**Methodology**

(a) Build a base model of TCP/IP stack using network simulator. Build provisions to evaluate parameters by including the ‘eighth layer’.

(b) Identify the information security algorithms at different layers of the new stack and simulate overheads (bandwidth and execution time) in the base model.

(c) Run the simulation model through various combinations of security algorithms and various layers of TP/IP stack to evaluate various parameters already selected.

(d) Analyse the results of simulation runs to build a most appropriate cumulative security index.

(e) Testing of hypothesis.