



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR

**NOTIFICATION**

No. Acad/168.

Date :12<sup>th</sup> June, 2014

To,

The Principal  
of all the affiliated Commerce Colleges  
of Rashtrasant Tukadoji Maharaj  
Nagpur University, Nagpur

**Subject:- Direction No. 12 of 2014.**

**Sir/Madam,**

I am forwarding herewith a copy of the Direction No. 12 of 2014 issued by the Hon'ble Vice-Chancellor under Section 14(8) of Maharashtra Universities Act, 1994 "**Direction Governing The Examinations Leading To The Degree Of Bachelor Of Commerce (Computer Application)(BCCA) In The Faculty Of Commerce**" along with the scheme to be implemented from Academic Session 2014-2015.

You are requested to kindly bring it to the notice of all teachers and students of your college.

Thanking you,

Encl: As above.

Yours faithfully,

Sd/-

**(Dr. A.V. Gomashe)**

Registrar,

Rashtrasant Tukadoji Maharaj

Nagpur University, Nagpur.

No. Acad/168.

Nagpur dated the 12<sup>th</sup> June, 2014

**Copy for information and necessary action along with the Direction and Scheme as mentioned above to :-**

- 1) The Dean, Faculty of Commerce, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur
- 2) The Chairman, All Board of Studies in Commerce Faculty, R.T.M. Nagpur University.
- 3) The Controller of Examinations, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

- 4) The Director, B.C.U.D., Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur
- 5) The Deputy Registrar (Exam.) Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.
- 6) The Deputy Registrar (Coll. Sec.) Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur
- 7) The Asstt. Registrar (Prof. Exam.), Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur
- 8) The Asstt. Registrar (Conf.), Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.
- 9) The Asstt. Registrar (Exams & Enquiry.), R.T.M. Nagpur University, Nagpur
- 10) The Asstt. Registrar University's Sub-Centre at Gadchiroli, R.T.M. Nagpur University, Nagpur.
- 11) The Officer-in-Charge, Publication Section, R.T.M. Nagpur University, Nagpur.
- 12) The Asstt. Registrar, Ordinance Section, R.T.M. Nagpur University, Nagpur
- 13) The P. A. to the Hon'ble Vice-Chancellor, R.T.M. Nagpur University, Nagpur
- 14) The P. A. to the Hon'ble Pro-Vice-Chancellor, R.T.M. Nagpur University, Nagpur
- 15) The P. A. to the Registrar, R.T.M. Nagpur University, Nagpur
- 16) Mrs. Veena Prakash, Information Scientist, R.T.M. Nagpur University, Nagpur

Sd/-

**(Puran Meshram)**

Deputy Registrar(Acad.)

Rashtrasant Tukadoji Maharaj

Nagpur University, Nagpur.



## **RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY**

“(Established by Government of Central Provinces Education Department by Notification No. 513 dated the 1st of August, 1923 & presently a State University governed by Maharashtra Universities Act, 1994.)”

**Directions, Subject Scheme and Syllabus**

**For**

### **Bachelor of Commerce (Computer Application) (BCCA) Examinations**

**FACULTY OF  
COMMERCE**

**B.Com. (Computer Application) (BCCA) Examinations**

**2014-15 and Onwards**

**(Three Years Degree Course)**



**RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**

**Direction No. 12 of 2014**

**DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE  
OF Bachelor of Commerce (Computer Application)**

**{B.Com. (Computer Application)}(BCCA)Examination**

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

**AND**

**WHEREAS** the amendment to the said Act came to be effected from 12th May, 2000.

**AND**

**WHEREAS** the Faculty of Commerce at its meeting held on 01-05-2013 have decided to restructure the syllabus for the award of the degree of **Bachelor of Commerce (B.Com(Computer Application))(BCCA)** Examination 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** all the Board of Studies in Faculty of Commerce in its meeting held on 20-07-2013 restructured the existing syllabi and recommended the new scheme of examination.

**AND**

**WHEREAS** the recommendations made by the all four Board of studies under Faculty of Commerce were approved by the Academic Council, in its meeting held on \_\_\_\_\_.

**AND**

**WHEREAS** it is expedient to provide and Amend Ordinance for the purpose of prescribing examinations leading to the degree of **B.Com(Computer Application))(BCCA)** in the Faculty of Commerce.

Now, therefore, I, Anoop Kumar, Vice-Chancellor, Rastrasant Tukdoji 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.

### **Scheme of Examination**

1. This Ordinance may be called '**Examination leading to the degree of B.Com(Computer Application))(BCCA) in the Faculty of Commerce (Amendment) Ordinance,**-----  
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2. This Ordinance shall come into force with effect from the date of its approval by the Management Council.
3. There shall be three examinations leading to the degree of **B.Com(Computer Application))(BCCA)** namely :
  - (1) The **B.Com(Computer Application)(BCCA) Part - I** Examination,
  - (2) The **B.Com(Computer Application)(BCCA) Part - II** Examination and
  - (3) The **B.Com(Computer Application)(BCCA) Final** Examination.
4. The duration of the Degree Course under this shall be of three academic years with the **BCCAPart - I** Examination at the end of the first academic year, the **BCCAPart - II** Examination at the end of the second year and the **BCCAFinal** Examination at the end of the third year.
5. The Examinations Specified in paragraph 3 above shall be held twice a year at such places and on such dates as may be fixed by the University.
6. The details of eligibility for **B.Com(Computer Application)(BCCA)** examinations:

(A) For the **BCCAPart - I**, Examinee shall have Passed the 12<sup>th</sup> Standard Examination of the Maharashtra State Board of Secondary and Higher Secondary Education, with English at Higher or Lower level and any Modern Indian Language at higher or lower level with any combination of optional subjects;

**OR**

XII Standard Examination of Maharashtra State Board of Secondary and Higher Secondary Education in Vocational Stream with one language only; OR any other examination recognized as equivalent thereto; in such subjects and with such standards of attainments as may be prescribed Minimum Competition vocation course (MCVC).

**OR**

**Any other Equivalent Examination of any State in (10+2) pattern with any combination of subjects**

(B) For the **BCCAPart - II** Examination the student shall have appeared in **BCCAPart - I** Examination of this University & should be eligible as per ATKT rules.

(C) For the **BCCAFinal** Examination the student shall have Passed **BCCAPart - I** & shall have appeared in **BCCAPart - II** Examination of this University & should be eligible as per ATKT rules.

7. A collegiate candidate shall have pursued a regular course of study for not less than one academic year before being examined for **BCCAPart - I** or the **BCCAPart - II** or the **BCCAFinal** Examination in any recognized institution and or college affiliated to RashtrasantTukdojiMaharaj Nagpur University where the course is conducted.

8. 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.

9. The fees for the examination shall be as prescribed by the University 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.

10. (A)

**Teaching and Examination Scheme**  
**B.Com. (Computer Application)(BCCA)**  
**Three Year Degree Course**

**B.Com. (Computer Application)(BCCA) Part-I w.e.f. 2014-15**

| Sr.No        | Subjects                          | Teaching Scheme  |                     |                 | Examination Scheme          |                         |       |                   |                          |                   |    |     | Total Marks (TH. + PR + IM) |
|--------------|-----------------------------------|------------------|---------------------|-----------------|-----------------------------|-------------------------|-------|-------------------|--------------------------|-------------------|----|-----|-----------------------------|
|              |                                   | Theory (Periods) | Practical (Periods) | Total (Periods) | Theory                      |                         |       |                   | Practical                |                   |    |     |                             |
|              |                                   |                  |                     |                 | Max Marks Theory Paper (TH) | Max Internal Marks (IM) | Total | Min Passing Marks | Max Marks Practical (PR) | Min Passing Marks |    |     |                             |
| 1            | English & Business Communication  | 4                | -                   | 4               | 80                          | 20                      | 100   | 40                |                          | -                 | -  | 100 |                             |
| 2            | Principles of Business Management | 4                | -                   | 4               | 80                          | 20                      | 100   | 40                |                          | -                 | -  | 100 |                             |
| 3            | Financial Accounting              | 4                | -                   | 4               | 80                          | 20                      | 100   | 40                |                          | -                 | -  | 100 |                             |
| 4            | Information Systems               | 4                | -                   | 4               | 80                          | 20                      | 100   | 40                |                          | -                 | -  | 100 |                             |
| 5            | Information Technology            | 4                | -                   | 4               | 80                          | 20                      | 100   | 40                |                          | -                 | -  | 100 |                             |
| 6            | Introduction to Operating Systems | 4                | -                   | 4               | 80                          | 20                      | 100   | 40                |                          | -                 | -  | 100 |                             |
| 7            | Practical-I : Microsoft Office    | -                | 6                   | 6               |                             |                         |       |                   |                          | 100               | 40 | 100 |                             |
| 8            | Practical-II : Operating System   | -                | 6                   | 6               |                             |                         |       |                   |                          | 100               | 40 | 100 |                             |
| <b>Total</b> |                                   | 24               | 12                  | 36              |                             |                         |       |                   |                          |                   |    | 800 |                             |

