



QP CODE: 23124790



23124790

Reg No :

Name :

**UNDER GRADUATE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE
EXAMINATIONS, MAY 2023**

Second Semester

COMMON COURSE I - EN2CCT03 - ENGLISH-ISSUES THAT MATTER

(For all UG Programmes)

2017 Admission Onwards

90758D58

Time: 3 Hours

Max. Marks : 80

Instructions to Private candidates only: This question paper contains two sections. Answer SECTION I questions in the answer-book provided. SECTION II, Internal examination questions must be answered in the question paper itself. Follow the detailed instructions given under

SECTION II

Part A

*Answer any **ten** questions.*

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

1. What gruesome nightmare does Oe have about humanism?
2. In the poem "The Old Prison" what does the flute represent?
3. How would one account for the toothless man's heart-breaking, uncontrollable sobs where the story War ends abruptly?
4. What is the role of the writers according to Toni Morrison?
5. "Now here you are, treating me like a liar!/Burn me!" Explain.
6. Where is the author going in the story A Trip Westward?
7. A Trip Westward is also a journey to the past. Elucidate the claim.
8. Why was Arenla reluctant to teach Sentila the craft of pot making?
9. What is the second major message of fossil records?
10. "But this alone won't do it/Not so much pain will do it." Explain the context.
11. How did the Universal Declaration of Human Rights address the problem of the refugees?
12. Name the poet who wrote the poem "Refugee Blues".

(10×2=20)





Part B

Answer any **six** questions.

Each question carries **5** marks.

13. Comment on the physical appearance of the old traveller in the short story War.
14. Describe the way in which patriotism is addressed in the story War.
15. What was Juan required to do in Section B of the Censorship Bureau?
16. How did Mhadeva react to Babu Patil's sarcastic comments?
17. Comment on the reactions of Grandma when Grandpa Yetalya throws away the crumbs.
18. What was Mesoba's response to the enquiries of the elder's of the village council?
19. What is the future of the Homo sapiens, according to Leakey?
20. Give a brief account of how Hagar and her child managed to survive till the mysterious bird revealed the water spring.
21. How did the protagonist and Isam manage to get the baskets filled?

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **15** marks.

22. How does Oe substantiate that the soul of the entire humanity was salvaged by the people of Hiroshima by their resilience in the effort to rebuild their lives.
23. How does Toni Morrison categorize the perils of free speech and the human response to chaos in her essay?
24. Critically evaluate the poem "On Killing a Tree" as emblematic of the connection between living beings and nature.
25. Describe the role of culture and identity in understanding refugeeism.

(2×15=30)





23125835

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**B.Sc/BCA DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE
EXAMINATIONS, MAY 2023
Second Semester**

**COMPLEMENTARY COURSE- MM2CMT03 - MATHEMATICS - DISCRETE
MATHEMATICS (II)**

(Common for B.Sc Computer Science Model III, B.Sc Cyber Forensic Model III, Bachelor of
Computer Applications)

2017 ADMISSION ONWARDS

036BEF95

Time: 3 Hours

Max. Marks : 80

Part A

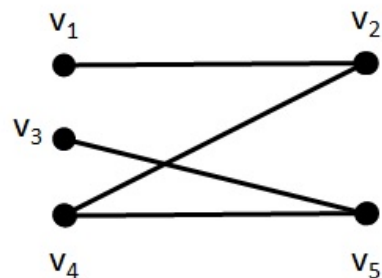
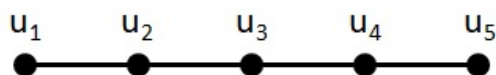
*Answer any **ten** questions.*

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

1. Draw K_5 and C_3
2. Draw a graph with the adjacency matrix

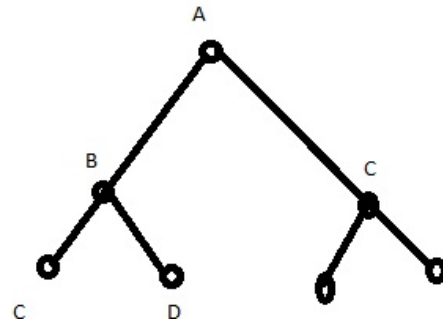
$$\begin{bmatrix} 0 & 3 & 0 & 2 \\ 3 & 0 & 1 & 1 \\ 0 & 1 & 1 & 2 \\ 2 & 1 & 2 & 0 \end{bmatrix}$$

3. Determine whether the given pair of graphs are isomorphic.





4. Which are the left and right subtrees of the root 'A'?



5. Define Binary search tree .
6. What is the ' inorder ' traversal of the rooted tree ?
7. What is the value of Prefix expression - * 2 / 8 4 3
8. Write the Distributive laws .
9. Define symmetric and skew symmetric matrices.
10. What is the rank of the matrix $\begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$
11. Define characteristic vector of a matrix.
12. State Cayley Hamilton theorem.

