



**B.Sc./B.Com. (Part-I) (Semester-I)  
Examination, 2025-26  
General English**

**Duration of Examination: 3 Hours**  
परीक्षा की अवधि: 3 घण्टा

**Max. Marks: 70**  
पूर्णांक: 70

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**Instructions to the Candidates:**

**परीक्षार्थी के लिए निर्देश:-**

**Note:- The Question paper is divided into two Parts : Part A & Part B.**

**Part-A**

Part-A will consist of 10 compulsory questions. Answer the each question shall be limited upto 50 words. Each question carries 02 marks. (Marks-10×2=20)

**Part-B**

Part-B will consist of 10 questions. Students will have to answer 05 questions in all, selecting. At least one question from each unit. The answer to each question shall be limited upto 400 words. Each question carries 10 marks. (Marks-10×5=50)

**Part-A**

1. Who is the writer of The Gentleman of the Jungle?
2. What did the School master want?
3. What are the objective of Spiritual Training? 1104
4. Fill in the blanks with suitable determiners :  
(a, an, the some any, much, many, few, little, each every)
  - (i) I saw \_\_\_\_\_ interesting book on the table.
  - (ii) She has \_\_\_\_\_ friends in this city.
  - (iii) \_\_\_\_\_ student must submit their homework on time.
  - (iv) There is very \_\_\_\_\_ water left in the bottle.
5. Fill in the blanks with suitable models :  
(can, could, may, might, must, should, would, shall, need to)
  - (i) You \_\_\_\_\_ finish your homework before going out.
  - (ii) He \_\_\_\_\_ be at the library; I saw him there earlier.
  - (iii) Students \_\_\_\_\_ respect their teachers.
  - (iv) \_\_\_\_\_ you please open the window? 1104
6. Fill in the blanks with suitable phrasal verbs:  
(look after, give up, run out of, take care of, put off, come across, break down)
  - (i) I had to \_\_\_\_\_ my neighbour's dog while they were on vacation.
  - (ii) The car \_\_\_\_\_ on the way to school yesterday.
  - (iii) We should not \_\_\_\_\_ our dreams easily.



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- (iv) I \_\_\_\_\_ an old friend in the market yesterday.
7. Change the sentences from direct to indirect :
- (i) he said, "I am going to the market."  
(ii) She asked, "Where are you going?"  
(iii) "Please help me with this task", said Riya.  
(iv) They said, "We have completed our homework."
8. Change the sentences from active to passive or vice versa.
- (i) The chef cooked a delicious meal.  
(ii) The teacher is explaining the lesson.  
(iii) Someone has stolen my bag.  
(iv) The children play football in the park.
9. Fill in the blanks with the correct form of the verb in brackets :
- (i) She \_\_\_\_\_ (go) to school every day.  
(ii) I \_\_\_\_\_ (see) that movie last week.  
(iii) By the time we arrived, they \_\_\_\_\_ (already/ leave).  
(iv) He \_\_\_\_\_ (study) English for three years.
10. Translate the following sentences into Hindi :
- (i) The sun rises in the east and sets in the west.  
(ii) She is reading a book under the shade of a tree.  
(iii) We must always respect our elders and help the needy.  
(iv) Yesterday, I visited the museum with my friends.

### Part-B

#### Unit-I

11. Read the following extract carefully, taken from the book 'The Many Worlds of Literature' the prescribed text book and answer the given questions :

The man had barely settled himself in his hut after the elephant's intrusion when the elephant, with great politeness, remarked that the hut was really very small for two. The man, feeling helpless, murmured something about the space being limited, yet the elephant began to push in his legs and then his huge body. Step by step, the man was forced to the doorway, until finally he found himself outside in the rain. The elephant, now comfortably inside, looked at him with what seemed like innocent curiosity, as if the man's discomfort was of no consequence. In this way, the elephant, under the guise of civility, gradually took over the man's home, turning the tables in a manner both subtle and overwhelming.

Questions :

- (i) How does the elephant use Politeness to manipulate the man?



