We have so far studied P.W.D. administration in Assam in detail since its formation of Assam as a Chief Commissioner's province in 1874. The establishment of P.W.D. in Assam was entirely a British affair. It was proposed to be established as early as in 1838. But for want of technical personnel it could not be established at that time. It was only in 1868 when a full fledged P.W.D. was established with a Superintending Engineer-in-charge of the department. Thus, we cannot agree with Dr. H.K. Barpujari that P.W.D. was established in Assam in 1880.

In 1874, when Assam was separated from Bengal there were only one Superintending Engineer, four Executive Engineers and four Assistant Engineers. With these few technical personnel it was not possible to carry on the public works in a large province like Assam. In 1887, to attract the native gentlemen to the P.W.D. the Governor General-in-Council sanctioned the grant of the title of Rai-Bahadur, Rao Bahadur and Khan Bahadur to all native gentlemen holding the rank of Executive Engineers, Assistant Engineers and Subordinate Engineers. This inducement, attracted the native gentlemen to a considerable extent. After a century of the separation of Assam from Bengal, the technical personnel of the P.W.D. became surplus.
Prior to the constitution of Assam into a Chief Commissioner's province, the establishment cost of the P.W.D. in proportion to the cost of works and repairs was higher. The average cost of establishment for ten years, immediately preceding the separation of Assam from Bengal, was 42.74 per cent of the expenditure on works and repairs, whereas for the three years subsequent thereto the establishment cost was reduced to 40.62 per cent. This diminishing trend of the establishment cost continued to a large extent up to the present which amounted to 17.46 per cent in 1971-72 and 15.42 per cent in 1981-82. The highest percentage of expenditure on establishment in comparison to works and repairs prior to 1874 and even after that may be partly due to the highest rate of salary given to the officers of the P.W.D. belonging to the Imperial service and partly due to the negligence of the Imperial Government on development works which became clear from the expenditure incurred on works and repairs as shown in chapter I. When the Imperial Government was dethrone and the state converted from police to a welfare state much stress was given to development works which is a very encouraging feature of this department.

So far revenue was concerned the rents, ferry receipts, motor permits, sales of old materials and buildings, unserviceable tools and plant etc. were the main sources. The actual realisation of revenue in proportion to the total outlay from its very inception was quite negligible. Thus, the highest portion of the total outlay of this department is being met
from other sources.

Prior to 1882, no diary was maintained by the officers of the P.W.D. which was reviewed by the then Chief Commissioner as the cause of inefficiency and extravagance. In 1882, the Commissioner directed the officers for the maintenance of diary containing details of the activities which were to be submitted monthly to their immediate superiors. This system facilitated the superior officers to consider and scrutinise the activities of each individual officers in their proper perspective. Further, from the very inception the P.W.D. Secretariat was kept separate from the Civil Secretariat and it was given a special status. The reasons for this are not clear. However, there was a demand for its amalgamation with the Civil Secretariat in 1931. Although this demand was not conceded yet the ministerial establishment of the P.W.D. Secretariat was amalgamated with Civil Secretariat as one cadre for recruitment, promotion and transfer. After Independence the demand for amalgamation became very acute and both the Secretariats were amalgamated into one.

The organisation of the P.W.D. at the headquarter, from its very inception, was a combined one of Secretariat and Directorate. It was only is 1971, when both the offices were separated. However, the practice of the appointment of the seniormost Chief Engineer as the Secretary developed. This practice is not favourable for the efficiency of the department. Thus, a Generalist should be appointed as the Secretary
for the reasons mentioned in chapter II.

Originally, the field organisation of the department consisted of one circle and three divisions. In 1881, the public works executive charges were made co-terminous with the civil districts of the province and it was distributed in eleven districts. But it was done away with in 1905 when Assam was tagged to Eastern Bengal. From 1940, the field organisation of the department expanded tremendously. In 1956 it was bifurcated into two wings: the Roads and Building and the Flood control and Irrigation wing. In 1965, both the wings were converted into two full fledged departments. In 1977, the P.W.D. (R&B) was again bifurcated into two wings: P.W.D. (Roads) and P.W.D. (Buildings). The Road wing consisted of 4 zones, 17 circles, 56 divisions and 172 sub-divisions. The Building wing consisted of 4 circles, 17 divisions and 43 sub-divisions. The organisation was done mostly on functional basis, in some levels on territorial and still in some other levels on process basis.

