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NAME : ARTHI SAHAYA RONES V   GROUP REF. : C2
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Question 1.2 The training of a control room operator is essential to enable them to be exposed to situations that rarely occur in real-life. However, in these extra-ordinary events the psychological pressure can affect the decision process of an operator, how can these conditions be replicated on a simulator?

The control room operator works in a real time environment, where experience, knowledge & situational awareness become key. Operator has to keep him/herself ready for any sorts of system contingencies while keeping grid parameters within safe limits. While in simulation such contingencies can be simulated, yet the situational & psychological pressure one faces within for early restoration of supply can't be simply replicated in a simulated environment. To ensure that the simulators provide experiences closer to real time situations, following are proposed:

- During simulated contingency operator may be made to take multiple telephonic calls from dummy stakeholders. Similarly, during such events they could be asked to write mails to clients/beneficiaries/Generating companies/ Other utilities for information extraction & sharing.

- During simulated grid disturbance, operators may be made to study signature analysis & quickly come to conclusion on whether to charge the elements or not.

- Time-bound simulation of disturbances and restoration process in DTS (Dispatcher Training Simulator) may be considered for capturing the psychological impact. The timer may be placed in front of the operators to keep the psychologically resilient to such high demanding situation.

- Past performance under different grid contingencies, number of training attended, number of mock exercise participation, experience in control room, certificate & degree, physical fitness, medical history, behavioral interaction with colleagues, social interactions, psychological parameters/assessment as recommended by expert psychologist, marital status, family-oriented/ responsible, networking etc. can be taken as inputs for artificial intelligence based tools. These inputs would train the model and may provide suitable results given any new rare situation.