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- (ii) What literary device is used when the elephant's "innocent curiosity" makes his true intentions?
- (iii) Explain how the phrase "turning the tables" applies to this situation.
- (iv) What does this paragraph suggest about the balance of power between the elephant and the man?
- (v) How might this episode serve as a social or moral commentary beyond the story itself?
12. Describe the little child, the emotion bond between the narrator and the child.
13. Why was Gandhi ji not willing to have women as a participant in the movement?

#### Unit-II

14. You are Rohan / Riya, a student of Sunshine College, staying in its hostel. Write an application to your Warden requesting to repair water purifier of the hostel at the earliest.

OR

You bought a school bag online and it had some defect. Write an application to the vendor requesting a replacement or refund.

15. Write a Paragraph on any of the following :
- (i) The impact of social media on Youth
- (ii) The Role of Sports in Student Life
- (iii) Role of Youth in Protecting Nature
16. Write a precis of the paragraph given in question 11 and provide a suitable title.

#### Unit-III

17. You are Ananya / Arjun, living at 45, Rose Street, Delhi. Write a formal letter to the Municipal Officer complaining about the poor condition of roads in your area and requesting immediate repair.

OR

Write a letter to your friends inviting them to your birthday party and giving details about the date, time and venue.

18. Correct the following sentences have one or more mistakes :
- (i) She dont like mangoes.
- (ii) The boys is playing in the ground.
- (iii) He go to school by bus everyday.
- (iv) I am living here since five years.
- (v) They has finished their homework.
- (vi) Where you are going now?
- (vii) Riya and Me went to the market yesterday.
- (viii) He is more smarter than his brother.



- (ix) The dog were barking loudly at night.
- (x) She can sings very well.

19. Read the following passage carefully and answer the given questions :

Rohit loved spending his weekends in the countryside. Every Saturday morning, he would travel to his grandparents' village, which was surrounded by green fields and tall trees. The village had a small river, and Rohit enjoyed fishing and boating there. He also liked helping his grandmother in the kitchen and learning how to cook traditional dishes. One day, while walking through the village, Rohit noticed a group of children planting trees along the riverbank. Curious, he asked them why they were doing it. They told him that the river was getting polluted, and planting trees would help prevent soil erosion and keep the environment clean. Inspired by their actions, Rohit decided to join them, and together they planted many saplings. By the end of the day, Rohit felt proud of contributing to the village's greenery.

Questions :

- (i) Where did Rohit go on weekends?
- (ii) What activities did Rohit enjoy by the river?
- (iii) What did Rohit learn from his grandmother?
- (iv) Why were the children planting trees?
- (v) How did Rohit feel after helping plant the trees?
- (vi) Find a word from the passage that means "**motivated or encouraged**".
- (vii) Give a suitable title for the passage.
- (viii) What lesson does this passage teach about the environment?
- (ix) How did planting trees help the village environment?
- (x) Describe Rohit's attitude towards helping and learning new things in the village.

20. Change the following sentences from Active to Passive Voice :

- (i) The teacher explains the leasson.
- (ii) The gardener is watering the plants.
- (iii) They built a new bridge last year.
- (iv) She has written a beautiful poem.
- (v) The cat chased the mouse.
- (vi) He will finish the work by tomorrow.
- (vii) The children were singing a song.
- (viii) Someone has stolen my purse.
- (ix) They are watching a movie.
- (x) The manager gave me a promotion.

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**B.C.A. (Part-I) (Semester-I)**  
**Examination, 2025-26**  
**BCA-102 : Computer Architecture**

*Duration of Examination: 3 Hours*

*परीक्षा की अवधि: 3 घण्टा*

*Max. Marks: 70*

*पूर्णांक: 70*

**Instructions to the Candidates:**

**परीक्षार्थी के लिए निर्देश:-**

**Note:- The question paper is divided into 02 Parts: Part - A & Part-B.**

**Part-A**

*Will consist of 10 compulsory questions. Answer to each question shall be limited up to 50 words. Each question will carry 02 marks. Total 20 Marks.* (Marks-10×2=20)

**Part-B**

*Will consist of 10 questions. Student will have to answer 05 questions, selecting At least one questions from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 marks. Total 50 Marks.*

