

**Goa Vidyaprasarak Mandal's**  
**GOPAL GOVIND POY RAITURCAR COLLEGE OF COMMERCE**  
**AND ECONOMICS, PONDA GOA**  
**B.COM. (SEMESTER-I) ISA - I EXAMINATION SEPTEMBER 2022**  
**Commercial Arithmetic**

**Duration: 30 minutes**

**Marks: 10**

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**Answer Any 5 Questions from the following.**

Q1. Given  $p$ : It is Sunday.       $q$ : It is holiday.

Write the following statements in symbolic form.      (2)

- a) If it is holiday then it is Sunday.
- b) If it is not Sunday then it is not holiday.

Q.2 State whether the following sentences are statements in logic.      (2)

- a) Get up early.
- b) 2 is an even number.

Q3. Prepare truth table for the statement  $\sim (\sim p \vee \sim q)$ .      (2)

Q.4 If  $X = \{x/x \in \mathbf{N}, 1 \leq x \leq 10\}$

$$A = \{2x/x \in \mathbf{N}, 1 \leq x \leq 5\}, B = \{1,2,4,5,7,9\}$$

Verify that  $(A \cup B)^c = A^c \cap B^c$       (2)

Q.5  $X = \{a, b, c, d, e, f, g\}$

$$A = \{a, c, d\}, B = \{c, d, e\}$$

Show that  $(A - B)^c = A^c \cup B$       (2)

Q. 6 A and B are two sets such that  $n(A)=21$ ,  $n(B)=32$  and  $n(A \cup B)=42$ ,

find  $n(A \cap B)$ .      (2)