1. Problem Statement: -

The main objective is to enhance the quality of the education provided in the government schools. For this, training of the teachers at regular time period will be helpful.

We have to make the schedule for the training of about 1.2 lakhs teachers who will get their training by the Master Trainers.

From the body of the teachers, Master Trainers and the State Monitors will be recruited.

In the state there are 24 districts and every district will be having a State Monitor. The State Monitor will monitor the teacher training given by the Master Trainers.

There are 446 Master Trainers out of which 42 Master Trainers are in the backup and they will train the teachers if any one of the 414 active Master Trainers will take leave or fall sick. The Master Trainers will give the training for one subject out of the three (Hindi, English, Mathematics). So there will be 138 Master Trainers for one subject. All the active Master Trainers will get 3 nearby training venues which he will cover over the cycle of three months (one venue per month). In a month, the Master Trainer will conduct 10 training sessions of two days each for about 40 teachers at a time at that venue. And a Master Trainer would get 1 day to shift to the new venue to train the other teachers.

All the Master Trainers (446) and the State Monitors (24) will get a 6 days training at the starting of every three months at Ranchi.

The school teachers are divided into three groups-1, 2, & 3, that will be based on the TNA test of the teachers. Every teacher will have to attend 2 days training in a month. Every teacher is assigned a nearest venue where they will be trained by a Master Trainer in a group of 40. Likewise, he will get the training for the next two subjects in the next coming months at the same

venue. The teachers will be selected from different schools so that the workings of the school doesn't get stopped.

The scheduler will have to reschedule the training of the teacher if the teacher is not present in the scheduled training at the first time.

2. <u>Parameters Involved and their description</u>

The following parameters would be included for the Scheduler.
a) Venue : The State is having 24 districts and each district is having blocks in it. So there will be venues in each of the blocks. One block can also have multiple venues. So there will be total 414 venues for the teacher training.
b) State Monitor : The state monitor will observe the training given by the Master Trainer. One State Monitor will be assigned for each district. So total 24 State Monitors will be there.
c) Master Trainer : The Master Trainer will train the teachers at the decided training venue. They will be 446 in total out of which 42 will be in backup. The Backup Master Trainer will be used if the active master trainer takes leave.
d) Teachers : There are about 1.2 lakh teachers in the government schools of the state.
e) Training Dates : These will be decided according to the holidays calendar of the state.

3. <u>Constraints</u>

The constraints for the scheduler will include
a) Number of teachers : The number of teachers to be trained are very high.
b) Number of Master Trainers : The number of Master Trainer is very less as per the number of teachers to be trained.
c) Venue : The number of venues are less as per the number of teachers to be trained.
d) Number of teachers in a school : If there are less number of teachers in a school, then the working of the school may get hampered.