



21102505

QP CODE: 21102505

Reg No :

Name :

UNDER GRADUATE (CBCS) EXAMINATIONS, OCTOBER 2021

First Semester

Common Course - EN1CCT01 - ENGLISH - FINE - TUNE YOUR ENGLISH

Common for all UG Programmes

2017 Admission Onwards

5D1F0F16

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. A. The boy stood on the burning deck. (Identify the subject.) B. Early bird catches the worm. (Identify the predicate.)
2. A. The boy moved swiftly. B. You can buy it everywhere. (Underline the adverb in each of the sentences)
3. A. Our neighbour, besides three others _____ standing in the queue. B. The man, along with his three dogs _____ taking a stroll in the park. (Use the appropriate auxiliary to complete the given sentences)
4. A. I _____ twenty next Saturday. B. It _____ Christmas in a week from now. (Fill in the blanks in both the sentences using the simple future tense form of "be")
5. A. John remained inactive. B. What Mary said is true. (Identify the kind of adjective)
6. A. Copper is _____ useful metal. B. He is not _____ honourable man. (Fill in the blanks with suitable articles.)
7. A. Every man, naturally wishes _____ distinction. B. The holy tree is associated _____ scenes of goodwill and rejoicing. (Fill in the blanks using the appropriate prepositions).
8. Bring out the meaning of the given idioms by using them in sentences of your own. A. an apple of discord. B. sour grapes
9. Explain the difference between the following expressions. pass out; stand out





10. Choose the appropriate noun suffix for the given words ('ant','or', 'age','ee') 1.edit 2. account 3.pay 4. drain
11. Give a couple of polite expressions to conclude a telephone conversation.
12. Frame two 'wh' questions.

(10×2=20)

Part B

Answer any **six** questions.

Each question carries **5** marks.

13. Replace the adverbs (given in italics) by adverb clauses. 1. They rested at sunset.2. He speaks powerfully. 3. Sit somewhere. 4. The door was suspiciously open. 5. He worked persistently.
14. Correct the following sentences. 1. These are my sisters books. 2. The group fought between themselves. 3. He gave me a few advice. 4. The sceneries here are extremely beautiful. 5. All possible means have been tried.
15. Rewrite the following sentences in passive form. 1. He will finish the work in a fortnight. 2. They elected him president. 3. We compelled the enemy to surrender. 4. The young man spoiled the game. 5. You won't gain anything by fretting.
16. Explain the difference in meaning between the given pairs of sentences. 1. a. She made a good meal; b. She had a good meal. 2. a. She is always making complaints, b. She is always having complaints.
17. Form the adverbs from the given adjectives. 1. Clever 2. Wise 3. Kind 4. Single 5. Happy 6. Heavy 7. Quick 8. Beautiful 9. Loud 10. Patient
18. What are demonstrative pronouns? Give examples.
19. Give five popularly used expressions with animal words.
20. Convert into negative form. 1. They have arrived already. 2. John knows English. 3. He is still there. 4. He does his work carefully 5. The information is reliable.
21. Frame five rhetorical questions.

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **15** marks.





22. Prepare a job application for the job of a Physiotherapist in a Multispeciality Hospital
23. A. Frame a telephone conversation between you and an intimate friend of yours about your career interests. B. Write a short speech you, as the Staff Secretary, would deliver on the retirement of your colleague.
24. Write a review of a movie that is a remake of a popular novel.
25. A. Write a letter to a friend describing a recent exciting cricket match in which your side won. B. Write an essay on the importance of using helmet while riding two wheelers.

(2×15=30)





QP CODE: 21102624



21102624

Reg No :

Name :

BCA DEGREE(CBCS)EXAMINATIONS, OCTOBER 2021

First Semester

Bachelor of Computer Application

**Complementary Course - ST1CMT31 - BASIC STATISTICS AND INTRODUCTORY
PROBABILITY THEORY**

2017 Admission Onwards

E26EA3FD

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. What is a frequency curve?
2. What are functions of an average?
3. Find SD of the data 4, 7, 2, 6, 9, 11, 12.
4. Write down the regression equation of X on Y.
5. What is the relation between the regression coefficients when there is perfect correlation?
6. When correlation coefficient is one, what is the nature of the regression lines?
7. Explain discrete and continuous sample space.
8. What is relative frequency definition of probability?
9. State addition theorem for any two events.
10. What are the properties of probability mass functions?
11. If $f(x) = 2x$ for 0.
12. Can a random variable X .have the following probability density : $f(x) = x, 0$.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Draw a histogram for the following data:





Class	0-10	10-20	20-40	40-70	70-100	100-110
frequency	7	14	28	34	18	2

14. How will you calculate range for frequency distributions?
15. How is coefficient of variation differ from standard deviation?
16. Explain how will you fit a straight line using least square principle.
17. Find Karl Pearson's coefficient of correlation and P.E

X	12	20	15	22	18	24	20	12
Y	30	35	28	36	29	39	30	25

18. Probability that a patient is correctly diagnosed is 0.4.If a patient is correctly diagnosed he will survive is 0.8. What is the probability that a patient is correctly diagnosed and survived?
19. State and prove multiplication theorem for two events.Deduce the result for three events.
20. Find $E(X)$ and $V(X)$ for $f(1)=1/4$, $f(2)=1/2$ and $f(3)=1/4$.
21. Explain moment generating function of a continuous random variable by stating its important properties.

