

D 112377

(Pages : 3)

Name.....

Reg. No.....

**FIRST SEMESTER (CUFYUGP) DEGREE EXAMINATION
NOVEMBER 2024**

Computer Application

BCA1CJ103—DISCRETE STRUCTURES FOR COMPUTER APPLICATIONS

(2024 Admission onwards)

Time : Two Hours

Maximum : 70 Marks

Section A*Answer all questions.**Each question carries 3 marks.**(Ceiling 24 marks).*

1. Define simple and compound propositions with examples.
2. Define Universal Quantifier.
3. Show that $\neg(p \leftrightarrow q)$ and $p \wedge \neg q$ are logically equivalent.
4. Define sets. Give any *two* methods for representing sets.
5. What is partition of a set ?
6. Define Bipartite graph.
7. Define the following with example : (a) Path ; and (b) Walk.
8. What is graph colouring ?
9. Define isolated and pendant vertices with examples.
10. Draw a binary tree and write which is the root, internal vertices and leaves.

Turn over

Each question carries 6 marks.
(Ceiling 36 marks).

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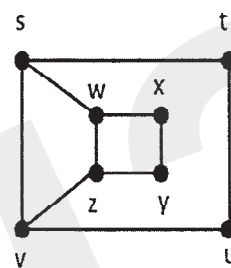
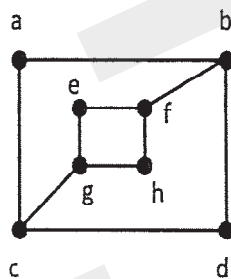
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Section C

Answer any **one** question.

The question carries 10 marks.

19. Define bijective function. Give examples.
20. Determine whether the following graph are isomorphic or not ? Explain.



(1 × 10 = 10 marks)