Gondwana University Gadchiroli  
FACULTY OF SCIENCE  
DIERCTION NO. 207 OF 2016

EXAMINATIONS LEADING TO THE DEGREE OF MASTER OF SCIENCE, SEMESTER PATTERN WITH CHOICE BASED CREDIT SYSTEM, DIRECTION, 2016.  

(Issued under Section 14(8) of the Maharashtra Universities Act, 1994)

Whereas, the Maharashtra Universities Act, 1994 (hereinafter referred to as the Act) has come into force from 21st July, 1994 and was amended from time to time,  

AND

Whereas, the University Grants Commission, New Delhi vide letter No.D.O.No.F-1-1/2015 (CM) dated 8th January 2015 to introduce Choice Based Credit System at the earliest from the academic session 2015-16 to provide option to students and also seamless mobility across the institutions.  

AND

Whereas, the Board of Studies in all the Science subjects in their meetings held during 24.4.2015 prepared the syllabi and scheme of examinations for the M. Sc. courses and recommended for starting of the Choice Based Credit System in the Faculty of Science from the academic session 2015-16,  

AND

Whereas, the faculty of Science in its meeting held on 20.5.2015 vide item No. 16, has considered, accepted and recommended to Academic Council, the policy decision regarding introduction of Choice Based Credit System and the Draft syllabi of M. Sc. Semester-I to IV with Draft Direction and other details.  

AND

Whereas, the Academic Council in its meeting held on 23/08/2016 vide has considered, accepted and recommended to Management Council, for M.Sc., along with Draft Direction and other details.  

AND

Whereas, the Management Council in its meeting held on 24/08/2016 vide has considered, accepted the Draft Direction and other details.  

AND

Whereas, the new Draft Direction and scheme of examinations as per semester pattern are to be implemented from the Academic Session 2016-17 for M.Sc. semester I and onwards which is to be regulated by this Direction and as such there is no ordinance in existence and framing of an Ordinance for the above examinations is a time consuming process.  

AND

Whereas, the admission of students in the Choice Based Credit System at M.Sc. Semester I are to be made in the Academic Session 2016-17.  

AND

Whereas, ordinance making is a time consuming process, Now, therefore, I, Dr. N.V. Kalyankar, Vice Chancellor Gondwana University, Gadchiroli in exercise of powers vested in me under Section 14(8) of the Act, do hereby issue the following Directions :-

1. This Direction may be called "examinations leading to the Degree of Master of Science, Semester Pattern with Choice Based Credit System, Direction, 2016"  
2. This direction shall come into force from the date of its issuance.  
3. The duration of the M. Sc. course shall be of two academic years consisting of four semesters with the University examinations at the end of each semester detailed in the following table.

   a) M. Sc. Semester I Exam,  
   b) M. Sc. Semester II Exam,  
   c) M. Sc. Semester III Exam, and  
   d) M. Sc. Semester IV Exam

TABLE
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of the examination</th>
<th>Main Examination</th>
<th>Supplementary Examination</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Semester I, III</td>
<td>Winter</td>
<td>Summer</td>
</tr>
<tr>
<td>2</td>
<td>Semester II, IV</td>
<td>Summer</td>
<td>Winter</td>
</tr>
</tbody>
</table>

**ELIGIBILITY TO THE COURSE:**

4. Subject to their compliance with the provisions of this Direction and of other ordinances in force from time to time, the following applicant candidates shall be eligible for the admission to Master of Science Course and examinations thereof.

**Eligibility for Semester I**

A  For M.Sc. (Physics)  For admission to the M. Sc. Semester I in Physics, a candidate shall have offered Physics as one of the subjects at the qualifying B.Sc. Examination.

B  For M.Sc. (Chemistry)  For admission to the M. Sc. Semester I in Chemistry, a candidate shall have offered Chemistry / Industrial Chemistry as one of the subjects at the qualifying B.Sc. Examination.

C  For M.Sc. (Mathematics)  For admission to the M. Sc. Semester I in Mathematics, a candidate shall have offered Mathematics as one of the subjects at the qualifying B.Sc. Examination.