- Note :
1. Theory/Practical period of 48 minutes per week.
  2. TH = Theory, PR = Practical, IM = Internal Marks.
  3. Minimum marks for passing will 40% of the total marks allotted to the theory paper/Practical.
  4. The candidate has to pass theory papers and practicals separately.
  5. Practical Examination is to be conducted as follows:
 

|                                |               |
|--------------------------------|---------------|
| a) Practical Record            | 20 marks      |
| b) Writing two programs/theory | 20 marks each |
| c) Program Execution           | 20 marks      |
| d) External viva-voce          | 20 marks      |
|                                | -----         |

Total 100 marks

(B)

**B.Com. (Computer Application) Part-IIw.e.f. 2015-16**

| Sr.No.       | Subjects                              | Teaching Scheme  |                     |                 | Examination Scheme             |                |       |                   |                             |                   |     |  | Total Marks<br>(TH. +<br>PR +<br>IM) |
|--------------|---------------------------------------|------------------|---------------------|-----------------|--------------------------------|----------------|-------|-------------------|-----------------------------|-------------------|-----|--|--------------------------------------|
|              |                                       | Theory (Periods) | Practical (Periods) | Total (Periods) | Theory                         |                |       |                   | Practical                   |                   |     |  |                                      |
|              |                                       |                  |                     |                 | Max Marks<br>Theory Paper (TH) | Max Marks (IM) | Total | Min Passing Marks | Max Marks<br>Practical (PR) | Min Passing Marks |     |  |                                      |
| 1            | Statistics & Quantitative Techniques. | 4                | -                   | 4               | 80                             | 20             | 100   | 40                | -                           | -                 | 100 |  |                                      |
| 2            | Business Economics                    | 4                | -                   | 4               | 80                             | 20             | 100   | 40                | -                           | -                 | 100 |  |                                      |
| 3            | Cost & Management Accounting          | 4                | -                   | 4               | 80                             | 20             | 100   | 40                | -                           | -                 | 100 |  |                                      |
| 4            | Programming Skills (C Prog.)          | 4                | -                   | 4               | 80                             | 20             | 100   | 40                | -                           | -                 | 100 |  |                                      |
| 5            | E-Commerce & Web Designing            | 4                | -                   | 4               | 80                             | 20             | 100   | 40                | -                           | -                 | 100 |  |                                      |
| 6            | MIS & System Analysis                 | 4                | -                   | 4               | 80                             | 20             | 100   | 40                | -                           | -                 | 100 |  |                                      |
| 7            | Practical-I : Programming Skills      | -                | 6                   | 6               |                                |                |       |                   | 100                         | 40                | 100 |  |                                      |
| 8            | Practical-II : HTML                   | -                | 6                   | 6               |                                |                |       |                   | 100                         | 40                | 100 |  |                                      |
| <b>Total</b> |                                       | 24               | 12                  | 36              |                                |                |       |                   |                             |                   | 800 |  |                                      |

- Note :
1. Theory/Practical period of 48 minutes per week.
  2. TH = Theory, PR = Practical, IM = Internal Marks.
  3. Minimum marks for passing will 40% of the total marks allotted to the theory paper/Practical.
  4. The candidate has to pass theory papers and practicals separately.
  5. Practical Examination is to be conducted as follows:
    - a) Practical Record 20 marks
    - b) Writing two programs/theory 20 marks each
    - c) Program Execution 20 marks
    - d) External viva-voce 20 marks

Total 100 marks



C.

**B.Com. (Computer Application) Part-III w.e.f. 2016-17**

| Sr.No. | Subjects  | Teaching Scheme  |                     |                 | Examination Scheme            |                |       |                   |                             |                   | Total Marks<br>(TH.+<br>PR+IM) |
|--------|---|------------------|---------------------|-----------------|-------------------------------|----------------|-------|-------------------|-----------------------------|-------------------|--------------------------------|
|        |   | Theory (Periods) | Practical (Periods) | Total (Periods) | Theory                        |                |       | Practical         |                             |                   |                                |
|        |   |                  |                     |                 | MaxMarks<br>Theory Paper (TH) | Max Marks (IM) | Total | Min Passing Marks | Max Marks Practical<br>(PR) | Min Passing Marks |                                |
| 1      | <b>Business Law</b>                             | 4                | -                   | 4               | 80                            | 20             | 100   | 40                | -                           | -                 | 100                            |
| 2      | <b>Computerized Accounting (TALLY)</b>          | 4                | -                   | 4               | 80                            | 20             | 100   | 40                | -                           | -                 | 100                            |
| 3      | <b>Software Product and Project Management.</b> | 4                | -                   | 4               | 80                            | 20             | 100   | 40                | -                           | -                 | 100                            |
| 4      | <b>Front End Development</b>                    | 4                | -                   | 4               | 80                            | 20             | 100   | 40                | -                           | -                 | 100                            |
| 5      | <b>DBMS and Oracle</b>                          | 4                | -                   | 4               | 80                            | 20             | 100   | 40                | -                           | -                 | 100                            |
| 6      | <b>Practical-I : Tally</b>                      | -                | 6                   | 6               |                               |                |       |                   | 100                         | 40                | 100                            |
| 7      | <b>Practical-II : VB &amp; Oracle</b>           | -                | 6                   | 6               |                               |                |       |                   | 100                         | 40                | 100                            |
| 8      | <b>PROJECT</b>                                  | -                | 6                   | 6               |                               |                |       |                   | 100                         | 40                | 100                            |
|        | <b>Total</b>                                    | 20               | 18                  | 38              |                               |                |       |                   |                             |                   | 800                            |

- Note:
1. Theory/Practical period of 48 minutes per week.
  2. TH = Theory, PR = Practical, IM = Internal Marks.
  3. Minimum marks for passing will 40% of the total marks allotted to the theory paper/Practical.
  4. The candidate has to pass theory papers and practicals separately.
  5. Practical Examination is to be conducted as follows:
 

|                                |               |
|--------------------------------|---------------|
| a) Practical Record            | 20 marks      |
| b) Writing two programs/theory | 20 marks each |
| c) Program Execution           | 20 marks      |
| d) External viva-voce          | 20 marks      |

-----  
Total 100 marks

6. Project Examination is to be conducted jointly by External Examiner & Internal Examiner / (Guide) appointed by university & shall jointly award the marks.

**11. (A)** The scope of the subjects and pattern of examination shall be as indicated in Syllabus.

**(B)** The Medium of instructions and examinations shall be in ENGLISH only.

**(C)** The Maximum/minimum marks which each subject carries & workload in BCCA Part - I, Part- II and Final Examination shall be as indicated in Examination & Teaching Scheme (item no 10) "A", "B", and "C" respectively.

12. The percentage of passing marks in Theory & Practical shall be as indicated in Examination Scheme (item no 10) "A", "B", and "C" respectively.

**In order to pass at the BCCA Part - I, II and Final Examinations an examinee shall obtain not less than 40% marks in each theory subject paper/practical, that is to say jointly in the written subject theory Examination and in internal assessment /sessional wherever applicable.**

(i) An examinee who is unsuccessful at 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.

(ii) An examinee who has failed at the Internal /sessional examination only shall be required to register himself afresh for doing the Internal practical work again in the Department / College in the subject/subjects in which he has failed on payment of fresh annual Internal/sessional fee of Rs. 100/- per paper. Such registration shall be done on or before the beginning of the respective Academic Session. The Director / Principal shall on being satisfied about the completion of the Internal/sessional work of such a candidate send the fresh Internal sessional marks to the University and these fresh Internal /sessional marks shall be taken into consideration for computing his / her result at the examination.

