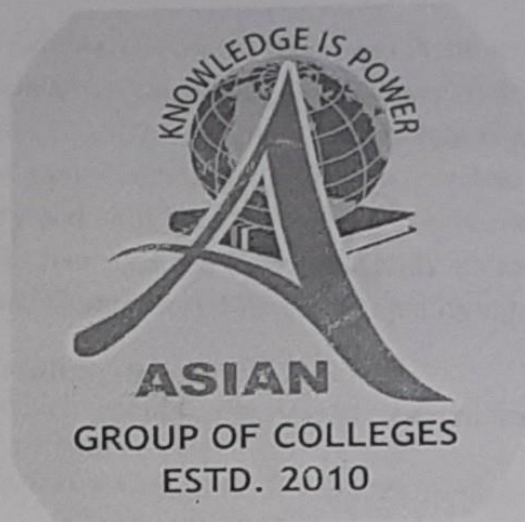


**ASIAN EDUCATIONAL INSTITUTE, PATIALA**

**(An Autonomous Body)**

**School of Computer Science**



**SCHEME OF EXAMINATION FOR UNDER-GRADUATE PROGRAMME**

**BACHELOR IN COMPUTER APPLICATIONS (BCA)  
(Programme Code BCA3AS)**

**CHOICE BASED CREDIT SYSTEM (CBCS)**

**(SEMESTER 1<sup>st</sup> AND 2<sup>nd</sup>)**

**SESSION 2024 -2025**

## ORDINANCES FOR BACHELOR IN COMPUTER APPLICATIONS

1) B.C.A is an integrated course spread over three years. Each year will consist of two semesters. The course of study shall be divided into 6 semesters and final examination will be held at the end of every semester in the month of NOV/DEC (for Semester I, III, V) & April/MAY (for Semester II, IV, VI).

2) The school of Computer Science of Asian Educational Institute Patiala (AN AUTONOMOUS COLLEGE) has started Bachelor in Computer Applications (BCA) from the session 2010. The College has from this session (2024-25) adopted **Choice based credit system** which has been introduced by University Grant Commission. This is a broad based programme covering disciplinary, interdisciplinary and skill based subjects. The Bachelor In Computer Application includes consisting categories namely Core Courses, Ability Enhancement Compulsory Course, Skill Enhancement Course and Compulsory Non Credit Qualifying Course.

### **Outline of Choice Based Credit System:**

**Core Course:** A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.

**Ability Enhancement Compulsory Courses:** - It includes English and Punjabi Communication.

**Skill Enhancement Courses:** - These courses are designed to provide skill based knowledge to students.

**Practical / Tutorials:-**The practical/ tutorials will be conducted keeping in view the spirit of UGC guidelines as per needs and requirements of concerned subjects.

**Project work/Dissertation:** is considered as a special course involving application of knowledge in solving / analyzing /exploring a real life situation / difficult problem.

3) *The students will be awarded:*

- *Certificate, after completion of One year.*
- *Diploma after completion of two years.*
- *A degree will be awarded after successfully completion of 3Years.*

4) **Eligibility Condition:-** The student who has passed the +2 examination from a statutory University/Board or any other examination equivalent thereto in any stream and has not been detained/declared fail or who has not been placed in the UMC category in the eligibility class and whose work and conduct have been declared to be satisfactory will be eligible for the admission.

5) **Evaluation:-**The learners' progress is measured through the means of continuous evaluation and end semester examinations.

### Internal Assessment (30)

Internal Assessment Component	Marks
Mid semester test (Best of Two)	12
Assignment/ Quiz/ Presentation/ Co curriculum Activities/ Class Test	12
Attendance/Class Participation	6
Attendance 65% to 70% = 1 70 % to 75% =2 75% to 80% =3 80% to 85% =4 Above 85% = 5	Out of 6
<b>Total</b>	<b>30</b>

#### Semester End Examination:

Semester end examination is the major component of the evaluation system and carries seventy percent weightage in the final result. The College will conduct end semester examination twice a year. The rules of examination as decided by College examination cell will be applicable.

- 6) The medium of instructions and examination will be English or Punjabi.
- 7) The students would be required to undergo training of four to six weeks after the completion of fourth semester & industrial training project in sixth semester.
- 8) A candidate must complete and pass the whole course of three years within a maximum of *seven years* from the date of admission in B.B.A. first semester.
- 9) Every candidate will be required to attend a minimum of 75% lectures delivered to that class in each paper as well as 75% of the laboratory work, seminars etc.
- 10) Has his name submitted to Controller Examinations by the head/principal of having attended not less than 75% of the total number of lectures delivered in each paper/ subject and 75% of the periods held in practical/lab work in each paper / subject during the Academic semester. The deficiency in the number of lectures can be condoned for special reasons subject to ordinance framed by the subject condonation committee.
- 11) To qualify for admission to the 2nd year of the course, the candidate must have passed 50% of the total papers of the two semesters of the 1st year. Similarly, to qualify for admission to the 3rd year of the course, the candidate should have passed 50% of the total papers of four semesters of the earlier two years.

12) The minimum number of marks required to pass each semester examination will be 35% in each paper of the semester examination. Provided that in papers with practical, the percentage shall be required separately in written and practical/lab work.

13) In assessing the performance of the students in examinations, the usual approach is to award marks based on the examinations conducted at various stages (mid semester tests and final examination) in a semester. To convert these marks to letter grades, an absolute grading system is being used to award the grades as per rules of the examination branch.

**Grades and Grade Points**

Letter Grade	Grade Point
O (Outstanding)	10
A+(Excellent)	9
A.(Very Good)	8
B+(Good)	7
B(Above Average)	6
C(Average)	5
P (Pass)	4
F(Fail)	0
Ab (Absent)	0

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

**(14) Division and Position:** Division shall be awarded in the following manner to the candidates on the basis of their respective CGPA:

CGPA	Division & Position
CGPA 7.5 or more	1st Division with Distinction
CGPA 6.0 or more but less than 7.5	1st Division
CGPA 5.0 or more but less than 6.0	2nd Division
CGPA 3.5 or more but less than 5.0	3rd Division
Otherwise	Fail

**Equivalence:** Percentage (P) equivalent to CGPA earned by a candidate may be calculated using the following formula:  $P = CGPA \times 10$

*Asingh*

*22/11/20*

*M.S. Chauhan*

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## **PROGRAM OUTCOMES (POs)**

- 1. Basic knowledge:** An ability to apply knowledge of basic mathematics, science and domain knowledge to solve the computational problems.
- 2. Discipline knowledge:** An ability to apply discipline-specific knowledge to solve core and/or applied computational problems.
- 3. Experiments and practice:** An ability to plan and perform experiments and practices and to use the results to solve computational problems.
- 4. Tools Usage:** Apply appropriate technologies and tools with an understanding of limitations.
- 5. Profession and society:** Demonstrate knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional practice.
- 6. Environment and sustainability:** Understand the impact of the computational solutions in societal and environmental contexts, and demonstrate the knowledge and need for sustainable development.
- 7. Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the professional practice.
- 8. Individual and team work:** Function effectively as an individual, and as a member or leader in diverse/multidisciplinary teams.
- 9. Communication:** An ability to communicate effectively.
- 10. Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the context of technological changes.

**SYLLABI, OULINES OF PAPERS AND TESTS**

**BCA Semester-I  
(Programme Code BCA3AS)  
(Session 2024-25)**

Code	Title of Paper	Credit	Hours per week	External Exam. Marks	Int. Ass. Marks	Max Marks	Time Total Allowed
BCA101T	General English - 1	4	4	70	30	100	3
BCA102T	Punjabi (Compulsory) -I or Punjabi Compulsory - I (MudlaGyan)** or PHC**	4	4	70	30	100	3
BCA103T	Fundamentals of Computer Science	2	2	70	30	100	3
BCA104T	Problem Solving using Computers	4	4	70	30	100	3
BCA105L	Software Lab -I (Operating System and Office Automation)	4	8	70	30	100	3
BCA106L	Software Lab - II (Based on paper BCA104T)	2	4	70	30	100	3
BEVS101	Environment and Road Safety Awareness (Value added course)	2	2	35	15	50	1.30
	<b>Total</b>	<b>22</b>		<b>455</b>	<b>195</b>	<b>650</b>	

**Note:**

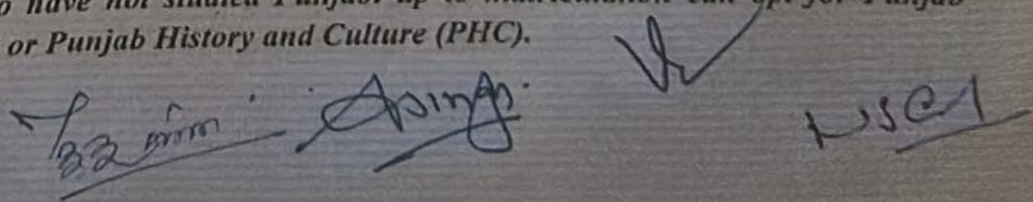
1. The break up of marks for the internal assessment for Theory/Practical except BCA101T will be as under:

- i. Two tests out of which one best will be considered for assessment. 20 Marks
- ii. Attendance 5 Marks
- iii. Class participation and behaviour 5 Marks

2. The break up of marks for the internal assessment for BCA101T: English Communication Skills - I will be as under:

- i. Formal assessment through Interview/Self Introduction/Recitation etc. 15 Marks
- ii. Conversation Skills (particularly listening and speaking to be evaluated through oral examination) 5Marks
- iii. Attendance 5 Marks
- iv. Class participation and behaviour 5 Marks

**\*\* Only those students who have not studied Punjabi up to matriculation can opt for Punjab Compulsory-I (MudlaGyan) or Punjab History and Culture (PHC).**



**B.C.A Part - 1 (Semester I)**  
**BCA101T General English - 1**  
**Session 2024-25**

Time: 3 Hours

Total Marks: 100

Credits: 04

Pass Marks: 35%

External Examination: 70 marks

Internal Assessment: 30 marks

**INSTRUCTIONS FOR THE PAPER -SETTER**

The question paper shall consist of three Units. Unit-I shall be of 24 marks; Unit-II shall be of 24 marks; and Unit-III shall carry 22 marks and shall contain questions from the preceding Units, thus covering the entire syllabus.

**COURSE CONTENT**

**(UNIT 1) Composition and Writing Skills.** Orient Black Swan, 2016.

1. Section One: Composition
  - Paragraph Writing
  - Developing a story.
  - Letter writing (Personal (or Informal))
2. Section Two: Vocabulary
  - Basic Vocabulary- List A(Pages 149-152)

**(UNIT II)** The following texts are prescribed:

**Interchange, 5<sup>th</sup> Edition** (with digital pack) vol. 1. Cambridge University Press. 2021 (Units 1-8):

1. Unit-1 Where are you from?
2. Unit-2 What do you do?
3. Unit-3 How much are these?
4. Unit-4 Do you play the guitar?
5. Unit-5 What an interesting family!
6. Unit-6 How often do you run?
7. Unit-7 We went dancing!
8. Unit-8 How's the neighbourhood?

**English Grammar in Use 5<sup>th</sup> Edition** by Raymond Murphy. Cambridge University Press. 2019.

The following units are to be studied:

Units 1-37, 69-81 and Appendices 1to .4 Additional exercises from the book that are relevant to the prescribed Units.

