



## **RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY**

### **DIRECTION NO. 44 OF 2016**

#### **DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE OF POST GRADUATE DIPLOMA IN COMPUTER COMMERCIAL APPLICATIONS (PGDCCA) Choice Based Credit System (CBCS)**

**WHEREAS** the Maharashtra Universities Act No. XXXV of 1994 has come into force with effect from 22<sup>nd</sup> July, 1994

**AND**

**WHEREAS** the amendment to the said Act came to be effected from 2016-2017

**AND**

**WHEREAS** the Faculty of Commerce at its meeting held on 14.2.2012 have decided to update and upgrade the existing syllabus for the award of the degree of Post Graduate Diploma in Computer Commercial Applications (PGDCCA) commensurate with the curricula existing in the various Universities in India and with a view to include the latest trends in the commerce stream as well as to design it to suit to the needs of the industries and corporate houses as provided under Section 38(a) of the Act.

**AND**

**WHEREAS** the Coordinator of the Faculty of Commerce concurred with the recommendations of the Special Task Committee in Computer Application in the Faculty of Commerce .

**AND**

**WHEREAS** the Special Task Committee in Computer Application in its meetings held on 24.2.2016 updated the existing syllabi and recommended some modifications in the scheme of examination for postgraduate courses,

**AND**

**WHEREAS** the Coordinator, Faculty of Commerce has consented to the changes in the syllabus and the scheme of examination for the award of Post Graduate Diploma in Computer Commercial Applications (PGDCCA),

**AND**

**WHEREAS** the Vice-Chancellor, Nagpur University, Nagpur approved the recommendations so made by the Special Task Committee in the Faculty of Commerce duly concurred by the Coordinator, Faculty of Commerce as required under Section 38 (a) of the Act .

AND

**WHEREAS** it is expedient to provide an Ordinance for the purpose of prescribing examinations leading to the Post Diploma of Post Graduate Diploma in Computer Commercial Applications (PGDCCA) in the Faculty of Commerce and phasic repeal of Ordinance No. 21 of 1994 governing the existing course of Post Graduate Diploma in Computer Commercial Applications (PGDCCA).

AND

**WHEREAS** As per the Advice of the Vice Chancellor, Coordinator, Faculty of Commerce & Coordinator, Special Task Committee (Computer Application) in the meeting held on 24.2.2016 constituted sub-committee for syllabus restructuring of PGDCCA with Semester pattern.

The Sub-committee submitted the Semester Draft Syllabus of PGDCCA in meeting held on 24.2.2016.

Now, therefore, I, Dr. S. P. Kane, Vice-Chancellor, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of the powers vested in me under Section 14(8) of the Maharashtra University Act of 1994 do hereby issue the following direction:

This direction shall be called “**DIRECTION REGARDING EXAMINATIONS LEADING TO THE POST GRADUATE DIPLOMA IN COMPUTER COMMERCIAL APPLICATIONS (PGDCCA) IN THE FACULTY OF COMMERCE, RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**”.

1. There shall be TWO examinations leading to the degree of Post Graduate Diploma in Computer Commercial Applications (PGDCCA) namely:

**Part-I**

- (1) The Post Graduate Diploma in Computer Commercial Applications (PGDCCA) Semester - I Examination,
- (2) The Post Graduate Diploma in Computer Commercial Applications (PGDCCA) Semester - II Examination,

2. The duration of the Post Diploma Course under this shall be of one academic years. The PGDCCA Semester - I Examination at the end of the first Semester and PGDCCA Semester - II Examination at the end of the Second Semester in First Year.
3. The Examinations Specified in above paragraph (i.e., Paragraph – 2) above shall be held twice a year (Winter + Summer) at such places and on such dates as may be fixed by the University.
4. The details of the procedure for admission as well as eligibility for examination of:
  - (A) An applicant of the **PGDCCASemester – I** Examination shall have :
    - (i) Obtained a Bachelor degree of this University or an equivalent Bachelor Degree of any statutory University in any faculty.
    - (ii) Prosecuted a regular course of study for not less than one Semester in any recognized institution or college affiliated to the R. T. M. Nagpur University where the course will be conducted.