13.(a) There shall be no classification of examinees successful at the BCCA Part - I & II Examinations. Division at the BCCAFinal Examination shall be declared on the basis of the aggregate marks at the BCCAPart - I Examination , the BCCAPart -II Examination and the BCCAFinal Examination taken together.

(b) Successful examinees at the BCCAPart -I, BCCAPart -II and the BCCA Final Examinations taken together and obtaining 75% or more in the aggregate shall be placed in the distinction, 60 % or more in the aggregate shall be placed in the first division, those obtaining less than 60 % but not less than 45 % in the Second Division & those obtaining less than 45% in third division.

c) Successful examinees in the BCCAPart -I, BCCAPart -II and BCCA Final Examination shall be awarded Distinction in each subject in which examinees obtain 75 % or more marks in that subject at the respective Examination.

14. 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.

15. 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.

16. 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.

17. Examinees passing all the **B.Com(Computer Application)(BCCA)** Examination shall on payment of the prescribed fees receive a Degree in the prescribed form signed by the Vice-Chancellor.

18. The aforesaid Amendment shall come into force from the date of its issuance and shall remain in force till the relevant Ordinance come into being in accordance with the provisions of the Maharashtra University Act, 1994.

19. The marks for internal assessment should be communicated to university within time limit as per University norms.

The record of conduct of such examination, evaluation and marks for internal assessments should be maintained for a period of at least **one** year by the respective college / Department for the verification by the competent authority.

The A.T.K.T. rules shall be as under : (Theory and Internal assessment of that theory subject shall be jointly considered as single passing head).

| Admission to academic year | Candidate should have passed in following examination | Candidate should have passed in Minimum <b>FOUR</b> passing heads of the following examination |
|----------------------------|---|--|
| I Year                     | H.S.S.C/equivalent                                    | -----  |
| II Year                    | -----   | <b>BCCA</b> Ist year   |
| Final Year*                | <b>BCCA</b> Ist year                                  | <b>BCCA</b> IInd year  |

**Note: (\*)** A candidate admitted to Final Year can appear for Final year examination however the result of the Final year examination will be withheld unless the candidate clears all the lower examinations of the **BCCA** course.

20. This direction shall come into force phase wise from the academic session 2014-15.

Nagpur:

Dated : 4.6.2014

Sd/-

( Anoop Kumar )

Vice-Chancellor

## Syllabus

# B.Com. (Computer Application) Part-I

## Paper – 1: English and Business Communication

**Unit I:** Comprehension, Enriching Vocabulary, Single Word For a Group of Words, Words Frequently Misspell.

**Unit II:** Business Letter Writing, Getting to the point, Choice of Words, Punctuation, E-mail etiquette. Enquiries and replies - Placing and fulfilling orders - Complaints and follow-up - Sales letters - Circular letters - Application for employment and resume.

**Unit III:** Nature, Scope, and Functions of Communication: Definition, Objectives, Purpose of Communication, Communication Process, Sender's Thoughts, Encoding, Decoding, Feedback Loop, Noise Channels of Communication, Informal Channels Of Communication, Barriers to Effective communication.

**Unit IV:** Textbook entitled 'Prism: Spoken and Written Communication, Prose & Poetry' published by Orient Longman

- 1) The Bet – Anton Chekov
- 2) Socrates and the Schoolmaster – F. L. Brayne
- 3) An Astrologer's Day – R. K. Narayan
- 4) The Gift of the Magi – O' Henry
- 5) With the Photographer – Stephen Leacock

### Reference Books:

1. Oxford Practice Grammar – John Eastwood (Oxford)
2. Business Communication – Sona Prasad, Saijyoti Publication  
A Guide to Business Correspondence – Kapoor A. (S. Chand & Co.)
3. Basic Business Communications – Rober M. Archer
4. English Grammar – Wren in & Martin
5. Effective Business Communication – Herta Murphy Chorles Perk (Tata McGraw Hill)
6. Business Communication: Urmila Rai, S.M. Rai- (Himalaya Publishing House)
7. Business Correspondence & Communication Skill- Kapur (S. Chand Co.)

## Paper-2: Principles of Business Management

**Unit I: Introduction** - Nature, function, definition and importance of management, Definition, nature, purpose and scope of management, Functions of a manager, an overview of planning, organizing and controlling, is management a science or art?

**Unit II: Development of Management Thought** - Scientific management; Contribution of Taylor, Fayol, Mary Follet, Elton Mayo; Hawthorne experiments, Contingency approach, Indian heritage in production and consumption.

**Unit III: Management and Administration** - Management and administration, Management as a profession, Professionalism of management in India, Management ethics and management culture, Skills required of manager, Classification of skills, Methods of skills development.

**Management Planning** - Concept of planning, objectives, Nature, Types of plan, Stages involved in planning, Characteristics of a good plan, Importance, Limitations of planning, Making planning effective, Strategic planning in Indian Industry.

**Unit IV: Decision Making** - Concept, characteristics of decisions, Types of decisions, Steps Involved in decision making, Importance of decision making, Methods of decision making, Committee Decision Making.**Organisation** - Concepts, Principle of organization, Importance, Features of good organization structure, Types of Organisation structure.

### Reference Books:

1. Essential of Business Administration - K.Aswathapa Himalaya Publishing House
2. Management: Concept and Strategies By J. S. Chandan, Vikas Publishing
3. Principles of Management, By Tripathi, Reddy Tata McGraw Hill
4. Principles of Management By Ramasamy T, Himalaya Publishing House
5. Principles of Business management By Sherlekar, Himalaya Publishing House

## Paper-3: Financial Accounting

**Unit -I: Introduction** - Meaning, Scope and importance of Financial Accounting. Financial Accounting - concepts and conventions, classification of accounts, Rules and principles governing Double Entry Book-keeping system. Accounting Books & Record - Meaning, Preparation of Journal, Ledger & Trial balance. Accounting Standards - introduction, Need & Objectives, AS 1 to AS 10, Accounting Policies and their Disclosure.

**Unit II: Final Account of Joint Stock Companies** - Final Accounts of Joint Stock Companies - contents, and preparation of Trading and Profit and Loss Account, Profit and Loss Appropriation Account and Balance sheet with adjustment, Closing Entries (Simple entries).

**Unit III: Accounting for Non-profit making institutions:** Introduction for non-profit making institutions, receipt and payment account, income and expenditure account, preparation of final accounts of non-profit making institutions.

**Unit IV: Issue of Shares:** Entries for issue of shares, Issue of shares at discount and premium, forfeiture and re-issue of forfeited shares.

### Reference Books:

- 1) S. N. Maheshwar :- Financial Accounting - Vikas Publishing House, New Delhi
- 2) Gupta R. L. - Advanced Financial Accounting - S. Chand & Sons
- 3) Kumar, Anil S. - Advanced Financial Accounting - Himalaya Publication House
- 4) Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi)
- 5) Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana)
- 6) Sr. K. Paul : Accountancy, Volume -I and II (New Central Book Agency, Kolkata)
- 7) R. K. Lele and Jawaharlal : Accounting Theory (Himalaya Publishers)
- 8) M. A. Arulnandam :- Advance Accounting - Himalay Publication

## Paper 4: Information Systems

**Unit-I: Introduction to IT and Computers**, Block diagram of computer, functioning of computer, generations of computer, classification of computers, characteristics, advantages & limitations of computer. Computer organization: Central processing Unit - speed of processor, computer memory: primary & secondary, types of primary memory, registers. Storage devices: floppy disk, Hard disk, magnetic tapes, optical disk (CD/ DVD), solid state storage (Flash memory cards, pen drive, etc.). Input devices: keyboard, mouse, joystick, light pen, scanners, OCR, MICR, Touch Screen, Bar code reader. Output devices: monitor, printers, classification of printers, impact & non-impact printers, dot matrix, ink jet, laser, thermal printers, plotters.

**Unit-II :Hardware & software**, Software and programming languages. Introduction, types of software, characteristics of good program, development of programming languages-machine language, assembly language, high level language.  
Data representation: Binary, decimal, Octal, hexadecimal number systems, features & conversions, BCD, EBCDIC & ASCII codes.