N. S. D. S.  
27-07-24

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## TESTING

### UNIT-I

1. There will be one lengthy question with internal choice on paragraph writing or developing a story based on themes like introducing oneself/someone, describing daily schedules, making invitations and excuses, talking about abilities and describing past experiences etc. The answer should be in about 350-400 words. **12 marks**
2. This question will carry an internal alternative and will be based on Personal or (Informal) letter writing **12 marks**

### UNIT-II

3. This question will carry twelve incomplete sentences to be set from prescribed units of English Grammar in Use. The students will complete the given sentences. Each shall carry one mark. **12 marks**
4. This question will pertain to answering questions based on a passage set from prescribed units of Interchange. Each question shall carry one mark. **7 marks**
5. This question will carry seven incorrect sentences. The students will find error/s and write the correct sentence. The student can attempt any five. **5 marks**

### UNIT-III

6. Read the situation and complete the conversation. The conversation will carry net incomplete sentences that can be set from one of the prescribed texts. **10 marks**
7. The students will use given twelve words to make sentences that shall be set from the Basic Vocabulary-List A from Composition and Writing Skills. Each sentence shall carry 1 mark. **12 marks**

Vinod Kumar  
27-07-21





ਸਮੇਸਟਰ ਪਹਿਲਾ

ਕੁਲ ਅੰਕ : 100

ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ : 30 ਅੰਕ

ਬਾਹਰੀ ਪਰੀਖਿਆ: 70 ਅੰਕ

ਸਮਾਂ : 3 ਘੰਟੇ

ਵਿਸ਼ੇ ਵਿੱਚੋਂ ਪਾਸ ਹੋਣ ਲਈ ਅੰਕ : 35

ਅਧਿਆਪਨ: 06 ਪੀਰੀਅਡ ਪ੍ਰਤੀ ਹਫ਼ਤਾ

ਕੁੱਲ 04 ਕ੍ਰੈਡਿਟ

ਸਿਲੇਬਸ ਤੇ ਪਾਠ ਪੁਸਤਕਾਂ:

- ਭਾਗ-ਓ: ਬੱਤਖ : ਖੰਡਾ ਜਿਹੇ ਸਫੈਦ ਦਿਨ (ਨਾਵਲਿਟ)-ਪ੍ਰਗਟ ਸਿੰਘ ਸਿੰਧੂ 12×12 = 24 ਅੰਕ
- ਭਾਗ-ਅ : (1) ਨਿਬੰਧ-ਰਚਨਾ : ਮਨੁੱਖੀ ਜੀਵਨ ਵਿਚ ਕੰਪਿਊਟਰ, ਤਕਨਾਲੋਜੀ, ਵਪਾਰਕ ਪ੍ਰਬੰਧ ਤੇ ਸਰਗਰਮੀ ਦੇ ਮਹੱਤਵ ਅਤੇ ਭੂਮਿਕਾ ਬਾਰੇ ਨਾਲ ਸਬੰਧਤ ਨਿਬੰਧ ਲਿਖਣ ਲਈ ਕਿਹਾ ਜਾਵੇਗਾ। 12 ਅੰਕ
- ਭਾਗ ਅ (2): ਕੰਪਿਊਟਰ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ: (i) ਕੰਪਿਊਟਰ ਅਤੇ ਇੰਟਰਨੈੱਟ ਨਾਲ ਸੰਬੰਧਿਤ ਤਕਨੀਕੀ ਸ਼ਬਦਾਵਲੀ (100 ਸ਼ਬਦ): ਅੰਗਰੇਜ਼ੀ ਸ਼ਬਦਾਂ ਦਾ ਪੰਜਾਬੀ ਅਨੁਵਾਦ ਅਤੇ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ। 06 ਅੰਕ
- (ii) ਪੰਜਾਬੀ ਵਿਚ ਕੰਪਿਊਟਰ ਦੀ ਵਰਤੋਂ ਦੀਆਂ ਸਮੱਸਿਆਵਾਂ ਅਤੇ ਸੰਭਾਵਨਾਵਾਂ: ਗੁਰਮੁਖੀ ਕੀ-ਬੋਰਡ; ਫੋਨੇਟਿਕ, ਰਮਿੰਗਟਨ, ਇਨਸਕ੍ਰਿਪਟ, ਪੰਜਾਬੀ ਅੱਖਰਕਾਰੀ ਦੀ ਇਕਸਾਰਤਾ ਅਤੇ ਫੌਂਟ ਕਨਵਰਟਰ ਦੀਆਂ ਸਮੱਸਿਆਵਾਂ, ਯੂਨੀਕੋਡ ਫੌਂਟ ਪ੍ਰਣਾਲੀ, ਅੱਖਰ ਸੌਫਟਵੇਅਰ ਦਾ ਸਰੂਪ ਅਤੇ ਵਰਤੋਂ 06 ਅੰਕ
- ਭਾਗ-ੲ: ਪਾਠਕ੍ਰਮ ਦੇ ਭਾਗ-ਓ ਅਤੇ ਭਾਗ-ਅ ਦੇ ਆਧਾਰ 'ਤੇ ਸੰਖੇਪ ਉਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ। 22 ਅੰਕ
- ਅੰਕ-ਵੰਡ ਅਤੇ ਪੇਪਰ ਸੈਂਟਰ ਲਈ ਹਦਾਇਤਾਂ**
1. ਪਾਠਕ੍ਰਮ ਦੇ ਦੋ ਭਾਗ ਓ ਅਤੇ ਅ ਹਨ ਪਰ ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਨੂੰ ਤਿੰਨ ਭਾਗਾਂ ਓ, ਅ ਅਤੇ ੲ ਵਿੱਚ ਵੰਡਿਆ ਜਾਵੇਗਾ।
3. ਭਾਗ ਓ ਵਿੱਚੋਂ: (i) ਨਾਵਲਿਟ ਦਾ ਵਿਸ਼ਾ/ਸਾਰ ਜਾਂ ਨਾਵਲਿਟ ਬਾਰੇ ਪਾਠਕੀ ਪ੍ਰਭਾਵ (ਤਿੰਨ ਵਿੱਚੋਂ ਇੱਕ) 12 ਅੰਕ
- (ii) ਨਾਵਲਿਟ ਦੇ ਪਾਤਰਾਂ ਨਾਲ ਜਾਣ-ਪਛਾਣ। (ਚਾਰ ਵਿੱਚੋਂ ਦੋ) 2 x 6 = 12 ਅੰਕ
4. ਭਾਗ ਅ-1: ਨਿਬੰਧ ਰਚਨਾ ਵਿਚ ਤਿੰਨ ਵਿਸ਼ੇ ਦੇ ਕੇ ਕਿਸੇ ਇਕ ਵਿਸ਼ੇ 'ਤੇ ਨਿਬੰਧ ਲਿਖਣ ਲਈ ਕਿਹਾ ਜਾਵੇਗਾ। 12 ਅੰਕ
5. ਭਾਗ ਅ-2 (i) ਵਿੱਚੋਂ ਅੰਗਰੇਜ਼ੀ ਦੇ 10 ਸ਼ਬਦਾਂ ਦੇ ਕੇ ਉਨ੍ਹਾਂ ਵਿੱਚੋਂ 6 ਸ਼ਬਦਾਂ ਦਾ ਪੰਜਾਬੀ ਅਨੁਵਾਦ ਕਰਕੇ ਉਨ੍ਹਾਂ ਦੀ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ ਲਈ ਕਿਹਾ ਜਾਵੇਗਾ। 06 ਅੰਕ
6. ਅ-2 (ii) ਵਿੱਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ ਅਤੇ ਵਿਦਿਆਰਥੀ ਨੇ ਦੋਵਾਂ ਵਿੱਚੋਂ ਇੱਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ ਹੋਵੇ 06 ਅੰਕ
7. ਭਾਗ-ੲ: ਭਾਗ ਓ ਅਤੇ ਅ ਵਿੱਚੋਂ ਸੰਖੇਪ ਉਤਰਾਂ ਵਾਲੇ 11 (ਨਾਵਲ ਵਿੱਚੋਂ 6 ਤੇ ਕੰਪਿਊਟਰ ਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿੱਚੋਂ 5) ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ। ਵਿਦਿਆਰਥੀ ਸਭ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਵੇਗਾ। ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 2 ਅੰਕ ਹੋਣਗੇ। 2X11=22 ਅੰਕ
- ਨੋਟ: ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ ਦੇ ਅੰਕਾਂ ਵਿੱਚੋਂ ਅਸਾਈਨਮੈਂਟ ਦੇ ਕਾਰਜ ਲਈ ਪੰਜਾਬੀ ਵਿਚ ਕੰਪਿਊਟਰ ਅਤੇ ਇੰਟਰਨੈੱਟ ਨਾਲ ਸੰਬੰਧਿਤ ਅਖਬਾਰੀ ਲੇਖਾਂ, ਮਿਡਲਾਂ ਅਤੇ ਬਲੋਗ-ਰਚਨਾਵਾਂ ਦੀ 20-25 ਪੰਨਿਆਂ ਦੀ ਸਕਰੈਪ ਬੁੱਕ ਤਿਆਰ ਕਰਵਾਈ ਜਾਵੇਗੀ। ਉਸ ਦੇ ਆਧਾਰ 'ਤੇ ਅਸਾਈਨਮੈਂਟ ਦੇ ਅੰਕ ਲਗਾਏ ਜਾਣਗੇ। ਮੌਲਿਕ ਲੇਖਣੀ ਨੂੰ ਤਰਜੀਹ ਦਿੱਤੀ ਜਾਵੇ।

ਕੰਪਿਊਟਰ ਤੇ ਇੰਟਰਨੈੱਟ ਨਾਲ ਸੰਬੰਧਿਤ ਤਕਨੀਕੀ ਸ਼ਬਦਾਵਲੀ:

