Today, Indian industry has made considerable progress. From a position of substantial dependence on imports in the early fifties the industry is not only able to meet indigenous demands but its products are exported all over the world; engineering goods have emerged as the largest single component of India's exports. Productivity cannot be attributed to machines alone. The role of the workers manning these machines is important. Within recent years technical education also received an impetus and a number of industrial training institutes, polytechnics, engineering colleges were established for providing a continuous flow of skilled manpower to run the modern industry.

The present investigation was an endeavour to investigate the work efficiency of technical personnel in relation to their aptitudes, personality, and motives. There were five variables viz intelligence, aptitudes, personality, motives and work efficiency. The respective tools used for intelligence, aptitudes, personality and motives were SPM, DAT, EPI and TAT (SIET, 1964). Work efficiency was obtained by the academic records of practical and theory for the ISTC students; for the PTL and APL workers the work efficiency was taken from the monthly ratings from the supervisors-in-charge of the respective industrial plants.

The five variables yielded an overall of fifteen scores for the ISTC sample and fourteen
scores for the PTL and APL industrial workers were obtained viz. SPM-1, Aptitudes - 4 (Mechanical Reasoning, Abstract Reasoning, Numerical Ability, Space Relations), Personality - 5 (Neuroticism, Extraversion, Lie Score, Sociability and Impulsivity), Motives - 3 (nAch, nAff, nPow), Work Efficiency - 2 and 1 (practical and theory for ISTC boys and monthly percentage work efficiency for the industrial samples respectively). A total of 194 male subjects representing 93 ISTC boys and 101 industrial workers were used in the present research and the subjects were tested individually. The data collected on these variables was processed and analysed.

The findings of the present study as detailed through statistical analysis were:

(i) Means and SDs for each variable were computed separately for the three groups viz. ISTC, PTL and APL.

(ii) Product Moment correlations were computed for each group.

(iii) A principal component model rather than an orthodox factor analysis was utilized and applied to each group.

(iv) The unrotated factors were then rotated according to the Varimax Method of Kaiser (1958).

(v) A sub-sample analysis of high and low achievers consisted of means, SDs and t-ratios for all the variables.
(vi) A further analysis of APL sub-sample was done computing the means, SDs and t-ratios for all the variables.

In order to offer some definite predictors of success for the under-training (ISTC) and the in-service industrial workers (PTL and APL) a sub-sample analysis taking the extreme groups on work efficiency was done. The sample was divided into high and low achievers. The means, SDs and t-ratios on all the variables for the ISTC, PTL and APL samples were obtained separately. The results of the subsample can have prognostic value - they can be used as guidelines for predicting for the under-training as well as those already on the job in industry.

A further APL subsample analysis was done separating the ISTC and ITI workers within the APL sample. This was done in order to empirically study the superior performance of the ISTC sample and the reasons underlying the inferior performance of the PTL subjects. The means and t-ratios were computed on all the variables for the ISTC and ITI boys in APL.

The present investigation revealed that intelligence and the four aptitudes had a positive relationship with work efficiency.

The means obtained on intelligence are comparable with the means of students in general academic courses. In fact the ISTC group yielded a superior score, the APL subjects were average and the PTL workers scored less than the comparable
counterparts. The same trend existed for the aptitude tests.

The relationship between work efficiency and the personality dimensions of N and E/I were negative or low positive. These findings were in consonance with the Yerkes-Dodson Law and were associated with persistence on complex tasks.

The mean scores on Neuroticism and E/I dimensions of personality have yielded lower scores than the comparable samples except in the case of Eysenck's business group which scored lower on N than the present sample.

The motives did not yield any significant relationships except nPow (practical) which showed positive relationships with work efficiency for ISTC boys.

In the case of motives, the APL workers yielded a superior mean score in comparison with ISTC and PTL samples. On nAch both ISTC and APL subjects scored higher than the comparable counterparts. The ISTC sample scored highest on nAff and the APL sample the lowest. For nPow, the APL workers' mean score was the highest in comparison to the ISTC and PTL subjects.

The superior performance of the ISTC sample may be on account of their rigorous selection procedure. So, they enjoyed the advantage of being a highly selective group whereas the industrial workers do not undergo any such procedure. In order to enhance productivity and avoid wastage of manpower
In industrial settings, it would be profitable both to the management of industrial plants and workers to know beforehand what the potentialities personality make-up and motives of the workers are, with the help of psychologically based standardised tests.