

03/08/2023

B.C.A (2022-23)
Ist Year, IInd Sem

Printing Pages : 2

Paper Code : AEC-01 B (SVSU:2022-23/S,

Enrollment No.

Program Name- B.C.A.

II Semester / I Year Examination

Subject Code- AEC-01

Subject Name- English Communication

[Time : 1:30 hr]

[Max. Marks : 35M]

Note : 1. Attempt all the questions as per given instructions.

1. Multiple Choice Questions (MCQs) [01M×10=10M]

I Identify the type of tense.

The boys play in the park.

- (a) Simple Present Tense (b) Simple Past Tense
(c) Simple Future Tense (d) none of the above

II The words that are used in place of Noun are called-

- (a) Adjective (b) Pronoun (c) Preposition (d) Conjunctions

III A group of words that makes complete sense is called-

- (a) Verb (b) Tense (c) Sentence (d) Adjective

IV Mohit _____ to work throughout the day.

- liking (b) going (c) liked (d) likes

V You must buy _____ umbrella.

- (a) a (b) an (c) the (d) no article

VI How many parts of speech are there?

- (a) 7 (b) 6 (c) 9 (d) 8

VII Identify the type of sentence.

Hurrah! We have won the match.

- (a) Imperative sentence (b) Exclamatory sentence
(c) Declarative sentence (d) None of the above

VIII _____ Ganga falls in the Bay of Bengal.

- (a) A (b) an (c) the (d) no article

IX Identify the type of sentence.

When do we have our meeting scheduled?

(a) Declarative sentence (b) Interrogative sentence (c) Imperative sentence (d) Exclamatory sentences

X The girls _____ on the stage.

(a) Is dancing (b) am dancing (c) dances (d) are dancing

2. Answer in long (any three)

[05M×3=15M]

- I Write an application to the Hod of your Department requesting him to excuse you for short attendance and allow to appear in the semester examination.
- II Write your brief professional introduction as discussed in the class.
- III Write an essay on 'Manners and Etiquettes'.
- IV Write the Do's and Don'ts of a GD.

3. Answer in short (any five)

[02M×5=10M]

- I What do you mean by 'Role Play'?
- II Define Extempore.
- III Write the opposite of- young
- IV What do you mean by Personal Grooming?
- V What is meant by a 'Report'?
- VI Write the names of 'Parts of Speech'.
- VII Transform the sentence into Present Tense.

The children played in the park.

12/08/2023

BCA (202
Ist Year, IInd

Printing Pages :2

Paper Code :BCA/BCS-203

A

(SVSU:2022-23/R)

Enrollment No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

COURSE NAME: BCA/BCS
II SEMESTER/ I YEAR EXAMINATION
Subject Code: BCA/BCS-203
Subject Name: C-Programming

[Time: 3:00 Hours]

Max. Marks: 70

NOTE: Attempt All the Question as per given instruction.

I. Objectives Question: Answer All Question [1×15=15]

1. What is a String in C Language?
 - a. String is a new Data Type in C
 - b. String is an array of Characters with null character as the last element of array.
 - c. String is an array of Characters with null character as the first element of array
 - d. String is an array of Integers with 0 as the last element of array.
2. Which function will you choose to join two words?
 - a. Strcpy() b. Strlen() c. Strcat() d. Strncon()
3. What are the types of C Preprocessor Directives?
 - a. Macros b. Conditional Compilation
 - c. File Inclusion d. All the above
4. Processor Directive in C language starts with?
 - a. \$ b. @ c. & d. #
5. What is the name for .C file?
 - a. Executable code b. Source Code
 - c. Distributable Code d. Macro code
6. Which of the following true about FILE *fp?
 - a. FILE is a keyword in C for representing files and fp is a variable of FILE type.
 - b. FILE is a stream
 - c. File is buffered stream
 - d. File is a structure and fp is a pointer to the structure of the file type
7. Which type of files can't be opened using fopen()?
 - a. .txt b. .bin c. .c d. None of the above
8. C structure or User defined datatype is also called _____.
 - a. Derived data type b. Secondary data type
 - c. Aggregate data type d. All the above
9. The which of the following are themselves a collection of different data types?
 - a. String b. Structure c. Char d. All of the motioned
10. Which of the following cannot be a structure member?
 - a. Another structure b. Function
 - c. Array d. None of the above