1. Abort: (ਐਬੋਰਟ) ਵਿਫਲ ਹੋਣਾ
2. Access (ਐਕਸੈੱਸ) ਰਸਾਈ, ਪਹੁੰਚ
3. Accuracy (ਅਕੂਰੇਸੀ) ਸੁੱਧਤਾ
4. Account (ਅਕਾਊਂਟ) ਖਾਤਾ
5. Activation (ਐਕਟੀਵੇਸ਼ਨ) ਕ੍ਰਿਆਸ਼ੀਲਨ
6. Add file (ਐਡ ਫਾਈਲ) ਮਿਸਲ ਜੋੜੋ
7. Address (ਐਡਰੈਸ) ਸਿਰਨਾਵਾਂ
8. Administrator (ਐਡਮਿਨਿਸਟ੍ਰੇਟਰ) ਪ੍ਰਸ਼ਾਸਕ
9. Alphanumeric (ਐਲਫਾਨਿਊਮੈਰਿਕ) ਅੱਖਰ-ਅੰਕੀ
10. Alphabetic code: (ਐਲਫਾਬੈਟਿਕ ਕੋਡ) ਅੱਖਰੀ ਸੰਕੇਤ
11. Alignment (ਅਲਾਈਨਮੈਂਟ) ਸੇਧਬੰਦੀ, ਕਤਾਰਬੰਦੀ
12. Altering (ਆਲਟਰਿੰਗ) ਪਰਿਵਰਤਨ ਕਰਨਾ
13. Analogue (ਐਨਾਲੋਗ) ਅਨੁਰੂਪ
14. Analogue programming (ਐਨਾਲੋਗ ਪ੍ਰੋਗਰਾਮਿੰਗ) ਅਨੁਰੂਪ ਕ੍ਰਮ-ਆਦੇਸ਼
15. Analogue system (ਐਨਾਲੋਗ ਸਿਸਟਮ) ਅਨੁਰੂਪ ਤੰਤਰ
16. Animation (ਐਨੀਮੇਸ਼ਨ) ਜੀਵੰਤ-ਚਿਤਰ
17. Anti-Virus (ਐਂਟੀ ਵਾਈਰਸ) ਬਿਗੜ-ਵਿਰੋਧੀ, ਬਿਗੜ-ਰੋਧਕ, ਵਾਇਰਸ-ਰੋਧਕ
18. Application (ਐਪਲੀਕੇਸ਼ਨ) ਅਮਲਕਾਰੀ
19. Attachment (ਅਟੈਚਮੈਂਟ) ਨੱਥੀ
20. Arithmetic instruction (ਅਰਿਥਮੈਟਿਕ ਇੰਸਟ੍ਰਕਸ਼ਨ) ਅੰਕਗਣਤਕ ਆਦੇਸ਼
21. Artificial intelligence (ਆਰਟੀਫੀਸ਼ੀਲ ਇੰਟੈਲੀਜੈਂਸ) ਗੈਰ-ਕੁਦਰਤੀ ਬੁੱਧੀ
22. Artificial language (ਆਰਟੀਫੀਸ਼ੀਅਲ ਲੈਂਗੁਏਜ) ਗੈਰ-ਕੁਦਰਤੀ ਬੁੱਧੀ ਜਾਂ ਮਸ਼ੀਨੀ ਬੁੱਧੀ
23. Auto booting (ਆਟੋ ਬੂਟਿੰਗ) ਸਵੈ-ਉੱਥਾਨਤਾ
24. Automatic error correction (ਆਟੋਮੈਟਿਕ ਐਰਰ ਕੋਰੈਕਸ਼ਨ) ਸਵੈ ਤਰੁੱਟੀ ਸੋਧ
25. ASCII (ਆਸਕੀ) ਆਸਕੀ
26. Ariel (ਏਰੀਅਲ) ਏਰੀਅਲ
27. Audio (ਆਡੀਓ) ਆਵਾਜ਼
28. Auto Correct (ਆਟੋ ਕਰੈਕਟ) ਸਵੈ-ਸੋਧ
29. Background (ਬੈਕਗ੍ਰਾਊਂਡ) ਪਿਛੋਕੜ, ਪਿਠਵਰਤੀ
30. Background job ਪਿਠਵਰਤੀ ਕਾਰਜ
31. Backup (ਬੈਕਅਪ) ਉਤਾਰਾ-ਸੰਭਾਲ, ਨਕਲ-ਸੰਭਾਲ
32. Bar (ਬਾਰ) ਪੱਟੀ
33. Battery (ਬੈਟਰੀ) ਊਰਜਾ-ਜੰਤਰ
34. Bandwidth (ਬੈਂਡਵਿੱਥ) ਬੈਂਡ ਚੌੜਾਈ
35. Bar code (ਬਾਰ ਕੋਡ) ਰੇਖਿਕੀ ਸੰਕੇਤ
36. Binary (ਬਾਈਨਰੀ) ਦੋ-ਆਧਾਰੀ
37. Binary code (ਬਾਈਨਰੀ ਕੋਡ) ਦੋ-ਆਧਾਰੀ ਸੰਕੇਤ
38. Binary digit (ਬਾਈਨਰੀ ਡਿਜ਼ਿਟ) ਦੋ-ਆਧਾਰੀ ਅੰਕ
39. Binary number (ਬਾਈਨਰੀ ਨੰਬਰ) ਦੋ-ਆਧਾਰੀ ਸੰਖਿਆ
40. Block (ਬਲੋਕ ਹੋਣਾ) ਅੜ-ਜਾਣਾ, ਫਸ-ਜਾਣਾ
41. Blog (ਬਲੋਗ) ਚਿੱਠਾ
42. Blue Tooth (ਬਲੂ ਟੂਥ) ਲਘੂ-ਪ੍ਰਦਾਨੀ, ਘੱਟ-ਦੂਰੀ-ਤਬਾਦਲਾ-ਤਕਨੀਕ
43. Bold (ਬੋਲਡ) ਗੂੜ੍ਹਾ
44. Bookmarks (ਬੁਕਮਾਰਕਸ) ਪੰਨਾ-ਚਿੰਨ੍ਹ, ਪਹੁੰਚ-ਚਿੰਨ੍ਹ
45. Browser (ਬ੍ਰਾਊਜ਼ਰ) ਜਾਲ-ਖੋਜਕ, ਜਾਲ-ਗਾਹੂ
46. Bug (ਬੱਗ) ਦੋਸ਼, ਨੁਕਸ
47. Byte (ਬਾਈਟ) ਬਾਈਟ

ਬੀ.ਸੀ.ਏ. ਭਾਗ-ਪਹਿਲਾ, ਪੇਪਰ:ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ ਸਮੇਸਟਰ 1

ਸੈਸ਼ਨ: 2024-25

48. Bulleting (ਬੁਲਟਿੰਗ)	ਗੋਲਾਕਾਰੀ	75. Connection (ਕਨੈਕਸ਼ਨ)	ਮੇਲ
49. Cafe (ਕੈਫੇ)	ਸੂਚਨਾ-ਦਾਬਾ,	76. Contacts (ਕਾਨਟੈਕਟਸ)	ਸਬੰਧ, ਸੰਪਰਕ
	ਤਕਨੀਕੀ ਦਾਬਾ	77. Content analysis (ਕੋਂਟੈਂਟ ਅਨੈਲਿਸਿਜ਼)	ਅੰਤਰਵਸਤੂ ਵਿਸ਼ਲੇਸ਼ਣ
50. Call (ਕਾਲ)	ਸੱਦ	78. Control unit (ਕੰਟਰੋਲ ਯੂਨਿਟ)	ਨਿਯੰਤਰਕ ਇਕਾਈ
51. Camera (ਕੈਮਰਾ)	ਚਿੱਤਰਕਸ਼ੀ-ਜੰਤਰ	79. Converter (ਕਨਵਰਟਰ)	ਤਬਾਦਲਾਕਾਰ,
52. Career signal (ਕੈਰੀਅਰ ਸਿਗਨਲ)	ਵਾਹਕ ਸੰਕੇਤ		ਪਲਟਾਉ-ਜੰਤਰ
53. Catalogue (ਕੈਟਾਲੋਗ)	ਕ੍ਰਮਆਦੇਸ਼ ਸੂਚੀ	80. Copy (ਕਾਪੀ)	ਉਤਾਰਾ
54. Channel (ਚੈਨਲ)	ਚੈਨਲ,	81. Corpus (ਕਾਰਪਸ)	ਸੰਗ੍ਰਹਿਣ
55. Central Processing Unit (CPU)	ਸੈਂਟਰਲ ਪ੍ਰੋਸੈਸਿੰਗ ਯੂਨਿਟ (ਸੀਪੀਯੂ)	82. Cut (ਕੱਟ)	ਹਟਾਉਣਾ
	ਅਮਲਕਾਰੀ ਇਕਾਈ	83. Cut-Paste (ਕੱਟ-ਪੇਸਟ)	ਚੱਕ-ਚਮੇੜ, ਹਟਾ-ਰੱਖ
56. Charge (ਚਾਰਜ ਕਰਨਾ)	ਉਰਜਾਉਣਾ	84. Drag and Drop (ਡਰੈਗ ਅਤੇ ਡਰਾਪ)	ਖਿੱਚੋ-ਤੇ-ਰੱਖੋ
57. Charger (ਚਾਰਜਰ)	ਉਰਜਾਉ-ਜੰਤਰ	85. Data (ਡਾਟਾ)	ਅੰਕੜਾ
58. Chatting (ਚੈਟਿੰਗ)	ਸ਼ਬਦੀ-ਚਰਚਾ	86. Data Pack (ਡਾਟਾ ਪੈਕ)	ਅੰਕੜਾ-ਗੁੱਟ
59. Check Box (ਚੈੱਕ ਬਾਕਸ)	ਠੀਕਾ-ਬਕਸਾ	87. Database (ਡਾਟਾਬੇਸ)	ਅੰਕੜਾਸ਼ਾਲਾ
60. Check point (ਚੈੱਕ ਪੁਆਇੰਟ)	ਜਾਂਚ-ਬਿੰਦੂ	88. Delete (ਡਿਲੀਟ)	ਹਟਾਉਣਾ
61. Chip (ਚਿੱਪ)	ਚਿੱਪ, ਪੱਚਰ	89. Design (ਡਿਜ਼ਾਈਨ)	ਰੂਪ-ਰੇਖਾ
62. Chip career (ਚਿੱਪ ਕੈਰੀਅਰ)	ਚਿੱਪ ਵਾਹਕ	90. Display unit (ਡਿਸਪਲੇਅ ਯੂਨਿਟ)	ਪ੍ਰਦਰਸ਼ਨ ਇਕਾਈ
63. Click (ਕਲਿੱਕ)	ਨੱਪਣਾ, ਦੱਬਣਾ	91. Digital (ਡਿਜੀਟਲ)	ਅੰਕੀ
64. Cluster (ਕਲਸਟਰ)	ਗੁੱਛਾ,	92. Directory (ਡਾਇਰੈਕਟਰੀ)	ਮੂਲ-ਨਿਰਦੇਸ਼ਕਾ
65. Cluster analyses (ਕਲਸਟਰ ਐਨਲਿਸਿਜ਼)	ਗੁੱਛ-ਵਿਸ਼ਲੇਸ਼ਣ	93. Disk (ਡਿਸਕ)	ਤਵਾ
66. Combination (ਕੰਬੀਨੇਸ਼ਨ)	ਸੰਯੋਜਨ	94. Disk Drive (ਡਿਸਕ ਡਰਾਈਵ)	ਤਵਾ-ਚਾਲਕ
67. Command (ਕਮਾਂਡ)	ਆਦੇਸ਼, ਕਮਾਂਡ	95. Document ((ਡਾਕੂਮੈਂਟ)	ਦਸਤਾਵੇਜ਼
68. Comment (ਕਮੈਂਟ)	ਟਿੱਪਣੀ	96. Download (ਡਾਊਨਲੋਡ)	ਉਤਾਰਨਾ
69. Codes (ਕੋਡਜ਼)	ਸੰਕੇਤ, ਸੰਕੇਤਾਵਲੀ	97. Drive (ਡਰਾਈਵ)	ਚਾਲਕ
70. Column (ਕਾਲਮ)	ਥੰਮ	98. Edit (ਐਡਿਟ)	ਸੰਪਾਦਨ
71. Command (ਕਮਾਂਡ)	ਹੁਕਮ	99. Electrical (ਇਲੈਕਟ੍ਰੀਕਲ)	ਬਿਜਲਈ
72. Comment (ਕਮੈਂਟ)	ਟਿੱਪਣੀ	100. Electronic (ਇਲੈਕਟ੍ਰੋਨਿਕ)	ਬਿਜਲਾਣਵੀ
73. Computer (ਕੰਪਿਊਟਰ)	ਗਣਕ-ਜੰਤਰ	101. E-mail (ਈ-ਮੇਲ)	ਬਿਜਲ-ਡਾਕ
74. Communication link (ਕਮਿਊਨਿਕੇਸ਼ਨ ਲਿੰਕ)	ਸੰਚਾਰ ਕੜੀ		

## BCA103T: FUNDAMENTALS OF COMPUTER SCIENCE

**Total Marks: 100**  
**External Examination: 70**  
**Internal Assessment: 30**

**Maximum Time: 3 Hrs.**  
**Minimum Pass Marks: 35%**  
**Lectures to be delivered: 45-55 Hrs.**

### A) Instructions for paper-setter

The question paper will consist of three sections A, B & C. Sections A & B will have four questions from the respective sections of the syllabus and will carry 30% marks each. Section C will have 6-12 short answer type questions which will cover the entire syllabus uniformly and will carry 40% marks in all.

### B) Instructions for candidates

1. Candidates are required to attempt two questions each from sections A & B of the question paper and the entire section C.
2. Use of non-programmable scientific calculator is allowed.