**UNIT - III: File Concept**, Types of Files, Organization of Files, Data Processing. Factors affecting File Organisation, Data capture techniques.

Computer communication, wireless communication, need for networks, forms of data communication - analog, digital; data transmission modes, data transmission media (Twisted pair, co-axial, Fibre Optic, Microwave, Satellite communication), Bandwidth- Narrow, voice, board band, Protocols, modems, Multiplexing, Types of network-, LAN, WAN, MAN, concept of Network topology, types of topologies, advantages & limitations .Type of networking: Telephone network, ISDN, LAN, MAN, WAN AND VAN; networking topology; OSI Model.

**UNIT - IV: Concept of E-Commerce and Internet**, Brief history and development of internet, WWW, Internet architecture - servers, browsers, URL; service providers - shell account, TCP/IP internet services and application - E Mail, education, financial service, e-Commerce, banking, shopping, advertising, e-governance.

Application of Computer: Business and Industry, CAD/CAM graphics, Office automation, scientific application, process control, computer, computer audit, simulation.

Virus, Types of Viruses, Anti-Virus, Firewall and Anti-Spy ware Utilities

### BOOKS RECOMMENDED:

1. I.T. TODAY (ENCYCLOPEDIA) BY S. JAISWAL (TEST BOOK)
2. COMPUTER TODAY BY DONALD SENDERS
3. Computer Applications in Management - UshaDahiya,SapnaNagpal(Taxmann's)
4. Information Technology - Dr. SushilaMadan (Taxmann's)
5. UNDERSTANDING COMPUTER BY DINESHKUMAR
6. COMPUTER FUNDAMENTALS BY P. K. SINHA
7. OFFICE AUTOMATION BY K.K. BAJAJ (MACMILAN)
8. BUSINESS ON THE NET AN INTRODUCTION TO THE WHATS AND HOWS OF E-COMMERCE BY K. N. AGARWALA & OTHERS (MACMILAN)
9. Fundamentals of Computers - IITL Education Solutions Ltd. (Pearson)



## Paper 5 - Information Technology

**Unit -I : Word Processing:** Introduction, Starting word, Creating document, Structure of Ms-word window and its application, Mouse & keyboard operations, designing a document; formatting-selection, cut, copy, paste, Toolbars, operating on text; Printing, Saving, Opening, Closing of document; creating a template; Tables, borders, textbox operations; Spelling and Grammar check, Mail merge, Envelope and Label, Protection of document, Change the view of document.

**Unit-II : Spreadsheet Package:** Introduction To Ms-Excel, Navigating, Excel Toolbars and Operations, Formatting Features- Copying Data Between Worksheets; Entering and Editing Cell Entries, Creation of Charts, Editing and Formatting Charts, Goal Seek, Auditing, Linking, Workbook, Database in Excel (Auto Filter, Advanced Filter, Sort, Form), Mathematical, Statistical and Financial Functions in Ms-Excel.

**Unit-III : PowerPoint Presentation:** Working with PowerPoint Window, Standard Toolbar, Formatting Toolbar, Drawing Toolbar, Moving the Frame, Inserting Clip Art, Picture, Slide; Text Styling, Send to Back, Entering Data to Graph, Organisation Chart, Table, Design Template, Master Slide, Animation Setting, Saving and Presentation, Auto Content Wizard, Package for CD (Pack & Go Feature).

**Unit-IV : MS-Access :** Introduction to database management system, DBMS vs RDBMS, Database Administrator (DBA) and its role.

Introduction to Microsoft Access, creating a database in access, using database wizards and blank database, creating table, database view and design view, creating queries, forms, reports and macros in ms-access.

### BOOKS RECOMMENDED:

1. Microsoft Office -2000 - Gini Courter , Annelte Marquis BPB
2. It Today (Encyclopedia- S.Jaiswal
3. A First Course In Computers- Sanjay Saxena
4. First Text Book On Information Technology - SrikantPatnaik
5. Guide To Microsoft Access - Carl Townsend
6. An Introduction to Database Management System - Bipin C. Desai (Galgotia Pub.)
7. Database Management Design- CSV Murthy ( Himalaya)

## Paper-6: Introduction to Operating System

**UNIT - I:Introduction to Operating System**, definition, need, functions, types of operating system, simple batch system, multiprogramming , time sharing system, parallel system, distributed systems, real-time system, multiprocessing, on-line and off line processing, multitasking, virtual memory management.

### **UNIT - II:Introduction to Disk Operating System (DOS)**

1. File types, Directory Structure
2. Booting - Warm and Cold Booting
3. Types of DOS commands (Internal and External)
4. Introduction of Autoexe and Config files.
5. Directory commands: DIR, MD, RD, TREE, PATH, SUBST ETC.
6. Wild card Definitions
7. Commands related to file management: COPY, DEL, ERASE, REN, ATTRIB, XCOPY, BACKUP and RESTORE .
8. General commands: TYPE DATE, TIME, PROMPT etc.
9. batch commands, wild card characters & its use.

### **Unit - III: Introduction to Unix overview**

1. File systems and structure of directories and file
2. File Oriented Commands - Cat, op, In mv, rm etc.
3. File Permissions
4. Directory Oriented commands - ls, mkdir, rmdir, cd, pwd etc.
5. Inter user connection commands - write, mail, used, at, wall etc.
6. Common commands - skill, date, wo, sleep, who ps.
7. Unix Utility Commands - grep, pr, cut, paste, sort, lp shutdown, halt, sys, tar, find etc.
8. Introduction of Linux.

**UNIT - IV:Introduction to windows Operating System**, advantages of windows operating system, using different windows applications simultaneously, operating with windows, GUI, use of help features, starting an application, essential accessories, creating shortcuts, windows explorer, control panel, my computer, my documents, recycle bin, finding folders and files, changing system settings, system tools, use of run command, setting peripherals, drivers, editing graphics in windows, new features in windows XP/Vista versions.

Introduction to Mobile Operating System

### **BOOK RECOMMENDED:**

1. MODERN OPERATING SYSTEMS 2<sup>nd</sup> EDITION BY TANENBAUM (PHI)
2. THE UNIX PROGRAMMING ENVIRONMENT BY KERNIGHAN & PIKE (PHI)
3. DOS/UNIX & WINDOWS: I.T. TODAY (ENCYCLOPEDIA) BYS. JAISWAL
4. OPERATING SYSTEM CONCEPT: SILLBERSCHATZ GALVIN
5. MSDOS; MANUAL
6. USING LINUX (FIFTH EDITION) : TACKETT, BURNETT (PHI)

### **PRACTICAL:**

#### **Practical - I: Microsoft Office**

The Practical should be based on MS-Word, MS-Excel, MS-PowerPoint and MS-Access.

#### **Practical -II: Operating System**

The Practical should be based on MS-DOS, Unix, Shell Script, Windows.

# **B.Com. (Computer Application) Part-II**

## **Paper 1: Statistics and Quantitative Techniques**

**Unit I: Descriptive statistics** - Definition, functions, scope and role of statistics in business, Importance of statistics, distrust and limitations of statistics.

**Unit II: Presentation of statistical data** - classification; tabulation; frequency distribution; diagrams & graphs.

**Statistical average** - importance and requisites of a good statistical average; types of averages - arithmetic mean, median, mode, geometric mean and harmonic mean, weighted average, relationship amongst different averages.

**Unit III: Dispersion** - meaning and significance of dispersion; methods of measuring dispersion - range, quartile; mean deviation, standard deviation, Co-efficient of Skewness, Lorenz Curve.

**Correlation and Regression (Simple)**- Types of correlation, Calculation of Co-efficient of Correlation for Simple Series, Calculation of Co-efficient of Correlation for Continuous Series; Regression Equation of X on Y, Regression Equation of Y on X

**Unit IV: Quantitative Techniques** - An introduction: Classifications of quantitative techniques; applications of quantitative techniques to business and industry; limitations of quantitative techniques.