11. In C a pointer variable to an integer can be created by the declaration?

- a. int p*; b. int *p; c. int +p; d. int \$p;

12. Which among the following is Copying function?

- a. memcpy() b. strcpy() c. memcopy() d. strxcpy()

13. DMA stands for _____?

- a. Dynamic Memory Allocation b. Data Memory Allocation
c. Detailed Memory Allocated d. None of the Above

14. An array elements are always stored in _____ Memory Location?

- a. Sequential b. Random
c. Sequential and Random d. None of the above

15. Which of the maximum number of dimensions an array in C may have?

- a. 2
b. 8
c. 50
d. Theoretically no limit. The only Practical Limits are memory size and compilers

Section II: Long Questions: Attempt any three [10×3=30]

1. Write a brief note on pre-processor in C-programming?
2. What do you mean by pointer? Explain its initialization and declaration method with a programming example.
3. What do you mean by structure? How we can initialize and declared structure in C? Explain with an example.
4. What do you mean by DMA? Explain calloc() function with n programming example.

Section III: Short Questions: Attempt any five. [5×5=25]

1. Explain the advantages of an array.
2. What is pointer? Write a program to display the address of a variable.
3. What do you mean by pointer to pointer variable?
4. Write a program to display the element from an array?
5. What do you mean by string? Write a program to calculate the length of a string.
6. Explain the difference between SMA and DMA.
7. What do you mean by macro substitution directives?
8. Write short note on fopen() and fclose() function used in file handling?

10/08/2023

BCA (2022-23)
Ist Yr., IInd Sem

Printing Pages :2
Paper Code : BCA-202

B (SVSU:2022-23/R)

Enrollment No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

BCA
I YEAR EXAMINATION
Database Management System
Subject Code-BCA-202

[Time : 3:00 Hours]

[Max. Marks : 70]

I. Objectives Question: Answer All Question

[15×1=15]

1) Which one of the following is commonly used to define the overall design of the database?

- a. Application program
- b. Data definition language
- c. Schema
- d. Source code

2) Which of the following levels is considered as the level closed to the end-users?

- a. Internal Level
- b. External Level
- c. Conceptual Level
- d. Physical Level

3) Which one of the following given statements possibly contains the error?

- a. select * from emp where empid = 10003;
- b. select empid from emp where empid = 10006;
- c. select empid from emp;
- d. select empid where empid = 1009 and Lastname = 'GELLER';

4) What do you mean by one to many relationships?

- a. One class may have many teachers
- b. One teacher can have many classes
- c. Many classes may have many teachers
- d. Many teachers may have many classes

5) A Database Management System is a type of _____ software.

- a. It is a type of system software
- b. It is a kind of application software
- c. It is a kind of general software
- d. Both A and C

6) Which one of the following refers to the "data about data"?

- a. Directory
- b. Sub Data
- c. Warehouse
- d. Meta Data

7) To which of the following the term "DBA" referred?

- a. Data Bank Administrator
- b. Database Administrator
- c. Data Administrator
- d. None of the above

8) The term "Data" refers to:

- a. The electronic representation of the information(or data)
- b. Basic information
- c. Row Facts and figures
- d. Both A and C

- 9) Rows of a relation are known as the _____.
- Degree
 - Tuples
 - Entity
 - All of the above
- 10) Which one of the following is a type of Data Manipulation Command?
- Create
 - Alter
 - Delete
 - All of the above
- 11) The term "TCL" stands for _____.
- Ternary Control Language
 - Transmission Control Language
 - Transaction Central Language
 - Transaction Control Language
- 12) In the relational table, which of the following can also be represented by the term "attribute"?
- Entity
 - Row
 - Column
 - Both B & C
- 13) The term "SQL" stands for _____.
- Standard query language
 - Sequential query language
 - Structured query language
 - Server-side query language
- 14) Which of the following keys is generally used to represents the relationships between the tables?
- Primary key
 - Foreign key
 - Secondary key
 - None of the above
- 15) Which one of the following keyword is used to find out the number of values in a column?
- TOTAL
 - COUNT
 - SUM
 - ADD

II. Long Question : Answer Any Three

[10×3=30]

- Explain different types of attributes.
- Name the different database models. Explain any two models.
- Draw a neat diagram of 3 view level dbms architecture and Explain.
- What is data independence? Explain types of data independence.
- Create a database schema as a fields are: sno,sname,saddress,feedetails
Display name from above database in ascending order.

