
B: Good
C: Average
D: Satisfactory
E: Pass
F: Fail

Conversion of Marks to Grades and Calculations of GPA (Grade Point Average)

In the Credit and Grade Point System, the assessment of individual Courses in the concerned examinations will be on the basis of marks only, but the marks shall later be converted into Grades by some mechanism wherein the overall performance of the Learners can be reflected after considering the Credit Points for any given course. However, the overall evaluation shall be designated in terms of Grade. There are some abbreviations used here that need understanding of each and every parameter involved in grade computation and the evaluation mechanism. The abbreviations and formulae used are as follows:-

Abbreviations and Formula's Used:-

G: Grade

GP: Grade Points

C: Credits

CP: Credit Points

CG: Credits X Grades (Product of credits & Grades)

∑CG: Sum of Product of Credits & Grades points

∑C: Sum of Credits points

$$SGPA = \frac{\sum CG}{\sum C}$$

Semester Grade point average (SGPA)

It is indicative of performance of a student in the given semester. The Grade Point average for a semester is obtained by adding the products of Actual Grade points and relative weightage for different courses as shown in the scheme for respective semester and dividing the total credit hours for that semester as illustrated below.

$$SGPA = [\ C_i G_i + C_{ii} G_{ii} + \ldots\ldots + C_n G_n\ ] / (\ C_i + C_{ii} + \ldots + C_n\ )$$

SGPA: Semester Grade Point Average shall be calculated for individual semesters. (It is also designed as GPA)

Cumulative Grade Point Average (CGPA)

The cumulative Grade Point Average (CGPA) is indicative of the overall academic performance of a student in all the courses registered up to and including the latest completed semester. It is the cumulative total of the products of actual grade point and its weightage upto last semester divided by total credits of all the semesters.

$$CGPA = \sum_{i=0}^{n} c_i\, g_i \sum_{i=0}^{n} c_i$$

CGPA: Cumulative Grade Point Average shall be calculated for the entire Program by considering all the semesters taken together.

Note: If a student is permitted to repeat any semester/course, the new letter grade will replace the old letter grade in the computation of the CGPA.

After calculating the SGPA for an individual semester and the CGPA for entire program, the value can be matched with the grade in the Grade Point table as per the Seven (07) Points Grading System and expressed as a single designated GRADE such as O, A, B, etc…

Illustration of Calculation:-

The illustration for the conversion of marks into grades in theory & practical, if any in individual courses are as shown below:

1) Pass in all the courses with more than 35% marks

Courses in the semester	Marks % obtained	Grade	Grade points (G)	Credits (C) per Course	∑ CG = (C × G)	SGPA =∑CG/ ∑C
Course- I	55	B	4	4	16	
Course-II	60	B	4	4	16	
Course-III	70	A	5	4	20	82/20= 4.1
Course-IV	80	O	6	3	18	
Course-V	40	D	2	3	06	
Course-VI	45	C	3	2	06	
Passes Credit earned = 20				∑C = 20	∑CG =82	Grade = B

Reporting of Learners Performance (Grade Card)

The grade cards can be issued to the Learners on the basis of the above calculations in a uniform format given by the University. The grade cards of the Examinations conducted by the University shall be signed by the Controller of Examinations only as per the provision in the University Act.

The grade card will reflect the marks obtained by the Learner, Credit points of the individual Course as well as Semester, conversion of marks into grades, calculation of SGPA for each individual semester and the CGPA for the complete Program at the end of the final semester.

The grade card shall be issued with SGPA & Grade in case of middle semesters or CGPA
& Grade in case of final semester only to those learners who have completed all the Courses & semesters of that program successfully. However, the learners those who are unsuccessful or carry the courses under ATKT rule will not get the SGPA & Grade in case of middle semesters or CGPA & Grade in case of the final semester unless and until they successfully complete their pending courses or semesters under the concerned program.

I, further direct that the aforesaid Direction shall come into force from the date of issuance and shall remain in force till the relevant Ordinance comes into being in accordance with the provisions of the Maharashtra Universities Act, 1994 or is repealed by an issuance of another Direction.