



*DEPARTMENT  
OF  
COMPUTER APPLICATIONS*

**NPS GDC Women (A), Chittoor**

Accredited with 'A' grade by NAAC

**B.Com.-Honors  
(Computer Applications)**

Proceedings of the Principal, NPS Govt. Degree College for Women(A), Chittoor  
Present: Dr. K. Manohar

Re.No.CA-01/NPSGDCW/UG-BoS/2025-26 dt. 27-05-2025

**Subject:** NPS GDC Women(A), Chittoor – UG Board of Studies (BoS) – Nomination of  
Members

– Orders issued,

**Ref.:** 1. UGC Guidelines of for Autonomous Colleges – 2023.

2. Proc. Of the VC No: SVU/C-III (3)/BOS/Smt. NPS, Govt. Coll/Chi/2025 dt. 09-05-2025

\*\*\*

**Order**

The Principal, NPS GDC Women(A), Chittoor, is pleased to nominate the following members to UG Board of Studies to frame the syllabus of **Computer Applications** courses in all the semesters duly following the norms of the UGC regulations for the Autonomous Colleges 2023.

S.No.	Name	Designation
1	Smt. Y. Jnapika	Chairperson
2	Smt. M. Padmavathi	Member
3	Sri T. Subramanyam	University Nominee
4	Smt. G. Satya Suneetha	Local Nominee
5	Dr. G. Dayanandam	Local Nominee
6	Sri. Murali Mohan M	Industrial Nominee
7	Kum. M. Ramya	Alumni Student
8	Sri. Y. Srinivasulu	Subject/Special Course Expert

The above members are requested to attend the BoS meetings for the first Autonomous UG-Batch 2025-26 and share their valuable views, suggestions on the following functionalities.

- Prepare syllabus for the subject keeping in view the objectives of the college, interest of the stakeholders and National recruitment for consideration and approval of the IQAC and Academic Cell.
- Suggest methodologies for innovative teaching and evaluation techniques
- Suggest the panel of names to the Academic council for appointment of Examiners
- Coordinate research, teaching, extension and other activities in the department of the College.
- Suggest CLO, PLO and subject experts to develop question bank in compliance with Bloom's Taxonomy.

The above said members are requested to bestow their services for the successful organization of the event.

  
PRINCIPAL  
27/05/25

**DEPARTMENT OF COMPUTER APPLICATIONS****COMPOSITION OF BOARD OF STUDIES FOR THE YEAR 2025-26**

<b>Sl. No.</b>	<b>Category</b>	<b>Name &amp; Designation</b>	<b>Chairperson/ Member</b>
1	Chairman	<b>Smt. Y Jnapika</b> Head of the Department Dept. of Computer Science Smt. N.P.S GDC for Women(A) Chittoor.	<b>Chairperson</b> Mobile: 8341341943 Email: <a href="mailto:jnapikagdl@gmail.com">jnapikagdl@gmail.com</a>
2	Members of the Department	<b>Smt. M. Padmavathi</b> Lecturer in Computer Applications Smt. N.P.S GDC for Women(A) Chittoor.	<b>Faculty</b> Mobile: 9985057603 Email: <a href="mailto:padma.manikyavelu@gmail.com">padma.manikyavelu@gmail.com</a>
3.	Two Experts in the Subject from outside the Parent University to be nominated by Academic council	<b>1. Smt. G. Satya Suneetha</b> Lecturer in Computer Applications Government Degree College, Kovvur, E.G. Dt <b>2. Dr. G. Dayanandam</b> Lecturer in Computer Science Government Degree College, Kodur(RS), Annamayya Dt 516101	<b>Subject experts outside parent University</b> <b>Mobile: 9491215695</b> <b>Email: <a href="mailto:satyasuneetha10@gmail.com">satyasuneetha10@gmail.com</a></b> <b>Mobile: 9885553539,</b> <b>7989475043</b> <b>Email:</b> <a href="mailto:gdayanandam@gdcrlkoduru.edu.in">gdayanandam@gdcrlkoduru.edu.in</a>
4.	One expert from to be nominated by the Vice-Chancellor from the panel of six recommend By Autonomous College Principal	<b>Sri T. Subramanyam</b> Lecturer in Computer Science NTR Govt. Degree College, Vayalpad	<b>Subject experts by University</b> Mobile: 9000305427 Email: <a href="mailto:sbmtupakula@gmail.com">sbmtupakula@gmail.com</a>
5.	One Representative from the Industry/ Corporate Sector	<b>Murali Mohan M</b> Principal Software Engineer CommScope, Bangalore	<b>Industry Expert</b> Mobile: 9739745424 Email: <a href="mailto:murali.mandala@commscope.com">murali.mandala@commscope.com</a>
6.	One Meritorious Alumni nominated by the Principal	<b>M. Ramya</b> ABPM at SO (Assistant Branch of Post Master) Mogili Venkatagiri, Bangarupalyan	<b>Alumni Student</b> Mobile: 9900175354 Email id: <a href="mailto:muderamya123@gmail.com">muderamya123@gmail.com</a>
7.	Experts from outside Autonomous College (Special Courses)	<b>Sri. Y. Srinivasulu</b> Lecturer in Computer Applications Dr. YSR GDC, Vedurukuppam S V University.	<b>Special Courses Expert</b> Mobile: 9985883900 Email id: <a href="mailto:srinivasulu120@gmail.com">srinivasulu120@gmail.com</a>

Signature of the Members

Signature of the BOS Chairman



# Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.lkc@gmail.com](mailto:chittoor.w.lkc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



## DEPARTMENT OF COMPUTER APPLICATIONS

**Board of Studies Dated: 25-10-2025**

Meeting of the Board of studies is held at NRC Room for the Department of Computer Applications, NPS GDC Women (A), Chittoor with the following agenda.

### Agenda

- Curriculum Design for all the I & II Semesters for B.Com. (Honors)-Computer Applications
- Designing of Course Outcomes and Course Objectives
- Identifying /inclusion of components of Skill Development, Employ ability and Entrepreneurship in the curriculum
- Additional inputs into the curriculum
- Designing Model Question Papers and identifying potential paper setters
- Innovative Teaching – Learning Methodology (Learner Centric)
- Curriculum for the Certificate Courses
- Academic activities of the Department
- Any other proposal with the permission of the chair

**(Smt. Y Jnapika)  
CHAIRPERSON  
BOARD OF STUDIES**



## Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.lkc@gmail.com](mailto:chittoor.w.lkc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



### Minutes and Resolutions

The BOS Team have given the following inputs on the BOS Meeting-1:

- In the Course-2 “Fundamentals of Information Technology & Office Automation (25BCA102T)” of semester-1, suggested to remove the topic “**Evolution of Computers:** History from early mechanic devices to modern-day systems” from unit -I as it is interlinked with same unit - I as Generations of Computers..
- In the Course-2 “Fundamentals of Information Technology & Office Automation (25BCA102T)” of semester-1, suggested to remove the topic “**Key Components:** Nodes, Links, Protocols, Networking Devices and **Internet Basics:** Search engines, Internet Security” in unit-II as required and emphasized in further courses later.
- In the Course-2 “Fundamentals of Information Technology & Office Automation (25BCA102T)” of semester-1, suggested to remove the topic “**References and Citations:** Footnotes, endnotes, and captions, Bibliography and citation tools, Table of contents and index creation.” in unit-III.
- In the Course-2 “Fundamentals of Information Technology & Office Automation (25BCA102T)” of semester-1, suggested to remove the topic “**Conditional formatting:** Data Bars, Color Scales, Icon Sets, Custom Formulas.” in unit-IV.
- In the Course-4 “E-Commerce and Web Application and Development (25BCA204T)” of semester-2, suggested to remove “**Commerce Business Models:** Revenue models (advertising, subscription, etc.)” from unit-1, to avoid ambiguity.
- In the Course-4 “E-Commerce and Web Application and Development (25BCA204T)” of semester-2, suggested to remove “Inline frames, HTML Forms. Embedding multimedia objects.” from unit-2, to avoid ambiguity.
- In the Course-4 “E-Commerce and Web Application and Development (25BCA204T)” of semester-2, suggested to remove “Carousels-Creating image sliders.” from unit-5, as it is good to study in advanced Web designing.
- The above suggestions are agreed by all the BOS members also incorporated while framing the UG syllabus for the B.Com., Computer Applications (Major) during first year. The approved syllabus is followed from A.Y.2025-26.

**Signature of the Members**

**Signature of the BOS Chairman**



## Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.lkc@gmail.com](mailto:chittoor.w.lkc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



### CONSOLIDATED REPORT OF BOARD OF STUDIES FOR THE YEAR 2025-26

The Meeting Board of Studies of Computer Science & Applications department was convened on **25-10-2025** under the Chairmanship of Smt, Y Jnapika Head / Lecturer-in-charge of Department of Computer Science and Applications. The following members are present

S.No.	Name	Designation	Signature
1	Sri. T. Subramanyam	University Nominee	
2	Smt. G. Satya Suneetha	Local Nominee	
3	Dr. G. Dayanandam	Local Nominee	
4	Sri. Murali Mohan M	Industrial Nominee	
5	Smt. M. Padmavathi	Faculty Member	
6	Sri. Y. Srinivasulu	Subject/Special Course Expert	
7	Kum. M. Ramya	Alumni	
8	Kum. A.C. Ashnah	Student	



Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.ikc@gmail.com](mailto:chittoor.w.ikc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)

Affiliated to Sri Venkateswara University: Thirupati



Board of Studies Meeting - I on 25-10-2025

## DEPARTMENT OF COMPUTER APPLICATIONS

### List of Paper Setters

S No	Name of the Paper Setter with Designation	Pape rs	Qualification	College - City
1	Sri. T Subramanyam Lecturer in Computer Science	ALL	M.Tech	Dept of Computer Science, Vayalpad, SV University
2	Smt. G. Satya Suneetha Lecturer in Computer Applications	ALL	M.Tech	Dept of Computer Applications, Kovvur, E.G. Dt, AKN University
3	Dr. G. Dayanandam Lecturer in Computer Science	ALL	Ph.D.	Dept of Computer Science, Kodur (RS), Annamayya Dt, Yogi Vemana University
4	Sri. E. Murali Mohan Reddy Lecturer in Computer Applications	ALL	MCA	Dept of Computer Applications, Puttur, SV University
5	Dr. A. Ravi Prasad Lecturer in Computer Applications	ALL	Ph.D.	Dept of Computer Applications, Srikalahasti, SV University
6	Dr. A. Sri Lakshmi Lecturer in Computer Applications	ALL	Ph.D.	Dept of Computer Applications, Nagiri, Autonomous
7	Sri. Y Srinivasulu Lecturer in Computer Applications	ALL	M.Tech	Dept of Computer Applications, Vedurukuppam, SV University
8	Smt. B. Durga Anuja Lecturer in Computer Applications	ALL	M.Tech	Dept of Computer Applications, Srikalahasti, SV University
9	Dr. S. Saravana Lecturer in Computer Applications	ALL	Ph.D.	Dept of Computer Applications, PVKN(A), Chittoor
10	Sri. T Narendra Babu Lecturer in Computer Applications	ALL	M.Tech	Dept of Computer Applications, Vedurukuppam, SV University
11	Sri. Shaik Munwar Lecturer in Computer Science	ALL	M.Tech	Dept of Computer Science, Vedurukuppam, SV University
12	Sri. Ismail Lecturer in Computer Science	ALL	M.Tech	Dept of Computer Science, Vedurukuppam, SV University
13	Dr. G. Vijay Kumar Lecturer in Computer Science	ALL	Ph.D.	Dept of Computer Science, Tanuku, W.G. Dt, AKN University
14	Manoj Prabhakar Darsi Lecturer in Computer Science	ALL	M.Tech (Ph.D)	Dept of Computer Science, Nellore, Vikram Simhapuri University,
15	Smt. A. Sumathi Lecturer in Computer Science	ALL	M.Tech	Dept of Computer Science, Srikalahasti, SV University



Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.jkc@gmail.com](mailto:chittoor.w.jkc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)

Affiliated to Sri Venkateswara University: Thirupati



Board of Studies Meeting - I on 25-10-2025

## DEPARTMENT OF COMPUTER APPLICATIONS

### List of Paper Examiners

S No	Name of the Examiner with Designation	Papers	Qualification	College - City
1	Sri. E. Murali Mohan Reddy Lecturer in Computer Applications	ALL	MCA	Dept of Computer Applications, Puttur, SV University
2	Dr. A. Ravi Prasad Lecturer in Computer Applications	ALL	Ph.D.	Dept of Computer Applications, Srikalahasti, SV University
3	Dr. A. Sri Lakshmi Lecturer in Computer Applications	ALL	Ph.D.	Dept of Computer Applications, Nagiri, Autonomous
4	Sri. Y Srinivasulu Lecturer in Computer Applications	ALL	M.Tech	Dept of Computer Applications, Vedurukuppam, SV University
5	Smt. B. Durga Anuja Lecturer in Computer Applications	ALL	M.Tech	Dept of Computer Applications, Srikalahasti, SV University
6	Dr. S. Saravana Lecturer in Computer Applications	ALL	Ph.D.	Dept of Computer Applications, PVKN(A), Chittoor
7	Sri. T Narendra Babu Lecturer in Computer Applications	ALL	M.Tech	Dept of Computer Applications, Vedurukuppam, SV University
8	Sri. Shaik Munwar Lecturer in Computer Science	ALL	M.Tech	Dept of Computer Science, Vedurukuppam, SV University
9	Sri. Ismail Lecturer in Computer Science	ALL	M.Tech	Dept of Computer Science, Vedurukuppam, SV University
10	Smt. A. Sumathi Lecturer in Computer Science	ALL	M.Tech	Dept of Computer Science, Srikalahasti, SV University
11	Sri. T Subramanyam Lecturer in Computer Science	ALL	M.Tech	Dept of Computer Science, Vayalpad, SV University

(Smt. Y Jnapika)

CHAIRPERSON BOARD OF STUDIES



Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.lkc@gmail.com](mailto:chittoor.w.lkc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



## DEPARTMENT OF COMPUTER APPLICATIONS

### SCHEME OF EVALUATION

MODEL OF SEMESTER END EXAMINATION QUESTION PAPER (THEORY)

(As Approved in the BOS meeting - I held on 25-10-2025)

#### EVALUATION SCHEME

Standard Operating Procedure for Continuous Internal Assessment (Internal Marks – 30). The Internal marks in all the courses/subjects will be awarded based on continuous internal assessment made during the semester concerned. For each Courses/subject 30 marks are allotted for internal assessment and 70 marks are allotted for the End Semester Examination.