D  For M.Sc. (Computer Science)  For admission to the M. Sc. Semester I in Computer Science, a candidate shall have offered Computer Science as one of the subjects at the qualifying B.Sc. examination or with Post B.Sc. diploma course in Computer Science of Gondwana University or any other statutory university with optional subjects Computer Maintenance / B.Sc. (Information Technology) / B.C.A/MCA*  

E  For M.Sc. (Electronics)  For admission to the M. Sc. Semester I in Electronics, a candidate shall have offered Electronics / Computer Maintenance/ B.Sc. IT and BCA as one of the subjects at the Qualifying B.Sc.; B.Sc. IT and BCA Examination.

F  For M.Sc. (Botany)  For admission to the M. Sc. Semester I in Botany, a candidate shall have offered Botany as one of the subjects at the qualifying B.Sc. Examination / B.Sc. Agriculture Science.

G  For M.Sc. (Zoology)  For admission to the M. Sc. Semester I in Zoology, a candidate shall have offered Zoology as one of the subjects at the qualifying B.Sc. Examination.

H  For M.Sc. (Microbiology)  For admission to the M. Sc. Semester I in Microbiology, a candidate shall have offered Microbiology/ Biotechnology as a subject of study at qualifying B.Sc. Examination.

I  For M.Sc. (Biochemistry)  For admission to the M. Sc. Semester I in Biochemistry, a candidate shall have offered Chemistry and Biochemistry as subjects of study at B.Sc. Examination.

J  For M.Sc. (Biotechnology)  For admission to the M. Sc. Semester I in Biotechnology, a candidate shall be a Life Science graduate / Veterinary / Fishery Sciences / Pharmacy / Engineering Technology / Medicine (MBBS)/B.D.S./B.Sc. Agriculture Science.
For M.Sc. (Environmental Science)  
For admission to the M. Sc. Semester I in Environmental Science, a candidate shall have offered Environmental Science as one of the subjects at the qualifying B.Sc. Examination or B.Sc. Agriculture Science.

For M.Sc. (Geology)  
For admission to the M. Sc. Semester I in Geology, a candidate shall have offered Geology as one of the subjects at the qualifying B.Sc. Examination.

Candidates shall have passed any one of the above examinations from Gondwana University Gadchiroli or any other statutory University of India or abroad, recognized by the UGC or any other concerned apex regulatory authority / body in India.

5. Without prejudice to other provisions of Ordinance No. 6 relating to the examinations in general, provisions of Para 5, 8, 9, 10, 26, 31 and 32 of the said ordinance shall apply to every student admitted to the courses.
6. The fees for the tuition, examination, laboratory and other fees shall be as prescribed by the university from time to time.
(a) The scope of the subjects shall be as prescribed in the syllabus.
(b) The medium of instruction and examination shall be English.
7. The number of papers and maximum marks assigned to each paper and minimum marks/grade/credits, an examinee must obtain in order to pass the examination shall be as prescribed in Appendices appended with this Direction.
8. The examinee at each of the examination shall have option of not being declared successful at the examination in case he/she does not secure a minimum of grade B+ equivalent to 55% marks at the examination. This option will have to be exercised every time the application is submitted to any of the examinations. Once this option is exercised, the option shall be binding on the examinee and it shall not be evoked under any circumstances.
9. The classification of the examinee successful at the semester end examinations and at the end of final semester examinations shall be as per the rules and regulations of Choice Based Credit System as prescribed in Appendices appended with this Direction.
10. The provisions of Direction No. 3 of 2007 for the award of grace marks for passing an examination, securing higher grade in subject(s) as updated from time to time shall apply to examinations under this Direction.
11. No candidate shall be admitted to an examination under this Direction, if he/she has already passed the same examination of this university or of any other university.
12. Successful examinees shall be entitled to receive a Grade Card after each semester end examinations and successful examinees at the end of M. Sc. Sem IV examinations shall, receive a Degree in the prescribed format, signed by the Vice-Chancellor.
13. This course is based on Choice Based Credit System and therefore, it will be also regulated by guidelines and regulation given in Appendices which are part of this Direction.
14. Absorption scheme for failure students of the credit based semester pattern:
   a) While switching over to Choice Based Credit System, the failure students of credit based semester pattern will be given Five chances to clear the examinations starting from session 2016-2017.
b) The candidates who have cleared first and second semester of Part I of the Credit Based Semester Pattern examinations in the concerned subject shall get admission to Third Semester of Part II of the Choice Based Credit System directly. However, candidates who are allowed to keep term will not be eligible for admission to Third Semester of Part II of the Choice Based Credit System unless they clear all the papers and practical of first and second semester of Part I of the Credit Based Semester Pattern examinations.

