QP CODE: 20101288

20101288

Reg No : .....

Name : .....

B.Sc./BCA DEGREE (CBCS) EXAMINATION, NOVEMBER 2020

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 Application)

2017 ADMISSION ONWARDS

5F91E0C8

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. What is an instruction register?
2. Which are the different fields in Instruction Formats?
3. What is byte addressability?
4. What is a bus?
5. What is the purpose of using status registers?
6. Write the classification of computer instructions.
7. What is the use of condition code bits?
8. Differentiate between RAM and ROM
9. Compare Static and dynamic RAM
10. What are the features of PROM?
11. What are multiprocessor systems?
12. How the efficiency of a pipeline can be measured?

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. Explain the basic operational concept between processor and memory.

14. How micro processor differentiates between data and instruction?Explain.
15. Explain the use of timing and control signals. Give example.
16. Explain register addressing mode with example
17. Explain memory hierarchy.
18. Distinguish between associative memory and cache memory.
19. What is virtual memory? How is it useful?
20. What is parallel processing?
21. List and explain some techniques to prevent pipeline conflicts.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Explain stack organization in detail.
23. Explain and distinguish magnetic storage devices and optical storage devices.
24. Explain Flynn's architectural classification scheme.
25. What is an array processor? Explain with the help of neat diagrams.

(2×15=30)

QP CODE: 20101087

20101087

Reg No : .....

Name : .....

B.Sc/BCA DEGREE (CBCS) EXAMINATION, NOVEMBER 2020

Second Semester

Core Course - CS2CRT04 - DATA BASE MANAGEMENT SYSTEMS

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

2017 ADMISSION ONWARDS

69538118

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. What do mean by data and information?
2. List different type of data models used?
3. Differentiate DDL and DML
4. Explain the difference among an entity, an entity type and an entity set?
5. Why tuples in a relation are not ordered?
6. Explain EXCEPT operator
7. List out different types of join operation?
8. Give the syntax of any two aggregate functions
9. Why should we avoid Null values in a relation?
10. What is clustering index?
11. What is rollback?
12. What you mean by Revoking a Privilege?

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. Explain data independence

14. Explain the uses of Query Evaluation Engine.

15. Explain structural constraints.

16. Compare implicit and explicit constraints

17. Explain different forms of SELECT command

18. What is the purpose of order by clause with an example?

19. Discuss the general anomalies and functional dependency in a relation

20. Explain 2NF with example?

21. Explain the control measures that are used to provide security of data in databases?

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Explain database users and how they interact with the database

23. Discuss the naming and displaying conventions used for ER diagrams.

24. Write short notes on (a) DDL commands used in SQL (b)Give SQL statement which creates a STUDENT table consisting of name and mark

25. Summarize normal forms based on primary keys and the corresponding normalization process.

(2×15=30)

QP CODE: 20101177

20101177

Reg No : .....

Name : .....

BA/B.Sc. /B.Com DEGREE (CBCS) EXAMINATION, NOVEMBER 2020

Second Semester

Common Course I - EN2CCT03 - ENGLISH-ISSUES THAT MATTER

(Common for all UG Programmes)

2017 ADMISSION ONWARDS

C8A8D2B1

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**.

SECTION I

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. How, according to the poet, did the prisoners fare in the poem "The Old Prison" ?
2. In the short story War what was the last message sent by the red-faced man's son?
3. " The fact that the a girl with leukaemia goes on suffering all her life, not committing suicide, surely lessens - by just one person's portion - the A-bomb dropper's burden of conscience." Explain
4. What are the giant faucets that Rushdie is talking about?
5. What was the stroke of luck that happened to Juan in the story The Censors?
6. Where is the author going in the story A Trip Westward?
7. How would you account for Dawee's loss of employment?
8. Why was Arenla reluctant to teach Sentila the craft of pot making?
9. "No. The root is to be pulled out Out of the anchoring earth;" Explain.
10. How has the tree grown to its present status?
11. What does the poet in the poem "Refugee Blues" mean when he says 'look in the atlas and you'll find it there'?
12. What is the setting of the short story The Child Goes to the Camp?