#### Continuous Internal Evaluation (CIA):

It has been decided to introduce Continuous Internal assessment marks for a total of 60 marks, which are to be distributed as follows:

S.No.	Component	Distribution of Marks
1	CIE I (after completion of 50% of syllabus)	20
2	CIE II (Online Exam)	20
3	ATTENDANCE	5
	Above 95%	5
	91% to 95%	4
	86% to 90%	3
	81% to 85%	2
	75% to 80%	1
	Below 75%	0
		5
Pedagogical Strategies		
4	Assignment	5
5	Participation or Paper Presentation in Student Seminars/Workshops/Group Discussions/ Quiz/ Student Study Project/Field Visit/Survey	5
6	Swatch Bharat (Clean & Green)	5
<b>TOTAL</b>		<b>60</b>

**\*The total 60 Marks is scaled down to 30 Marks\***

## Component I: CIE I & CIE II (20+20 = 40 Marks)

Two Internal Examinations, out of which one is Mandatorily Online examination, for each Course shall be conducted for assessment. These examinations will be conducted during August/September (CIE –I) and January/February (CIE-II). CIE-I carries 20 marks and CIE-II carries 20 marks. CIE- I will be conducted after completion of 50% of syllabus. The second internal examination, i.e., CIE – II, which will cover the remaining second half of the syllabus. The sum of both the CIEs will be considered for awarding marks for CIA.

Suggestive Question Paper Pattern for CIE I & CIE II (Based on Blooms Taxonomy):

Though the faculty concerned is empowered to adopt their own pattern for question paper, a general and suggestive model for question paper is given below based on Blooms Taxonomy.

Q No	Learning Objective	Marks
1	Memory based (Remember)	3
2	Understand (Comprehension)	4
3	Application	4
4	Analysis	3
5	Evaluation	3
6	Creativity	3
	TOTAL	20 marks

The active verbs used to frame the question based on Blooms Taxonomy is given below for the convenience.

### Active verbs developed based on Bloom's Taxonomy

Knowledge	Understand	Apply	Analyze	Evaluate	Create
define identify describe label list name state match recognize select examine locate memorize quote recall reproduce tabulate tell copy discover duplicate enumerate	explain describe interpret paraphrase summarize classify compare differentiate discuss distinguish extend predict associate contrast convert demonstrate estimate express Identify indicate Infer relate	solve apply illustrate modify use calculate change choose demonstrate discover experiment relate show sketch complete construct dramatize interpret Manipulate Paint Prepare produce	analyze compare classify contrast distinguish infer separate explain select categorize connect differentiate discriminate divide order point out prioritize subdivide survey advertise appraise Break down	reframe criticize evaluate order appraise judge support compare decide discriminate recommend summarize assess choose convince defend estimate find errors grade measure predict rank	design compose create plan combine formulate invent hypothesize substitute write compile construct develop generalize integrate modify organize prepare produce rearrange rewrite role-play

**Important Note:**

Students who absent themselves from any CIE will lose the marks for the respective test. However, if a student is not able to write the CIE I / II because of his/her participation in an important event related to NSS/NCC or Games/Sports representing the College/University/health grounds, the student has to get the prior permission of the Principal through the proper channel and submit the same to the Office of the Controller of Examinations. Deadline is 7 days after the CIE. Applications submitted after the deadline will not be considered for the retest.

**Component III: Attendance (5 Marks)**

Attendance mark will be awarded to the students based on their attendance percentage on a particular course. Faculty of each course has to award the attendance mark based on their subject attendance.

The marks split-up is given below

Above 95%	5
91% to 95%	4
86% to 90%	3
81% to 85%	2
75% to 80%	1
Below 75%	0

**Component IV: Assignment (5 Marks)**

One Assignment for each course must be submitted by a student in each semester. The marks allotted to this component will be awarded based on the performance of the student. The assignment topic may be assigned either individually or group. Assignment should be submitted by the student in the first half of the semester. Also maximum of 7 days should be given to students to submit the assignment. Assignments should be evaluated by the faculty concerned and the same to be verified by the student. The assignment should be kept in department for the Academic Audit by IQAC and also for external academic audit conducted by office of Commissionerate of Collegiate Education. The marks should be awarded by the faculty.

**Component V (Pedagogical Strategies):**

Participation /Paper Presentation in Student Seminars/Workshops/Group Discussions/ Quiz/ Student Study Project/Field Visit/Survey (5 Marks)

For this component, the marks will be provided to student, if he/she participate/win in the external college technical events. To score marks, the student has to participate / present papers related to subject in the technical events organized in the other colleges/other departments in the college.

	Participation	Second Prize	First Prize / Best Paper
Workshop / Seminar / Technical Symposium	2	3	5
National / International Conference	3	4	5

In case of Classroom seminar, one seminar for each course must be presented by a student in each semester. Each student should be given individual topic for seminar; the student has to submit the seminar topic as assignment and the same will be presented minimum of 10 minutes in the class through ICT. The seminar presented by the student should be evaluated by the subject faculty and based on the performance of the presentation, the marks will be awarded.

Similarly, reports on field visits, educational tours, study projects in prescribed format will be considered for awarding marks in this component.

For a student who has not participated in any events in that semester, the student will be awarded “0” for this component. If a student participates more than one event and win prize, the best would be considered for the subject.

In case of Quiz, offline/online quiz, it should be conducted after the CIE II and well before the SEE. Faculty concerned has to announce the schedule for the quiz and conduct the quiz.

### **Semester End Examinations (SEE)**

The question paper is of 2 ½ duration for 70 marks. The suggestive question paper model is given that may be used for framing the question. This kind of question paper will be helpful in CO - PO Mapping and thereby graduate attributes.



# Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.jkc@gmail.com](mailto:chittoor.w.jkc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



Curriculum 2025-26

Version: 1.0

## DEPARTMENT OF COMPUTER APPLICATIONS

### SCHEME OF VALUATION FOR PRACTICAL EXAMINATIONS

(As Approved in the BOS meeting - I held on 25-10-2025 for 2025-2026)

S.No.	Description	Marks
1	Procedure Explanation with Coding (including Algorithm & Flowchart if any)	15
2	Execution of Program	10
3	VIVA VOCE	10
4	RECORD	15
	<b>**Total Internal Marks**</b>	<b>50</b>
5	EXTERNAL PRACTICAL EXAM (At the end of II, IV & VI Semester)	50
6	EXTERNAL PRACTICAL EXAM (At the end of I, III & V Semester)	50
	<b>GRAND TOTAL</b>	<b>100</b>

\*\* Award of marks for number of practicals recorded in the Record.

10 Practical and Above	10
8 Practical	8
6 Practical	6
5 Practical	5
Less than 5	0



Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.ikc@gmail.com](mailto:chittoor.w.ikc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



Curriculum 2025-26

Version: 1.0

## B.Com. (Honors) Computer Applications

### Program Specific Outcomes

After completion of the program, the student is able to

**PSO1: Problem Solving Proficiency:** Proficiently analyze intricate problems, identify requirements, and implement efficient algorithms using appropriate programming languages.