### COURSE OBJECTIVES:

- Aware students about basic of computer and its evolution.
- Provide knowledge of different units of computer like processing unit, IO unit, and storage unit.
- Applications of Computers.
- Advanced trends in IT.

### LEARNING OUTCOMES:

On the successful completion of the course, students will be able to:

- Have a clear understanding of fundamentals of computers so as to apply it in real life problems.
- Develop an in-depth knowledge of various motivational theories.
- Develop skills to get employment in I.T. field

## SECTION A

**Computer Fundamentals:** Block diagram of a computer, characteristics of computers and generations of computers. Categories of Computers - Supercomputer, mainframe computer, network server, Workstation, Desktop computers, notebook computer, Tablet PC, handheld PC, smart phone.

**Input Devices:** Keyboard, Mouse, Joy tick, Track Ball, Touch Screen, Light Pen, Digitizer, Scanners, Speech Recognition Devices, Optical Recognition devices – OMR, OBR, OCR

**Output Devices:** Monitors, Impact Printers - Dot matrix, Character and Line printer, Non Impact Printers – DeskJet and Laser printers, Plotter.

**Memories:** Memory Hierarchy, Primary Memory – RAM, ROM, Cache memory. Secondary Storage Devices - Hard Disk, Compact Disk, DVD, Flash memory.

**Software:** Types of Software- System Software, Application Software, Firmware. Type of System

Software: Operating Systems, Language Translators, Utility Programs, Communications Software.  
**Commonly Used Application Software:** Word Processor, Spreadsheet, Database, Education, Entertainment Software.

**Computer Languages:** Machine language, assembly language, high level language, 4GL.

## SECTION B

**Computer Codes:** weighted and non-weighted code, BCD, EBCDIC, ASCII, Unicode.

**Computer Network:** Network types, network topologies.

**Internet Related Concepts:** Internet, World Wide Web, Hypertext, Uniform Resource Locator, Web Browsers, IP Address, Domain Name, Internet Services Providers, Internet Security, Web Search Engine, Net Surfing, web portal, Wiki, Blog.

**Advanced Trends in IT:** Mobile Internet, GPS, 3G, 4G, Wi-Fi, Bluetooth, Cloud Technology, Virtual LAN Technology, Firewall, E-Commerce, M-Commerce, Nanotechnology, Virtual Reality, BPO and KPO, Online shopping, Social Media - YouTube, Facebook, LinkedIn, Twitter, Google+.

**Applications of IT:** IT in Business and Industry, IT in Education & training, IT in Science and Technology, IT and Entertainment, Current Trends in IT Application - AI, Virtual Reports, voice recognition, Robots, Multimedia Technology.

### Text/Reference Books:

1. Peter Nortorn, Introduction to Computers, Seventh Edition
2. V. Rajaraman, Fundamentals of Computers, PHI.
3. Larry E. Long and Nancy Long, Computers: Information Technology in Perspective, PHI.
4. N. Subramanian, Introduction to Computers, Tata McGraw-Hill.
5. D.H. Sanders, Computers Today, McGraw-Hill.



## BCA104T: PROBLEM SOLVING USING COMPUTERS

Total Marks: 100  
External Examination: 70  
Internal Assessment: 30

Maximum Time: 3 Hrs.  
Minimum Pass Marks: 35%  
Lectures to be delivered: 45-55 Hrs.

### A) Instructions for paper-setter

The question paper will consist of three sections A, B & C. Sections A & B will have four questions from the respective sections of the syllabus and will carry 30% marks each. Section C will have 6-12 short answer type questions which will cover the entire syllabus uniformly and will carry 40% marks in all.

### B) Instructions for candidates

1. Candidates are required to attempt two questions each from sections A & B of the question paper and the entire section C.
2. Use of non-programmable scientific calculator is allowed.

### COURSE OBJECTIVE:

The course provides students with a detailed study of programming techniques using C programming language. Good programming habits, proper logical thinking, algorithm and flowchart development, writing efficient programs are taught in the course. Detailed lab exercises covering all aspects of the language are prepared.

### LEARNING OUTCOME:

- To analyze problems efficiently and develop comprehensive logic to solve it.
- To develop good algorithms and flowcharts to solve problems.
- To write C programs in a structured manner.

### SECTION A

**Problem solving process/Logic development:** Problem definition, Algorithm development, Flowchart, Pseudo code, Coding, Compilation and debugging.

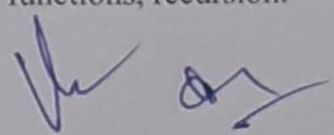
**Basic structure of C program:** History of C, Structure of a C program, Character set, Identifiers and keywords, constants, variables, data types.

**Operators and expressions:** Arithmetic, Unary, Logical, Relational operators, assignment operators, Conditional operators, Hierarchy of operations type conversion.

**Control statements:** branching statements (if, if else, switch), loop statements (for, while and do-while), jump statements (break, continue, goto), nested control structures.

**Functions:** Library functions and user defined functions, prototype, definition and call, formal and actual arguments, local and global variables, methods of parameter passing to functions, recursion.

**I/O functions:** formatted & unformatted console I/O functions



## SECTION B

**Storage Classes:** automatic, external, static and register variables.

**Arrays:** – One dimensional and two-dimensional arrays, Declaration, initialization, reading values into an array, displaying array contents

**Strings:** input/output of strings, string handling functions (strlen, strcpy, strcmp, strcat&strrev), table of strings.

**Structures and unions:** using structures and unions, comparison of structure with arrays and union.

**Pointers:** pointer data type, pointer declaration, initialization, accessing values using pointers, pointers and arrays.

**Introduction to Files in C:** opening and closing files. Basic I/O operation on files.

### Text/Reference Books:

1. E. Balagurusamy, Programming in C, Tata McGraw-Hill.
2. Kernighan and Ritchie, The C Programming Language, PHI.
3. Byron Gotfried, Programming in C.
4. Kamathane, Programming in C, Oxford University Press.



**BCA105L: SOFTWARE LAB – I**  
**(Operating System and Office Automation)**

**Total Marks: 100**

**External Examination: 70**

**Internal Assessment: 30**

**Maximum Time: 3 Hrs.**

**Minimum Pass Marks: 35%**

**Practical Sessions: 45-55 Hrs.**

This laboratory course will comprise the following list of practical based on any GUI Based Operating System (Unix/Windows/Mac) and concepts of Office Automation:

**Operating System**

**Activity 1:** Operating System Installation and Software & Drivers installation.

**Activity 2:** Basic components of GUI-Desktop, Icons, Taskbar, Status Bar, Wallpapers, Screen Saver

**Activity 3:** Start Menu: Accessories- Notepad, Calculator, Clock, Date and Time, Disk Defragmentation, Working with Control Panel/Settings.

**Activity 4:** Taskbar properties - Maximize Minimize, Restore, and Close.

**Activity 5:** Creating Files, Folders, Shortcuts, Moving folders (right click options)

**Excel**

**Activity 1:**

- i. Create, open, save and close workbook?
- ii. Create a new worksheet, renaming and moving sheet.
- iii. Entering, copying, moving and deleting data in cells and worksheets.
- iv. Insert and delete cells, columns and rows in Excel.

**Activity 2:**

- i. Formatting of data in cells.
- ii. Text formatting (font size, font style, font color, Cell border etc.)
- iii. Text Alignment
- iv. Text Orientation, Text Direction, Text Control.

**Activity 3:**

- i. Find and replace data in a sheet
- ii. Perform data sorting and data filtering in Excel
- iii. Protect your Worksheet and Workbook?
- iv. Enter and perform some basic formulas in excel.

**Activity 4:**

- i. Perform some basic Functions in Excel.
- ii. Create a chart in Excel.
- iii. Create different types of Charts in excel.
- iv. Set a size, margin, orientation of page in Excel.
- v. The print properties of a worksheet in Excel.

**Activity 5:**

- i. Hide and unhide row and column inExcel.
- ii. Set column width and row height in Excel.
- iii. Adding text Box, header/footers, pictures and special symbols in your worksheet.
- iv. Arranging, splitting and hiding windows in Excel. And also freezing panes.

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- v. Create and run Macros in Excel.

## Word

### Activity 1:

- i. Create, open, save and close a document.
- ii. Typing, copying, moving and deleting data in word document.
- iii. Perform Save and Save as, Cut and Copy, Paste and Paste Special.

### Activity 2:

Formatting of data in word Document: -

- i. Text formatting (font size, font style, font color, subscript, superscript, upper/lower case etc.)
- ii. Text Alignment and character spacing
- iii. Indentation and line spacing
- iv. Border and shading
- v. Bullets and Numbering

### Activity 3:

- i. Find and replace and data sorting in a document.
- ii. Protect your document.
- iii. Add chart in word document. Create different types of Charts in word.
- iv. Set a size, margin, orientation of page, Hyphenation, Columns and Line Numbers in Word.

### Activity 4:

- i. Set Page Color, Page Border, Themes, and Watermarks in Word
- ii. Adding Tables, header/footers, pictures, page numbers and special symbols, Text Box in your word document.
- iii. Showing Ruler, Gridlines, Document Map, Thumbnails, Inserting Word Art, Drop Cap, Hyperlink, Equation etc. in word document

### Activity 5:

- i. Arranging, splitting windows in word
- ii. Perform Mail-merge in word
- iii. Create and run Macros in Word
- iv. Set the print properties of a word document

## PowerPoint

### Activity 1:

- i. Create, open, save and close a Presentation
- ii. Typing, copying, moving and deleting data in presentation.
- iii. New Slide, understanding Slide Layout, adding and deleting slides.

### Activity 2:

Formatting of data in slides: -

- i. Text formatting (font size, font style, font color, subscript, superscript, upper/lower case etc.)
- ii. Text Alignment and character spacing
- iii. Indentation and line spacing
- iv. Border and shading
- v. Bullets and Numbering

**Activity 3:**

- i. Set a size, margin, orientation of slides in PowerPoint.
- ii. Adding Tables, header/footers, pictures, page numbers and special symbols, Text Box etc. in your presentation

**Activity 4:**

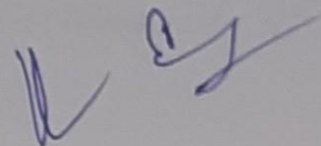
- i. Adding Animation and Transition Effects in Slides, Understanding Slide Show
- ii. Presentation Views, Understanding Formatting commands in PowerPoint

**Activity 5:**

- i. Create and run Macros in PowerPoint
- ii. Arranging, splitting windows in PowerPoint.

The breakup of marks for the practical will be as under

i. Internal Assessment	30 Marks
ii. Viva Voce (External Evaluation)	30 Marks
iii. Lab Record, Program Development and Execution(External Evaluation)	40 Marks



Total Marks: 100

External Examination: 70

Internal Assessment: 30

Maximum Time: 3 Hrs.

Minimum Pass Marks: 35%

Practical Sessions: 45-55 Hrs.

This laboratory course will comprise as exercises to supplement what is learnt under paper BCA104T: Problem Solving using Computers. Students are required to develop the following programs with internal documentation:

**1. Operators and data types in C**

- a) Write a program to print the size of all the data types supported by C and its range.
- b) Write a program to convert temperature from Fahrenheit to Celsius.
- c) Write a program to find simple interest and compound interest.

**2. Control statements**

- a) Write a program to check whether the given number is a even number or not.
- b) Write a program to accept three numbers and find the largest among them.
- c) Write a program to count the different vowels in a line of text using switch.
- d) Write a program to accept two numbers and perform various arithmetic operations (+, -, \*, /) based on the symbol entered.
- e) Write a program to find factorial of a number.
- f) Write a program to check whether a number is prime or not.
- g) Write a program to print all prime numbers between any 2 given limits.
- h) Write a program to check whether a number is palindrome or not.
- i) Write a program to print all the Armstrong numbers between any 2 given limits.