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. What would have made the 'toughest minds' postpone the dropping of an atomic bomb, according to Kenzaburo Oe?
14. What is the cancer of the 20th Century according to Oe?
15. What, according to Rushdie, do the writers want to talk about?
16. Why did Patil deny Yetalya his share of corn at the end of the day?
17. What realisation did the grandpa Yetalya have on his deathbed?
18. How did Onula help Sentila with pot making on the night of the music band's visit?
19. How does Leakey establish that the loss of diversity of species represent the loss of associated values?
20. What, according to Sarah Joseph, was the water covenant that was born in the desert?
21. In the story The Child Goes to the Camp describe the condition of the narrator's family.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Briefly explain the conflicts and themes raised by Pirandello in the given short story.
23. How does Toni Morrison categorize the perils of free speech and the human response to chaos in her essay?
24. How does Leaky establish the fact that Homo sapiens have a key responsibility to preserve biodiversity?
25. Comment on the efforts made by the international community towards understanding and resolving the problems of refugees.

(2×15=30)

QP CODE: 20101290

20101290

Reg No : .....

Name : .....

B.Sc/BCA DEGREE (CBCS) EXAMINATION, NOVEMBER 2020

Second Semester

Complementary Course - MM2CMT03 - MATHEMATICS - DISCRETE MATHEMATICS (II)

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

2017 ADMISSION ONWARDS

4B8A46CC

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. Describe directed multigraph.
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. Define cut vertices. Give example.
4. Draw a Binary tree and write which is the root, internal vertices and leaves.
5. Draw a Binary search tree of the numbers 50, 38 , 28 ,55 ,50 ,25.
6. What is the value of Prefix expression - * 2 / 8 4 3
7. Find a Spanning tree of K 4.
8. Find the values of (a) $1.\bar{0}$ (b) $\overline{(1+0)}$ (c) $1+\bar{1}$ (d) $\bar{0}.0$
9. Define transpose of a matrix.
10. Find the rank of the matrix $\begin{pmatrix} 2 & 3 \\ 4 & 6 \end{pmatrix}$
11. What is the rank of the matrix $\begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$

12. What is a homogeneous equation?

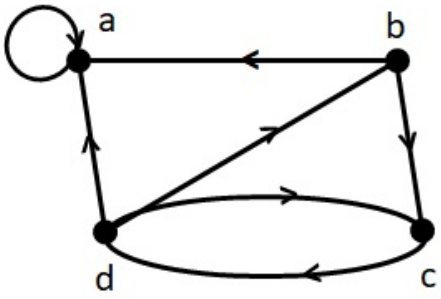
(10×2=20)

Part B

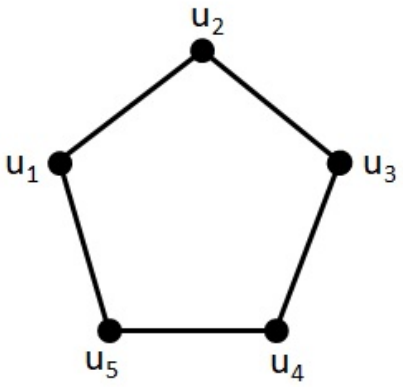
*Answer any **six** questions.*

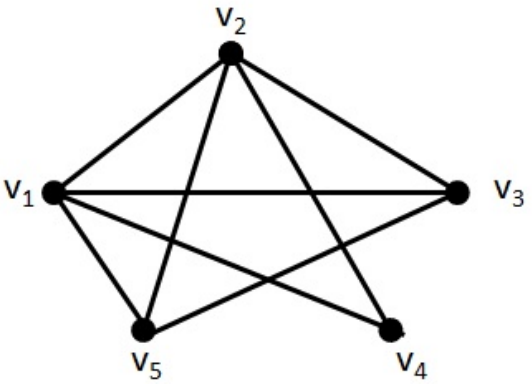
*Each question carries **5** marks.*

13. Determine the sum of the in - degree of the vertices and the sum of the out - degree of the vertices directly. Show that they are both equel to the number of edges in the given graph.



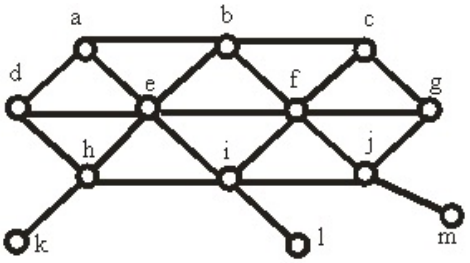
14. Determine whether the following graphs are isomorphic.