(B) An applicant of the **PGDCCASemester - II** Examination shall have :

Appeared PGDCCA Semester – I Examination of this University

<b>Admission to Semester</b>	<b>Candidate should have passed in following examinations</b>	<b>Candidate should have competed the term and filled examination form</b>
Semester - I	Degree Examination	-
Semester - II	-	Semester – I

5. Without prejudice to the other provisions of Ordinance No. 6 relating to the Examinations in General, the provisions of Paragraphs 5, 7, 8, 10, 26 and 31 of the said Ordinance shall apply to every collegiate candidate.
6. The fees for the examination shall be as prescribed by the Management Council from time to time and whenever any change is made in the fees prescribed for any particular examination that shall be notified through a notification for information of the examinees concerned.

With the issuance of this Direction, The Direction No 23 of 2012 (Credit based Semester Pattern) shall stand repealed.

Nagpur  
Date :21.6.2016

**Sd/-**  
**Dr. S. P. Kane**  
Vice-Chancellor

## 7. Teaching and Examination Scheme

### Post Graduate Diploma in Computer Commercial Applications (PGDCCA)

#### (A) PGDCCA Part-I

##### Semester – I

Course Code	Subjects	Paper	Teaching Scheme per weeks (hr)	End Sem Examination	Min Marks	Internal Assessment	Min Marks	Credits
<b>Theory</b>								
1CPT1	Fundamental of Information Technology	I	4	80	40	20	10	4
1CPT2	Programming in C & OOPs Concept	II	4	80	40	20	10	4
1CPT3	Introduction to Operating Systems	III	4	80	40	20	10	4
1CPT4	Computerized Accounting (Tally ERP 9)	IV	4	80	40	20	10	4
<b>Practical</b>								
1CPP5	<b>Practical-I</b> :Programming in C & Operating Systems	P-I	8	100	50	Nil	Nil	4
1CPP6	<b>Practical-II</b> :Tally (ERP 9)& MS-Office	P-II	8	100	50	Nil	Nil	4
	<b>Total</b>		32	520		80		24

#### Notes:

1. Duration of one Theory/Practical period is 1 hour.
2. The candidate has to pass theory papers and practical paper separately.
3. One credit is equivalent to one hour of Teaching or two hours of Practical Work per week.
4. Each semester will consist of 15 – 18 weeks of Academic Work equivalent to 90 actual teaching days.
5. The odd semester may be scheduled from July to December and even semester from January to June.

## (B) PGDCCA Part-I

### Semester – II

Course Code	Subjects	Paper	Teaching Scheme per weeks (hr)	End Sem Examination	Min Marks	Internal Assessment	Min Marks	Credits
<b>Theory</b>								
2CPT1	Management Information Systems	I	4	80	40	20	10	4
2CPT2	Core Java	II	4	80	40	20	10	4
2CPT3	Quantity Techniques & Operation Research	III	4	80	40	20	10	4
2CMT4	E-Commerce and Web Designing	IV	4	80	40	20	10	4
<b>Practical</b>								
2CPP5	<b>Practical-I</b> :Core Java	P-I	8	100	50	Nil	Nil	4
2CPP6	<b>Practical-II</b> : HTML, JavaScript	P-II	8	100	50	Nil	Nil	4
<b>Project</b>								
2CPP7	Project	Project	8	100	50	Nil	Nil	4
	<b>Total</b>		40	620		80		28

#### Notes:

1. Duration of one theory/practical period is 1 hour.
2. The candidate has to pass theory papers and practical paper separately.
3. One credit is equivalent to one hour of teaching or two hours of practical Work per week.
4. Each semester will consist of 15 – 18 weeks of academic Work equivalent to 90 actual teaching days.
5. The odd semester may be scheduled from July to December and even semester from January to June.

8. In order to pass the examination, an examinee shall obtain not less than 50 % marks in each of the theory papers and each of the practical and the project and Internal Assessment (Sessional) separately.
  - (A) An examinee who is unsuccessful in the examination shall be eligible for admission to the subsequent examinations on payment of a fresh fee prescribed for the examination together with the conditions of the ordinance in force from time to time.
9.
  - (A) The scope of the subjects and pattern of examination shall be as indicated insyllabi.
  - (B) The Medium of instructions and examinations shall be in ENGLISH only.
10. Applicant for PGDCCA Examination prosecuting regular course of study shall not be permitted to join any other course in this or any other University.

