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## Part-B

Q.4

Consider,

E: Exam pressure is high.

A: Attendance is low.

F: He will Fail and S: He will sleep.

According to conditions:-

- |       |                   |   |
|-------|-------------------|---|
| (i)   | $E \vee A$        | [Exam pressure is high or attendance low] |
| (ii)  | $A \rightarrow F$ | [If attendance low he will fail]          |
| (iii) | $E \rightarrow S$ | [Exam pressure high he will sleep]        |
| (iv)  | $\neg S$          | [He did not sleep]                        |
| (v)   | $F$               | [He will fail]                            |

Simplifying above statements we get :-

(i)  $E \vee A$

(ii)  $A \rightarrow F \equiv \neg A \vee F$

(iii)  $E \rightarrow S \equiv \neg E \vee S$

(iv)  $\neg S$

(v)  $F$

\* CNF ~~is~~ of statements is :-

$$(E \vee A) \wedge (\neg A \vee F) \wedge (\neg E \vee S) \wedge (\neg S) \wedge F$$