may not hold hile executing the schedule, thus making the schedule inefficient. So a schedule hich is robust enough to take care of these uncertainties to some extent should be a preferred schedule.

In this thesis e propose a ne and more complete perspective of quality of a schedule. Our argument, hich is based on the definition of the quality given by ISO 9000 guidelines, is that the quality of the solution should not only be the measure of its closeness to the optimal solution, but should also represent its ability to take care of these inevitable perturbation in the data set. So the quality of a schedule generated by any method should also be a measure of its robustness in case of uncertainty in the execution phase and it should also be capable of taking different types of inputs.

We use the Resource Constrained Project Scheduling Problem (RCPSP) to discuss the quality of schedule as discussed above. We consider the RCPSP ith rene able resource of several types, single mode activities ithout preemption and minimization of project completion time as the objective. We devise a priority rule for scheduling of activities at a time hich takes care of the precedence and resource constraints of the problem. The priority rule considers the criticality of the activities as ell as the resource utilization as the important factors for scheduling of activities. We use this priority rule for a ne schedule generation scheme hich schedules a set of activities at a time. This method generates a non-delay schedule.

The first measure of quality of the schedule is the measure of the proximity of the schedule to the optimal schedule. We use the proposed method to generate the schedule for the benchmark problems of PSPLIB given by Kolisch and Sprecher. The proximity of the schedule to the optimal schedule is measured by the deviation of the time taken by the proposed method to the optimal project completion time. For the cases here e do not kno the optimal solution, e use the critical path based lo er bound as a proxy for the optimal solution and calculate the deviation from that bound.

The second measure of quality of the schedule is the measure of its robustness. To