15. Absorption scheme for failure students of annual pattern:

The candidates who have cleared first year of annual pattern shall get admission to Semester III of the Choice Based Credit System directly. However, candidates who are allowed to keep term will not be eligible for admission to Third Semester of the Choice Based Credit System unless they clear all the papers and practical of First year of the annual pattern examination.

16. The ATKT rules for admission for the M. Sc. Course (Theory, Practical and Seminar etc. as separate passing head and on calculation fraction, if any, shall be ignored) shall be as given in the following table

<table>
<thead>
<tr>
<th>Admission to Semester</th>
<th>Rules</th>
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<tr>
<td>Semester I</td>
<td>As provided in the para 4 of the Direction</td>
</tr>
<tr>
<td>Semester II</td>
<td>Candidate should have appeared in semester I of University Examination.</td>
</tr>
<tr>
<td>Semester III</td>
<td>For Practical Subjects: Candidate should have passed at least 8 papers out of 12 in semester I and II together including practicals. For Non-Practical Subjects (Example Maths): Candidate should have passed at least 6 papers out of 10 in semester I and II together.</td>
</tr>
<tr>
<td>Semester IV</td>
<td>Candidate should have appeared in at least one paper of semester III of University Examination.</td>
</tr>
</tbody>
</table>

Gadchiroli.
Date :- 24 / 08 /2016.

Sd/-
(Dr. N.V. Kalyankar)
Vice-Chancellor
Scheme of teaching and examination under semester pattern Choice Based Credit System (CBCS) for M.Sc. Program in all subjects, except Mathematics.

<table>
<thead>
<tr>
<th>Core Course</th>
<th>Ability Enhancement</th>
<th>Skill Based Course</th>
<th>Discipline Specific Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEM I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core 1 Th. Paper 1 (4 Credits) (4 Hours/Week)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Core 2 Th. Paper 2 (4 Credits) (4 Hours/Week)</td>
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<td></td>
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</tr>
<tr>
<td>Core 3 Th. Paper 3 (4 Credits) (4 Hours/Week)</td>
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</tr>
<tr>
<td>Core 4 Th. Paper 4 (4 Credits) (4 Hours/Week)</td>
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<td></td>
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</tr>
<tr>
<td>Pract. Core Pr. 1 {Based on Core Th. 1&amp;2} (4 Credits) (3-8 Hours/Week)</td>
<td></td>
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<tr>
<td>Pract. Core Pr. 2 {Based on Core Th. 3&amp;4} (4 Credits) (3-8 Hours/Week)</td>
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<tr>
<td><strong>Total 25 Credits</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Core Subject</th>
<th>Ability Enhancement</th>
<th>Skill Based Course</th>
<th>Discipline Specific Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEM II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core 5 Th. Paper 5 (4 Credits) (4 Hours/Week)</td>
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<tr>
<td>Core 6 Th. Paper 6 (4 Credits) (4 Hours/Week)</td>
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<tr>
<td>Core 7 Th. Paper 7 (4 Credits)</td>
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<td>Core 8 Th. Paper 8 (4 Credits) (4 Hours/Week)</td>
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<td>Pr. Core Pr. 3 {Based on Core Th. 5&amp;6} (4 Credits) (3-8 Hours/Week)</td>
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<td>Pr. Core Pr. 4 {Based on Core Th. 7&amp;8} (4 Credits) (3-8 Hours/Week)</td>
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<td><strong>Total 25 Credits</strong></td>
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<td></td>
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<tr>
<td>Core Subject</td>
<td>Ability Enhancement</td>
<td>Skill Enhancement Course</td>
<td>Discipline Specific Elective</td>
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</tr>
<tr>
<td>SEM III</td>
<td>Core 9 Th. Paper 9 (4 Credits) (4 Hours/Week)</td>
<td>Seminar III (1 Credit) (2 Hours/Week)</td>
<td>Core Elective I (DSE I) Th. Paper 11</td>
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<tr>
<td></td>
<td>Core 10 Th. Paper 10 (4 Credits) (4 Hours/Week)</td>
<td>Foundation Course I (SEC I) Paper 12 (4 Credits) (4 Hours/Week)</td>
<td>(4 Credits) (4 Hours/Week)</td>
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<td></td>
<td>Pract. Core Pr. 5 {Based on Core Th. 9&amp;10} (4 Credits) (3-8 Hours/Week)</td>
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<td>Pr. Core Elective I (DSE I) Practical 6</td>
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<td>(4 Credits) (3-8 Hours/Week)</td>
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<td></td>
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<td></td>
<td>Total 25 Credits</td>
</tr>
</tbody>
</table>