**Numerical shall be based on Unit II and Unit III.**

### **Reference Books:**

1. Fundamentals of statistics : D. V. Elhance & Veena Elhance
2. Statistics : V. K. Kapoor - S. Chand & Sons
3. Statistics : B. New Gupta - Sahitya Bhavan Agra
4. Statistics Methods : S.P. Gupta - S. Chand & Sons
5. Fundamental of Statistics : S. C. Gupta - Himalaya Publishing House
6. Business Mathematics & Statistics : NEWK Nag & S.C. Chanda - Kalyani Publishers
7. Problem in statistics : Y. R. Mahajan - Pimplapure Publisher Nagpur

## **Paper-2:Business Economics**

**Unit I: Nature and fundamental concepts and basis techniques of Business economics** - Analysis of Demand, Significance, estimation of demand; Elasticity of Demand, Techniques and Importance of Demand forecasting; Basic Mathematical Problems related to demand estimation and elasticity of demand.

**Unit II: Production & Cost Analysis** - Production & Production Function: Concept, Forms of production function, Law of variable Proportions, Returns to scale. Cost concept, Short term and long term cost output relationship, Cost curves, Economies of scale.

**Objectives & Equilibrium of the Firm** - Market Structures- Perfect Competition, Monopoly, Monopolistic Competition & Oligopoly - kinked demand curve and cartels, Mathematical Problems on profit maximization and Price & Output determination under various market structures.

**Unit III: National Income Accounting** - Concept & measurement; Determination of Income & Employment; Concept of multiplier; Inflation and Deflation, types, causes and control of inflation.

**Unit IV: Macroeconomic policy** - Monetary and fiscal- objectives and Instruments; Effectiveness of Monetary & Fiscal Policy with respect to Indian Economy.**Business cycles** - Concept, Causes & Impact, Measures to control Business cycles.

### **Reference Books:**

1. Managerial Economics, P. L. Mehta, Sultan Chand & Sons, New Delhi
2. Managerial Economics, Dwidevi, TMH
3. Managerial economics in a Global economy, Dominick Salvatore, 2006, Thomson learning Press
4. Managerial Economics, Suma Damodran, 2006, Oxford University Press, New Delhi
5. Indian Economy, Mishra &Puri, 2007, Himalaya Publishing House

## Paper 3: Cost & Management Accounting

**Unit I : Meaning, Definition, Scope, and Importance of Cost Accounting** - Elements of Cost, Cost Classification, Preparation of Cost Sheets, Tenders, and Quotations. Methods of Cost Allocation and Absorption (Simple Problems on Operating Costing - Transportation only).

**Unit II : Reconciliation of Profits Shown by Cost and Financial books. Marginal Costing** - Break Even Analysis, Concept and Applications. Process Costing (Up to Abnormal Loss and Abnormal Effectiveness).

**Unit-III:** Meaning, objects, advantages, importance tools and techniques of management accounting. Distinction between Financial Accounting, Cost Accounting and Management Accounting.

**Ratio Analysis** - Meaning, nature, analysis, significance & limitations of ratio analysis. Ratio as tools of interpretation of financial statements.

**Computation of ratios** - Gross profit ratio, net profit, net profit ratio, operating net profit ratio, operating ratio, expenses ratio stock turn-over ratio, current ratio, liquidity ratio, debtors turn-over ratio, creditors turnover ratio, fixed assets turnover ratio, debt equity ratio, earning per share.

**Unit-IV: Break even analysis** - Meaning, need, importance & limitations. Computation - Profit volume ratio, breakeven point, margin of safety, estimated sales for required profit & estimated profit for given sales.

**Fund flow statement** - Meaning, concepts, importance & limitations, preparation of fund flow statement, Business budgets and budgetary control - Types of budget and its utility, preparation of cash & flexible budgets.

**Simple Numerical will be based on all Units.**

### Reference Books:

- 1) S. N Maheshwari : Cost Accounting Theory and problems -ShriMahavir Book Depot, New Delhi
- 2) V.K. Saxena : Cost Accounting Text Book- Sultan Chand and Sons New Delhi
- 3) M.C. Shukls - T.S. - Grewal, M.P. Gupta - Cost Accounting - S. Chand , New Delhi
- 4) R. S. N. Pallai, V Bhagavathi - Cost Accounting - S. Chand, New Delhi
- 5) S. M. Shukla :- Cost Accounts (Hindi)
- 6) Nigam R. S. - Advanced Cost Accounting , S. Chand & Company
- 7) Jain S. P. - Advanced Cost Accounting - Kalyani Publication
- 8) Pillai R. S. N. - Management Accounting - S. Chand & Co. Pvt. Ltd.
- 9) Agrawal N. K. - Managements Accounting - Galgotia Publication
- 10) Singh, Jagwant - Managements Accountings - KitabMahal
- 11) Rathnam P. V. - Managements Accountings - KitabMahal
- 12) Sharma R. K. - Managements Accountings - Kalyani Publication
- 13) Management Accounting & Financial Management :-Arora M N (Himalaya Publishing House Pvt. Ltd.)

## Paper 4: Programming Skills ('C' Programming)

**Unit -I: Programming Logic:**Problem Analysis, Process Analysis, Conceptual Development of solution. Development Tools : Algorithm & Flowchart **Translator** : Interpreter, Compiler  
**Introduction to C** : History of C Language, C Character Set, Data Types, Constant & Variables, Type Casting, Type Modification, Operators in C, Input/Output Function in C.

**Unit -II: Control Statement** :If, If...Else, While, Do....While, for, goto, switch...case, break, continue, exit statement. **Arrays** : Array Definition, One dimensional array, two dimensional array, searching, sorting, inserting, deletion, process in arrays, Addition & Multiplication of two dimensional array, **Storage Class** : Automatic, Register, Static, External Storage Class.

**Unit -III: String Handling:**String library function. **Structure and Union** : Introduction to structure and union, Declaration, initializing structure, accessing structure elements, array of structure.

**Function** :Library functions, user defined functions, function prototype, types of user defined function, function with arrays, function with structure.

**Unit -IV: Pointers:**Introduction to pointers, Arithmetic operations on pointer variables. Pointer with array.Pointer with structure, Function call value and call by reference.

**File Processing** : Introduction, stream and files, opening and closing files, file opening modes, text mode, binary mode, more on file handling functions.

### BOOKS RECOMMENDED:

1. Introduction Tech. Concepts by Dr. Madhulika Jain, Shashank&Satish Jain (BPB)
2. Programming in ANSI C - By E. Balaguruswami
3. C in Depth - by S.K. Shrivastava (BPB)
4. Let us C - By Y Kanetkar (BPB)

## Paper 5: E-Commerce and Web Designing

**Unit -I : E-Commerce:** Introduction, Definition, Benefits of E-Commerce, Impact of E-Commerce on business models, Traditional Commerce Vs E-Commerce, Advantages and Disadvantages of E-Commerce, Electronic Commerce and the Trade Cycle.

**Electronic Market :** Usage, Advantages and Disadvantages and its future.

**Electronic Data Interchange (EDI) :** Introduction, Benefits, Trade Cycle and Example.

**Internet Commerce :** Introduction, Internet Trade Cycle and example, **Internet Security :** Secure Transaction, Privacy issues, computer crimes and its type, **Security Issues :** Security threats like damage to data, loss of data and unauthorized use of data, **Security Procedure :** Firewall, Encryption, Password, Access Control List, Digital Certificate.

**Unit -II : Creating Static Web Pages with HTML:** Introduction, Designing web site, Advantages and Disadvantages of HTML, Flow of Web Information, Role of Web Browser and Web Server, Process of Web Publishing,

**Creating a Simple Static Web Page :** About HTML, Basic elements : <html>, <head>, <title>, <p>, <br>, <h1> to <h6>, <ol>, <ul>, <li>, <dl>, <pre>, <marquee>, <hr>, Physical and Logical tags **Path :** Relative and Absolute path, Comments, Special Characters, Text Formatting tags, <center>

**Adding Links, Images, Background and Table :** Hyperlinks <a href ...>, Creating links to web pages and URLs, Creating links within the same page, various types of URLs that can be used in links, Image tag and their related attributes, Inline images, Links to (external) images, Using Inline images, Using images as hyperlinks, Popular images formats for internet and HTML.

**Tables :** Basic tabletags and their related attributes.

**Unit -III : Frames and Embedding Multimedia: Frames, Image Map and Web Font Creator :** Frames and their creation, the <Frame> and <Frameset> tags, Fram linking, Floating or Inline Frames, Image Maps <map> and <area> tags, Client - Side and Server - Side image maps.

Form designs, Form Controls, Text controls, password fields, radio buttons, checkboxes, reset and submit buttons, form control selection, option processing and textarea.