**4. Arrays and strings**

- a) Write a program to find largest element in an array.
- b) Write a program to find sum and average of numbers stored in an array.
- c) Write a program to check whether a string is a Palindrome.
- d) Write a program to perform matrix addition.
- e) Write a program to perform matrix multiplication.

**6 Functions and recursion**

- a) Write a program to find the roots of a quadratic equation using function.
- b) Write a recursive program to find the factorial of a number.
- c) Write a recursive program to find the nth Fibonacci number.

**7. Structures and unions**

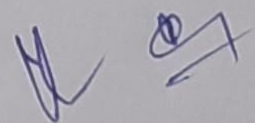
- a) Create an employee structure and display the same.
- b) Create a student database storing the roll no, name, class etc and sort by name.

**8. Pointers**

- a) Write a function to swap two numbers using pointers
- b) Write a program to access an array of integers using pointers

**9. Files**

- a) Create a file and store some records in it. Display the contents of the same. Count numbers of characters, words and lines in the file.



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The breakup of marks for the practical will be as under

- |      |  |          |
|------|--|----------|
| i.   | Internal Assessment  | 30 Marks |
| ii.  | Viva Voce (External Evaluation)                                    | 30 Marks |
| iii. | Lab Record, Program Development and Execution(External Evaluation) | 40 Marks |



## SEMESTER- I

### BEVS101: ENVIRONMENTAL AND ROAD SAFETY

Max. Marks : 50 Marks  
Internal Assessment: 15 marks  
End Semester Exam: 35 marks  
Examination Duration: 1.5 hrs.

Total lectures: 24  
Pass marks: 40%  
Credits: 02

#### INSTRUCTIONS FOR PAPER SETTER

The question paper will consist of three sections A, B and C. Section A and B will have four questions from the respective sections of the syllabus and will carry 05 marks each. Section C will consist of 15 short-answer type questions which will cover the entire syllabus uniformly and will carry 15 marks in all.

#### INSTRUCTIONS FOR CANDIDATES

Candidates are required to attempt two questions from each section A and B and the entire section C.

#### Section-A

##### Unit 1: Introduction to Environmental Studies

- Multidisciplinary nature of environmental studies. Definition and importance.
- Concept of Biosphere- Lithosphere, Hydrosphere, Atmosphere.

(01 Lectures)

##### Unit 2: Eco-System and Biodiversity Conservation

- Ecosystem and its components, Types of Ecosystems.
- Biodiversity- Definition and Value, Threatens to biodiversity and its conservation:

(02 Lectures)

##### Unit 3: Natural Resources: Renewable and Non- Renewable Resources

- Land resource and land use change; Land degradation, soil erosion and desertification.
- Deforestation: Causes and impacts due to mining, dam building on environment.
- Water: Use and over-exploitation of surface and ground water.
- Energy resources: Renewable and non-renewable energy sources.

(06 Lecture)

##### Unit 4: Environmental Pollution

- Environmental Pollution: Types, causes, effects and controls
- Solid waste management: Control measures of urban and industrial waste.

(03 Lecture)

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## Section-B

### Unit 5: Environmental Protection laws in India

- Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; water (Prevention and Control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act, International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity(CBD)
- Environmental policies and Practices: Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture.

(06 Lectures)

### Unit 6: Human Communities and the environment

- Human population growth: Impacts on environment, human health and welfare, Sanitation and Hygiene.
- Disaster management: floods, earthquake, cyclones and landslides.
- Environmental movements: Chipko, Silent Valley, Bishnois of Rajasthan.

(03 Lecture)

### Unit 7: Road Safety Awareness

- Concept and significance of Road safety.
- Traffic signs.
- Traffic rules.
- Traffic Offences and penalties.

(01 Lectures)

### Unit 8: Stubble Burning

- Meaning of Stubble burning, impact on health and environment.
- Management and alternative uses of crop stubble.

(02 Lectures)

### Fieldwork / Project Work

- Identify the natural resources of your area.
- Identify the sources of energy used in your area.
- Construction of food chain/ food web of the visited area.
- To identify the sources of pollution of your area.
- To record the AQI daily during stubble burning season and study its impact on health and environment.
- Common traffic violation and their penalties in and around your city.

*Namur Kaur*  
Namur Kaur

**SYLLABI, OULINES OF PAPERS AND TESTS**  
**BCA Semester-II**  
**(Programme Code BCA3AS)**  
**(2024-25 Session)**

Code	Title of Paper	Credit	Hours per week	External Exam. Marks	Int. Ass. Marks	Max Marks	Time Total Allowed
BCA201T	English Communication Skills – II	4	4	70	30	100	3
BCA202T	Punjabi (Compulsory) - II or Punjabi Compulsory-II (MudlaGyan)** or PHC**	4	4	70	30	100	3
BCA203T	Logic Organisation Of Computer	4	4	70	30	100	3
BCA204T	Data Structures	4	4	70	30	100	3
BCA205T	Basic Mathematics	4	4	70	30	100	3
BCA206L	Software Lab – III (based on BCA204T)	2	4	70	30	100	3
BCA207Q	Drug Abuse: Problem, Management and Prevention	2	2	35	15	50	1.5
<b>Total</b>		22		<b>455</b>	<b>195</b>	<b>650</b>	

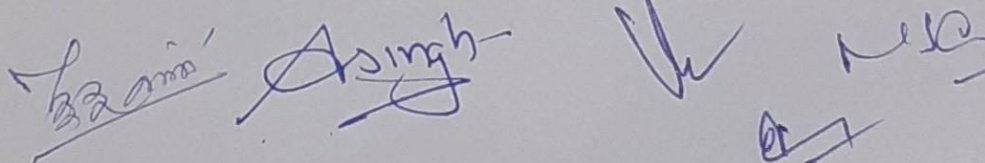
**Note:**

1. The breakup of marks for the internal assessment for Theory/Practical except BCA201T will be as under:
 

i. Two tests out of which one best will be considered for assessment.	20 Marks
ii. Attendance	5 Marks
iii. Class participation and behaviour	5 Marks
  
2. The breakup of marks for the internal assessment for BCA201T: English Communication Skills – II will be as under:
 

i. Formal assessment through Interview/Self Introduction/Recitation etc.	15 Marks
ii. Conversation Skills (particularly listening and speaking to be evaluated through oral examination)	5 Marks
iii. Attendance	5 Marks
iv. Class participation and behaviour	5 Marks

**\*\* Only those students who have not studied Punjabi up to matriculation can opt for Punjab Compulsory-I (MudlaGyan) or Punjab History and Culture (PHC).**



**B.C.A Part - I (Semester II)**  
**BCA201T General English - II**  
**Session 2024-25**  
**Session 2024-25**

Total Marks: 100

Time: 3 Hours

Credits: 04

Pass Marks: 35% .

External Examination: 70 marks

Internal Assessment: 30 marks

**INSTRUCTIONS FOR THE PAPER -SETTER**

The question paper shall consist of three Units. Unit-I shall be of 24 marks: Unit-II shall be of 24 marks: and Unit-III shall carry 22 marks and shall contain questions from the preceding Units, thus covering the entire syllabus.

**COURSE CONTENT**

**UNIT I** Composition and Writing Skills. Orient Black Swan. 2016.

1. Section One: Composition
  - Letter Writing -Official (or Formal) Letters
  - E-mails
  - Essay writing
  - Summary writing

2. Section Two: Vocabulary

Basic Vocabulary -List A(Pages 153-157)

**UNIT II** The following texts are prescribed:

**Interchange, 5<sup>th</sup> Edition** (with digital pack) vol. .1 Cambridge University Press. 2021 (Units 9-16)

1. Unit-9 What does she look like?
2. Unit-10 Have you ever been there?
3. Unit-11 It's a really nice city.
4. Unit-12 It's important to get rest.
- 5 Unit-13 What would you like?
6. Unit-14 It's the coldest city!
7. Unit-15 What are you doing later?
8. Unit-16 How have you changed?

**English Grammar in Use, 5 Edition** by Raymond Murphy. Cambridge University Press, 2019. The following units are to be studied:

Units 38-68. 82-91 and Appendices 5 and 6. Additional exercises from the book that are relevant to the prescribed Units.

*Mindhu*  
27-07-24

*aj*



## TESTING

### UNIT-I

1. The student will write an e-mail or official (or formal) letter to a public authority. The candidate shall attempt any one of the given two. **12 marks**
2. There will be one lengthy question with an internal choice on essay writing. The student will be asked to draft an essay that can be descriptive/narrative/expository or argumentative. The answer should be in about 350-400 words. **12 marks**

### UNIT-II

3. This question will carry ten incomplete sentences to be set from prescribed units of English Grammar in Use. The students will complete the given sentences. Each shall carry one mark. **10 marks**
4. This question will pertain to answering questions based on an unseen passage. Each question shall carry one mark. **7 marks**
5. The students will be asked to select words from the given list to complete the sentences. They can attempt any five out of the seven given sentences. **5 marks**

### UNIT-III

6. One passage of ten sentences to be translated from Punjabi into English. **10 marks**
7. Complete the sentences by writing the correct form of auxiliary verbs, pronouns and determiners etc **6 marks**
8. The students will use any six words out of the given eight to make sentences that will be set from the Basic Vocabulary-List A from Composition and Writing Skills. Each sentence shall carry one mark. **6 marks**

*M. M. D.*  
*27-07-24*

*dy*

ਸਮੇਸਟਰ ਦੂਜਾ

ਕੁਲ ਅੰਕ : 100

ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ : 30 ਅੰਕ

ਬਾਹਰੀ ਪਰੀਖਿਆ: 70 ਅੰਕ

ਸਮਾਂ : 3 ਘੰਟੇ

ਵਿਸ਼ੇ ਵਿਚੋਂ ਪਾਸ ਹੋਣ ਲਈ ਅੰਕ : 35

ਅਧਿਆਪਨ: 06 ਪੰਜਾਬੀ ਪ੍ਰਤੀ ਰਫਤਾਰ

ਕੁਲ 04 ਕ੍ਰੈਡਿਟ

ਪਾਠਕ੍ਰਮ ਤੇ ਪਾਠ ਪੁਸਤਕਾਂ:

ਭਾਗ-ੳ: ਚੋਣਵੇਂ ਪੰਜਾਬੀ ਨਿਬੰਧ, ਸੰਪਾ. ਡਾ. ਜੋਗਿੰਦਰ ਸਿੰਘ ਪੁਆਰ, ਡਾ. ਪਰਮਜੀਤ ਸਿੰਘ ਸਿੰਘੂ (ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ) 12x12=24

ਭਾਗ-ਭਾਗ ਅ: (1) ਵਿਗਿਆਨ ਸਿੱਖਿਆ ਅਤੇ ਅਧਿਆਪਨ ਦਾ ਭਾਸ਼ਾਈ ਪੱਖ, ਮਾਤ ਭਾਸ਼ਾ ਅਤੇ ਵਿਗਿਆਨ ਸਿੱਖਿਆ, ਅਧਿਆਪਨ ਅਤੇ ਮਾਤ ਭਾਸ਼ਾ, ਕੰਪਿਊਟਰ/ਵਿਗਿਆਨ ਦੀ ਪੜ੍ਹਾਈ ਦਾ ਜਨਤਕ ਪਾਸਾਰ, ਕੰਪਿਊਟਰ ਸਾਖਰਤਾ, ਤਕਨੀਕੀ ਵਿਕਾਸ ਅਤੇ ਤਕਨੀਕੀ-ਗਿਆਨ ਅਤੇ ਇੰਟਰਨੈੱਟ ਸੁਵਿਧ ਦੀ ਬਰਾਬਰੀ ਦਾ ਅਧਿਕਾਰ ਆਦਿ ਵਿਸ਼ਿਆਂ ਉੱਤੇ ਪੈਰੋ ਰਚਨਾ/ਸੰਖੇਪ ਅਖਬਾਰੀ ਲੇਖ 12 ਅੰਕ