**Note:** Th. = Theory; Pr. = Practical/lab.

The Practical and Project/Dissertation shall be evaluated by both the External and Internal Examiner in the respective University Department / Center / Affiliated College as per guidelines appended with this Direction.
1. In each semester, the student will have to deliver a seminar on any topic relevant to the syllabus / subject encompassing the recent trends and development in that field / subject. The topic of the seminar will be decided at the beginning of each semester in consultation with the supervising teachers. The student has to deliver the seminar which will be followed by discussion. The seminar will be open to all the teachers of the department, invitees, and students.

2. The student will have to carry out the project work (based on guidelines appended to this direction) in lieu of practical in the fourth semester in the department or depending on the availability of placement; he / she will be attached to any of the national / regional / private research institute / organization.

3. Internal Assessment Marks will be as per appendix attached in this direction.

4. Skill Enhancement Course: Student can choose this paper from any skill enhancement courses available in the University Department / Center / Affiliated College.

5. One credit will be for 25-30 hours spent by the learner for one paper.
### Scheme of teaching and examination under semester pattern Choice Based Credit System (CBCS) for M.Sc. Program in Mathematics.

<table>
<thead>
<tr>
<th>Core Course</th>
<th>Ability Enhancement</th>
<th>Skill Based Course</th>
<th>Discipline Specific Elective</th>
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<tbody>
<tr>
<td><strong>SEM I</strong></td>
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<td></td>
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<tr>
<td>Core 1 Th. (4 Credits)</td>
<td>Seminar I (1 Credit)</td>
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<tr>
<td>Core 2 Th. (4 Credits)</td>
<td>Seminar II (1 Credit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core 3 Th. (4 Credits)</td>
<td>Seminar III (1 Credit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core 4 Th. (4 Credits)</td>
<td>Seminar IV (1 Credit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core 5 Th. (4 Credits)</td>
<td>Seminar V (1 Credit)</td>
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<td><strong>Total 25 Credits</strong></td>
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### Core Subject

<table>
<thead>
<tr>
<th>Core Subject</th>
<th>Ability Enhancement</th>
<th>Skill Based Course</th>
<th>Discipline Specific Elective</th>
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<tbody>
<tr>
<td><strong>SEM II</strong></td>
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<td>Core 6 Th. (4 Credits)</td>
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<td>Core 7 Th. (4 Credits)</td>
<td>Seminar VII (1 Credit)</td>
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<tr>
<td>Core 8 Th. (4 Credits)</td>
<td>Seminar VIII (1 Credit)</td>
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<td></td>
</tr>
<tr>
<td>Core 9 Th. (4 Credits)</td>
<td>Seminar IX (1 Credit)</td>
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</tr>
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<td>Core 10 Th. (4 Credits)</td>
<td>Seminar X (1 Credit)</td>
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### Core Subject

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<th>Skill Enhancement Course</th>
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<tbody>
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</tr>
<tr>
<td>Core 11 Th. (4 Credits)</td>
<td>Seminar XI (1 Credit)</td>
<td>Foundation Course I (SEC I) Th. Paper 15 (4 Credits)</td>
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<td>Core 12 Th. (4 Credits)</td>
<td>Seminar XII (1 Credit)</td>
<td>Seminar (SEC I) XV (1 Credit)</td>
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### Scheme of teaching and examination under semester pattern Choice Based Credit System (CBCS) for M.Sc. Program in all subjects except Mathematics.