**PSO2: Expert Software Development:** Expertly design software, architect systems, and develop solutions with an emphasis on scalability, user experience, and best practices.

**PSO3: Specialized Knowledge Application:** Apply specialized knowledge in areas such as AI, data science, cyber security, contributing to practical problem-solving and innovative solutions.

**PSO4: Effective Communication and Collaboration:** Communicate technical concepts effectively and collaborate proficiently within multidisciplinary teams, demonstrating leadership and teamwork skills.

## B.Com. (Honors) Computer Applications

### Programme Outcomes

Sl. No.	Program Outcomes (POs) -A student will be able to:
PO1:	Understand the fundamental concepts, principles, and practices of commerce, accounting, management, and economics.
PO2:	Identify, formulate, research literature, and analyse complex scientific problems using principles of mathematics, statistics and applied computer science
PO3:	Develop the skills to present ideas effectively and efficiently as a member and as a leader.
PO4:	Create, Solve and apply tools of programming, networking, database, Web design, AI and modern technology for solutions to significant problems.
PO5:	Design computer-based solutions for various technical problems.
PO6:	Ensure professional development growth through contextual, reflective and lifelong learning.
PO7:	Demonstrate knowledge, Design, and implement solutions to significant computational problems.
PO8:	Use research-based knowledge and methods design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO9:	Apply professional ethics, responsibilities and norms of the scientific practice
PO10:	Understand the impact of the software engineering solutions in social and environmental contexts, and demonstrate the knowledge and need for development.



Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.ikc@gmail.com](mailto:chittoor.w.ikc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



Curriculum 2025-26

Version: 1.0

## R25 CURRICULUM FRAMEWORK

### Curriculum Framework of B.A/B.Com/BBA (Honours) from the A.Y. 2025-26 Major + Minor with CSP & VI Semester Internship

#### 1st Year - Semester I

Sl.No	Category	Course No	No. of Hours*	No. of Credits
1	Major - Core	I	4	4
2	Major - Core	II	4	4
4	Minor	0	0	0
5	AECC - English	I	4	3
6	AECC - MIL (Telugu/Hindi/Sanskrit)	I	4	3
7	Multidisciplinary Course	0	0	0
8	Skill Enhancement Course (SEC) Intro' to Artificial Intelligence	I	4 + 2 (Practice)	4
<b>End of Semester I of 1st Year</b>		<b>5</b>	<b>22</b>	<b>18</b>

#### 1st Year - Semester II

Sl.No	Category	Course No	No. of Hours	No. of Credits
1	Major - Core	III	4	4
2	Major - Core	IV	4	4
3	Minor	0	0	0
4	AECC - English	II	4	3
5	AECC - MIL (Telugu/Hindi/Sanskrit)	II	4	3
6	Multidisciplinary Course	I	2	2
7	Skill Enhancement Course (SEC) Application of Artificial Intelligence (Discipline Specific)	II	4 + 2 (Practice)	4
8	Indian Knowledge System	I	2	0
9	Community Service Project (minimum of 80 hours with 1 Credits)			1
<b>End of Semester II of 1st Year</b>		<b>7</b>	<b>26</b>	<b>21</b>

For B.Com courses, the number of instructional hours shall be five (5) for courses involving problem-solving, and four (4) for courses comprising only theory.



Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.ikc@gmail.com](mailto:chittoor.w.ikc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



Curriculum 2025-26

Version: 1.0

**R25 COURSE STRUCTURE**

	<b>ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION</b>
---	---

**Model Syllabus for 4-Year UG Honours in B.Com. (Computer Applications) as Major in consonance with Curriculum framework w.e.f. AY 2025-26**

**COURSE STRUCTURE**

Year	Semester	Course	Title of the Course	No. of Hrs /Week	No. of Credits	
I	I	2	Fundamentals of Information Technology & Office Automation	3	3	
			Fundamentals of Information Technology & Office Automation - Practical	2	1	
	II	4	E-Commerce and Web Application and Development	3	3	
			E-Commerce and Web Application and Development -Practical	2	1	
II	III	7	Database Management System	3	3	
			Database Management System- Practical	2	1	
	IV	10	Data Science using Python	3	3	
			Data Science using Python-Practical	2	1	
III	V	12 A	Entrepreneurship & Start-Ups	4	4	
		<b>OR</b>				
		12 B	Business Intelligence tools and Data Visualisation	3	3	
			Business Intelligence tools and Data Visualisation-Practical	2	1	
		13 A	Business Analytics Using Excel and Power BI	3	3	
			Business Analytics Using Excel and Power BI-Practical	2	1	
		<b>OR</b>				
13 B	Accounting Information System	3	3			
	Accounting Information System- Practical	2	1			

**SEMESTER-I**



# Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.ikc@gmail.com](mailto:chittoor.w.ikc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



Curriculum 2025-26

Version: 1.0

Course Code	Title of the Course	L	T	P	C
25BCA102T	Fundamentals of Information Technology & Office Automation		3		3
Prerequisites	Basic Computer Knowledge				

## COURSE OBJECTIVES

1	Understand foundational computing concepts including number systems, evolution of computers, and architectural components.
2	Explore basic computer organization and network fundamentals, recognizing device functions, system types, and internet components.
3	Demonstrate proficiency in word processing and presentation tools, applying formatting techniques and design elements for professional outputs.
4	Develop competency in spreadsheet operations, employing formulas, charts, and data-handling techniques.
5	Apply advanced data modeling and productivity features to analyze and visualize data efficiently using modern tools.

## COURSE OUTCOMES

COURSE OUTCOMES		BTL
Upon successful completion of the course, the student will be able to:		
CO1	Convert between binary, decimal, octal, and hexadecimal systems	Understanding
CO2	Summarize Basic blocks of a computer and fundamental networking knowledge.	Understanding
CO3	Show visually appealing presentations	Applying
CO4	Prepare accurate summaries and visualizations.	Applying
CO5	Interpret, organize, and represent data effectively	Applying