(10×2=20)

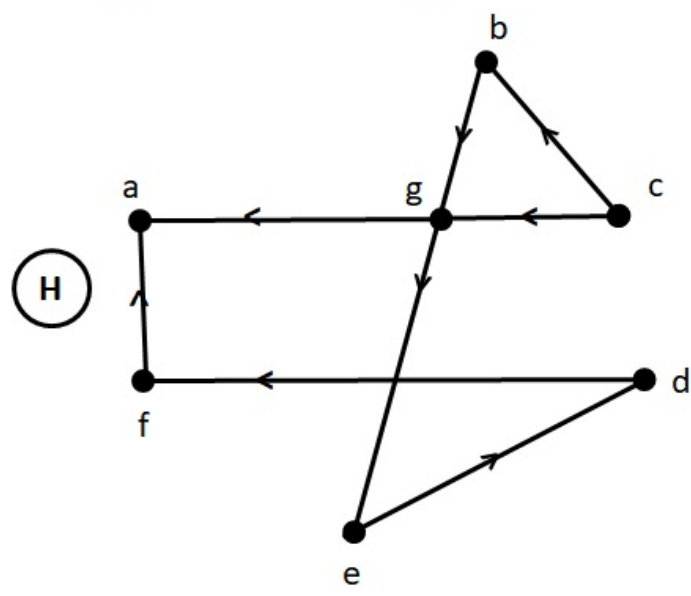
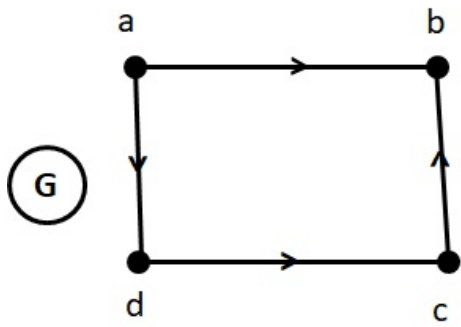
Part B

Answer any **six** questions.

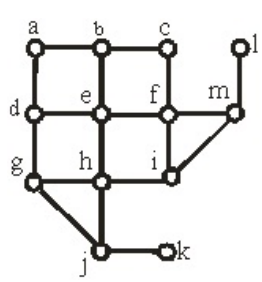
Each question carries 5 marks.

13. There is a simple path between every pair of distinct vertices of a connected undirected graph. prove.
14. Which of the directed graphs have an Euler circuit? of those that do not , which have an Euler path ?





15. Prove that a tree with ' n ' vertices has (n - 1) edges.
16. What is a Spanning tree ? Find different spanning trees of K5 .
17. Find BFS spanning tree for the following graph starting from the vertex ' a ' .



18. 1) Translate the logical equivalence $(T \wedge T) \vee \neg F$.
 2) Find the value of the expression $1 \cdot \overline{1 + 0}$
 3) Find value of x of the boolean variable that satisfies $x + x = 0$
19. Construct circuits from inverters ,AND gates and OR gates to produce these outputs 1) $\bar{x} + y$. 2) $(\overline{x + y})x$
20. Solve using Cramer's rule.
 $3x - 2y = 7$





$$4y - 7x = 2$$

21. Check the consistency of the following system.

$$2x + 5y + 2z = 0$$

$$-4x + 6z = 0$$

$$12x - 6y = 0$$

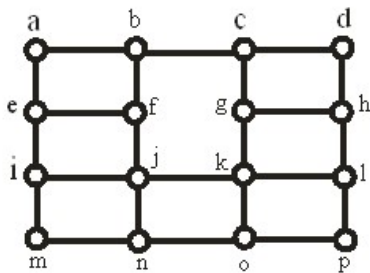
(6×5=30)

Part C

Answer any **two** questions.

Each question carries **15** marks.

22. Describe graph models with suitable examples.
23. (a) Explain in detail BFS spanning tree of a connected graph.
 (b) Find BFS spanning tree of the following graph starting from the vertex 'a' by explaining steps.



