QP CODE: 19103105

Reg No : ....

Name : ....

UNDERGRADUATE(CBCS) EXAMINATION, NOVEMBER 2019

First Semester

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

(Common for all U.G Programmes)

2017 Admission Onwards

0AF381B4

Maximum Marks: 80   Time: 3 Hours

Part A

*Answer any **ten** questions.*

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

1. A.He is industrious and diligent and works hard.(Improve the style) B. His courage won him honour. (Identify the subject)

2. A golden crown, A purple cloak, A white elephant, A deserted village
    (Convert the adjectives into phrases of similar meaning)

3. A. Can I have a piece of chocolate? Can I have a chocolate?
    (Mark out the erroneous usage in the given pair)

4. A. The hunter shot the lion. B. A policeman caught the thief.
    (Turn the sentences into passive voice)

5. Give two sentences beginning with a sentence adverb.

6. A. John got ____ best present. B. Mumbai is ____ very costly place to live in.
    (Fill in the blanks with suitable article.)

7. A. She will be twenty five _____August 11th . B. Christmas day is _____December 25th. (Supply the appropriate prepositions)

8. Use the following in sentences of your own. A. to get the sack. B. to call it a day

9. Give the phrasal verbs with the meaning A. to abandon, B. to continue

10. Use the following expressions in sentences of your own.
    A. to rain cats and dogs. B. a bee in one's bonnet

11. What is a declarative question? Give an example.

12. A. Gopal hasn't passed the exam,_____? B. They will go home soon,_____?
(Add question tag)

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. Fill the blanks with suitable adjective clauses.
1. I know the place_____. 2. Where is the book _____ 3. I know the man_____ 4. The dog _____ does not bite. 5. Any boy _____will be punished.

14. Use the appropriate form of the verbs given at the end of each sentence.
1. He _____ the room and _____down in the chair ('cross' 'sit') 2. When we set out early this morning the sun_____ ('shine') 3. A bus _____ him down as he _____ the road ('knock' 'cross').

15. Fill in the blanks using the infinitive form of the given verbs.
1. It is wrong_____(steal) 2. I should advise you _____ (see) a doctor. 3. The teacher made him_____ (repeat) his work. 4. The police would not allow anyone _____(enter) the disputed area. 5. The law requires all the citizens_____ (obey) the traffic rules.

16. Frame five sentences with the auxiliary 'may' to express possibility.

17. What is a noun adjective? Use three noun adjectives in sentences of your own.

18. Explain the following usages by framing meaningful sentences.
1. foot the bill 2. make faces behind someone's back 3. see eye to eye 4. to have goose flesh 5. facing all challenges

19. Give the possible word that may be derived out of affixation in the following words.
1. duty 2. pay 3. music 4. simple 5. institute

20. Many people did not attend the function; Not many people attended the function. Given here is an example of an alternative negative. Frame three similar pairs of alternative negatives.

21. Frame five alternative questions.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Prepare a job application for the post of a Banker in a Law firm

23. A. You are the secretary of your Residents' Association. You are moderating a discussion among the members of the Association Committee for the cleanliness of the surroundings. Discuss your plan of action. B. Summarise the suggestions given by the other participants in the discussion.

24. Write an essay stating your views on how water scarcity will affect the world.

25. A. Write a letter to the Director of Education, applying for appointment as a teacher in Educational service. B. Write an essay stating your views on" Role of Judiciary in Indian today".

(2×15=30)

QP CODE: 19103223

Reg No   :   ....

Name   :   ....

B.Sc.DEGREE (CBCS) EXAMINATION, NOVEMBER 2019

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

94EE1A99

Time: 3 Hours   Maximum Marks :80

Part A

*Answer any **ten** questions.*

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

1. Define conjunction and disjunction of propositions

2. Define Universal Quantifier . Give example.

3. Define Modus Ponens rule.

4. using set identities prove that $\overline{A \cup (B \cap C)} = (\overline{C} \cup \overline{B}) \cap \overline{A}$

5. Let $A_i = \{i, i+1, i+2,...\}$ for i = 1, 2, 3,... Then find $\cup_{i=1}^{n} A_i$ and $\cap_{i=1}^{n} A_i$

6. How can we produce the terms of the sequnce 5, 11, 17, 23, 29, 35, ...

7. Evaluate (a) 13 mod 3   (b) -97 mod 11

8. State the fundamental theorem of Arithmetic. Give an example of Prime factorisation

9. State Fermat's little theorem

10. Define a relation R from A to itself. Give an example.

11. How can the matrix representing a relation 'R' on a set A be used to determine whether the relation is asymmetric?

12. Suppose A = {1,2,3,4,5,6}, A_1 = {1,2,3}, A_2 = {4,5}, A_3 = {5,6} . Is A_1, A_2, A_3 form a partition of A.

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. Define a bit string and length of a bit string. Also find the length of 101010011. And find the bit wise XOR of 10101110 and 01010000.