III. Short Question: Answer any Five

[5×5=25]

- What is data and information?
- Define primary key .
- What do you mean by relationship in dbms? Give an example
- What do you mean by data abstraction ?
- What is the domain of an Attribute?
- How do you add a column to a table using SQL statement(s)?
- What do you mean by Entity.

B.C.A (2022)
Ist Yr., IInd Yr.

Paper Code :BCA-101 C (SVSU:2022-23/R)

[illegible]**BCA/ BSc(CS)**

1 YEAR, 1 SEMESTER EXAMINATION

Mathematics I

BCA/BCS-101

[Max. Marks : 70]

[10×3=30]

1. Define Euclidean algorithm. Find the gcd of 12378 and 3054 using Euclidean algorithm. Also express gcd as a linear combination of 12378 and 3054.

2. Solve the following by Gauss's elimination method $x + y + z = 6$, $x - y + z = 2$ and $3x + 2y - 4z = -5$.

4. By using the first principal, find the differentiation of

- A. $\sin x$ B. $\log x$

5. Integrate

- A. $\int \log x dx$

- $$B. \int \frac{x+4}{3+2x-x^2} dx$$

[5×5=25]

1. A survey shows that 73% of Indians like apples, whereas 65% like oranges. What percentage of Indians like both apples and oranges?

2. If $\begin{bmatrix} 2 & x \\ y & 3 \end{bmatrix} \begin{bmatrix} 1 & 2 \\ 1 & 1 \end{bmatrix} = \begin{bmatrix} 3 & 5 \\ 5 & 7 \end{bmatrix}$, then find the value of x and y.

3. Define Unitary matrix and Involuntary matrix with examples.

4. Find the area of parallelogram determined by the vectors $\vec{a} = \mathbf{i} + 2\mathbf{j} + 3\mathbf{k}$ and $\vec{b} = 3\mathbf{i} - 2\mathbf{j} + \mathbf{k}$.

5. Find the differentiation of $x^3 \log x$.

6. Find the integration of $\int x^2 \log x^3 dx$.

7. Evaluate: $\int_1^2 \frac{dx}{x(1+x^2)}$

| 15×1=15 |

1. If A and B are two sets disjoint sets, then

- [B] $A \cap B \neq \emptyset$

- [C] can't say

- [D] None

2. The set of negative integers is

- [B] Finite**

- [C] Subset

- [D] Empty

3. The gcd of 119 and 272
 [A] 17 [B] 34 [C] 119 [D] 272
4. The determinant of unit matrix is
 [A] 1 [B] 0 [C] can't say [D] none
5. If A is orthogonal matrix then
 [A] $A.A' = O$ [B] $A.A' = I$ [C] $A.A' = A$ [D] $A.A' = A'$
6. If A is matrix of order 2×3 and B is matrix of order 3×2 then order of AB is
 [A] 2×2 [B] 3×2 [C] 2×3 [D] 3×3
7. If position vector of A is $i + j + k$ and of B is $2i + 5j$, then $\overline{AB}$ is equal to
 [A] $i + 4j - k$ [B] $-3i + j - k$
 [C] $-i - 4j + k$ [D] $3i - j + k$
8. $i \cdot j =$
 [A] 0 [B] 1 [C] -1 [D] none
9. $i \times i =$
 [A] 0 [B] 1 [C] -1 [D] none
10. Given $y = 5e^{3x} + \cos x$, $\frac{dy}{dx}$ is
 [A] $5e^{3x} + \sin x$ [B] $5e^{3x} - \sin x$
 [C] $15e^{3x} + \sin x$ [D] $15e^{3x} - \sin x$
11. Given $y = \cos 2x$, $\frac{dy}{dx}$ at $x = 0$ is
 [A] 0 [B] 1 [C] 2 [D] -1
12. The definition of the first derivative of a function $f(x)$ is
 [A] $f'(x) = \lim_{h \rightarrow \infty} \frac{f(x+h)-f(x)}{h}$
 [B] $f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h)-f(x)}{h}$
 [C] $f'(x) = \lim_{h \rightarrow \infty} \frac{f(x+h)+f(x)}{h}$
 [D] $f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h)+f(x)}{h}$
13. $\int \cos x \, dx =$
 [A] $\sin x$ [B] $-\sin x$ [C] $\sin x + c$ [D] $-\sin x + c$
14. $\int \tan x \, dx$
 [A] $\log \cos x$ [B] $-\log \cos x$ [C] $\log \sin x$ [D] $-\log \sin x$
15. If $f(x)$ is odd function, then $\int_{-a}^a f(x) \, dx =$
 [A] 0 [B] 1 [C] Can't say [D] none