24. Find sum of products 1) $(x + y)\bar{z}$ 2) $((\bar{x} + z)\bar{y})$

25. Find rank by row canonical form $\begin{pmatrix} 1 & 2 & 3 & 4 \\ 4 & 3 & 5 & 4 \\ 6 & 9 & 1 & 0 \\ 8 & 5 & 0 & 2 \end{pmatrix}$

(2×15=30)





23125830

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**B.Sc/BCA DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE
EXAMINATIONS, MAY 2023**

Second Semester

Core Course - CS2CRT06 - OBJECT ORIENTED PROGRAMMING USING C++

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

2017 Admission Onwards

269870AC

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. What are the Characteristics of POPs?
2. If $a=5$; $b=++a$; What will be the value of a and b ?
3. What is meant by nesting of member functions?
4. Explain the memory allocation of class data member and member function.
5. Explain static class member? Explain its characteristics.
6. Define operator overloading. Name any two operators that cannot be overloaded in C++.
7. What is type conversion?
8. What is the syntax for defining a derived class in inheritance?
9. What is nesting of classes?
10. Define pointer. What is pointer initialization?
11. What is a virtual function?
12. What are the different file pointers?

(10×2=20)





Part B

Answer any **six** questions.

Each question carries **5** marks.

13. Explain different categories of data types.
14. Explain the different parameter passing techniques.
15. Define an array. Explain the use of array of objects with example.
16. Explain Constructor Overloading.
17. Explain operator overloading? Write a program to overload a unary operator.
18. How private inheritance is different from protected inheritance?
19. Describe virtual base class with an example.
20. Explain the hierarchy of stream classes for I/O operation.
21. What are the different input and output functions used in files?

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **15** marks.

22. (a) What is function overloading? Explain with example.
(b) What are the advantages and disadvantages of inline function? Give example.
23. Explain friend functions. Write a program to swap the private data of two classes using friend functions.
24. Explain dynamic constructors.
25. What is multiple inheritance? Discuss the syntax and rules of multiple inheritance in C++. How can you pass parameters to the constructor of base class in multiple inheritance? Explain with suitable example.

(2×15=30)





QP CODE: 23125826

Reg No :

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**B.Sc/BCA DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE
EXAMINATIONS, MAY 2023**

Second Semester

Core Course - CS2CRT05 - COMPUTER ORGANIZATION AND ARCHITECTURE

(Common for B.Sc Computer Science Model III, B.Sc Information Technology Model III, Bachelor of
Computer Applications)

2017 ADMISSION ONWARDS

34759D73

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. Define the terms: computer organization and computer architecture.
2. What is opcode?
3. Which are the different fields in Instruction Formats?
4. What is the role of MAR and MDR?
5. What is Reverse polish Notation?
6. List various shift operations.
7. What are flag bits? How they are useful?
8. Compare Static and dynamic RAM.
9. Define locality of reference.
10. What do you mean by aging registers?
11. Write the characteristics of multiprocessor system.
12. Write the concept of array processing.

(10×2=20)





Part B

Answer any **six** questions.

Each question carries **5** marks.

13. List and explain various registers in CPU.
14. Explain the use of timing and control signals. Give example.
15. Explain about single bus structure with neat diagram.
16. Distinguish between indirect address mode and relative address mode.
17. Explain ROM.
18. Explain any two Auxiliary Memory.
19. Describe address space and memory space.
20. Explain Flynn's classification.
21. Explain different types of pipelines

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **15** marks.

22. Describe general register organization with the help of neat diagram.
23. Explain the concept of main memory. What are the different types?
24. Explain different parallel processing mechanisms in a uniprocessor system.
25. Explain pipeline conflicts and discuss the remedies for them.

(2×15=30)





23124488

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**B.Sc/BCA DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE
EXAMINATIONS, MAY 2023
Second Semester**

Core Course - CS2CRT04 - DATA BASE MANAGEMENT SYSTEMS

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

2017 ADMISSION ONWARDS

F734D753

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. What is a database? Explain DBMS
2. Define the terms physical schema and logical schema.
3. What are the different database languages?
4. What is the difference between key and super key?
5. Explain the terms Key constraint and constraint on NULL values.
6. What are the basic SQL queries?
7. Explain BETWEEN operator.
8. Discuss the use of NULL values.
9. What is data Redundancy?
10. Differentiate cardinality ratio and Existence dependency?
11. What are the operations in transaction state?
12. Explain Grant Option.

(10×2=20)





Part B

*Answer any **six** questions.*

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

13. Describe the advantages of using DBMS.
14. With a neat diagram, explain the DBMS component modules in detail?
15. Explain about weak entity type.
16. Discuss the characteristics of relations.
17. Explain the following
 - a) renaming of attributes.
 - b) nested queries.
18. Explain how the GROUP BY clause works. What is the difference between the WHERE and HAVING clause?
19. Define Normalization. What are the different Normal Forms Used?
20. Explain BCNF.
21. Discuss the concurrency control mechanism in dbms.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. What is a data model? Explain the different categories of Data Model.
23. Explain E-R Modelling in detail. Also draw a sample E-R diagram of BANK Database.
24. Explain different constraints to maintain data integrity in SQL.
25. Explain Indexing. Which are the indexing structures?

(2×15=30)