14. Show that $\neg\forall x(p(x) \to q(x))$ and $\exists x(p(x) \land \neg q(x))$ are logically equivalent.

15. Use rules of inference to show that the hypothesis

    "Ravi works hard", " If Ravi works hard, then he is a dull boy " and " If Ravi is a dull boy, then he will not get the job" imply the conclusion, "Ravi will not get the job"

16. Define bijective functions with an example.

17. Display the graph of the function $f(x) = x^2$ from the set of integers to the set of integers.

18. 1. Find the g c d $(11 \times 13 \times 17, 2^9.3^7.5^5.7^3)$

    2. What is the l c m $(3^{13}.5^{17}, 2^{12}.7^{21})$

19. Find the g c d (124,323) and express it as the linear combination of 124 and 323.

20. Let R be the relation on the set of integers such that a R b if and only if a = b or a = -b. Show that R is an equivalence relation.

21. What do you mean by total ordering ?What is a totally ordered set . Give example.

$(6 \times 5 = 30)$

Part C

*Answer any **two** questions.*

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

22. State and prove Distributive laws and assosiative laws of logical equivalance

23. What are different types of functions. Give any two examples of countable sets. Justify your answer.

24. 1.(a) Encrypt the message WATCH YOUR STEP by

    (i) the encryption function $f(p) = p + 14 \pmod{26}$ (ii) By Caesar's cipher

    2. Decrypt the following messages encrypted using Caesar's cipher

     (a) EOXH MHBQV   (b) WHVW WRGDB

25. a) Prove that the relation R on a set A is transitive if and only if $R^n \subseteq R$ for n=1,2,3, ...

    b) Let R = {(1,1), {2,1), (3,2), (4,3)} Find the powers R^n, n=2,3,4,.......

$(2 \times 15 = 30)$

BCA DEGREE (CBCS) EXAMINATION, NOVEMBER 2019

First Semester

Bachelor of Computer Application

Complementary Course - ST1CMT31 - BASIC STATISTICS AND INTRODUCTORY PROBABILITY THEORY

2017 Admission Onwards

7C6486B8

Time: 3 Hours

Maximum Marks :80

Part A

*Answer any **ten** questions.*

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

1. How will you draw a less than ogive?

2. If mean =30, median=32 find mode.

3. Define variance

4. What are the normal equations for fitting a straight line?

5. What is mean by limited degree of correlation?

6. When correlation coefficient is zero, what is the nature of the regression lines?

7. Define equally likely events with example.

8. Define subjective probability

9. When will you say that two events are statistically independent?

10. Find k if $f(x) = k \, x \, e-x \; 0$

11. If E(X)=3.5, find E(2x+7)

12. Find the expectation of X if $f(x)=30x4 \; 0 \leq x \leq 1$.

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. Represent the following data by a stem and leaf chart:

11,10,13,23,27,28,25,32,38,49,40,47

14. Find median,quartilesand 8th decile of the following:

    120,130,140,110,160,150,190,180,170,200

15. Find out coefficient of variation for the following:

    200,210,208,160,220,250

16. Explain least square principle in curve fitting

17. Out of the two lines of regression given by

    x+2y-5=0 and 2x+3y-8=0,which one is the regression line of X on Y

18. If odds in favour of A solving a problem are 2 to 3 and odds against B solving the same problem are 3to5.Find the probability for (1) A solving the problem (2) Bsolving the problem

19. There are two urns one containing 5 white and 4 black balls and the other containing 6 white and 5 black balls.One urn is chosen and one ball is drawn. If it is white,what is the probability that the urn selected is the first

20. An unbiased die is thrown.Obtain the probability distribution for it.

21. Let X have density function $f(x)=1/(b-a)$;$a<x<b$

    $\qquad\qquad\qquad$ =0 otherwise.