#### Semester I

<table>
<thead>
<tr>
<th>Code</th>
<th>Theory / Practical</th>
<th>Teaching Scheme</th>
<th>Examination Scheme</th>
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<td><strong>TOTAL</strong></td>
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<td></td>
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### Appendix-10

### Semester III

<table>
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</tr>
<tr>
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<td>Theory</td>
<td>Practical</td>
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</tr>
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<td>Foundation Course 1</td>
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<td>Pract. Core 9 &amp; 10</td>
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### Appendix-11
### Appendix-12

#### Semester IV

<table>
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<th>Examination Scheme</th>
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<tbody>
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<td>Core 12</td>
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<td>3 80 20 100 40</td>
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<td>3 80 20 100 40</td>
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<td>Foundation</td>
<td>Paper 16</td>
<td>4 - 4 4</td>
<td>3 80 20 100 40</td>
</tr>
<tr>
<td>Course 2</td>
<td>Pract. Core 11, 12 &amp; Elective 2</td>
<td>Practical 7 - 8 8 4 3-8*</td>
<td>80 20 100 40</td>
</tr>
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<td>Project</td>
<td>Project</td>
<td>8 8</td>
<td>- 80 20 100 40</td>
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<td>2 - 2 1</td>
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<td></td>
<td>18 16 34 25</td>
<td>480 145 625 170 80</td>
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</table>

**Scheme of teaching and examination under semester patter Choice Based Credit System (CBCS) for M.Sc. Program in Mathematics.**

### Appendix-13

#### Semester I for M.Sc. Program in Mathematics

<table>
<thead>
<tr>
<th>Code</th>
<th>Theory / Practical</th>
<th>Teaching scheme (Hours/Week)</th>
<th>Credits</th>
<th>Examination Scheme</th>
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<tbody>
<tr>
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<td>5 4 1 5 3</td>
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<td>Paper 2</td>
<td>5</td>
<td>5 4 1 5 3</td>
<td>100 25 125</td>
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<td>Paper 4</td>
<td>5</td>
<td>5 4 1 5 3</td>
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<td>Paper 5</td>
<td>5</td>
<td>5 4 1 5 3</td>
<td>100 25 125</td>
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<td>25</td>
<td>25 20 5 25</td>
<td>500 125 625</td>
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## Appendix-14

### Semester II for M.Sc. Program in Mathematics

<table>
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<th>Theory / Practical</th>
<th>Teaching scheme (Hours/Week)</th>
<th>Credits</th>
<th>Examination Scheme</th>
<th>Max. Marks</th>
<th>Total Marks</th>
<th>Minimum Passing Marks</th>
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<tbody>
<tr>
<td></td>
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<td>Th</td>
<td>Total Theory</td>
<td>Seminar Total</td>
<td>Duration in hrs.</td>
<td>Extern al Marks</td>
<td>Intern al Asst.</td>
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## Appendix-15

### Semester III for M.Sc. Program in Mathematics

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<th>Max. Marks</th>
<th>Total Marks</th>
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<td>25</td>
<td>500</td>
</tr>
<tr>
<td>Code</td>
<td>Theory / Practical</td>
<td>Teaching scheme (Hours/Week)</td>
<td>Credits</td>
<td>Examination Scheme</td>
<td>Minimum Passing Marks</td>
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<td></td>
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<td>Theory duration</td>
<td>Max. Marks</td>
<td>Total Marks</td>
<td>Th. Extern al</td>
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<td>5</td>
<td>500</td>
<td>125</td>
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Project Work/Dissertation Scheme / Guidelines for the Students, Supervisors and Examiners

Every student is required to carry out a project work in semester IV. The project can be of following types. A) Experimental Project Work; OR B) Field Based Project Work; OR C) Review writing based Project Work.

Experimental Project Work and Field Based Project Work:
Student can carry out Experimental / Field Based Project Work on a related research topic of the subject / course. It must be an original work and must indicate some degree of experimental work / Field work. On the basis of this work, student must submit the Project Report (typed and properly bound) in one copy (Hard and Soft)prior to commencement of the final Practical / lab Examination of Semester IV. The project report shall comprise of Introduction, Material and Methods, Results, Discussion, Summary, Conclusion and, References along with the declaration by the candidate that the work is original and not submitted to any University or Organization for award of the degree and certificate by the supervisor and forwarded through Head / Course-coordinator / Director of the Department / Centre or the Principal of the College.

Review writing based Project Work.
Student can carry out review writing Based Project Work on a related topic of the subject / course. It must be a review of topic based on research publications. Student shall refer peer reviewed original research publications and based on findings, write a summary of the same. The pattern of review writing shall be based on reputed reviews published in a standard, peer reviewed journals. On the basis of this work, student must submit the Project Report (typed and properly bound) in one copy (Hard and Soft) prior to commencement of the final Practical /lab/University Examination of Semester IV. The project report shall comprise of Abstract, Introduction, detailed review, Discussion, Summary, Conclusion and, References along with the declaration by the candidate that the work is original and not submitted to any University or Organization for award of the degree and certificate by the supervisor and forwarded through Head / Course-coordinator / Director of the Department / Centre or the Principal of the College.