# SYLLABUS

COURSE	CONTENT
UNIT I	<p><b>Number Systems, Evolution , Block Diagram and Generations</b>  <b>Number Systems:</b> Binary, Decimal, Octal, Hexadecimal; conversions between number systems.</p> <p><b>Block Diagram of a Computer:</b> Input Unit, Central Processing Unit, Memory Unit, Output Unit.</p> <p><b>Generations of Computers:</b> First to Fifth Generation – Technologies, Characteristics, Examples.</p> <p><b>Activity:</b> Create a digital poster or infographic comparing number systems (binary, decimal, octal, hexadecimal) and illustrating the timeline of computer generations with key innovations.</p> <p><b>Evaluation Method:</b> Rubric-based assessment of the poster presentation on a 10-point scale focusing on:</p> <ul style="list-style-type: none"> <li>● Accuracy of number system conversions</li> <li>● Correct identification of block diagram components</li> <li>● Visual organization and creativity</li> </ul>
UNIT II	<p><b>Basic Organization and Network Fundamentals</b>  <b>Computer Organization:</b> Functional components: Input/Output devices, Storage types, Memory Hierarchy.  <b>Types of Computers:</b> Micro, Mini, Mainframe, and Supercomputers.  <b>Networking Fundamentals:</b> Definition, Need for Networks,  <b>Types of Computer Networks :</b> LAN, WAN, MAN.  <b>Network Topologies:</b> Bus. Ring, Star, Mesh..  <b>Internet Basics:</b> History, IP Address, URL, WWW, Web browsers, E-mail.</p> <p><b>Activity:</b> Design a concept map showing the internal architecture of a computer and types of networks (LAN, WAN, MAN), including devices and topologies.</p> <p><b>Evaluation Method:</b> Checklist-based peer review and instructor validation:</p> <ul style="list-style-type: none"> <li>● Completeness of the map</li> <li>● Correctness of networking concepts</li> <li>● Use of appropriate terminology</li> <li>● Logical flow and structure of the map</li> </ul>
UNIT III	<p><b>Word Processing and Presentations</b>  <b>Word Processing Basics:</b> Definition, Using Microsoft Word / Google Docs. Templates for resumes, letters, reports.  <b>Basic text editing and formatting</b> - Typing and editing text, Font styles, sizes, colors, and effects, Paragraph alignment, indentation, and spacing, Bullets, numbering, and text highlighting, Templates for resumes, letters and reports.  <b>Working with Tables and Graphics</b> - Inserting and formatting tables, Adding images, shapes, icons, and SmartArt, Text wrapping and positioning graphics.  <b>Document Layout and Design</b> - Page setup, Headers, footers, and page numbering, Section breaks and columns, Applying themes and styles.  <b>Advanced Features</b> - Spell check and grammar tools, Thesaurus, and Mail merge.</p>

	<p><b>Presentation Tools:</b> Using PowerPoint/Google Slides – Creating, Saving and Opening presentations, Adding, deleting, and rearranging slides, Slide layouts and design themes, Using templates and master slides, Slide sorter and outline view, Applying transitions and Animations, Design and Layout.</p> <p><b>Applications:</b> Creating resumes, Reports, Brochures, and Presentations.</p> <p><b>Activity:</b> Prepare a formal report (e.g., project proposal) in a word processor and present it using a slide deck with transitions, embedded media, and design elements.</p> <p><b>Evaluation Method:</b> Performance-based evaluation using a 10-point scoring scale:</p> <ul style="list-style-type: none"> <li>● Formatting and structure of the document</li> <li>● Presentation aesthetics and clarity</li> <li>● Communication skills during presentation</li> </ul>
UNIT IV	<p><b>Spreadsheet Basics</b>  <b>Spreadsheet Concepts:</b> Understanding rows, columns, cells in tools like MS Excel/Google Sheets, Workbook, Worksheet, <b>Cell referencing-</b> Relative, Absolute, Mixed.</p> <p><b>Functions and Formulae:</b> Mathematical, Statistical, Logical, Text, Date and Time, Financial.</p> <p><b>Lookup and Reference :</b> VLOOKUP, HLOOKUP, XLOOKUP, INDEX, MATCH</p> <p><b>Visual representations:</b> Creating a chart, common chart types, Column Chart, Bar Chart, Line Chart, Pie Chart, Scatter Chart, Histogram.</p> <p><b>Data Handling:</b> Sorting data, Filtering data, Grouping Data</p> <p><b>Activity:</b> Analyze a dataset (e.g., student scores or sales data) using spreadsheet software. Apply formulas (SUM, AVERAGE, IF, VLOOKUP) and create relevant charts.</p> <p><b>Evaluation Method:</b> Practical test with a rubric:</p> <ul style="list-style-type: none"> <li>● Correct use of formulas</li> <li>● Accuracy of data summaries</li> </ul>
UNIT V	<p><b>Data Modelling</b>  <b>Data Analysis Tools:</b> Pivot Tables and Pivot Charts, Data Validation (Drop-downs, Input Messages, Error Alerts), <b>What-If Analysis:</b> Goal Seek, Scenario Manager, Data Tables</p> <p><b>Charts and Dashboards:</b> Creating Interactive Dashboards, Using slicers with Pivot Tables ,Combo Charts and Sparklines.</p> <p><b>Productivity Tips:</b> Using Named Ranges, Freeze Panes, Split View.</p> <p><b>Activity:</b> Prepare an interactive dashboard for a given data set using EXCEL.</p> <p><b>Evaluation Method:</b> Evaluation of the dashboard on a 10-point scoring scale:</p> <ul style="list-style-type: none"> <li>● Presentation aesthetics and clarity</li> <li>● Interactiveness</li> <li>● Communication skills during presentation</li> </ul>
<b>TEXT BOOKS</b>	
1.	Thareja, R. (Second Edition). <i>Fundamentals of Computers</i> . Oxford University Press.
2.	Rajaraman, V. (n.d.). <i>Fundamentals of Computers</i> . PHI Learning.
3.	Norton, P. (2017). <i>Introduction to Computers</i> (7th ed.). McGraw Hill Education.
4.	Nordell, R., Stewart, K., Easton, A., Graves, P. R., & Triad Interactive, Inc. (2022). <i>Microsoft Office 365: In Practice</i> (1st ed.). New York: McGraw Hill Education.

**REFERENCE BOOKS**

1. **Alexander, M., & Kusleika, R.** (2022). *Microsoft Excel 365 Bible* (2nd ed.). Wiley.
2. **Lowe, D.** (2021). *Networking All-in-One For Dummies* (8th ed.). Wiley.

**WEB RESOURCES**

1. **Microsoft Official Docs and Training:** <https://learn.microsoft.com>
2. **Google Workspace Learning Center:** <https://support.google.com/a/users/>

**CO-PO Mapping:**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO 1	PSO 2	PSO 3	PSO 4
CO1	2	2	0	0	1	0	0	0	0	0	0	1	0	0
CO2	2	2	1	0	2	1	0	0	0	0	0	1	0	0
CO3	2	3	2	1	2	1	0	1	0	0	0	1	1	1
CO4	3	2	1	1	2	1	0	2	0	0	0	1	1	1
CO5	3	3	2	1	2	1	1	2	1	0	0	1	1	0

**Model Blue print for the question paper setter**

S.No.	UNIT-	Essay 10M	Short 4 M	Weightage
1	I	2	2	20%
2	II	2	2	20%
3	III	2	2	20%
4	IV	2	2	20%
5	V	2	2	20%
		100	40	100%



Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.lkc@gmail.com](mailto:chittoor.w.lkc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



I B.COM. (Hons) Computer Applications

Semester-I

**Recommended Format of Question Paper for all Courses**

**Time: 3 Hours**

**Max. Marks: 70M**

**Section-A**

**Answer any FIVE of the following questions.**

**5x4=20M**

1. From Contents of Unit-I
2. From Contents of Unit-I
3. From Contents of Unit -II
4. From Contents of Unit -II
5. From Contents of Unit -III
6. From Contents of Unit -III
7. From Contents of Unit -IV
8. From Contents of Unit -IV
9. From Contents of Unit -V
10. From Contents of Unit -V

**Section-B**

**Answer FIVE questions.**

**5x10=50M**

11. A) From Contents of Unit-I

OR

B) From Contents of Unit-I

12. A) From Contents of Unit-II

OR

B) From Contents of Unit -II

13. A) From Contents of Unit -III

OR

B) From Contents of Unit -III

14. A) From Contents of Unit -IV

OR

B) From Contents of Unit -IV

15. A) From Contents of Unit -V

OR

B) From Contents of Unit -V

\*\*\*\*\*



Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.ikc@gmail.com](mailto:chittoor.w.ikc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



## Fundamentals of Information Technology & Office Automation

MODEL QUESTION PAPER (W.E.F 2025-2026)

Time: 2 ½ Hrs.