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **15** marks.

22. The following table gives the age distribution of 542 workers ina company.Calculate Q_1, Q_3, D_4 and P_{27}

Age	20-30	30-40	40-50	50-60	60-70	70-80	80-90
No.of workers	3	61	132	153	140	51	2

23. Explain least square principle in curve fitting and explain how will you fit a straight line using this method.
24. State and prove Baye's theorem.
25. Briefly explain mean ,variance and mgf of a random variable.Also state their properties.

(2×15=30)





21102407

QP CODE: 21102407

Reg No :

Name :

B.Sc/BCA DEGREE(CBCS)EXAMINATIONS, OCTOBER 2021

First Semester

Core Course - CS1CRT01 - COMPUTER FUNDAMENTALS AND DIGITAL PRINCIPLES

(Common to B.Sc Computer Applications Model III Triple Main, Bachelor of Computer Application)

2017 Admission Onwards

C6717A08

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Why most standard keyboards are called 'QWERTY' keyboards?
2. List the four factors we should consider when comparing monitors.
3. What is LAN ?
4. What is a web browser?
5. Convert $(127)_{10}$ to octal.
6. What are the rules for BCD addition?
7. Explain how NAND gate act as AND gate?
8. Demorganize the expression $f = ((AB)'(CD+E'F) + ((AB)' + (CD)'))$
9. Define Parity.
10. Draw the truth table of a R-S flip flop
11. Draw the truth table of half adder.
12. What is the need of encoder?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*





13. Explain any two optical input devices.
14. Which are the different types of PC operating System?
15. Explain the working of Internet.
16. How to represent decimal numbers 0 to 15 in 4-bit binary form.
17. Perform the Subtraction using 2's complement method (a) 00111010 - 00011011
(b) 00010010 - 111101111
18. Convert the following SOP expression to an equivalent POS expression.
 $A'B'C' + A'BC' + A'BC + AB'C + ABC$
19. Draw Kmap and simplify the following boolean expression
 $f(A,B,C,D) = \prod M(0,2,5,7,8,10,13,15)$
20. Differentiate between Multiplexer and Demultiplexer.
21. Write short note on JK flip flop.

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **15** marks.

22. Explain about the essential computer hardwares.
23. Explain the binary addition and subtraction processes with suitable example.
24. Explain the different logic gates with truth table and logic diagram.
25. With neat diagrams explain the working of following types of shift registers
(a) Serial-in, Serial-out (b) Serial-in, parallel-out (c) Parallel-in, Parallel-out

(2×15=30)



QP CODE: 21102623



Reg No :

Name :

B.Sc/BCA DEGREE (CBCS) EXAMINATIONS, OCTOBER 2021

First Semester

Complementary Course - MM1CMT03 - MATHEMATICS - DISCRETE MATHEMATICS (I)

(Common to B.Sc Computer Science Model III, Bachelor of Computer Application, B.Sc Cyber Forensic Model III)

2017 Admission Onwards

15257B0E

Time: 3 Hours

Max. Marks : 80

Part A

Answer any **ten** questions.

Each question carries **2** marks.

- Let $P(x)$ denote the word x contains "a" what are the truth values of
(a) $P(\text{orange})$ (b) $P(\text{lemon})$ (c) $P(\text{true})$ (d) $P(\text{false})$.
- Express each of the following statements "Every student in this class has studied Calculus" and "Some students in this class has visited Mexico". using predicates and Quantifiers.
- Determine the validity of the following argument
If 7 is less than 4 or 7 is a prime number
7 is not less than 4
Conclusion : 7 is a prime number
- Define ordered n -tuple. State condition for two ordered n -tuple to be equal.
- Let $U = \{1, 2, 3, \dots, 10\}$ be the universal set, using bit string find union and intersection of the sets $\{1, 3, 5, 9\}$ and $\{2, 4, 6, 8\}$.
- How can we produce the terms of the sequence if the first 10 terms are 1, 2, 2, 3, 3, 3, 4, 4, 4, 4
- Find counter example to the statement about congruence
If $ac \equiv bc \pmod{m}$ where a, b, c and m are integers with $m \geq 2$ then $a \equiv b \pmod{m}$
- Show that 101 is prime
- Find (1) $\text{gcd}(120, 500)$ (2) $\text{lcm}(2^3 \cdot 3^5 \cdot 7^2, 2^4 \cdot 3^3)$
- Is 'divides' relation on the set of positive integers transitive? Explain.
- Find the matrix representation of R^2 if R is represented by the matrix $\begin{bmatrix} 0 & 1 & 1 \\ 1 & 0 & 0 \\ 1 & 0 & 1 \end{bmatrix}$
- Define a lattice. give example.

