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Chapter : 1

Section : 2

Exercise No : 4

4. To use the wireless network in the airport you must pay the daily fee. unless you are a subscriber to the service

· service

Express your answer in terms of

w: " You can use the wireless network in the airport",

d : " You pay the daily fee "

s : " You are a subscriber to the service "

A:

My answere in terms of w, d and s
will be

$$s \lor (\neg s \land d) \longleftrightarrow w$$

Explanation :

Truth table for this proposition is:

	$s \lor (\neg s \land d)$	w	$s \lor (\neg s \land d) \leftrightarrow w$
①	T	T	T
②	T	F	F
③	F	T	F
④	F	F	T

From this truth table :

In Case 1 :   (subscriber) or (not subscriber
                but pays fee) can   use
            the wireless network.

It must be true,
and so it is it

In case 2: (subscriber) or (not subscriber
but pays fee) can not
use the wireless network.

It must be False and so it is.

In case 3: neither (subscriber) nor
(pays fee) can use the
wireless network.

It must be False and so is it.

In case 4: neither (subscriber) nor
(pays fee) can not use the
wireless network.

It must be True and so is it.

From all the cases, it is evident that
that proposition stands for all logic. So it
is True.