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Question No # (1) Part ((a))

$$(P \wedge Q) \vee (\sim P \vee (P \wedge \sim Q))$$

P	Q	$P \wedge Q$	$\sim P$	$\sim Q$	$P \wedge \sim Q$	$\sim P \vee (P \wedge \sim Q)$	$(P \wedge Q) \vee (\sim P \vee (P \wedge \sim Q))$
T	T	T	F	F	F	F	T
T	F	F	F	T	T	T	T
F	T	F	T	F	F	T	T
F	F	F	T	T	F	T	T

Answer No # 01 (Part) (b)

(1) If you have flu, then you will miss the final exam

$p \rightarrow q$

(2) If you don't miss the final exam, you will pass the course

$\neg q \rightarrow r$

(3) If you neither have flu, nor miss the Final exam then you will pass the course

$\neg p \wedge \neg q$

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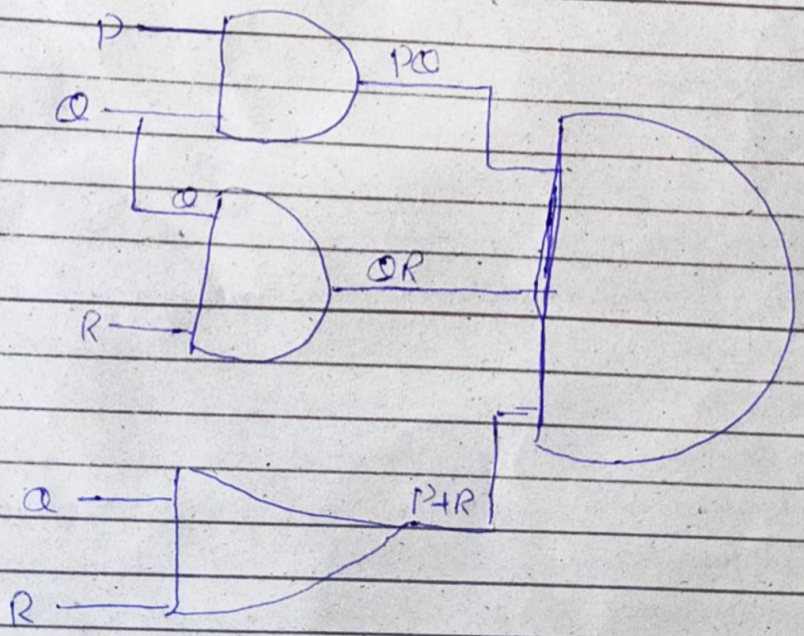
Question No. (2) Part (b)

Solu- Part (b)

(i) $PQ + QR(Q+R)$



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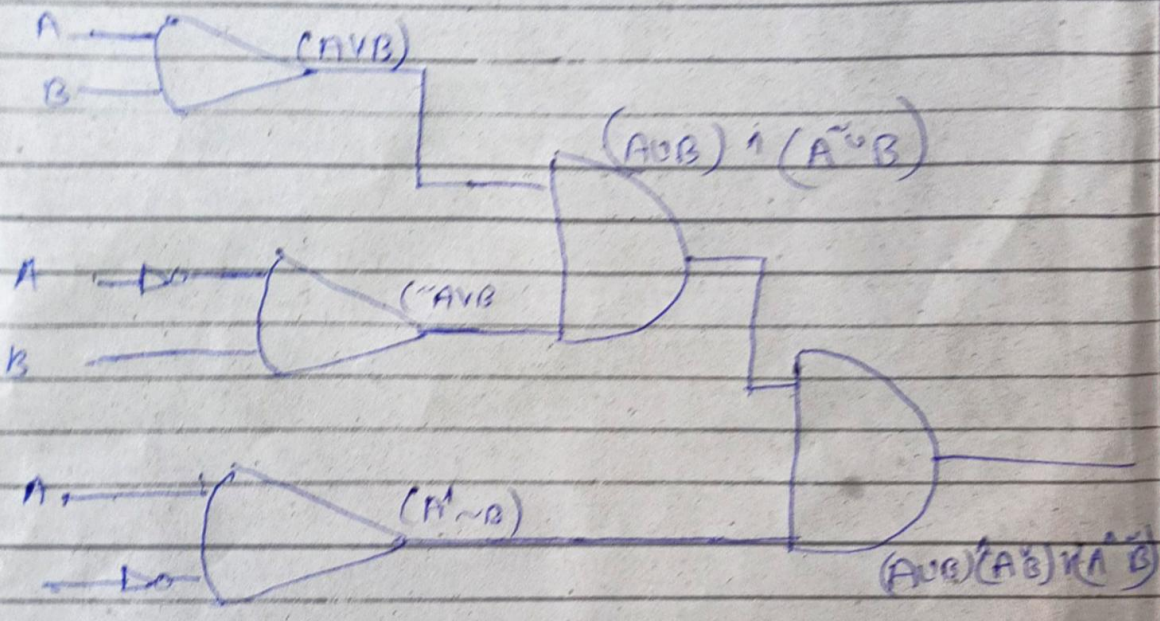
(2)

$(A \cup B) \wedge (\neg A \vee B) \vee (A \wedge \neg B)$



ANSWER No # (2) (A)

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Question No # (3) Part (b)

Brifly discuss three Form of Sets with the help of example.

ANSWER No # (3) Part (B)

Three Forms of Sets: are that:

1) Tabular Form
2) Descriptive Form
3) Set builder Form.

1) Tabular Form:-

All elements of Sets are listed within the braces { }

and Separated each elements by Using a Comma,

Example:

$W = \{0, 1, 2, 3, \}$ is the Set of Natural numbers

$B = \{2, 4, 6, 8, 10 \cdots\}$ is the Set of Even Number.

2) Descriptive Form:-

A Set is described with the help of a Statment.

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a Set in words.

Example:

$A = \{1, 2, 3, 4, \}$ is the Set of natural number.

3) Set of Builder Forms:

A Set is described by using a common property of all elements.

=> The common characterastic in Symbolic Form shared by all the element are the Set

Example:

$C = \{x \mid x \in w\}$

ANSWER NO (3) (A)

If

$A = \{a, b, c\}$ and

$B = \{1, 2, 3, 4\}$

Find $P(A) \cap P(B)$

Then

$P(A \cap B) = \{\}$

empty set.

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Answer No (2) Part (a)

P	q	$P \rightarrow q$
T	T	T
T	F	F
F	T	T
F	F	T

x x y y