B.C.A (2022-
Ist Yr., IInd S

B (SVSU:2021-22/R)

Enrollment No.								
-----------------------	--	--	--	--	--	--	--	--

I- YEAR II SEMESTER EXAMINATION

Mathematics-II

[Max. Marks : 70]

[10×3=30]

1. Show that the set of rational numbers is not complete order field.
2. If a function f is continuous in a closed interval $[a, b]$, then show that it possesses greatest and least values.
3. Show that a sequence converges iff it is a Cauchy sequence.
4. State and prove D'Alembert's ratio test.
5. State and prove Rolle's theorem.

[5×5=25]

1. Describe the properties of the set of real numbers as a complete order field.
2. Show that intersection of two closed sets is a closed set.
3. Let $f(x) = \begin{cases} 1-2x, & x < 0 \\ 0, & x = 0 \\ 1+3x, & x > 0 \end{cases}$. Show that $\lim_{x \rightarrow 0} f(x)$ exists and equal to 1.
4. Show that- $\lim_{x \rightarrow \infty} n^{1/n} = 1$.
5. Prove that- $\lim_{x \rightarrow \infty} \left(\frac{n}{(n!)^{1/n}} \right) = e$.
6. Test for convergence, $\sum \frac{1}{n^2 + a^2}$.
7. Discuss the types of discontinuities of a function.
8. Define absolutely convergent series, conditional convergent series and Alternating series.

III. Objectives Question: Answer All Question [15×1=15]

(I) The sequence $\langle (-1)^{n-1} \rangle$ is

- (A) bounded above, not bounded below (B) not bounded above, bounded below
(C) bounded above, bounded below (D) none of these

(II) The sequence $\langle 1 + (-1)^n / n \rangle$ is

- (A) convergent (B) divergent (C) oscillatory (D) none of these

(III) The sequence $\langle (-1)^n \rangle$ is

- (A) convergent (B) divergent (C) oscillatory (D) none of these

(IV) The sequence $\langle 1, -1, 1, -1, 1, -1, \dots \rangle$ has

- (A) no limit point (B) only one limit point
(C) two limit point (D) an infinite number of limit points

(V) The least upper bound of the sequence $\langle 1 - (1/n) \rangle$ is

- (A) 0 (B) -1 (C) 1 (D) none of these

(VI) The infinite series $\sum 1/n^p$ is convergent if

- (A) $p < 1$ (B) $p > 1$ (C) $p = 1$ (D) $p \geq 1$

(VII) The series $1 + r + r^2 + r^3 + \dots$ is oscillatory if

- (A) $r < 1$ (B) $r > 1$ (C) $r = 1$ (D) $r = -1$

(VIII) Which of the following is nbd of each of its points?

- (A) Set Q of rational numbers (B) Set Q' of irrational numbers
(C) Set N of natural numbers (D) open interval (a, b)

(IX) If $f(x) = (\sin x)/x$, then $f(0 - 0)$ is

- (A) 0 (B) 1 (C) -1 (D) none of these

(X) The set of limit points of $\{1, 3, 7, 11\}$ is

- (A) $\{1, 3, 7, 11\}$ (B) $\{1\}$ (C) $\{11\}$ (D) none of these

(XI) The series $\sum 1/\sqrt{n}$ is

- (A) absolutely convergent (B) Conditionally convergent
(C) Both A and B (D) none of these

(XII) Nbd of $1/2$ is the set

- (A) $[-1/2, 1/2]$ (B) $(0, 1/2]$ (C) $(-\infty, \infty)$ (D) none of these

(XIII) Any non-empty sub-set of real numbers which is bounded below has

- (A) Infimum (B) both infimum and supremum
(C) Supremum (D) neither infimum nor supremum

(XIV) Any non-empty sub-set of real numbers which is bounded above has

- (A) Infimum (B) both infimum and supremum
(C) Supremum (D) neither infimum nor supremum

(XV) If A and B are sets and $A \cup B = A \cap B$, then

- (A) A is empty set (B) B is empty set
(C) $A = B$ (D) none of these