*(Marks-5×10=50)*

**Part-A**

1. Convert  $(110101)_2$  into decimal and hexadecimal number systems.
2. Draw the logic diagram for XOR gate using NAND gates only.
3. Explain the difference between r's and (r-1)'s complement.
4. Design a 2-bit Binary adder and show its working with example inputs.
5. Define a Flip-Flop.
6. What is a decoder?
7. Simplify the Boolean expression  $A'B + AB' + AB$  using Boolean laws.
8. Define Cache Memory.
9. Differentiate between Static RAM and Dynamic RAM.
10. Calculate the effective access time of a memory system given :
  - (a) Cache hit rate = 90%
  - (b) Cache access time = 10 ns
  - (c) Main memory access time = 100 ns

**Part-B**

**Unit-I**

11. Explain number base conversion with an example of Octal to Binary conversion.
12. Discuss the axiomatic definition and basic theorems of Boolean Algebra.



13. Draw and explain the working of basic logic gates.
14. Simplify the following Boolean expression using Karnaugh Map :  
 $F(A,B,C,D) = \sum (0,1,2,5,8,9,10,13)$   
 $F(A,B,C,D) = \sum (0,1,2,5,8,9,10,13)$

### Unit-II

15. Explain the working of a Binary parallel Adder with a neat diagram.
16. Describe the BOOTH algorithm for signed number multiplication.
17. Discuss the different types of Flip-Flops with diagrams and truth tables.

### Unit-III

18. Explain the concept of assembly language and write the basic structure of an assembly program.
19. Discuss the internal organization of memory chips and explain types of semiconductor memories.
20. Write short notes on :  
 (a) Virtual Memory  
 (b) Cache Memory



**Bachelor of Computer Applications**  
**B.C.A. (Part-1) (Semester-I) Examination, 2025-26**  
**BCA-104 : Operating Systems**

*Duration of Examination: 3 Hours*

*परीक्षा की अवधि: 3 घण्टा*

*Max. Marks: 70*

*पूर्णांक: 70*

*Instructions to the Candidates:*

*परीक्षार्थी के लिए निर्देश:-*

*Note:- The question paper is divided into 02 Parts: Part - A & Part-B.*

**Part-A**

*Will consist of 10 compulsory questions. Answer to each question shall be limited up to 50 words. Each question will carry 02 marks. Total 20 Marks.*

*(Marks-10×2=20)*

**Part-B**

*Will consist of 10 questions. Student will have to answer 05 questions, selecting At least one questions from each unit. The answer to each question shall be limited to 400 words. Each question carries 10 marks. Total 50 Marks.*

*(Marks-5×10=50)*

**Part-A**

1. What is the purpose of system calls?
2. What is meant by context switch?
3. Define Inter-process communication.
4. Illustrate the use of fork and exec system calls.
5. What are the conditions under which a deadlock situation may arise?
6. Define Belady's anomaly.
7. Explain the internal and external fragmentation.
8. What is a Pipe (|) used for in shell scripting?
9. Write the syntax and use of the setenv ( ) function?
10. State the difference between soft links and hard links.

**Part-B**

**Unit-I**

11. Explain key features of batch processing and multi-programming OS with neat diagram and explain their advantages and disadvantages.
12. Define process state. With the help of neat sketch explain the process fundamental state transition diagram.



13. Consider the set of 5 processes whose arrival time and burst time are given below :

Process ID	Arrival Time	Burst Time
P1	3	1
P2	1	4
P3	4	2
P4	0	6
P5	2	3

If the CPU scheduling policy is SJF pre-emptive. Calculate the average waiting time and average turn around time.

**Unit-II**

- 14. Explain the difference between logical and physical addresses. How does address translation work in a paging system? Illustrate with a diagram.
- 15. Discuss file permissions in Linux. How are permission represented, and how can they be changed using `chmod()`?
- 16. Discuss the various page replacement algorithms. Compare FIFO, LRU and Optimal algorithms with examples.
- 17. What are the different methods for handling deadlocks in an operating system? Discuss deadlock prevention and avoidance with suitable example.

**Unit-III**

- 18. What are shell metacharacters? How does the shell interpret them? Provide examples showing their usage and how to avoid unintended behaviour using quoting?
- 19. Discuss control structures in shell programming such as `if`, `case`, `for` and `while`. Write a shell script that reads number from a user and prints whether they are even or odd.
- 20. Explain the use of `mkdir()`, `rmdir()`, and `shdir()` functions in directory manipulation. Provide examples for each function.