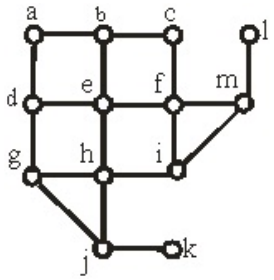


15. Prove that a full ' m-ary ' tree with ' i ' internal vertices contains n = mi + 1 vertices .

16. Find DFS spanning tree of the following graph starting from the vertex ' a ' .



17. Find BFS spannig tree for the following graph starting from the vertex ' a '.



18. Verify associative law x + (y + z) = (x + y) + z and commutative law xy = yx

19. Find the sum of products expansion of F (x , y , z) = $x\bar{y}$

20. Find the rank of matrix $\begin{pmatrix} 5 & 0 & -2 \\ 1 & 4 & 6 \\ 5 & -3 & 7 \end{pmatrix}$ by row canonical form.

21. Find the inverse of the matrix A using Cayley Hamilton theorem where $A = \begin{pmatrix} 4 & 9 \\ 0 & 2 \end{pmatrix}$

(6×5=30)

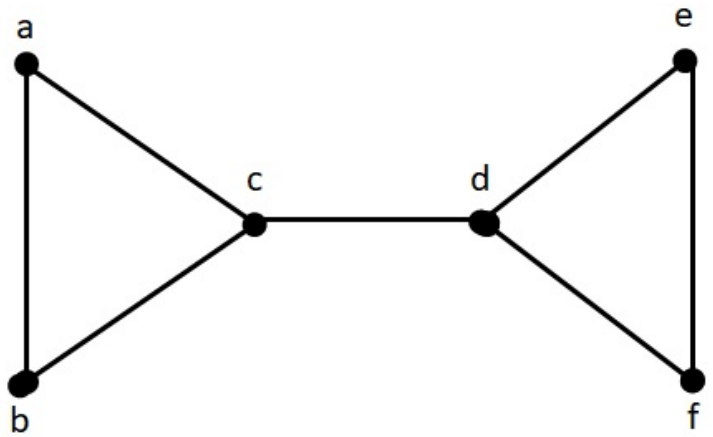
Part C

*Answer any **two** questions.*

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

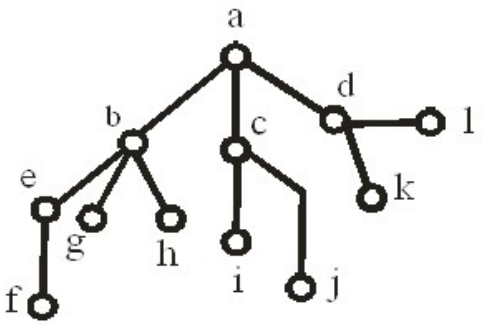
22. (a) Explain Konigsberg Bridge problem.

(b) Does the following graph have a Hamilton path ? If so find such a path. If not give an argument to show why no such path exist.



23. (a) Explain pre order and post order tree traversal algorithms.

(b) Find pre order and post order search of the following rooted tree.



24. Draw a circuit for a fixture controlled by Three Switches

25. Find the eigen values and eigen vectors of the matrix $\begin{pmatrix} 5 & -8 \\ 3 & -6 \end{pmatrix}$

(2×15=30)

QP CODE: 20101289

20101289

Reg No : .....

Name : .....

B.Sc./BCA DEGREE (CBCS) EXAMINATION, NOVEMBER 2020

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 Application)

2017 ADMISSION ONWARDS

945FEC72

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

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

1. What is the purpose of function prototype declaration?
2. What is the function overloading?
3. Define private member functions.
4. Explain array of objects.
5. How are friend functions different from member functions?
6. Define operator overloading. Name any two operators that cannot be overloaded in C++.
7. What is Operator overloading?
8. Explain multiple inheritance.
9. In what order are the class constructors called when a derived class object is created.
10. Differentiate between early binding and late binding.
11. What is pure virtual function?
12. What are the functions used for the manipulation of file pointers?

(10×2=20)

Part B

*Answer any **six** questions.*

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

13. Explain the different OOPs concepts.

14. What are the benefits of using OOP?

15. Explain Nesting of member functions.

16. Explain Constructor Overloading.

17. Write a program to illustrate dynamic constructors.

18. What are the purposes of class access specifier private, public and protected?

19. Discuss abstract classes with example.

20. What is a stream? Explain the different file stream classes.

21. Write a note on sequential input output operation.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. What are control structures used in C++?

23. Define static data member. Explain the characteristics of static class members with suitable examples.

24. Explain different type conversions.

25. What is inheritance? What are the different variations of inheritance?

(2×15=30)