(10×2=20)

Part B

Answer any **six** questions.

Each question carries **5** marks.

- Construct the truth table of the compound proposition $(\neg p \leftrightarrow \neg q) \leftrightarrow (q \leftrightarrow r)$
- Show that (a) $p \vee (q \wedge r)$ and $(p \vee q) \wedge (p \vee r)$ (b) $p \leftrightarrow q$ and $\neg p \leftrightarrow \neg q$ are logically equivalent.





15. Show that $\forall x(p(x) \wedge q(x))$ and $\forall x p(x) \wedge \forall x q(x)$ are logically equivalent.
16. Draw the graph of the function $f(x) = \lfloor 2x + 1 \rfloor$.
17. Show that the set of all integers is a countable set.
18. Let a and b are integers and let m be a positive integer then $a \equiv b \pmod{m}$ iff $a \bmod m = b \bmod m$
19. What are the solutions of the linear congruence $3x \equiv 4 \pmod{7}$
20. Draw the directed graph that represent each of the following relations.
 1. $\{(a,a), (a,b), (b,c), (c,b), (c,d), (d,a), (d,b)\}$
 2. $\{(a,b), (b,a), (b,b), (c,a), (c,b), (c,c)\}$
21. Let $A =$ Set of all words in English language. The relation R on A is defined by $a R b$ if and only if the words a & b starts with the same alphabet. Show that R is an equivalence relation.

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **15** marks.

22. (a) Show that the hypothesis "if you send me an e- mail message ,then I will finish writing the programme " . " if you do not send me an e- mail message then I will go to sleep early" and if I go to sleep early then I will wake up feeling refreshed". lead to the conclusion "If I do not finish writing the programme then I will wake up feeling refreshed."
(b) Show that the premises " A student in this class has not read the book" and " Every one in this class passed the first exam " imply the conclusion " Someone who passed the first exam has not read the book".
23. Define One to One and Onto functions. How can we use these functions to find cardinality of sets. Illustrate with any two examples.
24. State and prove Chinese Remainder Theorem.
25. Show that 'divides / ' is a partial order on the set of integers. Draw a Hasse diagram when '/' on set $\{1,2,3,4,6,8,12\}$

(2×15=30)





QP CODE: 21102622



21102622

Reg No :

Name :

B.Sc/BCA DEGREE(CBCS)EXAMINATIONS, OCTOBER 2021

First Semester

**Core Course - CS1CRT02 - METHODOLOGY OF PROGRAMMING AND C
LANGUAGE**

(Common to B.Sc Computer Applications Model III Triple Main, B.Sc Computer Science Model III,
B.Sc Information Technology Model III & Bachelor of Computer Application)

2017 Admission Onwards

2D0E4A78

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. List out any three factors for selecting a programming language.
2. Draw a flow chart to find the average of three numbers.
3. List the three control structures with atleast one example for each.
4. Differentiate between keywords and identifiers.
5. What are different storage class specifiers in C ?
6. Explain the use of printf() statement.
7. Draw the flow chart showing the execution of while loop in C.
8. How a matrix can be declared in C?
9. Differentiate between array of pointers and pointers to array.
10. Write the commonly used library functions in C.
11. What is external variable?
12. What is dynamic memory allocation ?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Discuss about various programming languages with its advantages and limitations.





14. What do you mean by Testing and Debugging ? Explain.
15. Discuss the precedence of arithmetic, logical and relational operators in C.
16. Discuss the various unconditional branching statements in C.
17. Write a C program to print the first n prime numbers.
18. What is array? Write a program to sort a set of numbers in ascending order.
19. Write a C program to find the number of vowels in a string.
20. What is the difference between function prototype and function definition? Explain with an example.
21. What is recursion? Write a program to find the factorial of a number using recursion?
(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Explain about a) Linker b) Subprogram c) Differences between compiler and interpreter.
23. Explain in detail various datatypes used in C with example.
24. a) Write a C program using pointer to swap the values of two integer number.
b) Explain the relation between an array and a pointer. What is wild pointer in C?
25. Explain a) structure with sample program.
b) Explain Pointers to Structure.
(2×15=30)