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**Bachelor of Computer Applications**  
**B.C.A. (Part-1) (Semester-I) Examination, 2025-26**  
**BCA-103 : C Programming**

Duration of Examination: 3 Hours

Max. Marks: 70

परीक्षा की अवधि: 3 घण्टा

पूर्णांक: 70

Instructions to the Candidates:परीक्षार्थी के लिए निर्देश:-*Note:- The Question paper is divided into two Parts : Part A & Part B.***Part-A**

Part-A will consist of 10 compulsory questions. Answer the each question shall be limited upto 50 words. Each question carries 02 marks. (Marks-10×2=20)

**Part-B**

Part-B will consist of 10 questions. Students will have to answer 05 questions in all, selecting. At least one question from each unit. The answer to each question shall be limited upto 400 words. Each question carries 10 marks. (Marks-10×5=50)

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**Part-A**

1. Which type of variable has a property of preserving their value even after they are out of their scope? Explain.

2. What do you mean by compound relational tests?

3. Evaluate the following expressions :

$$22 + 3 < 6 \ \&\&! \ 5 \ || \ 22 == 7 \ \&\& \ 22 - 2 > + 5$$

4. Define function signature.

5. What will be the output of following code? Also give reason.

```
#include<stdio.h>
char *str = "char *str = %c%s%c; main () {printf(str, 34, str, 34);}";
int main()
{
    printf (str, 34, str, 34);
    return 0;
}
```

6. What will be the output of following code? Also give reason.

```
#include<stdio.h>
int main()
{
```



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```
int i, j;
int arr [4] [4] = {{1, 2, 3, 4},
                  {5, 6, 7, 8},
                  {9, 10, 11, 12},
                  {13, 14, 15, 16} };
for(i = 0; i < 4; i++)
    for(j = 0; j < 4; j++)
        printf("%d", j[i[arr]] );
printf("\n");
for(i = 0; i < 4; i++)
    for(j = 0; j < 4; j++)
        printf("%d", i[j[arr]] );
return 0;
}
```

7. What will be the output of following code? Also give reason.

```
#include <stdio.h>
int main () {
    int matrix[2] [3] = {{1, 2, 3}, {4, 5, 6}};
    printf("%d, %d\n", matrix[0] [1], *((matrix + 1) + 0));
    return 0;
}
```

8. Write syntax of structure within structure in C using normal variable and using pointer variable.
9. What will be the output of following code? Also give reason.

```
#include <stdio.h>
void test (struct number n)
{
    n, x=100;
}
struct number {int x;};
int main()
{
    struct number num;
    test(num);
}
```



```

        printf("%d\n", num. x);
        return 0;
    }

```

10. What will be the output of following code and why?

```

#include <stdio.h>
int main()
{
    struct person{
        char name[30];
        int age;
    };
    struct person p={"Bhaarat", 21} ;
    p.name="Gargi";
    p.age=27;
    printf("%s, %d\n", p.name, p.age);
    return 0;
}

```

### Part-B

#### Unit-I

11. Write short note on the following :
- Symbolic constants.
  - Type of expression.
  - Ternary Operator
  - Nested Function.
12. Explain looping structure with example in C language. Also give reason why there are three loops and two entry controlled loops structure?
13. What is recursion? Write a C program to print Fibonacci sequence up to N terms using recursion.

#### Unit-II

14. Write a C Program to Sort 2D Array across rows.
15. C Program to check if String is Pangram (A pangram is a sentence containing every letter in the English Alphabet).



16. Explain C Storage Classes with suitable example also differentiate between Scope and Storage Classes.

### Unit-III

17. Write a C Program to store student records as Structures and Sort them by Name.
18. What is the difference between pass by value and pass by reference? Give suitable example.
19. Write short note on the following :
- (a) Bit field
  - (b) Pointer arithmetic
  - (c) Memory allocation functions
  - (d) Enum
20. Define Infix and Postfix notation of expression. Given a prefix expression, convert it into a postfix expression  $1 + A/BC + * AKL/CL$