*The supervisors for the Project Work shall be from the following.
A person shall be an approved faculty member in the relevant subject.
OR
Scientists of National Laboratories / Regional Research Laboratories/ Experts from R&D in Industry who are approved by competent authority in such facilities by the Union Government / the State Government / Gondwana University / Other Universities recognized by UGC.
The Project Work will carry total 100 marks and will be evaluated by both external and internal examiner in the respective Department / Center / Affiliated College.
The examiners will evaluate the Project Work/Dissertation taking into account the coverage of subject matter, arrangement and presentation, references, etc.

<table>
<thead>
<tr>
<th>For written Project work</th>
<th>Marks – Evaluated jointly by External &amp; Internal examiner</th>
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<tr>
<td>Oral Presentation</td>
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</tr>
<tr>
<td>For Viva-Voce</td>
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<tr>
<td>Internal Assessment</td>
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<tr>
<td>Total</td>
<td>100</td>
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</table>
Appendix-18

Seminar
Guidelines for Students, Supervisors and Examiners
In each semester, the student will have to deliver a seminar on any topic relevant to the syllabus / subject encompassing the recent trends and development in that field / subject. The topic of the seminar will be decided at the beginning of each semester in consultation with the supervising teachers. The student has to deliver the seminar which will be followed by discussion. The seminar will be open to all the teachers of the department, invitees, and students.

The students should submit the seminar report typed and properly bound in two copies to the head of the department. The said shall be evaluated by the concerned supervisor / head of the department. The marks of the seminar shall be forwarded to the university within due period through head of the Department. The record of the seminar should be preserved till the declaration of the final result.

Appendix-19

Internal Assessment:

1. The internal assessment marks shall be awarded by the concerned teacher.
2. The internal assessment marks shall be sent to the University after the Assessment in the prescribed format.
3. For the purpose of internal assessment the University Department / College shall conduct any three assignments described below. Best two scores of a student in these tests shall be considered to obtain the internal assessment score of that student.
4. If the student does not appear for the Practical Exam he shall be declared failed in Practical Examination irrespective of marks obtained in Internal Practical Assessment. However the Internal Practical Assessment marks will be carried forward for his next supplementary Practical Exam.
5. General guidelines for Internal Assessment are:
   a) The internal assessment marks assigned to each theory paper as mentioned in Appendix 1 shall be awarded on the basis of assignments like class test, attendance, home assignments, study tour, industrial visits, visit to educational institutions and research organizations, field work, group discussions or any other innovative practice / activity.
   b) There shall be three assignments (as described above) per course.
   c) There shall be no separate / extra allotment of work load to the teacher concerned. He/ She shall conduct the Internal assessment activity during the regular teaching days / periods as a part of regular teaching activity.
   d) The concerned teacher / department / college shall have to keep the record of all the above activities until six months after the declaration of the results of that semester.
   e) **At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method he / she proposes to adopt and the scheme of marking for internal assessment. (Prescribed in syllabus of respective Subjects).
   f) Teacher shall announce the schedule of activity for internal assessment in advance in consultation with HOD / Principal.

**To be included in syllabus by BOS.

Appendix-20

Practical Examination
1. Each practical carries 100 (80 Pr + 20 Int) marks. The scheme of marking shall be as per given in the syllabi of respective subjects.
2. Practical performance shall be jointly evaluated by the External and Internal Examiner. In case of discrepancy, the External Examiner’s decision shall be final.
3. Duration of practical examination will be as per given in the syllabi of respective subjects.
4. The Practical Record of every student shall carry a certificate as shown below, duly signed by the teacher-in-charge and the Head of the Department. If the student fails to submit his / her certified Practical Record duly signed by the Teacher-In-Charge and the Head of the Department, he / she shall not be allowed to appear for the Practical Examination and no Marks shall be allotted to the student.
5. The certificate template shall be as follows:

**CERTIFICATE**

Name of the college / institution ________________________________

Name of the Department: ________________________________

This is to certify that this Practical Record contains the bonafide record of the Practical work of Shri / Shrimati / Kumari ________________________________ of M. Sc. ________________________________ during the academic year ________________________________. The candidate has satisfactorily completed the experiments prescribed by Gondwana University Gadchiroli for the subject ________________________________ during the academic year _______________________________.