    Find its mean and variance

$\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad$ (6×5=30)

Part C

*Answer any **two** questions.*

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

22. Draw a histogram and frequency polygon for the following data:

Class	0-10	10-20	20-30	30-40	40-50
frequency	3	20	20	15	6

23. From the following result ,estimate the yield of crops when the rainfall is 22 cms.and the rainfall when the yield is 600 kgs.

    Coefficient of correlation between yield and rainfall is 0.2

	Yieldin kgs.(Y)	Rainfall in cms (X)
Mean	508.4	26.7
SD	36.8	4.6

24. Given A,B,C are independent events. P(A)=0.3,P(B)=0.2 and P(C)=0.4.Find the probability for (a) all occuring (b)none occuring (c)Atleast one occuring (d)Exactly one occuring

25. For the function $f(x)=cxe^{-x}$;$x>0$ .find C .Also find mean ,variance and mgf,

$\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad$ (2×15=30)

B.Sc.DEGREE (CBCS) EXAMINATION, NOVEMBER 2019

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

B2EB9FA7

Time: 3 Hours   Maximum Marks :80

Part A

*Answer any **ten** questions.*

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

1. List out the characteristics of a good programming language.

2. Create an algorithm to find the reverse of a number.

3. What is Debugging?

4. What are static variables?

5. Define the term 'type casting'.

6. Explain the use of getche() statement

7. What is a loop?

8. How a matrix can be declared in C?

9. What is meant by wild pointer?

10. What is user defined function?

11. Compare Union and Structure in C

12. Define a) malloc b)calloc.

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. Compare compiler and interpreter.

14. Explain the various control structures used in a programming language.

15. Explain various bitwise operators in C.

16. Distinguish break and continue statements with the help of examples.

17. Given are the marks of three subjects. Write a C program to display the student's grade (A - above 90%, B - above 60%, C - above 40%) using else if ladder.

18. Write a C program to find the number of vowels in a string.

19. Explain how to pass array as argument to function with example.

20. Differentiate between call by value and call by reference with the help of an example.

21. Write a program to find the sum of n numbers using recursion.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Write an essay about the various types of programming languages with its advantages and disadvantages.

23. Explain different tokens in C language.

24. a) What is an array? Explain single dimensional array b) Write a C program to insert an item into a given position in an array.

25. Explain different storage classes in C with example.

(2×15=30)

B.Sc/B.C.A .DEGREE(CBCS)EXAMINATION, NOVEMBER 2019

First Semester

CORE - CS1CRT01 - COMPUTER FUNDAMENTALS AND DIGITAL PRINCIPLES

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

2017 Admission Onwards

31704F5E

Time: 3 Hours

Maximum Marks :80

Part A

*Answer any **ten** questions.*

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

1. Differentiate between system software and application software.

2. What do you mean by submarining?

3. Explain Network Operating system

4. Differentiate between video conferencing, audio conferencing, and data conferencing.

5. Diffferentiate between positional and non-positional number system.

6. What are BCD numbers?

7. Explain how NOR gate act as AND gate?

8. Define De- Morgan's theorem

9. Why Parity Checker is needed?

10. What is the need of a half adder?

11. What is demultiplexer?

12. What is T-flip flop ?

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. What are the different types of computers for organizations?

14. What is Internet.Explain the history of Internet?

15. Which are the main services of Internet?

16. Add : (a) 1101 and 0111 (b) 1011 and 1101 (c) 110110 and 110011

17. Briefly explain about 1's complement and 2's complement subtraction concepts with example

18. Explain logic gates?

19. Explain SOP and POS expression with examples?

20. Discuss the truth table of encoder

21. Discuss the applications of shift registers

$(6\times5=30)$

Part C

*Answer any **two** questions.*

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

22. Explain the various input devices.

23. Explain with examples; Conversion-From octal to (a) binary (b) decimal (d) hexadecimal

24. Using Kmap simplify f=(A+B+C)(A+B'+C)(A'+B+C)(A'+B'+C)(A'+B'+C') Realize the reduced expression using NAND gates?

25. How can a R-S flip flop be constructed using NOR gate? Explain its working with truth table.

$(2\times15=30)$