(2) ਕੰਪਿਊਟਰ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ: (i) ਕੰਪਿਊਟਰ ਅਤੇ ਇੰਟਰਨੈੱਟ ਨਾਲ ਸੰਬੰਧਿਤ ਤਕਨੀਕੀ ਸ਼ਬਦਾਵਲੀ (100 ਸ਼ਬਦ): ਅੰਗਰੇਜ਼ੀ ਸ਼ਬਦਾਂ ਦਾ ਪੰਜਾਬੀ ਅਨੁਵਾਦ ਅਤੇ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ 06 ਅੰਕ

(ii) ਗਿਆਨ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ, ਦੂਜੀਆਂ ਭਾਸ਼ਾਵਾਂ ਦੀ ਤਕਨੀਕੀ ਸ਼ਬਦਾਵਲੀ ਵਿਚੋਂ ਸ਼ਬਦ-ਉਧਾਰ ਦੇ ਤਰੀਕੇ: ਤੱਤਸਮ ਅਤੇ ਤਦਭਵੀਕਰਨ, ਤੱਤਸਮ ਸ਼ਬਦ-ਉਧਾਰ ਅਤੇ ਸ਼ਬਦਜੋੜਾਂ ਦਾ ਟਕਸਾਲੀਕਰਨ 06 ਅੰਕ

ਭਾਗ-ੲ ਉਪਰੋਕਤ ਸਿਲੇਬਸ 'ਤੇ ਅਧਾਰਿਤ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ। 2x11=22 ਅੰਕ

ਅੰਕ-ਵੰਡ ਅਤੇ ਪੇਪਰ ਸੈਂਟਰ ਲਈ ਹਦਾਇਤਾਂ

1. ਪਾਠਕ੍ਰਮ ਦੇ ਦੋ ਭਾਗ ਓ ਅਤੇ ਅ ਹਨ ਪਰ ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਨੂੰ ਤਿੰਨ ਭਾਗਾਂ ਓ, ਅ ਅਤੇ ਏ ਵਿੱਚ ਵੰਡਿਆ ਜਾਵੇਗਾ।
3. ਭਾਗ ਓ ਵਿਚੋਂ: (i) ਕਿਸੇ ਇਕ ਦਾ ਵਿਸ਼ਾ / ਸਾਰ ਜਾਂ ਰਚਨਾ ਬਾਰੇ ਪਾਠਕੀ ਪ੍ਰਭਾਵ ਬਾਰੇ ਪ੍ਰਸ਼ਨ। (ਤਿੰਨ ਵਿੱਚੋਂ ਇੱਕ) 12 ਅੰਕ

(ii) ਨਿਬੰਧਾਂ ਵਿਚਲੇ ਵਿਚਾਰਾਂ ਸਬੰਧੀ ਛੋਟੇ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ। (ਚਾਰ ਵਿੱਚੋਂ ਦੋ) 2x6=12 ਅੰਕ

4. ਭਾਗ ਅ-1 ਵਿਚ 3 ਵਿਸ਼ਿਆਂ ਵਿਚੋਂ 1 'ਤੇ ਪੇਰਾ ਰਚਨਾ/ਸੰਖੇਪ ਅਖਬਾਰੀ ਲੇਖ ਲਿਖਣ ਲਈ ਕਿਹਾ ਜਾਵੇਗਾ। 12 ਅੰਕ

ਅ-2 (i) ਵਿੱਚ 10 ਅੰਗਰੇਜ਼ੀ ਸ਼ਬਦਾਂ ਦੇ ਪੰਜਾਬੀ ਅਨੁਵਾਦ ਦੀ ਵਾਕਾਂ ਵਿਚ ਵਰਤੋਂ ਲਈ ਕਿਹਾ ਜਾਵੇਗਾ। 06 ਅੰਕ

5. ਭਾਗ ਅ-2 (ii) ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛਕੇ ਉਨ੍ਹਾਂ ਵਿਚੋਂ ਵਿਦਿਆਰਥੀ ਨੂੰ ਇੱਕ ਪ੍ਰਸ਼ਨ ਕਰਨ ਲਈ ਕਿਹਾ ਜਾਵੇਗਾ। 06 ਅੰਕ

6. ਭਾਗ-ੲ ਪਾਠ ਪੁਸਤਕ ਚੋਣਵੇਂ ਪੰਜਾਬੀ ਨਿਬੰਧ ਅਤੇ ਭਾਗ ਅ 2 ਵਿੱਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ 11 (ਪਾਠ ਪੁਸਤਕ ਚੋਣਵੇਂ ਪੰਜਾਬੀ ਨਿਬੰਧ ਵਿਚੋਂ 6 ਅਤੇ ਕੰਪਿਊਟਰ ਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਚੋਂ 5) ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ। ਵਿਦਿਆਰਥੀ ਨੇ ਸਾਰੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਸੰਖੇਪ ਉੱਤਰ ਦੇਣੇ ਹੋਣਗੇ। ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 2 ਅੰਕ ਹੋਣਗੇ। 11x2=22 ਅੰਕ

ਨੋਟ: ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ ਦੇ ਅੰਕਾਂ ਵਿਚੋਂ ਅਸਾਈਨਮੈਂਟ ਦੇ ਕਾਰਜ ਲਈ ਪੰਜਾਬੀ ਵਿਚ ਕੰਪਿਊਟਰ ਅਤੇ ਇੰਟਰਨੈੱਟ ਨਾਲ ਸੰਬੰਧਿਤ ਅਖਬਾਰੀ ਲੇਖਾਂ, ਮਿਡਲਾਂ ਅਤੇ ਬਲੋਗ-ਰਚਨਾਵਾਂ ਦੀ 20-25 ਪੰਨਿਆਂ ਦੀ ਸਕਰੈਪ ਬੁੱਕ ਤਿਆਰ ਕਰਵਾਈ ਜਾਵੇਗੀ। ਉਸ ਦੇ ਅਧਾਰ 'ਤੇ ਅਸਾਈਨਮੈਂਟ ਦੇ ਅੰਕ ਲਗਾਏ ਜਾਣਗੇ। ਮੌਲਿਕ ਲੇਖਣੀ ਨੂੰ ਤਰਜੀਹ ਦਿੱਤੀ ਜਾਵੇ।

ਕੰਪਿਊਟਰ ਅਤੇ ਇੰਟਰਨੈੱਟ ਨਾਲ ਸੰਬੰਧਿਤ ਤਕਨੀਕੀ ਸ਼ਬਦਾਵਲੀ

- |   |   |
|---|---|
| 1. E-mail Address (ਈ-ਮੇਲ ਐਡਰੈੱਸ) ਬਿਜਲ-ਡਾਕ-ਪਤਾ                 | 26. Key (ਕੀਅ) ਬਟਣ   |
| 2. Explorer (ਐਕਸਪਲੋਰਰ) ਜਾਂਚ-ਪੜਤਾਲਕ                            | 27. Keyboard (ਕੀ-ਬੋਰਡ) ਬਟਣ-ਫੱਟਾ                                   |
| 3. External memory (ਐਕਸਟਰਨਲ ਮੈਮਰੀ) ਬਾਹਰਵਰਤੀ ਯਾਦ ਜਾਂ ਸਮ੍ਰਿਤੀ   | 28. Keyword (ਕੀਵਰਡ) ਕੁੰਜੀ-ਸ਼ਬਦ                                    |
| 4. File (ਫਾਈਲ) ਮਿਸਲ   | 29. Landline Phone (ਲੈਂਡਲਾਈਨ ਫੋਨ) ਜ਼ਮੀਨੀ-ਦੂਰਭਾਸ਼-ਜੰਤਰ             |
| 5. File clean up (ਫਾਈਲ ਕਲੀਨ ਅੱਪ) ਮਿਸਲ ਸੋਧ ਕਾਰਜ                | 30. Line Spacing (ਲਾਈਨ ਸਪੇਸਿੰਗ) ਸਤਰ-ਦੂਰੀ                          |
| 6. File recovery (ਫਾਈਲ ਰਿਕਵਰੀ) ਮਿਸਲ ਪੁਨਰ-ਪ੍ਰਾਪਤੀ              | 31. Mail ID (ਮੇਲ ਆਈਡੀ) ਡਾਕ-ਪਛਾਣ                                   |
| 7. Folder (ਫੋਲਡਰ) ਮਿਸਲ-ਪਟਾਰਾ                                  | 32. Margin (ਮਾਰਜਿਨ) ਹਾਸ਼ੀਆ  |
| 8. Format (ਫਾਰਮੈਟ) ਖਾਂਚਾ                                      | 33. Matter (ਮੈਟਰ) ਸਮੱਗਰੀ  |
| 9. Frequency (ਫ੍ਰੀਕੁਐਂਸੀ) ਦੁਹਰਾਅ-ਦਰ, ਆਵ੍ਰਿਤੀ                  | 34. Memory (ਮੈਮਰੀ) ਯਾਦ  |
| 10. Function key (ਫੰਕਸ਼ਨ ਕੀ) ਪ੍ਰਕਾਰਜ ਕੁੰਜੀ                    | 35. Memory Card (ਮੈਮਰੀ ਕਾਰਡ) ਯਾਦ-ਪੱਤਾ                             |
| 11. Game theory (ਗੇਮ ਥਿਊਰੀ) ਖੇਡ ਸਿਧਾਂਤ                        | 36. Menu (ਮੀਨੂ) ਆਦੇਸ਼-ਸੂਚੀ  |
| 12. Gallery (ਗੈਲਰੀ) ਗਲਿਆਰਾ                                    | 37. Microphone ਪੁਨੀ-ਆਗਤ-ਜੰਤਰ, ਮਾਈਕਰੋਫੋਨ                           |
| 13. Hack (ਹੈਕ) ਸੰਨ੍ਹ-ਮਾਰਨਾ, ਸੋਧ-ਲਾਉਣਾ                         | 38. Missed Call (ਮਿਸਡ ਕਾਲ) ਬੇਜਵਾਬ-ਘੰਟੀ, ਖੁੰਝੀ-ਸੱਦ                 |
| 14. Hacker (ਹੈਕਰ) ਸੰਨ੍ਹਮਾਰ, ਸੋਧਮਾਰ                            | 39. Mobile (ਮੋਬਾਈਲ) ਜੇਬੀ  |
| 15. Hand Set (ਹੈਂਡ ਸੈੱਟ) ਜੇਬੀ-ਇਕਾਈ, ਹੱਥ-ਉਪਕਰਣ                 | 40. Mobile Number (ਮੋਬਾਈਲ ਨੰਬਰ) ਜੇਬੀ (ਫਿਰਤੂ-, ਸਫਰੀ-, ਮੋਬਾਈਲ-) ਅੰਕ |
| 16. Hard Disk (ਹਾਰਡ ਡਿਸਕ) ਸਖਤ-ਤਵਾ, ਠੋਸ-ਚੱਕਲੀ                  | 41. Network (ਨੈਟਵਰਕ) ਪਸਾਰ-ਪ੍ਰਣਾਲੀ                                 |
| 17. Hardware (ਹਾਰਡਵੇਅਰ) ਭੌਤਿਕ-ਭਾਗ, ਕਲ-ਪੁਰਜੇ                   | 42. Notification (ਨੋਟੀਫਿਕੇਸ਼ਨ) ਸੰਖੇਪ-ਸੂਚਨਾ, ਸੂਚਨਾਕਰਣ              |
| 18. Home Page (ਹੋਮ ਪੇਜ) ਮੁੱਖ-ਪੰਨਾ                             | 43. Numbering (ਨੰਬਰਿੰਗ) ਅੰਕਕਾਰੀ                                   |
| 19. Home Screen (ਹੋਮ ਸਕਰੀਨ) ਮੁੱਖ-ਸਤਹ                          | 44. Offline (ਆਫਲਾਈਨ) ਜਾਲ-ਨਿਸ਼ੇਧ, ਅਜੁੜਿਆ                           |
| 20. Inbox (ਇਨਬਾਕਸ) ਆਗਤ-ਬਕਸਾ                                   | 45. One Drive (ਵਨ-ਡਰਾਈਵ) ਇੱਕ-ਚਾਲਕ                                 |
| 21. Input (ਇਨਪੁਟ) ਆਗਤ   | 46. Online (ਆਨਲਾਈਨ) ਜਾਲ-ਸੰਬੰਧ, ਜੁੜਿਆ                              |
| 22. Install (ਇੰਸਟਾਲ) ਲਾਗੂ (ਕਰਨਾ)                              | 47. Operating System (ਓਪਰੇਟਿੰਗ ਸਿਸਟਮ) ਸੰਚਾਲਨ-ਪ੍ਰਣਾਲੀ              |
| 23. Internet (ਇੰਟਰਨੈੱਟ) ਅੰਤਰਜਾਲ                               | 48. Operator (ਓਪਰੇਟਰ) ਵਰਤੋਂਕਾਰ                                    |
| 24. Internet Explorer (ਇੰਟਰਨੈੱਟ ਐਕਸਪਲੋਰਰ) ਅੰਤਰਜਾਲ-ਜਾਂਚ-ਪੜਤਾਲਕ | 49. Optical character reader (OCR) ਪਕਾਸ਼ੀ ਲਿੱਪੀ-ਚਿੰਨ ਪਾਠਕ         |
| 25. Italic (ਇਟੇਲਿਕ) ਟੇਵਾ                                      | 50. Option (ਆਪਸ਼ਨ) ਵਿਕਲਪ  |
|   | 51. Output (ਆਊਟਪੁਟ) ਨਤੀਜਾ   |
|   | 52. Painting (ਪੇਂਟਿੰਗ)ਚਿਤਰਕਲਾ                                     |