Max Marks: 70M

Q. No	Question	Marks	BL	CO	PO	PI
<b>SECTION – A</b>						
<b>Answer any Five of the Following</b>		<b>5 x 4 = 20M</b>				
1	Convert hexadecimal to decimal: (1E2)	4M	2	1		
2	Write down the steps to convert a decimal number to binary number with an example?	4M	1	1		
3	Explain about various kinds of computer memories.	4M	2	2		
4	Discuss about different types of Network Typologies.	4M	2	2		
5	Summarize different types of text formatting in MS-Word?	4M	2	3		
6	Explain about various Keyboard shortcuts in MS - Word?	4M	2	3		
7	Show the steps to insert rows and columns in MS-Excel?	4M	3	4		
8	Explain about different types of cell references in MS-Excel?	4M	2	4		
9	Define Data validation? Explain about Data validation using Drop-downs.	4M	1	5		
10	Explain about Combo Charts.	4M	4	5		

**SECTION – B**

<b>Answer All Questions</b>		<b>5 x 7 = 35 M</b>				
11	a). Explain the generations of computers and their characteristics.	10M		1		
	(OR)					
	b). Describe the characteristics and applications of computers. c). Explain the Block Diagram of a computer system in detail.	5M 5M		1		
12	a). Discuss about Input and Output devices in the computer.	10M		2		
	(OR)					
	b). Summarize different types of network topologies?	10M		2		
13	a). Illustrate the concept of Mail Merge in MS-Word?	10M		3		
	(OR)					
	c). What is MS Power Point? Explain about the creation of presentation using MS power Point.	10M		3		
14	a). Explain different types of Text functions in MS-Excel?	10M		4		
	(OR)					
	b). Explain different types of charts used in MS-Excel?	10M		4		
15	a). What is What-If Analysis? Explain about primary tools for What-If Analysis in Excel?	10M		5		
	(OR)					
	b). Write short notes on: a) Pivot Tables b) Pivot Charts	5M 5M		5		

\*\*\*\*\*



## Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.lkc@gmail.com](mailto:chittoor.w.lkc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



Course Code	Title of the Course	L	T	P	C
25BCA102P	Fundamentals of Information Technology & Office Automation			2	1
Prerequisites	Basic Computer Knowledge				

### List of Experiments:

- Using Word, write a letter to your higher official seeking 10-days leave.
- Prepare a formal invitation letter and use Mail Merge to personalize it for a list of recipients.
- Create a PowerPoint Presentation on the Role of AI in Business Decision-Making.
- Using a spreadsheet, prepare your class Time Table.
- Using a Spreadsheet, calculate the Gross and Net salary of employees (Min 5) considering all the allowances.
- Using IF, AND, OR, and IFERROR to Automate Grade Evaluation.
  - Create a table of student scores in different subjects.
  - Use IF to assign grades (A/B/C/Fail).
  - Use IFERROR to handle missing scores or invalid data.
- You are given the order details of a company in the below table.

Order Id	Product	Unit price	Quantity	Discount	Revenue	Tax (2% for each order)	Net Income
11250	A	8	10	0%	?	?	?
11251	B	20.8	1	0%	?	?	?
11252	C	7.7	16	25%	?	?	?
11253	D	15.6	50	0%	?	?	?
11254	E	39.4	15	25%	?	?	?
Total					?		?

- Calculate the revenue and tax on the revenue for each product.
  - Calculate the net income of each product.
  - Calculate the total revenue of all products.
  - Calculate the total net income of all products.
- The following are the details of Expenditure. Draw a Pie diagram with appropriate Formatting options, including Percentages and chart headings.

Product	Sales
Food	10000
Rent	5000
Clothing	1000
Fee	4000

9. The following are the marks obtained by the students of B. Com. In three subjects.

Roll. No.	Name	Accounts	IT	Economics
2001	Ramesh	65	85	75
2009	Mahesh	88	75	60
2004	Suresh	67	84	35
2002	Ravi	42	85	74
2007	Raju	88	89	90

1. Sort the above table on Roll. No.
2. Using Conditional formatting List out students who scored
  - a. Less than 55 in Accounts
  - b. More than 75 in IT
  - c. Between 60 and 75 in Economics.

10. Prepare Pivot Table for the given data:

Department	Employee Name	Salary
HR	Ramesh	20,000
Finance	Mahesh	18,500
IT	Suresh	17,500
HR	Ravi	13,000
Finance	Raju	15,000
IT	Balu	10,000

11. Employee Database Search Using VLOOKUP, HLOOKUP, XLOOKUP, INDEX, and MATCH

- Create a database of employees (Name, ID, Department, Salary).
- Implement VLOOKUP to search by employee ID.
- Use HLOOKUP to extract department heads by role.
- Apply XLOOKUP for more flexible searches.
- Use INDEX + MATCH as an alternative to VLOOKUP.

12. Sales Report Analysis Using Pivot Tables and Charts

- Use a dataset of product sales (Product, Region, Date, Quantity, Revenue).
- Create Pivot Tables to summarize data by region/product.
- Insert Pivot Charts for visual analysis (e.g., bar, line).
- Add slicers to make the dashboard interactive.

13. Designing a Data Entry Form with Drop-downs and Input Rules

- a. Create a student registration form.
- b. Add drop-down lists for course selection using Data Validation.
- c. Add input messages to guide users.
- d. Add error alerts for wrong entries.

14. Monthly Budget Planning using Goal Seek and Scenario Manager

- Create a simple personal budget (income, expenses, savings).
- Use Goal Seek to determine income needed to save a desired amount.
- Use Scenario Manager to compare different budgeting scenarios (best/ worst/ realistic case).
- Create a one-variable Data Table to analyze how different expenses affect savings.

15. Consider the monthly sales report

Month	Region	Product	Units Sold	Unit Price (₹)	Total Sales (₹)
Jan-25	North	Laptop	120	50,000	60,00,000
Jan-25	South	Tablet	80	30,000	24,00,000
Feb-25	North	Laptop	150	50,000	75,00,000
Feb-25	South	Tablet	90	30,000	27,00,000
Mar-25	North	Laptop	100	50,000	50,00,000
Mar-25	South	Tablet	110	30,000	33,00,000

- Create PivotTables
- Add Slicers
- Create Combo Chart
- Insert Sparklines
- Assemble Dashboard

# **SEMESTER-II**



## Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.ikc@gmail.com](mailto:chittoor.w.ikc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



Curriculum 2025-26

Version: 1.0

Course Code	Title of the Course	L	T	P	C
25BCA204T	E-COMMERCE AND WEB APPLICATION DEVELOPMENT		3		3
Prerequisites	E-commerce Workflows and Basic Design Principles				

### COURSE OBJECTIVES

1	Understand the evolution, types, and models of e-commerce, including technical, legal, and ethical frameworks. Explore web design technologies and content management systems relevant to e-commerce platforms.
2	Apply online marketing principles, SEO techniques, and e-payment systems with attention to logistics and risk management.
3	Design interactive and responsive websites using HTML5, CSS3, and client-side scripting with JavaScript.
4	Develop and customize CMS - based interfaces using the Bootstrap framework and responsive design principles.