Dated __ / __ / ______

Signature of the teacher who taught the examinee ________________________________

Head of the Department ________________________________

---

Appendix-21

to be finalized after obtaining information from BOS

Appendix 10 Decided by BOS

**Skill Enhancement Course**

Candidate can opt for any one skill enhancement course (paper) as shown below in the semester III and IV.

Appendix-22

**General Rules and Regulations regarding pattern of question paper for the semester end examination:**

**A) Pattern of Question Paper**

1. There will be four units in each paper.
2. Maximum marks of each theory paper will be 80.
3. Question paper will consist of five questions, each of 16 marks.
4. Four questions will be on four units with internal choice (One question on each unit).
5. Fifth question will be compulsory with questions from each of the four units having equal weightage and there will be no internal choice.

**B) Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA)**

Among the 100 credits which candidate needs to complete and clear for M. Sc. in any concerned subjects, at least 92 credits must be taken from the parent department where he / she is registered for M. Sc. Course. The remaining 08 credits can be taken from any other department of university or affiliated colleges offering skill enhancement courses of PG programs.
A student obtaining Grades F and Ab shall be considered failed and will be required to reappear for the examination.

Valuation pattern:

<table>
<thead>
<tr>
<th>Marks obtained in Theory / Practical out of 100 marks</th>
<th>Letter Grade</th>
<th>Grade point</th>
</tr>
</thead>
</table>

Computation of SGPA and CGPA

Following is the procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

i. The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e

\[
SGPA (S_i) = \frac{\sum (C_i \times G_i)}{\sum C_i}
\]

where \(C_i\) is the number of credits of the \(i^{th}\) course and \(G_i\) is the grade point scored by the student in the \(i^{th}\) course.
### Illustration for SGPA

<table>
<thead>
<tr>
<th>Code</th>
<th>Theory/Practical</th>
<th>Credits</th>
<th>Marks Obtained</th>
<th>Out of</th>
<th>Grade Point</th>
<th>Grade Letter</th>
<th>Credit Points</th>
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<td>9</td>
<td>O</td>
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<td>100</td>
<td>8</td>
<td>A+</td>
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<td>50</td>
<td>100</td>
<td>4</td>
<td>C</td>
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<td>100</td>
<td>7</td>
<td>A</td>
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<td>8</td>
<td>A+</td>
<td>4x8=32</td>
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<td>O</td>
<td>1x9=9</td>
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</table>

**Total** | **25** | **Obtained** | **Out of** | **Grade Point** | **Grade Letter** | **Credit Points** |

Thus, **SGPA = 185/25 = 7.4**

The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a program, i.e.

\[
CGPA = \frac{\sum (Ci \times Si)}{\sum Ci}
\]

where Si is the SGPA of the ith semester and Ci is the total number of credits in that semester.

### Illustration for CGPA

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Semester 2</th>
<th>Semester 3</th>
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<tbody>
<tr>
<td>Credit : 25</td>
<td>Credit : 25</td>
<td>Credit : 25</td>
<td>Credit : 25</td>
</tr>
<tr>
<td>SGPA: 8.46</td>
<td>SGPA: 7.83</td>
<td>SGPA: 5.69</td>
<td>SGPA: 6.31</td>
</tr>
</tbody>
</table>

Thus, **CGPA = \frac{25 \times 8.46 + 25 \times 7.83 + 25 \times 5.69 + 25 \times 6.31}{100} = \frac{211.5 + 195.15 + 142.25 + 157.75}{100} = 7.0665**

i.e. **CGPA = 7.06**

The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts. For example, 7.0765 = 7.08 or 6.5168 = 6.52 etc.

Transcript (Format): Based on the above recommendations on Letter grades, grade points and SGPA and CGPA, the HEIs may issue the transcript for each semester and a consolidated transcript indicating the performance in all semesters.

**The course code may be given as follows for different courses**

- P-Postgraduate; S-Science
- PSFC01 - Foundation Course
- PSCHT01 - Chemistry theory
- PSCHP01 - Chemistry Practical
- PSPHT01 - Physics theory
- PSPHT01 - Physics Practical
- PSBOT01 - Botany Theory
- PSBOP01 - Botany Practical