Further, since 1928, in the organisation of the P.W.D. certain Advisory Boards and Committees were placed or tied into their hierarchical structure but not organically connected with the departmental machinery. These Boards and Committees were outside its structure and associated usually with its head only for the purposes of advice. Thus, in 1928, a provincial "Communication Board" was constituted to advise the department in matters relating to the selection of schemes to be under-
taken for the improvement of road communications. In 1952, an E & D. Advisory Committee was constituted to advise the department in implementing some effective flood protective measures. Thus, although it was organised on "Baruautype" yet it enjoyed all the advantages of "Board" type department because of the association of above mentioned Advisory Boards or Committees. This is a very healthy feature in a democratic state. The functions of the P.W.D. varied from time to time. The trend is to increase the functions of the P.W.D. So long the state was a police state, the functions of the P.W.D. were few, when the state became a welfare state the functions of this department increased enormously. It was the main agency of the provincial Government for the construction and repair of roads, bridges, buildings etc. Sometimes it had also to act as an agent of the Federal Government.

The method of working was quite sound. Rules and procedures are all comprehensive. There are mainly two methods—departmental construction and contract. The later method is mostly prevalent. Although comprehensive rules and procedures were there yet in actual practice some irregularities were committed which were brought to the notice of the Legislative Assembly by the public Accounts committees. These irregularities can easily be removed if the care is taken by the superior officers of the administrative hierarchy of the department. In the whole the method of working of the department is efficient.
The classification of services of the P.W.D. was made either on the basis of grade or on the basis of class. From 1874 to 1938, almost all the services of the P.W.D. were classified into three or four grades either on the basis of the scale of pay or on the simplicity or complexity of works entrusted. Since 1938 onwards all the services of this department were classified into two or three classes even up to four classes on the basis of pay scale and authority the incumbents enjoyed. The classification was scientific which enabled the employer to eliminate the injustice of different rates of compensation for the same work of the department.

The qualifications prescribed for the various services of P.W.D. were mainly two; special and general. In the former category the academic and technical knowledge were included while in the later category—Nationality, Age, Character, Health etc. were included. Sometimes domicile is also included in later category. The technical qualifications varied with the positions to be filled; specially the posts in technical cadre such as Indian Engineering Service, Assam Engineering Service, Assam Subordinate Engineering Service etc. The general qualifications were more or less the same for all the positions to be filled in the P.W.D. The domicile qualifications which was prescribed for the lower technical services since 1882 to provide employment for the bona fide residents was highly essential for this backward province in technical education.
Although it is inconsistent with the merit principle and said to create provincialism and narrow outlook yet it is used more or less in all states in India. Moreover, some of the key posts are held by some non-Assamese who always try to provide employment to their fellow brothers of their own province. That is why Assam has become the hunting ground of non-Assamese. To check this tendency the domicile qualification is extremely necessary.

The salary of all the employees of the P.W.D. from 1874 to 1912 was given on the Bengal rates of graded pay. In 1912, the graded pay was replaced by the time scale of pay for Executive and Assistant Engineers only. In case of Superintending and Chief Engineers and for other employees the graded system of pay remained in force. From 1920, an improved time scale of pay was given to all services. However, the scales of pay were revised from time to time either because of diminishing or rising trend of prices.

The scale of pay given to the higher categories of employees during the period from 1874 to 1920 was much higher and comfortable. It was because of the fact that the higher administrative posts were held by Europeans. But the lower categories of employees were given lower pay scale, i.e., say Rs. 100/- per mensum for lower subordinates. Thus, the lower categories of employees were neglected, nay rather exploited. Further, if we examine the pay scale given to the
different categories of employees during the period from 1948 to 1956 with the pay scale from 1974 to 1982, according to the value of a rupee we find that the employees are being exploited to the fullest extent possible. For instance during the period from 1948 to 1956 the scale of pay of a Chief Engineer and a Superintending Engineer was Rs. 1200-50-1500, and Rs. 800-50-1100 per mensam respectively. During the period from 1974 to 1980 the pay scale of a Chief and a Superintending Engineer was fixed at Rs. 1600-50-2100, and Rs. 1200-55-1725 per mensam respectively. But the value of a rupee in 1980 has gone down to 17 per cent in comparison to the value of a rupee in 1948. Thus, according to money value, in 1980, the Chief and the Superintending Engineers are getting approximately Rs. 300-10-350 and Rs. 220-9-300 per mensam respectively. Same thing we notice, if we compare the scale of pay given in 1948 with the scale of pay drawn in 1980, in case of other employees also. Thus, we may conclude that, after Independence, in a welfare state the employees are being exploited to the maximum which should immediately be rectified if the morale of the employees is to be raised. The scale of pay of the employees should be determined not only on the basis of the principle of adequacy but also on market value principle.