ਬੀ.ਸੀ.ਏ. ਭਾਗ-ਪਹਿਲਾ, ਪੇਪਰ:ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ ਸਮੇਸਟਰ 2

ਸੈਸ਼ਨ: 2024-25

- |                                    |                       |   |                    |
|------------------------------------|-----------------------|---|--------------------|
| 53. Password (ਪਾਸਵਰਡ)              | ਪਛਾਣ-ਸ਼ਬਦ             | 78. SIM Card (ਸਿਮ ਕਾਰਡ)                 | ਗਾਹਕ-ਪਛਾਣ-ਪੱਤਾ     |
| (ਸਕੋਤ)                             |                       | 79. Slide Show (ਸਲਾਈਡ ਸ਼ੋਅ)             | ਸਰਕਵਾਂ-ਪ੍ਰਦਰਸ਼ਣ    |
| 54. Paste (ਪੇਸਟ)                   | ਚਬੋੜਨਾ                | 80. Smart (ਸਮਾਰਟ)                       | ਆਧਿਨਕ              |
| 55. Pattern (ਪੈਟਰਨ)                | ਨਮੂਨਾ-ਬਿੰਦੀਆਂ         | 81. SMS (ਐਸਐਮਐਸ)                        | ਸਬਿਪ-ਸਨੇਹਾ-ਸੇਵਾ    |
| 56. PC (ਪੀਸੀ)                      | ਨਿੱਜੀ-ਗਣਕ-ਜੰਤਰ        | 82. Software (ਸਾਫਟਵੇਅਰ)                 | ਆਦੇਸ਼ਕਾਰੀ          |
| 57. Pen Drive (ਪੈਨ ਡਰਾਈਵ)          | ਅੰਕੜਾ-ਕਿੱਲੀ           | 83. Speaker (ਸਪੀਕਰ)                     | ਪੁਨੀ-ਨਤੀਜਾ-ਜੰਤਰ    |
| 58. Photography (ਫੋਟੋਗ੍ਰਾਫੀ)       | ਚਿਤਰਕਸ਼ੀ              | 84. Spell Checker (ਸਪੈਲ ਚੈਕਰ)           | ਸਬਦ-ਜੋੜ-ਜਾਂਚਕ      |
| 59. Picture Gallery (ਪਿਕਚਰ ਗੈਲਰੀ)  | ਚਿਤਰ-ਗਿਲਿਆਰਾ          | 85. Spreadsheet (ਸਪਰੈਡਸ਼ੀਟ)             | ਵਿਸਥਾਰੀ-ਤਲ-ਅਮਲਕਾਰੀ |
| 60. Pixel (ਪਿਕਸਲ)                  | ਚਿਤਰ-ਅੰਸ਼             | 86. Storage Device (ਸਟੋਰੇਜ ਡਿਵਾਈਸ)      | ਸੰਗ੍ਰਹਣ-ਜੰਤਰ       |
| 61. Portable (ਪੋਰਟੇਬਲ)             | ਚੱਕਵਾਂ                | 87. Text (ਟੈਕਸਟ)                        | ਲਿਖਤ               |
| 62. Presentation (ਪ੍ਰੈਜੈਂਟੇਸ਼ਨ)    | ਪੇਸ਼ਕਸ਼               | 88. Tool Box (ਟੂਲ ਬਾਕਸ)                 | ਸੰਦ-ਬਕਸਾ           |
| 63. Processor (ਪ੍ਰੋਸੈਸਰ)           | ਪ੍ਰਕਿਰਿਆ-ਇਕਾਈ         | 89. Touch Technique (ਟੱਚ ਟੈਕਨੀਕ)        | ਛੋਹ-ਤਕਨੀਕ          |
| 64. Programme (ਪ੍ਰੋਗਰਾਮ)           | ਆਦੇਸ਼ਕਾਰੀ, ਅਮਲਕਾਰੀ    | 90. Type (ਟਾਈਪ)                         | ਅਕਸੀਕਰਣ            |
| 65. Record (ਰਿਕਾਰਡ)                | ਇਕੱਤਰ-ਅੰਕੜੇ           | 91. Underline (ਅੰਡਰਲਾਈਨ)                | ਸਤਰਾਕਿਤ            |
| 66. Removable Disk (ਰਿਮੂਵੇਬਲ ਡਿਸਕ) | ਹਟਾਉਣਯੋਗ-ਤਵਾ          | 92. Update (ਅਪਡੇਟ)                      | ਆਧੁਨਿਕੀਕਰਣ         |
| 67. Ring Tone (ਰਿੰਗ ਟੋਨ)           | ਘੰਟੀ-ਪੁਨ              | 93. Upload (ਅੱਪਲੋਡ)                     | ਚੜ੍ਹਾਉਣਾ           |
| 68. Row (ਰੋਅ)                      | ਪਾਲ                   | 94. USB (ਯੂਐੱਸਬੀ)                       | ਸਰਬ-ਕ੍ਰਮ-ਚਾਲਕ      |
| 69. Save (ਸੇਵ)                     | ਸੁਰੱਖਿਅਤ-ਕਰਨਾ         | 95. Video (ਵੀਡੀਓ)                       | ਸਚਿਤਰ              |
| 70. Scanner (ਸਕੈਨਰ)                | ਪ੍ਰਤੀਬਿੰਬਕ            | 96. Wall Paper (ਵਾਲ-ਪੇਪਰ)               | ਪਰਤ-ਪੱਤਰ           |
| 71. Screen (ਸਕਰੀਨ)                 | ਸਤਹ                   | 97. Website (ਵੈੱਬਸਾਈਟ)                  | ਜਾਲ-ਟਿਕਾਣਾ         |
| 72. Screen Saver (ਸਕਰੀਨ ਸੇਵਰ)      | ਚਾਲੂ-ਸਤਹ-ਪੱਤਰ (-ਚਿਤਰ) | 98. Window (ਵਿੰਡੋ)                      | ਝਰੋਖਾ              |
| 73. Scroll (ਸਕਰੋਲ)                 | ਘੁਮਾਉਣਾ               | 99. Windows Explorer (ਵਿੰਡੋਜ਼ ਐਕਸਪਲੋਰਰ) | ਝਰੋਖਾ-ਪ੍ਰਦਰਸ਼ਕ     |
| 74. Search (ਸਰਚ)                   | ਲੱਭਣਾ                 | 100. Wireless (ਵਾਇਰਲੈਸ)                 | ਤਾਰਹੀਣ             |
| 75. Search Bar (ਸਰਚ ਬਾਰ)           | ਖੋਜ-ਪੱਟੀ              | 101. Word Processor (ਵਰਡ ਪ੍ਰੋਸੈਸਰ)      | ਸਬਦ-ਅਮਲਕਾਰੀ        |
| 76. Search Engine (ਸਰਚ ਇੰਜਣ)       | ਖੋਜ-ਇੰਜਣ              |   |                    |
| 77. Security (ਸਕਿਊਰਟੀ)             | ਸੁਰੱਖਿਆ               |   |                    |

## BCA203T: LOGIC ORGANISATION OF COMPUTER

**Total Marks: 100**  
**External Examination: 70**  
**Internal Assessment: 30**

**Maximum Time: 3 Hrs.**  
**Minimum Pass Marks: 35%**  
**Lectures to be delivered: 45-55 Hrs.**

### A) Instructions for paper-setter

The question paper will consist of three sections A, B & C. Sections A & B will have four questions from the respective sections of the syllabus and will carry 30% marks each. Section C will have 6-12 short answer type questions which will cover the entire syllabus uniformly and will carry 40% marks in all.

### B) Instructions for candidates

1. Candidates are required to attempt two questions each from sections A & B of the question paper and the entire section C.
2. Use of non-programmable scientific calculator is allowed.

### COURSE OBJECTIVES:

- To introduce the fundamentals of computers
- To introduce basic postulates of Boolean algebra and shows the correlation between Boolean expressions
- To introduce the methods for simplifying Boolean expressions
- To outline the formal procedures for the analysis and design of combinational circuits and sequential circuits
- To introduce the concept of computer memories

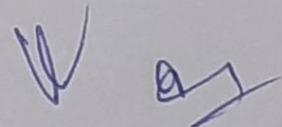
### LEARNING OUTCOME:

After learning the course, the students should be able to explain about the fundamentals of computers, digital number systems and logic circuits. The student should be able to solve logic function minimization. The students should be able to differentiate between combinational and sequential circuits such as decoders, encoders, multiplexers, de-multiplexers, flip-flops, counters, registers. The students should be able state the specifications of logic families. The student should be able to explain the different types of computer memories.

### SECTION-A

**Fundamental Concepts:** Introduction to Analog and Digital Systems, Digital Signals, Basic Digital Circuits: AND, OR, NOT, NAND, NOR, XOR and XNOR gates. Boolean algebra theorems, Characteristics of Digital IC.

**Number Systems:** Positional and Non-positional number systems, Binary, Decimal, Octal and Hexadecimal, Base conversions, Binary arithmetic: Addition and Subtraction, 1's complement, 2's complement, subtraction using 1's complement and 2's complement.



**Combinational Logic Design:** SOP and POS Representation of Logic functions, K-Map representation and simplification up to 4 variable expressions, Don't care condition.