### COURSE OUTCOMES

COURSE OUTCOMES		BTL
<b>Upon successful completion of the course, the student will be able to:</b>		
CO1	Describe e-commerce models, revenue strategies, and legal considerations including cyber laws and data privacy.	Understanding
CO2	Implement basic web structures using HTML5 and apply web design principles suitable for digital commerce.	Applying
CO3	Implement various style dynamic websites using CSS for layout, animation, and visual enhancements.	Applying
CO4	Construct client-side scripts using JavaScript to enable interactivity, form validation, and event handling.	Applying
CO5	Prepare responsive e-commerce front-ends using the Bootstrap framework, incorporating reusable UI components and custom styling.	Applying

# SYLLABUS

COURSE	CONTENT
UNIT I	<p><b>Introduction to E-Commerce:</b> Definition, scope, and evolution, Benefits and limitations;</p> <p><b>Types of E-Commerce:</b> B2B, B2C, C2C, C2B, G2C models;</p> <p><b>Payment gateways and digital wallets Legal and Ethical Issues:</b> Cyber laws and data privacy, Intellectual property, taxation, and security.</p> <p><b>Case study: Study of successful e-businesses</b></p>
	<p><b>Activity 1: Case Study – Amazon’s</b></p> <p><b>Growth Story Scenario:</b> Students analyze how Amazon evolved from an online bookstore to a global e-commerce leader.</p> <p><b>Task:</b> Identify Amazon’s e-commerce model (B2C) and revenue models, List benefits and limitations faced during its evolution. Expected Outcome: Students will understand the evolution of e-commerce and business models.</p> <p><b>Evaluation:</b> Accuracy of model identification, Depth of analysis, Quality of presentation.</p> <p><b>Activity 2: Case Study – Paytm and Digital Payments in India</b></p> <p><b>Scenario:</b> Examine Paytm’s role in enabling digital wallets and online transactions in India. <b>Task:</b> Explain how Paytm works as a payment gateway, Discuss challenges faced related to cyber laws, taxation, and data privacy.</p> <p><b>Expected Outcome:</b> Students will relate theory with Indian e-payment ecosystems.</p> <p><b>Evaluation:</b> Correct explanation of payment gateway functions, Identification of legal/ethical issues.</p>
	<p><b>Technology in E-Commerce:</b></p> <p><b>Online Marketing &amp; SEO:</b> Digital marketing channels, Search engine optimization basics.;</p> <p><b>Digital Payment Systems:</b> Credit/Debit Cards, Net Banking, Mobile Wallets, UPI, Electronic Fund Transfer (EFT) , Payment Gateways – Blockchain and Cryptocurrencies, Artificial Intelligence and E-Commerce, Future of E-Commerce;</p> <p><b>Web Designing:</b></p> <p>Web designing Principles, Introduction to HTML5, HTML Document Structure, Formatting Elements (text and block formatting), Lists, Images, Links and Navigation (External and internal links), Tables.</p>
	<p><b>Activity 1: Case Study – Shopify</b></p> <p><b>Websites Scenario:</b> Students explore Shopify-based small business sites.</p> <p><b>Task:</b> Analyze features of a Shopify store (design, responsiveness, content), Suggest 3 improvements for better customer experience.</p> <p><b>Expected Outcome:</b></p> <p>Students will understand CMS tools and good design practices.</p> <p><b>Evaluation:</b> Relevance of suggested improvements, Clarity of analysis.</p>
UNIT II	<p><b>Cascading Style Sheets</b></p> <p><b>CSS Basics:</b> CSS Rule, Applying CSS Rules (Selectors), Embedding CSS code in HTML page Inline, internal, external style sheets; CSS Properties: Font, Color, Types of CSS Color values, Background, CSS Box Model, Display properties, Styling Pseudo Elements, Positioning properties, Layering, Styling Lists and tables. CSS Animations: Filters, Transition and transform properties, Navigation Bars, CSS CANVAS.</p>
	<p><b>Activity 1: Case Study – Homepage Redesign (FLIPKART)</b></p>

**UNIT III**

**Scenario:** Flipkart wants to revamp its homepage with modern CSS techniques.  
**Task:** Suggest CSS improvements (color scheme, box model usage), Implement one of these changes in a sample HTML page.  
**Expected Outcome:** Students will apply CSS properties for real-world UI improvement.  
**Evaluation:** Creativity of suggestions, Correctness of CSS code.

**Activity 2: Case Study – Netflix Interface Styling**

**Scenario:** Analyze Netflix’s web interface for user experience.  
**Task:** Identify 5 CSS techniques used (hover effects, transitions, grids). Replicate one effect in a simple web page.  
**Expected Outcome:** Students will recognize modern CSS practices.  
**Evaluation:** Correct identification of techniques, Working replication of an effect.

**Client-Side Scripting using JAVA SCRIPT**

**Javascript Basics:** Datatypes, Variables, Operators, Control Statements, Functions; Builtin Objects: Arrays, String, Date, Window, Document, Reg Ex;  
**Document Object Modelling:** Introduction to DOM, Form Validation using Java Script,  
**Event Handling:** Mouse events, form submission events, load and unload events, keyboard events – focus and blur events.

**UNIT IV**

**Case Study 1: Form Validation in IRCTC Booking Portal**  
**Scenario:** IRCTC uses JavaScript to validate passenger details (e.g., correct email format, age range, date picker) before allowing ticket booking.  
**Activity:** Study how form validation prevents incorrect inputs during online train booking, Implement a simple form (name, email, age, travel date) and add JavaScript validation for each field.  
**Outcome:** Students will be able to write JavaScript for real-world form validation. **Evaluation:** Accuracy of validation logic, Correct handling of invalid inputs, Code structure and usability.

**Case Study 2: Client-Side Cart Updates in BigBasket**

**Scenario:** BigBasket updates cart totals instantly when the user changes product quantity without reloading the page.  
**Activity:** Discuss how JavaScript DOM manipulation is used for updating totals. Create a simple product list with quantities and update total cost dynamically using JavaScript.  
**Outcome:** Students will understand how JavaScript modifies the DOM in real-time. **Evaluation:** Functionality of dynamic updates, Correctness of calculations, Neat interface

**UNIT V**

**Responsive Webdesign:** Grid System, Breakpoints, Containers, Utilities;  
**Introduction to BOOT STRAP FRAME WORK:** Benefits, Setup Bootstrap Project; Bootstrap Components: Navigation, Creating navigation bars (.navbar), Dropdowns, and Responsive togglers. Buttons- Styling buttons with various classes for size, color, and state. Forms-Styling form elements like inputs, labels, and client side validation.

**Alerts:** Displaying informative messages; Customization: Overriding Bootstrap's default styles using custom CSS

**Activity 1: Case Study: Responsive Website for a Start-up**

**Scenario:** A local bakery wants a responsive site using Bootstrap.  
**Task:** Design a layout using Bootstrap grid, navbar, and carousel, Ensure the design adjusts for mobile and desktop.