Prior to 1920, no definite recruitment procedure was laid down for the appointment of Engineering service, Subordinates and Accounts service. The higher appointments with a salary of Rs. 250 or more a month were made by the Government
of India, while the lower appointments with a salary of below Rs. 250 were made by the local Government. From 1921, recruitment to the Indian service of Engineers was made by the Secretary of state for India with the advice of a selection committee. The gazetted provincial services were recruited by Governor-in-council after consulting a permanent Board of selection. The non-gazetted provincial services were recruited by the Head of the department. In 1937, the A.P.S.C. an independent body, was constituted for the purpose. With the constitution of A.P.S.C., all provincial gazetted services were recruited by the Governor in collaboration with the A.P.S.C. while the non-gazetted services were recruited by the Head of the department in consultation with the A.P.S.C. Further, recruitment to the lower categories of services were made by open competition while the upper categories were made partly by open competition and partly by promotion. The administrative post like Chief Engineer, Superintending Engineer, Secretary, Under Secretary were recruited purely by promotion. On the whole, from 1920 onwards the recruitment procedure of the different services of P.W.D. was efficient.

Whatever may be the methods adopted for the recruitment of P.W.D. personnel, there would have been square pegs in round holes without probation. Therefore, since 1918, the principle of probation was rigidly enforced for all the services of P.W.D. It was two year for Subordinate Engineering service all through, one year for the direct recruits of the
Assam Engineering service all through. For the promotion posts in 1941, it was fixed at one year for the Assam Engineering Service. In 1978, it was fixed at two years. For the Assistant Secretary, Registrar and Superintendents, in 1951 the probationary period was six months only. It was extended to one year in 1963. In case of Accounts service, it was fixed at two years in 1963. Although the probationary period was fixed differently for different services yet it could be increased or decreased by the Appointing Authority for good and sufficient reasons.

The principle of promotion is indispensable to keep the employees efficient and contented. In P.W.D., since 1874, this principle existed to all the services. However, from 1874 to 1912, there was discrimination in promotion of Royal and Provincial Engineers. Royal Engineers were promoted to the Executive rank in 9th year of service, while provincial Engineers were promoted to the Executive rank in 11th year. Further, for administrative posts like Superintending and Chief Engineers only the Royal Engineers were preferred. In 1912, this discrimination was done away with. Another discrimination was found in the promotion of Assistant Engineers brought from Assam Subordinate Engineering service by promotion. A separate seniority list of the members of Subordinate Engineering Service who were promoted as Subdivisonal officers and encadered as Assistant Engineers was maintaining with effect from 1st January 1971, for further
promotion. Why the members of this service encadered as Assistant Engineers were not treated equally with members of the Assam Engineering service, appointed as Assistant Engineers, is not known. Once a Subordinate Engineer encadered as Assistant Engineer, should get equal in status with other Assistant Engineers appointed from Assam Engineering service. For this reason the members of this service feel that they are not getting justice. To avoid this discrepancy a service rule regulating promotion for this service should be made immediately.

Further, seventy five per cent of the posts of Divisional Accountants are filled up by promotion from among the junior Divisional Accountant and the rest by direct recruitment. The junior Divisional Accountants are exclusively appointed by promotion from the Assistant Divisional Accountants and the Assistant Divisional Accountants are appointed by direct recruitment. By direct recruitment of twenty five per cent Divisional Accountants no better purpose can be served than by promotion of the already trained junior Divisional Accountants. Hence, the provision of direct recruitment to Divisional Accountants should be abolished.

The training that was imparted to the P.W.D. personnel was mainly of two types, pre-entry or vocational training and in-service or the job-training. For the Engineering Service some vocational training institutes were recognised from time to time. The successful candidates of these institutes were
directly recruited to these services. In 1924, for the Indian service of Engineers, besides these vocational training a kind of apprenticeship training was also imparted for one year.

For the Accounts service, an in-service training is imparted in the A.G. Office, P.W.D. divisional accounts office and in the District Treasuries. For the Assistant Secretary, Under Secretary, Registrar and Superintendings, the job training is imparted in doing job under the guidance of their respective seniors in their own job.

Further, sometimes some officers belonging to the Assam Engineering service, Subordinate Engineering Service and the Secretariat services are deputed for training abroad, in specialized branches. The above mentioned arrangements of training for P.W.D. Officers are not at all adequate. The training at one stage of the employee's career is not enough, but it must be a life-long process. Thus, refresher courses at suitable intervals should be provided to help the employees to bring his knowledge of the work up-to-date and adjust his attitude to the fast changing physical and human environment. The main emphasis in training should be to generate in the trainees an outlook of service devoid of any feelings of bossism or bureaucratic mentality.

