

AN OPTIMIZATION TECHNIQUE FOR NURSE SCHEDULING

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Nurse scheduling is a major problem faced by many hospitals all over the world. The management department has a difficult task to assign nurses to the wards according to the demand, as there is always dearth of nurses in the hospital. The task is even more difficult as they have to assign the nurses 7 days a week and 24 hours a day.

The objective of the study is to create monthly schedules for nurses of the Peradeniya Teaching Hospital using techniques in operations research. At present, the hospital management prepares the monthly schedule by following a set of rules. After analyzing the existing method, it was revealed that there are many drawbacks in the method.

This type of scheduling is known as optimal assignment in operations research. In this project, the monthly assignment of nurses is formulated as an integer programming problem considering all the rules adopted by the management. Here we also consider requests made by the nurses at the beginning of the month.

The Branch and Bound Algorithm is used to solve the formulated problem.