11. **ASSESSMENT**

- The final total assessment of the candidates is made in terms of an internal assessment (Sessional) and an external assessment for each course.
- For each paper, 20 marks will be based on internal assessment and 80 marks for semester end examination (external assessment), unless otherwise stated.
- The division of the 20 marks allotted to internal assessment of theory papers should be based on class test, attendance, project assignments, seminar, power point presentation, fieldwork, group discussions or any other innovative practice / activity as determined by the teacher in respective subject and moderated by Head of the Institute/Principal.
- There shall be no separate / extra allotment of workload to the concerned teacher. He/ She shall conduct the internal assessment activity during the regular teaching days / periods as a part of regular teaching activity.
- At the beginning of each semester, every teacher shall inform his / her students unambiguously the method he / she propose to adopt and the scheme of marking for internal assessment with the prior permission of HOD / principal.

- An unsuccessful examinee at any internal shall be eligible for reexamination on payment of fresh examination fee prescribed by the University as per the respective directions.
- The internal marks will be communicated to the University at the end of each semester, but before the semester end examinations. These marks will be considered for the declaration of the results.
- The record of internal marks, evaluation & result should be maintained for a period of one year by respective institute/college for verification by competent authority.
- The maximum and minimum marks which each subject carries in PGDCCA Semester – I and Semester - II Examination are as indicated in Paragraph 7. A and B respectively.
- A copy of Project work shall be submitted to college prior to commencement of Semester - II Examination for Evaluation by Internal and External Examiner appointed as per University rules.
- Candidate shall submit his/her declaration that the Project is a result of his/her own work and the same has not been previously submitted to any examination of this University or any other University.
- The Practical Examination of each Semester will be conducted by Internal and External Examiner appointed as per University rules.
- If an examinee failed to pass the PGDCCA Post Diploma within three successive years from the date of his/her first admission to particular programme he/she shall be declared as **“Not Fit for the Course” (NFC)** and he/she will not be allowed to appear further for any examination of the course.

#### **STANDARD OF PASSING**

- Every candidate must secure 50% marks in each head of passing.
  - The passing marks for external examination will thus be 40 out of 80 and for internal examination, 10 out of 20 and aggregate marks taking both together will be 50 marks.
  - There shall be no internal marks in Practical and Project Examination.
11. (A) There shall be no classification of examinees successful at the PGDCCASemester – I and Semester – IIExaminations whereas SGPA will be notified.

**\* Conversion of Marks to Grades and Calculations of SGPA (Grade Point Average)**

**and CGPA (Cumulative 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 Formulae Used**

**G:** Grade

**GP:** Grade Points

**C:** Credits

**CP:** Credit Points

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

**SGPA =  $\Sigma CG$ :** Sum of Product of Credits & Grades points /  $\Sigma C$ : Sum of Credits points

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

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

After calculating the SGPA for an individual semester and the CGPA for entire programme, the value can be matched with the grade in the Grade Point table as per the ten (10) Points Grading System and expressed as a single designated GRADE such as O, A+, A, B+, B, etc.

<b>Marks</b>	<b>Grade</b>	<b>Grade Points</b>
85 and above	O (Outstanding)	10
75 - 84	A+ (Distinction)	9
71 - 74	A (Very Good)	8
61 - 70	B+ (Good)	7
55 - 60	B(Above Average)	6
50 - 54	C (Average)	5
40 - 49	P (Pass)	4
00 - 39	F (Fail)	0
	AB (Absent)	0



A student obtaining Grade F shall be considered failed and will be required to reappear in the examination.

- (B) Division at the PGDCCASemester - II Examination shall be declared based on the aggregate marks at the PGDCCASemester – I and Semester – II Examination taken together and the CGPA will be calculated and notified.
- (C) Successful examinees at the PGDCCA Semester - II Examination shall be awarded division based on CGPA as follows:

<b>CGPA Range</b>	<b>Final Grade</b>	<b>Equivalent Class/ Division</b>
9.01 to 10.00	O	First Division (Outstanding)
8.01 to 9.00	A+ (Distinction)	First Division(Distinction)
7.01 to 8.00	A(Very Good)	First Division (Very Good)
6.01 to 7.00	B+(Good)	First Division (Good)
5.55 to 6.00	B(Above Average)	Second Division (Above Average)
5.00 to 5.54	C(Average)	Second Division (Average)
4.00 to 4.99	P (Pass)	Pass
0	F (Fail)	Fail
0	AB(Absent)	Absent

