Paper ID : 70065

Total Pages: 2

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BCA (Semester-II) Examination, 2022

(Session 2021-23)

DISCRETE MATHEMATICS

[Paper Code : BC-201]

Time: Three Hours

[Maximum Marks: 80

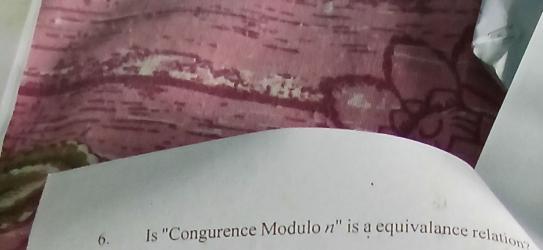
Note: Candidates are required to give their answers in their own words as far as practicable. The questions are of equal value. Answer any five questions.

- 1. Draw a Hasse-Diagram for the Poset $(P(S), \subseteq)$ where P(S) is power set on set = $\{1, 2, 3\}$.
- 2. Define partitions of the set S and find out the partitions of $X = \{1, 2, 3\}$.
- 3. If f(x) = 3x 5 and f[g(x)] = 2x then find g(x).
- 4. Show that set of all divisors of 12 form a Lattice.
- 5. Define equivalence relation with an example.

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- 6. Explain it.
- In a class of 25 students 12 have taken mathematics, 8 7. have taken mathematics but not biology. Find the number of students who have taken mathematics and biology and those who have taken biology but not mathematics...
- 8. Define Group with an example.

Let
$$A = \{1, 2, 3, 4, 5\}$$
 $B = \{3, 4, 5, 6\}$
 $C = \{x \in z : x \text{ is even}\}$

Find:

- (a) A - B
- (b) B∩A
- (c) C-B
- JOY (ANB)UC
- Write short notes of the following: 10.
 - (a) Monoid
 - (b) Partition of sets
 - (c) Equivalence relation
 - (d) Lattice

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BCA (Semester-II) Examination, 2022

(Session 2021-23)

COMPUTER ARCHITECTURE

[Paper Code : BC-202]

Time: Three Hours

[Maximum Marks: 80

Note: Candidates are required to give their answers in their own words as far as practicable. The questions are of equal value. Answer any five questions.

- What is Data type and Number system? Explain Decimal, Binary, Octal, Hexa-Decimal number system with example.
- Explain NOR gate, NAND gate and XOR gate with the help of diagram and truth table.
- 3. Explain Boolean algebra and also define Basic Law of Boolean Laws.