**Expected Outcome:** Students will learn to create responsive layouts.  
**Evaluation:** Correct application of Bootstrap components, Responsiveness.  
**Activity 2:**  
**Case Study:** Zomato UI Components  
**Scenario:** Study Zomato’s website UI elements.  
**Task:** Identify Bootstrap-like components (cards, modals, navigation), Recreate one of these components using Bootstrap in a sample page.  
**Expected Outcome:** Students will apply Bootstrap UI concepts.  
**Evaluation:** Correct recreation of components, Visual similarity and functionality.

**TEXT BOOKS**

- Whiteley, D., 2000. *E-commerce: Strategy, technologies and applications*. McGraw-Hill Education.
- Turban, Efraim, David King, Jae Kyu Lee, Ting-Peng Liang, and Deborrah Turban. *Electronic Commerce: Concepts, Models, Strategies*. Pearson Education, 2002.
- Robbins, Jennifer Niederst. *Learning Web Design: A Beginner’s Guide to HTML, CSS, JavaScript, and Web Graphics*. 5th ed., O’Reilly Media, 2018.

**REFERENCE BOOKS**

- Diwan, Amit. *Ultimate Bootstrap for Responsive Web Design*. Orange Education Pvt. Ltd., 2024. ISBN: 9789348107251.
- Hussain, Frahaan, and Kameron Hussain. *Mastering Bootstrap 5: From Basics to Expert Projects*. Sonar Publishing, 2023. ISBN: B0CPW9PRVT.

**E - RESOURCES**

- NPTEL / SWAYAM Online Lectures ::Course: E-Business (NPTEL)**
- [https://www.tutorialspoint.com/e\\_commerce/index.htm](https://www.tutorialspoint.com/e_commerce/index.htm)
- <https://www.w3schools.com/bootstrap5/>
- <https://www.w3schools.com/> (HTML-CSS- JAVASCRIPT)

**CO-PO Mapping:**

	PO1	PO2	PO3	PO 4	PO 5	PO 6	PO 7	PO 8	PO9	PO10	PSO 1	PSO 2	PSO 3	PSO 4
CO1	1	1	1	2	1	1	1	1	1	0	1	1	0	2
CO2	2	1	1	2	1	1	2	1	1	0	2	1	1	1
CO3	2	1	0	3	2	2	3	2	1	1	3	2	2	1
CO4	2	1	0	3	2	2	3	2	1	1	3	3	2	1
CO5	2	2	0	3	2	2	3	2	1	2	3	3	2	1

**Model Blue print for the question paper setter**

S.No.	UNIT-	Essay 10M	Short 4 M	Weightage
1	I	2	2	20%
2	II	2	2	20%
3	III	2	2	20%
4	IV	2	2	20%
5	V	2	2	20%
		100	40	100%



Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.jkc@gmail.com](mailto:chittoor.w.jkc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



I B.COM. (Hons) Computer Applications

Semester-II

**Recommended Format of Question Paper for all Courses**

Time: 3 Hours

Max. Marks: 70M

**Section-A**

Answer any FIVE of the following questions.

5x4=20M

1. From Contents of Unit-I
2. From Contents of Unit-I
3. From Contents of Unit -II
4. From Contents of Unit -II
5. From Contents of Unit -III
6. From Contents of Unit -III
7. From Contents of Unit -IV
8. From Contents of Unit -IV
9. From Contents of Unit -V
10. From Contents of Unit -V

**Section-B**

Answer FIVE questions.

5x10=50M

11. A) From Contents of Unit-I

OR

B) From Contents of Unit-I

12. A) From Contents of Unit-II

OR

B) From Contents of Unit -II

13. A) From Contents of Unit -III

OR

B) From Contents of Unit -III

14. A) From Contents of Unit -IV

OR

B) From Contents of Unit -IV

15. A) From Contents of Unit -V

OR

C) From Contents of Unit -V

\*\*\*\*\*



Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.ikc@gmail.com](mailto:chittoor.w.ikc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



## E-COMMERCE AND WEB APPLICATION DEVELOPMENT

MODEL QUESTION PAPER (W.E.F 2025-2026)

Time: 2 ½ Hrs.

Max Marks: 70M

Q. No	Question	Marks	BL	CO	PO	PI
<b>SECTION – A</b>						
<b>Answer any Five of the Following</b>		<b>5 x 4 = 20M</b>				
1	Define E-Commerce?	4M	2	1		
2	What is an Online payment gateway?	4M	1	1		
3	Mention any two advantages of E-Commerce.	4M	1	2		
4	Write any two security issues in E-Commerce.	4M	1	2		
5	Explain the structure of CSS?	4M	2	3		
6	Explain the DNS?	4M	2	3		
7	Show any two types of E-Commerce models..	4M	3	4		
8	Explain the key features of Bootstrap?	4M	2	4		
9	Classify client-server architecture?	4M	2	5		
10	Discuss the benefits of using a CMS?	4M	2	5		

**SECTION – B**

Answer All Questions		5 x 7 = 35 M				
11	a). Explain in detail the infrastructure requirements for E-Commerce.	10M	2	1		
	(OR)					
	b). Demonstrate the different types of E-Commerce (B2B, B2C, C2C, C2B).	10M	2	1		
12	a). Describe the advantages and limitations of E-Commerce.	10 M	2	2		
	(OR)					
	b). Discuss the security threats and preventive measures in E-Commerce transactions.	10M	2	2		
13	a). Classify the various types of CSS with suitable examples.	5M	3	3		
	b). Explain the CSS properties with suitable examples.	5M	2	3		
	(OR)					
	c). Describe the detailed notes on HTML, CSS, and JavaScript with syntax and examples.	10M	2	3		
14	a). Explain the control statements in JavaScript with suitable examples?	10M	2	4		
	(OR)					
	b). What are the different types of nodes in the DOM?	10M	1	4		
15	a). Define Bootstrap? Explain the components of Bootstrap?	10M	1	5		
	(OR)					
	b). Extend CMS? Explain the various types of CMS?	10M	2	5		

\*\*\*\*\*



Smt. NPS Govt. College for Women, Chittoor

[www.npsgcwctr.edu.in](http://www.npsgcwctr.edu.in)

Email: [chittoor.w.lkc@gmail.com](mailto:chittoor.w.lkc@gmail.com)

Accredited by NAAC with A Grade

(ISO 9001:2015 Certified Institution)



Course Code	Title of the Course	L	T	P	C
25BCA204P	E-COMMERCE AND WEB APPLICATION DEVELOPMENT			2	1
Prerequisites	E-commerce Workflows and Basic Design Principles				

#### List of Experiments

1. Create a simple HTML page with: Headings, paragraphs, bold/italic text
2. Create Grocery Lists for an E-commerce Website (OL: Top 5 fruits in demand, UL: 5 vegetables, DL: Terms – Fruits, Vegetables, Beverages (with definitions))
3. Create a static product gallery page that displays 4 product images in a grid layout (using HTML tables)
4. Demonstrate Layout Design Using CSS Box Model.
5. Demonstrate linking an external CSS file to style a multi-page college website.
6. Create webpages demonstrating the usage of CSS Animations and transitions and transforms on images and text
7. Write a script to take two numbers as input and display their sum, difference, and product using a function.
8. Create a webpage that changes background color when a button is clicked and displays an alert when the page is loaded.
9. Create a web page with a list and buttons to Add, Remove, and Highlight list items dynamically using JavaScript DOM methods.
10. Write a JavaScript program that greets the user with "Good Morning", "Good Afternoon", or "Good Evening" based on the current system time.