**Embedding Multimedia :** Introduction, Embedding Multimedia, Inserting sound/audio formats, video file formats.

**Unit -IV : Cascading Style Sheets (CSS) and XML: CSS :** Defining style sheets, features, adding style to document, Linking to a single sheet, Embedding style sheet, Using inline style, Style sheet properties, Font properties, Color and Background properties, Text properties, Box properties.

**XML :** Introduction, XML and SGML, Design goals of XML, Application of XML: Document Application, Data Application, XML Software : Browsers, Editors, Parsers, Processor, XML tags, Structure of XML documents, XML element tags, Element markup, Attribute markup, HTML document, adding scripts, Data types in XML , XML Namespaces : Qualified name and Unqualified names, Namespace scope, default name space, working with text and font : Font, Font Size, font style, text alignment, text indent, line height, color and Background Properties : Foreground color, Background color, Border color, Background image, Working with DTD : Introduction, HTML and DTD, Benefits of the DTD, Structure of DTD, Declarations of variable in DTD : Element name, Occurrence indicators, Connectors.

### BOOKS RECOMMENDED :

1. Electronic Commerce : Greenstein and Feinman (TMH)
2. E-Commerce : Bhushan Dean – S. Chand
3. Web Publishing : MonicD'souza and J D'souza
4. Complete HTML : BPB
5. XML : Xavier (TMH)

## Paper 6: MIS AND SYSTEM ANALYSIS

**UNIT-I: System Concept**, definition, system approach, characteristics, System Elements - Input, Output, Environment, Boundary Interface, feedback, Control. Types of systems, Business as system. Data vs information, information and decision making, Value of information, quality of information. Introduction to MIS, definition, need, objectives, benefits, functions, characteristics. Structure of MIS, information requirements at various levels of Management Activities. MIS vs data processing. Types of MIS: TPS, OAS, DSS, Expert system (organization, features & advantages)  
Functional MIS for marketing, finance, human resource, production & service industry.

**UNIT -II :System development life cycle(SDLC)** concept & stages. Need identification, determining user's information requirements. Information gathering - Sources & Methods (Interviews, questionnaires, observation, document analysis). System analysis, planning approach- elements, objectives, constraints , feasibility study, Tools of data recording, DFDs, data dictionary, decision tree, decision table, cost benefit analysis.

**UNIT -III: Output input design**, form design, process design, process specification, file design, program design, module integration, storage requirement ,selection of hardware and software, software controls, system flow chart, user view of processing, modeling input output data. Procedure design, design documentation, user feedback, Project planning& control.

### **UNIT -IV: Testing and Implementation**

Testing: Code testing, specification testing, types of tests, verification and validation systems security and privacy, control measures, disaster recovery plan, system audit, Documentation : user's, System , operations manual, Role and qualities of system analyst as a change agent. Implementation - Methods of change over, transition and conversion, change management, user training. Post implementation maintenance & review.

### **BOOKS RECOMMENDED :**

1. System Analysis and Design : E. Awad(Galgotia)
2. Systems Analysis and Design : Edward (TMH)
3. System Analysis and Design : Don Yeats(McMillan)
4. Management Information Systems : Goyal(McMillan)
5. Management Information System : Jawadekar (venus)
6. Management Information System : Sadagopan (Prentice Hall of India).
7. Management Information Systems : Kanter (Prentice Hall of India)

### **PRACTICAL :**

#### **Practical - I : Programming Skills**

The Practical should be based on all the units of Programming Skills

#### **Practical -II : Web Designing**

The Practical should be based on Unit-II, Unit-III and Unit-IV of E-Commerce & Web Designing.



# **B.Com. (Computer Application) Part-III**

## **Paper - 1: Business Law**

**Unit I: Legal Framework for business entities-** Introduction to legal aspects of Business in general; Need and importance of Business Laws.

**Indian Contract Act, 1872** - Definition of Contract, Agreement, Offer and Acceptance, Essentials of Valid Contract, Performance of Contract and Breach of Contract.

**Unit II: Indian Joint Stock Companies Act, 1956-** Definition of a Joint Stock Company, Kinds of Companies, Formation of Company, Memorandum of Association, Articles of Association, Prospectus, Company Meetings, Liquidation of a Company.

**Unit III : Indian Partnership Act, 1932-** Definition of Partnership, Kinds of Partners, Partnership Deed, Registration of a Partnership Firm, Rights and Duties of Partners, Liabilities of Partners, Dissolution of a Partnership Firm.

**Unit IV: Information Technology Act 2000 & Cyber Law** - Scope, Provisions & overview, IT Act and E-mails, Strategy to Combat Cyber Crime

**Consumer Protection Act, 1986-** Definitions, Category of the term Consumer, Rights of Consumer, Consumer protection Councils, Remedies & Relief available to the consumer.

### **Reference books:**

1. Business laws By SatishMathur, McGraw Hill,
2. Principles of Business Law, Maheshwari, Himalaya Publishing House
3. Business & Industrial Laws, M.C.Kuchhal, Vikas Publishing Pvt.Ltd.
4. Business Law, Sarvanavel, Himalaya Publishing House
5. Corporate Law, AbhishekShahu ,Saijyoti Publication

## Paper 2 :Computerised Accounting (TALLY)

**Unit - I: Introduction to Accounting**, Advantages of Accounting, Books of accounts, Classification of Accounts, Financial Statements, Inventory management, Computerized Accounting, Advantages of Computerized Accounting, Manual Vs Computerized Accounting, Need of Computerized Accounting, Accounts Organization, Accounts group, Loans, Liabilities, Assets and Budget.

**Unit - II: Accounting Software's**, Introduction to Tally Software, Features of Tally, Tally Screen, Company Information, Creating new Company, Gateway, Selection of Company, Selection of Options, Buttons at Gateway, Working with multiple Companies, Company Features, Configuration - General, Numeric Symbols, Voucher Entry, Invoice Order Entry, Printing.

**Unit - III: Accounts Info Menu, Account Groups** - Create new group, creation of Primary group. Normal and Advance Information, Ledger Accounts, Cost Categories, Cost Centers. Creation of Budget, Types of Budget. Voucher - Voucher Entry, Creation of Voucher Screen, Types of Voucher, Selection of Voucher Types, Post Dated Voucher, Printing of Vouchers, Cheque Printing, advance Features of account Voucher.

**Unit - IV: Inventory Info, Features of Inventory Info. Configure** - Inventory Info, Balance Sheet, Audit trail, Ratio Analysis. Display - Accounting Report Display, Inventory report Display, and MIS Report Display. Printing Reports, Export of Data. Maintenance - Bank Reconciliation, House Keeping, Data Maintenance. Security - Users and Password, Security Controls, Types of Security, Creation New Security Levels and Tally Audit.

### **Practical:**

**Tally Software** - All Accounting Problems Viz. Balance Sheet, Profit & Loss, Cash Book, Loans, Cost Accounting, Vouchers, Budget, Sales and Purchase, Assets & Liabilities, Inventory Management, Financial Statements, Books of accounts, Ledger, etc.

### **Books Recommended:**

1. Accounting with Tally : K.K. Nadhani, BPB Publication.
2. Tally Tutorial :K.K. Nadhani and A.K. Nadhani, BPB Publication.
3. Advances Accounts Vol - I :M.C.Shukla, T.S.Grewal and S.G.Gupta, S.Chand& Company, Delhi.
4. Accounting Principles :Anthony R.N. and J.S.Richard, Irwin Inc.
5. Advanced Accountancy : P.C. Tulsian, Tata McGRAW HILL Publication.

## Paper 3: Software Product and Project Management

### Unit-I: PROJECT MANAGEMENT

1. The Management Spectrum, The People, The Product, The Process, The Project
2. Project Manager – Role & Responsibilities
3. Project Estimation – Introduction, Decomposition Techniques – Software sizing, Problem Based Estimation, LOC Based, FP Based estimation
4. Project Scheduling – Basic Concepts, Project Scheduling, Basic Principles, The relationship between People & effort, Effort Distribution, Defining a task network – CPM/PERT, Gantt Chart.