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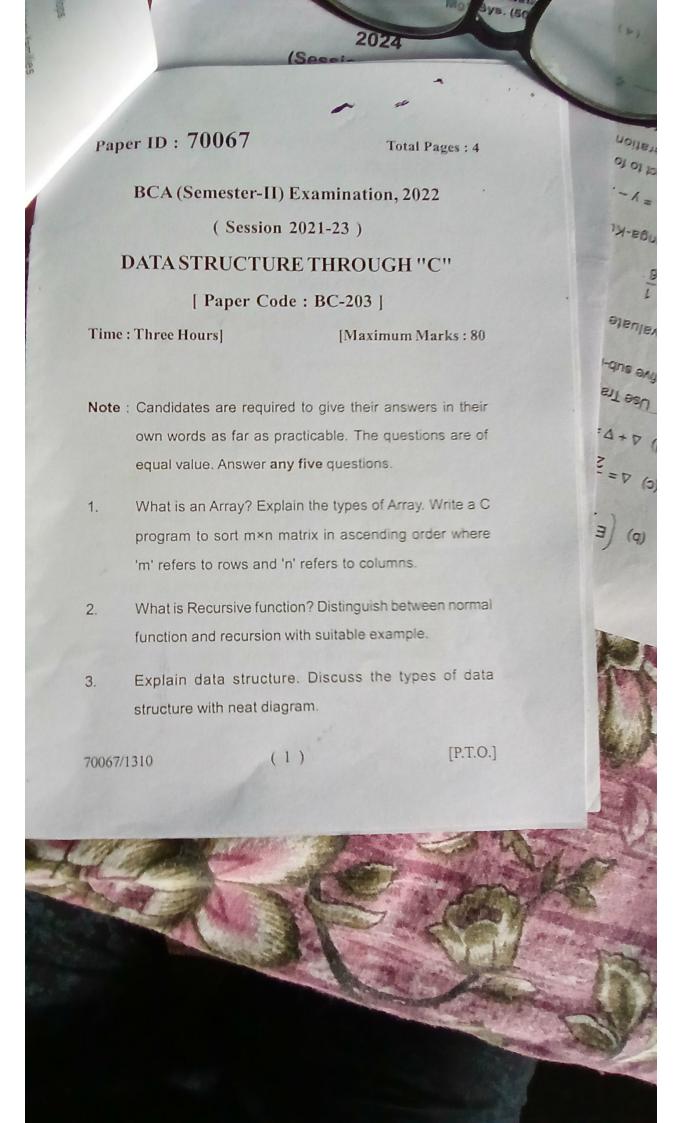
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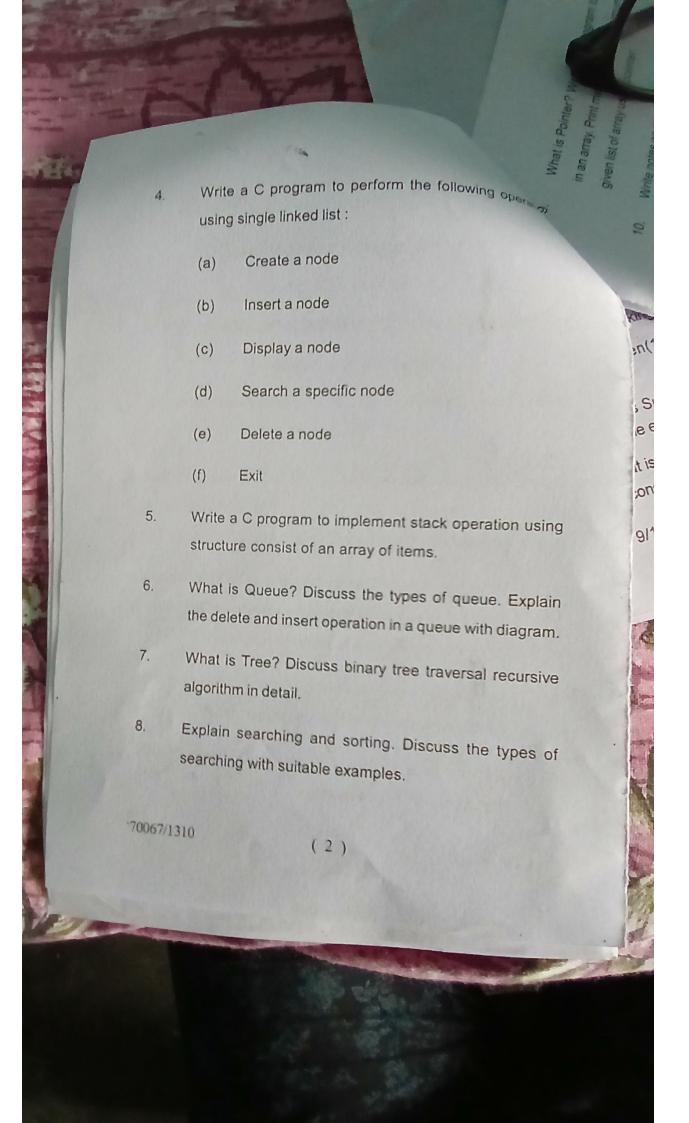
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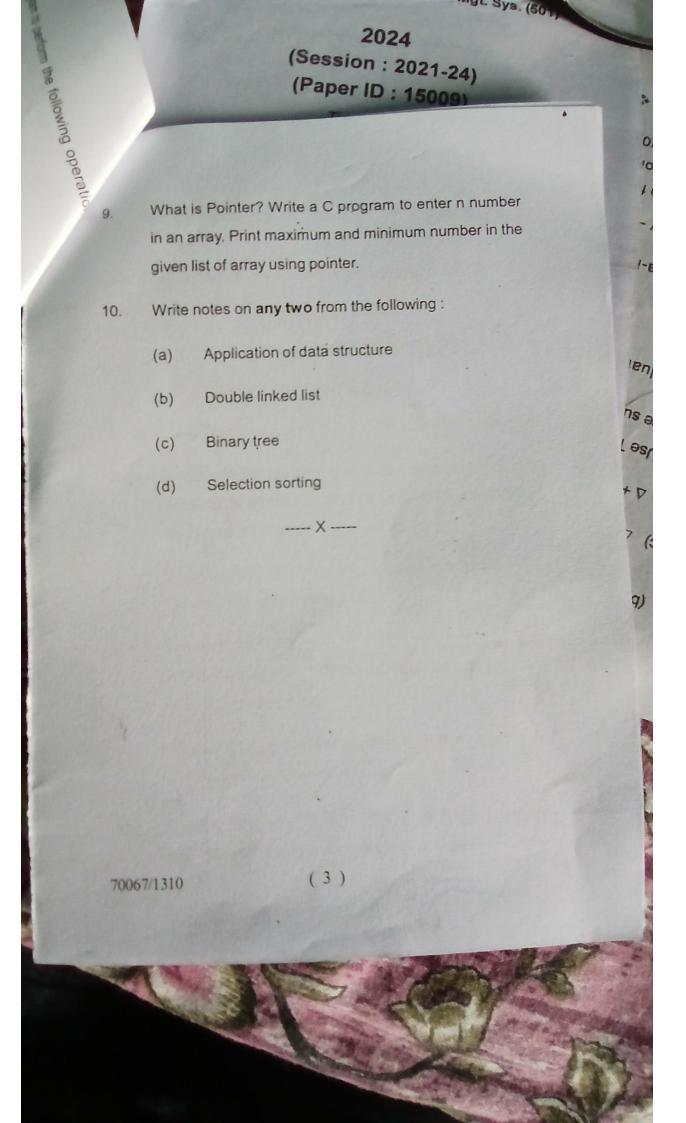
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(Paper ID: 2021-24)

Time: 3 hours

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Paper ID : 70068

Total Pages: 2

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BCA (Semester-II) Examination, 2022

(Session 2021-23)

SYSTEM ANALYSIS AND DESIGN

[Paper Code : BC-204]

Time: Three Hours] [Maximum Marks: 80

Note: Candidates are required to give their answer in their own words as far as practicable. Attempt any five questions.

Each question carries equal marks.

- What is DFD? Mention various steps in drawing DFD.
 Explain each step in detail.
- What is feasibility analysis? What conditions are involved in feasibility analysis? Which consideration do you think most crucial and why?
- What is Documentation? Differentiate between system and user documentation with their application.
- Define System. How system is different from sub-system? Explain various types of system in detail.

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What is system implementation process? Explain various system implementation methods with their merits and 5. demerits. What is Audit trial? Describe role of audit control trial in conversion? Who performs it? Explain in detail. 6. What is MIS? What are different methods of information 7. gathering? Explain in detail. What is SDLC? Explain various phases of SDLC in detail. 8. Explain the concept of waterfall model with the help of 9. suitable diagram. What is meant by system testing? Write the objectives 10. of testing and also explain various testing techniques. 70068/1310 (2)