12. Successful examinees in the PGDCCASemester Examination shall be awarded Distinction in each subject in which examinees obtain 75% or more marks in that subject at the respective Examination.
13. Unsuccessful examinees at the above examinations can be readmitted to the same examination on payment of a fresh fee and such other fees as may be prescribed by university.
14. Provisions of ordinance No 3 of 2007, relating to the award of grace marks for passing an examination, securing higher division / class and for securing distinction in subject(s) shall be applicable.
15. Notwithstanding anything to the contrary in this Direction, no person shall be admitted to an examination under this Ordinance, if he/ she has already passed the same examination or an equivalent examination of any other University.
16. Examinees successful at PGDCCASemester – I and Semester - II Examination shall on payment of the prescribed fees receive a Degree in the prescribed form signed by the Vice-Chancellor.

17. This Scheme shall come into force from the academic session 2016-17.
18. The Provisions of Ordinance No. 21 of 1994 governing the existing course for Post Graduate Diploma in Computer Commercial Applications (PGDCCA) stands repealed physically on implementation of this Direction.

# APPENDIX –A

## QUESTION PAPER PATTERN

### First / Second / Third / Fourth Semester Post Graduate Diploma in Computer Commercial Applications (PGDCCA) Examination Choice Based Credit System (CBCS)

Subject Name  
Paper - I

Time: 3 Hours

Total Marks: 80

- N. B. - a) Draw well labeled diagram wherever necessary.  
b) All questions are compulsory.

#### Part - A

- N. B. – 1. Each question carries two marks.  
2. Answers should not more than five lines.

- |              |            |            |
|--------------|------------|------------|
| 1. }<br>2. } | Unit - I   | 8 x 2 = 16 |
| 3. }<br>4. } | Unit - II  |            |
| 5. }<br>6. } | Unit - III |            |
| 7. }<br>8. } | Unit - IV  |            |

#### Part - B

- N. B. – 1. Each question carries three marks.  
2. Answers should not more than ten lines.

- |              |            |            |
|--------------|------------|------------|
| 1. }<br>2. } | Unit - I   | 8 x 3 = 24 |
| 3. }<br>4. } | Unit - II  |            |
| 5. }<br>6. } | Unit - III |            |
| 7. }<br>8. } | Unit - IV  |            |

**Part - C**

N. B. – 1. Each question carries five marks.

2. Answers should not more than 400 words for 5 marks questions and 600 words for 10 Marks questions respectively.

1. **Either**

(A)	}	Unit - I	<b>OR</b>	5
(B)				5
(C)				10

2. **Either**

(A)	}	Unit - II	<b>OR</b>	5
(B)				5
(C)				10

3. **Either**

(A)	}	Unit - III	<b>OR</b>	5
(B)				5
(C)				10

4. **Either**

(A)	}	Unit - IV	<b>OR</b>	5
(B)				5
(C)				10

## **APPENDIX –B**

### **(A) Project and Classification of Marks on Project**

Towards the end of the second year of study, a student will be examined in the course “Project Work”.

- a. Project Work may be done individually or in groups (Maximum 3 students) in case of bigger projects. However if project is done in groups, each student must be given a responsibility for a distinct module and care should be taken to monitor the progress of individual student.
- b. The Project Work should be done using the tools covered in Post Graduate Diploma in Computer Commercial Applications (PGDCCA).
- c. The Project Work should be of such a nature that it could prove useful or be relevant from the commercial / management angle.
- d. The project work will carry 100 marks.
- e. Project Work can be carried out in the Institute or outside with prior permission of the Institute.
- f. The external viva-voce examination for Project Work would be held as per the Examination Time Table of the second year of study, by a panel of one external and one Internal Examiner.

## **Types of Project**

As majority of the students are expected to work out a project in some industry/research and development laboratories/educational institutions/software export companies, it is suggested that the project is to be chosen which should have some direct relevance in day-today activities of the candidates in his/her institution. The Applications Areas of project - Financial/Marketing/Database Management System/ Relational Database Management System/E-Commerce /Internet/ Manufacturing/ web Designing / Scientific / ERP etc.