### Unit-II: SOFTWARE TESTING STRATEGIES

1. A strategic approach to software testing – Verification & Validation, Organizing for software testing.
2. Test Strategies for conventional software – Unit Testing, Integration Testing.
3. Test Strategies for object-oriented software – Unit Testing, Integration Testing.
4. Validation Testing – Test Criteria, Configuration Review, Alpha & Beta Testing.
5. System Testing – Recovery, Security, Stress & Performance Testing.
6. The Art of Debugging – The debugging process, Psychological consideration, Debugging strategies, correcting the errors.

### Unit-III: RISK MANAGEMENT

1. Introduction
2. Software Risks
3. Risk Identification – Assessing overall project risk, Risk Components & Drivers
4. Risk Projection – Developing a risk table, Assessing Risk Impact
5. Risk Refinement
6. Risk Mitigation, Monitoring and Management
7. The RMMM Plan

### Unit-IV: QUALITY MANAGEMENT

1. Quality Concepts – Quality, Quality Control, Quality assurance, Cost of Quality.
2. Software Quality Assurance – Background issues, SQA Activities.
3. Formal Technical Reviews – The Review Meeting, Review reporting & record keeping, Review guideline
4. Statistical Software Quality Assurance – A generic example, Six sigma for software engineering.
5. Software Reliability – Measure of software reliability & Availability, Software safety.
6. ISO 9000 Quality Standard

### Books Recommended :-

| Author                       | Title  | Edition | Year of Publication | Publisher and Address             |
|------------------------------|--|---------|---------------------|-----------------------------------|
| Elias M. Awad                | System Analysis and Design                       | Second  | 1997                | Galgotia Publication              |
| Roger S. Pressman            | Software Engineering – a Practitioner's Approach | Sixth   | 2005                | McGraw-Hill                       |
| Fitz AngGery Gerald          | System Analysis and Design                       | First   | 1997                | Galgotia Publications , New Delhi |
| By Whitten, Bentley, Dittman | System Analysis and Design Methods               | Fifth   | 2001                | McGraw-Hill                       |
| V.K. Khanna                  | System Analysis, Design & MIS                    |         | 2002                | Khanna Book Publishing, New Delhi |

## Paper 4 : Front End Development

**Unit -I:** Introduction to Visual Basic, Event driven programming, **Programming constructs** - Variables, Types of Variables, Data Types, Scope of Variables, Constants, system defined functions, Operators (Precedence and Associativity), Creating User Interface, **VB Controls** (Label, Text box, Command button, Frame, Check box, Option button, List box, Combo box, Timer, Drive list box, Directory list box, File list box, Horizontal and vertical scroll bars, Image, Picture box, Shape, Line, Data, OLE container), **Microsoft windows common controls** (Tab Strip, Tool bar, Status Bar, Progress Bar, Tree View, List View, Image List, Slider, Date Picker, Month View), adding controls to a form, adding controls at run time,

**Unit -II:** Working with Procedure, Function and Modules (Form, Class, Standard Modules), Scope of Procedures, Calling Procedures, Calling Functions, Passing Arguments, Control Structures : If-Then, If-Then-Else, Select Case, Loops Structures : Do-While, While -Wend, For-Next, For-Each, With-End With. Arrays : Declaring an Array, Types of Array (Fixed arrays, Single-dimensional arrays, Multidimensional arrays, Dynamic arrays), Control Array. Menus : Creating Menus, Adding Menu Items, Adding Code for the Menus, Modifying menus at run time, Creating Pop-Up Menus.

**Unit - III:** Database Programming in Visual Basic: Use of data control, creating database using Visual data manager, validating data, data bound controls. Comparative study of Data Access Techniques: DAO, RDO, ADO, ODBC Data access object:DAO Architecture, Database connectivity through data access object. Types of recordset , setting properties and record editing & updating , searching records.

**UNIT IV :Active X data object:** ADO architecture, setting data source through Active X Data objects. Use of ADO control , connecting ADODC to bound controls. Use of different data bound Controls. Editing , Updating & searching through ADO. Data Reports, Data Environment designer adding connection & commands Data report controls creating & printing reports. **Error handling:** Types of errors, Debugging, tools for debugging, break mode,break points, watch window, immediate window, handling runtime errors.

### Books Recommended:-

1. Visual Basic to Advance – Soma Dasgupta (BPB)
2. Murach’s Visual Basic 6 – Koop, Prince, Murach (BPB)
3. Mastering VB 6 - BPB Publication
4. Visual Basic Black Book – SterenHolzna
5. Programming in VB 6

## Paper 5 : DBMS and Oracle

**Unit -I:** Database environment, Data processing, Traditional and DBMS environment, Database system, **Types of databases** - Centralize, distributed, Database management system, Components of DBMS, DBMS elements, **Database Approach** - Objectives, benefits, characteristics, Advantages of DBMS, The three tire architecture, Three level architecture, Database administration - Roles, Functions and responsibilities of DBA.

**Unit-II: The E-R Model** - Data models, Entities, attributes and relationship, Logical and Physical database design, Mapping Cardinalities, Database development process, Database development life cycle. Integrity constrains. Transforming ERR diagrams into relations, tree structure and hierarchical. Normalization, Codd's 12 rules, hierarchical database structure, Network database structure, Relational database structure.RDBMS.

**Unit-III: Introduction to ORACLE as RDBMS,** History& standardization of SQL, **Elements of SQL** : Database objects, reserved words, Keywords, Variables, Data Types, Operators.

**Types of SQL** : DDL, DML, DCL, Create table, Alter table, Crate view, Drop table, grant, revoke, commit, delete, insert, lock table, rollback, save point, Update, Select statement, Where clause.

**Functions** : Arithmetic & Characters comparison, Logical set, Like function, Group function, Date Functions.

**Unit-IV: PL/SQL** : Introduction to PL/SQL, Variables, Initialization of variables, Dynamic data types, Control loop statements, **PL/SQL Cursor** : Declare cursor, Fetch, Open cursor, Close cursor. **Triggers** :Concepts, Trigger definition, Trigger type, Enabling, Disabling & Dropping triggers.

### BOOKS RECOMMENDED:

- |                               |   |                                    |
|-------------------------------|---|------------------------------------|
| 1. DBMS                       | : | Korth and Sudarshan                |
| 2. DBMS                       | : | Desai                              |
| 3. Database management system | : | R. Panneerselvam (PHI)             |
| 4. Oracle                     | : | I.T. Today (Encyclopedia)          |
| 5. Oracle                     | : | Oracle Press                       |
| 6. Oracle Pl/SQL              | : | PL/SQL in 21 days (Techmedia) SAMS |

### PRACTICAL:

#### Practical - I : Tally

The Practical should be based on all the units of Computerised Accounting (Tally)

#### Practical -II : VB & Oracle

The Practical should be based on all the Units of Front End Development (VB) and Unit-III and Unit-IV of DBCS & Oracle.

# Project

The Project work constitutes a major component in most of the professional programmes and it is to be carried out with due care and executed with seriousness by the students.

## Types of Project

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

**Group Project may be allowed (Not more than THREE students in a group)**

## Indicative Project Report Formulation.

1. Title Page.
  2. Certificate Page.
  3. Declaration Page.
  4. Acknowledgment Page.
  5. Index or Content Page.
  6. Documentation.
    - i. Introduction/Objectives.
    - ii. Preliminary System Analysis.
      - Identification of Need.
      - Preliminary Investigation.
      - Feasibility Study.
      - Need Of New System.
      - Flaws in Present System.
    - iii. Project Category.
    - iv. Software Requirement Specification.
    - v. Detailed System Analysis.
      - Data Flow Diagram.
      - Numbers of Modules and Process Logic.
      - Data Structures and Tables.
      - System Chart or Structure Chart.
      - Entity-Relationship Diagram.
    - vi. System Design.
      - Source Code.
      - Input screen & Output Screen.
    - vii. Validation Checks.
    - viii. Implementation, Evaluation and Maintenance.
    - ix. security Measures taken.
    - x. Reports.
    - xi. Future Scope of the project.
    - xii. Bibliography.
- 

**Project Examination is to be conducted as follows:**

- **External Examiner & Internal Examiner (Guide) jointly examine the project and award the marks.**