### SECTION – B

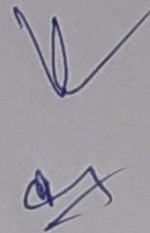
**Multiplexers:** 4X1, 8X1 and 16X1. De-multiplexers: 1 to 4, 1 to 8 and 1 to 16. BCD to Decimal decoder, Decimal to BCD encoder. Parity generator and Parity checker. Design of Half adder and Full adder

**Flip-Flops:** Introduction, Latch, Clocked S-R Flip Flop, Preset and Clear signals, D-Flip Flop, J-K Flip Flop, The race-around condition, Master Slave J-K Flip Flop, D-Flip-Flop, Excitation Tables of Flip Flops. Edge-Triggered Flip Flops.

**A/D and D/A Converters:** Introduction, Digital to Analog Converters: Weighted-Register D/A converter, R-2R Ladder D/A converter. Analog to Digital Converters: Quantization and encoding, Parallel-comparator A/D converter, Counting A/D converter.

#### Text/Reference Books:

1. Modern Digital Electronics by R. P. Jain, Fourth Edition, TMH
2. Digital Principles and Applications by Albert Paul Malvino and Donald P. Leach, Fourth Edition, TMH
3. Digital Electronics: An Introduction to Theory and Practice by William H Gothmann, 2<sup>nd</sup> Edition, PHI



## BCA204T: DATA STRUCTURES

**Total Marks: 100**

**External Examination: 70**

**Internal Assessment: 30**

**Maximum Time: 3 Hrs.**

**Minimum Pass Marks: 35%**

**Lectures to be delivered: 45-55 Hrs.**

### A) Instructions for paper-setter

The question paper will consist of three sections A, B & C. Sections A & B will have four questions from the respective sections of the syllabus and will carry 30% marks each. Section C will have 6-12 short answer type questions which will cover the entire syllabus uniformly and will carry 40% marks in all.

### B) Instructions for candidates

1. Candidates are required to attempt two questions each from sections A & B of the question paper and the entire section C.
2. Use of non-programmable scientific calculator is allowed.

### COURSE OBJECTIVE:

- To give fundamental knowledge data type various data structure.
- To explain the basic concepts of searching and graph theories.
- To make the learners acquainted with the use of different theories.

### LEARNING OUTCOME:

- Understand the need for Data Structures when building Applications.
- Appreciate the need for optimized algorithm.
- Able to walk through insert and delete for different data techniques.
- Improve programming skills.

### SECTION A

**Basic concepts and notations:** Types of data structures, Data structure operations, Mathematical notations and functions, Algorithmic complexity, Big 'O' notation, Time and space trade off.

**Arrays:** Linear array, representation of array in memory, traversing linear array, insertion and deletion in an array, Two-dimensional array, row major and column major orders, sparse matrix.

**Stacks:** Representation of stacks in memory (linked and sequential), operations on stacks, Applications of stacks: string reversal, parentheses matching.

**Queues:** Representation of queues in memory (linked and sequential), operations on queues, insertion in rear, deletion from front.

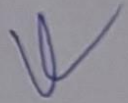

### SECTION B

**Linked list:** Representation of linked list using static and dynamic data structures, insertion and deletion of a node from linked list, searching in link list, searching in sorted link list.

**Trees:** Definition and basic concepts, linked representation and representation in contiguous storage, binary tree, binary tree traversal, Binary search tree, searching, insertion and deletion in binary search tree.

**Searching and sorting algorithms:** Linear and binary search, bubble sort, insertion sort, selection sort, quick sort, merge sort.

**Text/Reference Books:**

1. Seymour Lipschutz, Theory and Practice of Data Structures, McGraw-Hill.
  2. Vishal Goyal, Lalit Goyal, Pawan Kumar, A Simplified Approach to Data Structures, Shroff Publications.
  3. Y.L.Tenenbaum, and A. J. Augenstein, Data Structures using C and C++, PHI.
  4. Robert Sedgewick, Algorithms in C, Pearson Education.
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## BCA205T: BASIC MATHEMATICS

Total Marks: 100  
External Examination: 70  
Internal Assessment: 30

Maximum Time: 3 Hrs.  
Minimum Pass Marks: 35%  
Lectures to be delivered: 45-55 Hrs.

### A) Instructions for paper-setter

The question paper will consist of three sections A, B & C. Sections A & B will have four questions from the respective sections of the syllabus and will carry 30% marks each. Section C will have 6-12 short answer type questions which will cover the entire syllabus uniformly and will carry 40% marks in all.

### B) Instructions for candidates

1. Candidates are required to attempt two questions each from sections A & B of the question paper and the entire section C.
2. Use of non-programmable scientific calculator is allowed.

### COURSE OBJECTIVE:

- To give fundamental knowledge of set theories, abstract algebra.
- To explain the basic concepts of matrices, trigonometry.
- To make the learners acquainted with the use of Calculus and vector analysis.

### LEARNING OUTCOME:

On the successful completion of the course, students will be able to;

- Have a clear understanding of Mathematical functions.
- Develop an in-depth knowledge of Mathematical theories.
- Develop skills to get employment in I.T and Analysis Field

### SECTION A

**Complex Numbers:** Complex Numbers in the form of  $a + ib$ , Real and Imaginary parts of a complex number, Complex conjugate, algebra of complex numbers, square roots of a complex number, cube roots of unity.

**Quadratic Equations:** Solutions of Quadratic equations (with real and complex coefficients), Relations between roots and coefficients, Nature of roots, Equations reducible to quadratic equations.

**Cartesian System of Rectangular Coordinates:** Cartesian coordinate system, distance formula, section formula, centroid and incentre, area of triangle, condition for collinearities of three points in a plane.

**Straight Line:** Slope of a line, parallel and perpendicular lines, Equation of line in different forms, distance of a point from a line.

**Circle:** Standard form of equation of circle, General form, diameter form, three point form, Intersection of a line and a circle.

### SECTION B

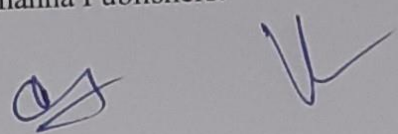
**Matrices:** Types of Matrices, Addition, Subtraction, Multiplication, Transpose, Conjugate and their properties, Symmetric, Skew-symmetric, Minor, co-factors, Adjoint, Inverse of matrices, Solution of linear system of equations using matrices.

**Rank of a matrix,** consistency of linear system of equations,

**Determinants:** Expansion of determinants (upto order 4), solution of linear system of equations using Cramer rule.

#### Text/Reference Books:

1. NCERT Textbooks of Mathematics for +1 and +2.
2. M K. Jain, S.R.K. Iyengar and R.K. Jain, " Numerical Methods for Scientific and Engineering Computation", Wiley.
3. B. S. Grewal, Higher Engineering Mathematics", Khanna Publishers.



## BCA206L: SOFTWARE LAB – III

**Total Marks: 100\***

**External Examination: 70**

**Internal Assessment: 30**

**Maximum Time: 3 Hrs.**

**Minimum Pass Marks: 35%**

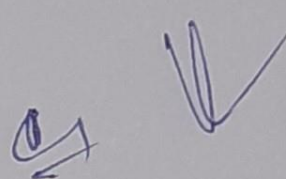
**Practical Sessions: 45-55 Hrs.**

This laboratory course will comprise as exercises to supplement what is learnt under paper BCA204T: Data Structures. Students are required to develop following programs in C language with internal documentation

- 1 Program to insert an element in an array.
- 2 Program to delete an element from an array.
- 3 Program to store an array using sparse representation.
- 4 Program to apply various operations on stack.
- 5 Program for parenthesis matching using stack.
- 6 Program for String reversal using stack.
- 7 Program to insert and delete nodes in a queue.
- 8 Program to insert and delete nodes in a linked list.
- 9 Program to search a node in a linked list.
- 10 Program to insert or delete node in a binary tree.
- 11 Program to traverse binary tree.
- 12 Program for implementing linear search.
- 13 Program for implementing binary search.
- 14 Program for implementing Bubble sort.
- 15 Program for implementing Selection sort.
- 16 Program for implementing Insertion sort.
- 17 Program for implementing Quick sort.
- 18 Program for implementing Merge sort.

**\*The breakup of marks for the practical will be as under**

<b>i. Internal Assessment</b>	<b>30 Marks</b>
<b>ii. Viva Voce (External Evaluation)</b>	<b>30 Marks</b>
<b>iii. Lab Record, Program Development and Execution(External Evaluation)</b>	<b>40 Marks</b>



**BCA207Q: DRUG ABUSE: PROBLEM, MANAGEMENT AND PREVENTION**

**Total Marks: 50**

**External Examination: 35**

**Internal Assessment: 15**

**Maximum Time : 1 Hr 30 Min.**

**Minimum Pass Marks: 35%**

**A) Instructions for the paper setters**

The question paper will consist of three sections A, B and C. Each of sections A and B will have four questions from the respective sections of the syllabus. Each question shall carry 5 marks. Section C will consist of 15 one word answer type questions of 1 mark each. Section C is compulsory.

**B) Instructions for the candidates**

Candidates are required to attempt two questions each from sections A & B of the question paper and the entire section C.

**SECTION A**

**UNIT: 1- Problem of Drug Abuse: Concept and Overview; Types of Drug Often Abused**

**(a) Concept and Overview**

What are drugs and what constitutes Drug Abuse?

Prevalence of menace of Drug Abuse

How drug Abuse is different from Drug Dependence and Drug Addiction?

Physical and psychological dependence:- concepts of drug tolerance.

**(b) Introduction to drugs of abuse: Short Term, Long term effects & withdrawal symptoms**

**Stimulants:** Amphetamines, Cocaine, Nicotine

**Depressants:** Alcohol, Barbiturates- Nembutal, Seconal, Phenobarbital Benzodiazepines-Diazepam, Alprazolam, Flunitrazepam.

**Narcotics:** Opium, morphine, heroin

**Hallucinogens:** Cannabis & derivatives (marijuana, hashish, hash oil) Steroids Inhalants

**UNIT: II -Nature of the Problem**

Vulnerable Age Groups Signs and symptoms of Drug Abuse

(a)-Physical indicators

(b)- Academic indicators

(c)- Behavioural and Psychological indicators

**SECTION B**

**UNIT: III - Causes and Consequences of Drug Abuse**

**a) Causes**

Physiological

Psychological

Sociological

**b) Consequences of Drug Abuse**

For individuals

For families,

For society & Nation.

#### **Unit: IV- Management & Prevention of Drug Abuse**

Management of Drug Abuse

Prevention of Drug Abuse

Role of Family, School, Media, Legislation & Deaddiction Centres

#### **Suggested readings:**

1. Kapoor. T. (1985) Drug Epidemic among Indian Youth, New Delhi: Mittal Pub
2. Modi, Ishwar and Modi, Shalini (1997) Drugs: Addiction and Prevention, Jaipur: Rawat Publication.
3. Ahuja, Ram, (2003), Social Problems in India, Rawat Publications: Jaipur
4. 2003 National Household Survey of Alcohol and Drug Abuse. New Delhi, Clinical Epidemiological Unit, AI India Institute of Medical Sciences, 204.
5. World Drug Report 201, United Nations Office of Drug and Crime.
6. World Drug Report 2010, United Nations Office of Drug and Crime.
7. Extent, Pattern and Trend of Drug Use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
8. The Narcotic Drugs and Psychotropic Substances Act, 1985, (New Delhi: Universal, 2012)

#### **Pedagogy of the Course Work:**

The pedagogy of the course work will consist of the following: 70% lectures (including expert lectures). 30% assignments, discussion and seminars and class tests.

Note: A visit to drug de-addiction centre could also be undertaken