## **Project Proposal (Synopsis)**

The project proposal should be prepared in consultation with the guide. The project guide must be a person having minimum Qualification MCM/ M.Sc. (Computer Science + Information Technology)/ M.Sc. (Mathematics /Electronics/Statistics/Physics + Post B.Sc. Diploma in Computer Science& Application)/MCA. The project proposal should clearly state the objectives and environment of the proposed project to be undertaken. It should have full details in the following form:

### ***Format of Synopsis for Desktop Application***

1. Title of the Project.
2. Objectives of the Project.
3. Project Category (DBMS/RDBMS/OOPSetc.).
4. Tools/Platform and Languages to be used.
5. Complete Structure of the System:
  - i. Numbers of Modules and its Description.
  - ii. Modular Chart / System Chart.
  - iii. Data Structures or Tables.
  - iv. Process Logic of each Module.
  - v. Types of Report Generation.
6. References.

**Note:** Synopsis should not be more than 3-4 pages.

### ***Format of Synopsis for Web Application***

1. Title of the Project.
2. Objectives of the Project.
3. Project Category (DBMS/RDBMS/OOPSetc.).

4. Tools/Platform and Languages to be used.
5. Complete Structure of the System:
  - i. Number of pages and links their short description.
  - ii. Use / Information of Pages.
  - iii. Feedback Form (if any).
6. References.

**Note:** Synopsis should not be more than 3-4 pages.

### **Project Report Formulation**

Front Page.

College Certificate Page.

Declaration Page.

Acknowledgment Page.

Project Profile.

Index or Content Page.

- i. \*Contents \_\_\_\_\_.

Appendices

- i. List Figures, Tables & Charts.
- ii. Approved copy of Synopsis.

Glossary

#### **\* Contents.**

- i. Introduction.
- ii. Objectives.
- iii. Preliminary System Analysis.
  - Preliminary Investigation.
  - Present System in Use.
  - Flaws in Present System.
  - Need of New System.
  - Feasibility Study.
  - Project Category.
- iv. Software Engineering Paradigm Applied
  - Modules
  - System / Modular Chart.
- v. Software & Hardware Requirement Specification.
- vi. Detailed System Analysis.

- Data Flow Diagram.
  - Numbers of Modules and Process Logic.
  - Data Structures and Tables.
  - Entity-Relationship Diagram.
- vii. System Design.
- Form Design.
  - Source Code.
  - Input screen & Output Screen.
- viii. Testing & Validation Checks.
- ix. System Security Measures.
- x. Implementation, Evaluation and Maintenance.
- xi. Future Scope of the project.
- xii. Suggestion & Conclusion
- xiii. Bibliography & References.

**Note :-**

- i. A Student is expected to complete the Assignments based on Syllabus of Practical subjects and submit the same in the form of a files (assignment Record) at the end of Academic Session for the evaluation purpose.
- ii. A student should submit internal assessment of each theory paper prescribed by the subject teacher.
- iii. A Student is expected to deliver a seminar on any course curricular subject / latest trends in IT relevant subject per semester for internal assessment.

**# Classification Of Marks on Project :-**

Report & Documentation	40
Viva voce (External)	40
Viva voce (Internal)	20
<b>Total Marks</b>	
	<b>100</b>

The marks of Project shall be notified as a whole out of 100 in Foil/C-Foil.

**(B) Practical and Classification of Marks on Practical**

1. Practical exam shall be of 4 hours duration.
2. 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.



3. 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.
4. After Viva-Voce and evaluation of practical records of a student by the Internal & External Examiner, both examiners should sign on the certificate of practical records.
5. The certificate template shall be as follows:

**Name of the college / Institution**

**Name of the Department:**

## CERTIFICATE

This is to certify that Mr./Mrs./Ms. \_\_\_\_\_  
of class PGDCCA Part \_\_\_\_\_ Semester \_\_\_\_\_ has satisfactorily completed the practical experiments prescribed by Rastrashant Tukdoji Maharaj Nagpur University for the subject \_\_\_\_\_ during the academic year \_\_\_\_\_.

Signature  
**Practical In-charge Head of the Department**

Signature

Signature  
**Internal Examiner**

Signature  
**External Examiner**

Date: \_\_\_\_\_

# **Classification Of Practical Marks :-**

	<b>Practical – I</b>	<b>Marks</b>
1.	Writing a Program or Problem (Algorithm & Flowchart)	40
2.	Execute on a computer	
3.	Taking Hard Copy	
<b>Practical – II</b>		
1.	Writing a Program or Problem (Algorithm & Program)	20
	<b>Viva Voce</b>	20
	<b>Practical Record</b>	20
<b>Total Marks</b>		
		<b>100</b>

The marks of Practical shall be notified as a whole out of 100 in Foil/C-Foil.