**Question Paper Pattern**  
**B.Com.(Computer Application) (BCCA)**

**N.B. – 1) All Questions are compulsory.**

**2) All Questions carry equal marks.**

**Time :- 3 hours**

**Marks-80**

|                     |           |          |
|---------------------|-----------|----------|
| Question No. 1 – A) | Unit I    | 08 Marks |
| B)                  | Unit-I    | 08 Marks |
|                     | <b>OR</b> |          |
| C)                  | Unit-I    | 16 Marks |
| Question No. 2 – A) | Unit II   | 08 Marks |
| B)                  | Unit-II   | 08 Marks |
|                     | <b>OR</b> |          |
| C)                  | Unit-II   | 16 Marks |
| Question No. 3 – A) | Unit III  | 08 Marks |
| B)                  | Unit-III  | 08 Marks |
|                     | <b>OR</b> |          |
| C)                  | Unit-III  | 16 Marks |
| Question No. 4 – A) | Unit IV   | 08 Marks |
| B)                  | Unit-IV   | 08 Marks |
|                     | <b>OR</b> |          |
| C)                  | Unit-IV   | 16 Marks |
| Question No. 5 – A) | Unit I    |          |
| B)                  | Unit-II   |          |
| C)                  | Unit-III  |          |
| D)                  | Unit-IV   | 4x4      |

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## Absorption Scheme

### **B.Com.(Computer Application) (BCCA)**

It is notified for general information of all concerned that the failure students of **B.Com.(Computer Application)(BCCA) Old Course** shall be absorbed in the **New course** introduced from the session 2014-2015 examination with the following scheme.

1. Those who have completed & passed **B.Com.(Computer Application)(BCCA) Part - I as per Oldcourse** are eligible for admission in the **B.Com.(Computer Application)(BCCA) Part - II New course**.
2. Failure students of **B.Com.(Computer Application)(BCCA) Part - I old course** and having ATKT as per rules are eligible to take admission in **B.Com.(Computer Application)(BCCA) Part-II New course**. They should clear their **B.Com.(Computer Application)(BCCA) Part - I old coursebacklog** papers in next **three attempts (Last Chance Winter 2016)**. If they fail to pass in **Winter-2016** attempt they will have to appear in parallel papers of **New course scheme** as per absorption scheme indicated in **Appendix- I**.

**Note:** The students who will appear in parallel papers of **New course scheme** paper with maximum theory marks 80, will get proportional marks out of 100 updated in **old course marksheet** of **B.Com.(Computer Application)(BCCA) Part - I**.

3. Those who have completed & passed **B.Com.(Computer Application)(BCCA) Part - I & B.Com.(Computer Application)(BCCA) Part - II as per Oldcourse** are eligible for admission in the **B.Com.(Computer Application)(BCCA) Part - III New course**.
4. Failure students of **B.Com.(Computer Application)(BCCA) Part - II old course** and having ATKT as per rules are eligible to take admission in **B.Com.(Computer Application)(BCCA) Part-III New course**. They should clear their **B.Com.(Computer Application)(BCCA) Part - II old coursebacklog** papers in next **three attempts (Last Chance Winter 2017)**. If they fail to pass in **Winter-2017** attempt they will have to appear in parallel papers of **New course scheme** as per absorption scheme indicated in **Appendix- II**.



**Note:** The students who will appear in parallel papers of **New course scheme** paper with maximum theory marks 80, will get proportional marks out of 100 updated in **old course marksheet** of **B.Com.(Computer Application)(BCCA) Part - II**.

5. Failure students of **B.Com.(Computer Application)(BCCA) Part-III old course** are having chances upto **Winter 2018 examination (Last Chance)**. So they should appear **B.Com.(Computer Application)(BCCA) Part-III old course examination & are required to clear their backlog**.

After that those who will have backlog in the **B.Com.(Computer Application)(BCCA) Part-III old course** will have to appear in parallel papers of **New course scheme** as per the absorption scheme indicated in **Appendix- III**.

**Note:** The students who will appear in parallel papers of **New course scheme** paper with maximum theory marks 80, will get proportional marks out of 100 updated in old course marksheet of **B.Com.(Computer Application)(BCCA) Part-III**.

## Appendix- I.

### B.Com.(Computer Application) (BCCA) Part-I

| Sr. No. | Old course                              | Max. Marks | Sr. No. | New Course                             | Max. Marks |
|---------|---|------------|---------|--|------------|
|         | <b>Theory</b>                           |            |         | <b>Theory</b>                          |            |
| 1       | English & Business Communication.       | 100        | 1       | English & Business Communication       | 80         |
| 2       | Principles of Business Management.      | 100        | 2       | Principles of Business Management      | 80         |
| 3       | Basic Economics & Business Environment. | 100        | 3       | Introduction to Operating Systems      | 80         |
| 4       | Financial Accounting.                   | 100        | 4       | Financial Accounting                   | 80         |
| 5       | Information Systems.                    | 70         | 5       | Information Systems                    | 80         |
| 6       | Information Technology                  | 70         | 6       | Information Technology                 | 80         |
| 7       | <b>Practical I : IS</b>                 | 30         | 7       | <b>Practical-I : Microsoft Office</b>  | 100        |
| 8       | <b>Practical II : IT</b>                | 30         | 8       | <b>Practical-II : Operating System</b> | 100        |

**Note:** The students who will appear in parallel practicals of **New course scheme** with maximum practical marks 100, will get proportional marks out of 30 updated in old course marksheet of **B.Com.(Computer Application)(BCCA) Part-I**.

## Appendix- II.

### B.Com.(Computer Application) (BCCA) Part-II

| Sr. No. | Old course                             | Max. Marks | Sr. No. | New Course                              | Max. Marks |
|---------|--|------------|---------|---|------------|
|         | <b>Theory</b>                          |            |         | <b>Theory</b>                           |            |
| 1       | Cost & Management Accounting           | 100        | 1       | Cost & Management Accounting            | 80         |
| 2       | Statistics & Quantitative Techniques.  | 100        | 2       | Statistics & Quantitative Techniques.   | 80         |
| 3       | MIS & System Analysis                  | 100        | 3       | MIS & System Analysis                   | 80         |
| 4       | E-Commerce & Web Designing             | 70         | 4       | E-Commerce & Web Designing              | 80         |
| 5       | Programming Skills (C Prog.)           | 70         | 5       | Programming Skills (C Prog.)            | 80         |
| 6       | Computerized Accounting (TALLY)        | 70         | 6       | Basic Economics & Business Environment. | 80         |
| 7       | <b>Practical- I : PS (C Prog.)</b>     | 30         | 7       | <b>Practical-I : Programming Skills</b> | 100        |
| 8       | <b>Practical-II : E-Comm&amp; WD</b>   | 30         | 8       | <b>Practical-II : HTML</b>              | 100        |
| 9.      | <b>Practical-III : Comp.A/c(Tally)</b> | 30         |         |   |            |

**Note:** The students who will appear in parallel practicals of **New course scheme** with maximum practical marks 100, will get proportional marks out of 30 updated in old course marksheet of **B.Com.(Computer Application)(BCCA) Part-II**.

## Appendix- III.

### B.Com.(Computer Application) (BCCA) Part-III

| Sr. No. | Old course                               | Max. Marks | Sr.No. | New Course                               | Max. Marks |
|---------|--|------------|--------|--|------------|
|         | <b>Theory</b>                            |            |        | <b>Theory</b>                            |            |
| 1       | Business Laws.                           | 100        | 1      | Business Law                             | 80         |
| 2       | Auditing and Income Tax                  | 100        | 2      | Computerized Accounting (TALLY)          | 80         |
| 3       | Software Product and Project Management. | 100        | 3      | Software Product and Project Management. | 80         |
| 4       | Front End Development                    | 70         | 4      | Front End Development                    | 80         |
| 5       | DBMS and Oracle                          | 70         | 5      | DBMS and Oracle                          | 80         |
| 6       | <b>Practical- I : FED</b>                | 30         | 6      | <b>Practical-I : Tally</b>               | 100        |
| 7       | <b>Practical -II : DBMS &amp; Oracle</b> | 30         | 7      | <b>Practical-II : VB &amp; Oracle</b>    | 100        |
| 8       | <b>Project</b>                           | 100        | 8      | <b>Project</b>                           | 100        |

**Note:** The students who will appear in parallel practicals of **New course scheme** with maximum practical marks 100, will get proportional marks out of 30 updated in old course marksheet of **B.Com.(Computer Application)(BCCA) Part-III**.