For the purpose of superannuation, all the P.W.D. personnel were divided into two categories: ministerial and non-ministerial service. For the ministerial services the superannuative age was fixed at 60 and for the non-ministerial
services it was fixed at 55. In 1887, a provision was made under which any Civil Engineer who on reaching the age of 50 year could not attain the rank of Superintending Engineer was liable to be retired after acquiring qualifying years of service for pension. In 1956, the Government of Assam fixed the superannuation age at 58 for all the classes of employees excepting the class IV employees whose retirement age was fixed at 60. Thus the superannuation in the P.W.D. is quite in the interest of the efficiency of the services. So far retirement benefits were concerned all the personnel of the P.W.D. were given retiring pension at the rate of $\frac{1}{60}$ sixtieth of average emoluments per year of service after a minimum period of qualifying service of not less than 10 years. When the state was converted from police state to a welfare state the various types of retiring benefits were provided to the P.W.D. personnel such as pension, family pension, Extra-ordinary pension, Service gratuity, and Death-cum-retirement gratuity. These retirement benefits are quite sufficient to raise the morale of the P.W.D. personnel who are still in service. These benefits are given according to the prevailing theory that pensions have to be earned by approved service of which the Government is the final judge.

The financial administration of the P.W.D. consist of budget, accounting and auditing. For the preparation of budget the controlling officer of this department collect informations required for the purpose from the Estimating officer and
furnishes it to the finance department which bears the ultimate responsibility for framing the budget. The accounting function of this department is done by A.O. Office through its own staff. The treasury is the basic unit of accounting which furnishes accounts to the A.O. office. The P.W.D. officers also need to furnish its accounts to the A.O. The A.O. office compile the accounts submitted by the treasury and the P.W.D. officers after necessary comparison.

Prior to 1919, the auditing function of this department was done by the Deputy Examiner of Public Works Accounts. In 1919, audit was made a central subject and a central department known as Audit and Accounts department headed by the Auditor General was created. For Assam an Accountant General was appointed who was responsible for auditing the accounts of the P.W.D. also. The present Constitution also made provisions for this office. Thus, the financial administration of the P.W.D. was sound. Rules framed for the purpose are comprehensive and detailed. Financial administration of this department was in the hands of experts. In spite of detailed and comprehensive rules certain irregularities were committed by individual officers which were brought to the notice of the Legislative Assembly from time to time by Public Accounts Committee. These irregularities were partly due to the carelessness of the officers and partly due to the intention for the misappropriation of fund and materials which can be averted with strict supervision by the superior officers of the administrative hierarchy and also by raising the morale
of the officers by providing them with all the facilities due to them.

There is another defect in the financial administration. The treasury, which is the basic unit of accounting, are staffed by the state Government, but professionally responsible to the Accountant General. This is quite against the principle of unity of command. Thus treasury should be staffed by the Accountant General who are also professionally responsible to them.

Further, in our state, accounting and auditing functions is in the hands of one and the same person which is subject to severe criticism. The Comptroller and Auditor General Act 1976 separated Audit from Accounts both at the centre and in the states. In the P.W.D. Assam it has not yet been separated for want of fund and technical personnel which is not conducive for sound financial administration. Efficiency should not be surrendered in the name of economy. Thus, the Comptroller and Auditor General Act 1976 should immediately be implemented and the accounting function should be entrusted to the department itself.

It is an accepted fact that corruption is rampant in the whole administrative machinery of our state. It is all the more in P.W.D. The causes of corruption are many. The measures adopted for the prevention of corruption are comprehensive. Inspite of the various measures adopted for the prevention of corruption the government failed in preventing it. Unless
and until private property ceases to be the symbol of status
and power the corruption will remain. That is why, long ago
Plato envisaged a scheme in which he wanted to deprived the
public servants property and family. Of course, Plato's scheme
is not practicable. However, we must admit, that for the total
eradication of corruption the attitude of the society towards
the institution of private property must be reformed. The
acquisitive society must be replaced by a socialist society
and private property must cease to be the symbol of status
and power. Corruption must be regarded as sin not only against
God but also against society. If this feeling is cultivated
in the society then only it would be possible to eradicate
corruption by the measures mentioned in chapter VII.

The system of controls that exist in P.W.D. are of two
types: external and internal controls. The external control
is a general control of the Government by executive, legisla-
ture and judiciary. But each one has certain limitations.
Hence, external control is not effective. Besides, the commu-
nity's control is also included in external control which
exercises some sort of control over this department by various
means particularly pressure groups, Advisory Committees, and
Public opinion. This control is increasing day by day due to
party politics. But this control is not at all desirable.
The official cannot take directives from the people although
he may be ultimately responsible to them. The official should
be free from outside interference. Otherwise he will have to
serve two masters which is not conducive for efficient administration.

The internal control operate from within the administrative machinery of the department. It range from top to bottom which exist in every section, branch, subdivision, division, circle, zone up to the head of the department. The administrative machinery is so designed hierarchically that one control the works of other effectively. But now a days the administrative machine has become a complex structure for which it has become necessary to supplement the internal controls by external control in order to make it more efficient.

From the above discussion we may conclude that the and P.W.L. administration is by large efficient.