By Registration: Citizenship can be acquired by registration on:

- descent.

- father being an Indian citizen, or his father being an Indian citizen registered as such, or having been so registered, or having been a citizen of India at the time of his birth, or his father having been a citizen of India at the time of his birth, and his father being an Indian citizen.

- birth.

- foreign diplomatic and enemy aliens, however, shall not acquire Indian citizenship by birth.

-Every person born in India on or after the 26th January, 1950, shall be a citizen of India by birth.

-children born in India on or after the 26th January, 1950, shall be a citizen of India by birth.

- This Act also provides for the termination of citizenship.

- The Act does not apply to Indian citizens by naturalisation and by incorporation of territory.

- The Act of 1955, which is determined by the Indian Citizenship Act 61 of 1955, also provides for the acquisition of citizenship.

Indian Citizenship
side undivided India; (c) women who are, or have been, married to citizens of India; (d) minor children of persons who are citizens of India; and (c) persons of full age and capacity who are citizens of a Commonwealth country.

Commonwealth countries include United Kingdom, Canada, Australia, New Zealand, Union of South Africa, Pakistan, Ceylon and the Federation of Rhodesia and Nyasaland. The Republic of Ireland is also placed on the same footing. For the purpose of registration, a person shall be deemed to be Indian origin if he, or either of his parents, or any of his grand-parents, was born in undivided India. A person of full age must take an oath of allegiance before he is registered as a citizen of India.

By Naturalisation—A person of full age and capacity not being a citizen of a Commonwealth country, may be naturalised as an Indian citizen provided he makes an application in the prescribed manner to that effect. The qualifications for naturalisation of a person who is not a citizen of a country in the Commonwealth are:—

(a) that he is not a subject or citizen of any country where citizens of India are prevented by law or practice of that country from becoming subjects or citizens of that country by naturalisation;
(b) that if he is a citizen of any country, he has renounced the citizenship of that country in accordance with the law therein in force in that behalf and has notified such renunciation to the Central Government;
(c) that he has either resided in India or been in the service of a Government in India or partly the one and partly the other, throughout the period of twelve months immediately preceding the date of the application;
(d) that during the seven years immediately preceding the said period of twelve months, he has either resided in India or been in the service of a Government in India or partly the one and partly the other, for periods amounting in the aggregate to not less than four years;
(e) that he is of good character;
(f) that he has an adequate knowledge of a language specified in the Eighth Schedule to the Constitution; and
(g) that in the event of a certificate of naturalisation being granted to him, he intends to reside in India or to enter into or continue in, service under a Government in India or under an international organisation of which India is a member or under a society, company or body of persons established in India.

Provided that, if in the opinion of the Central Government, the applicant is a person who has rendered distinguished service to the cause of science, philosophy, art, literature, world peace or human progress generally, it may waive all or any of the conditions specified above.

By Incorporation of Territory—if any territory becomes a part of India, the Central Government may specify the persons who shall be citizens of India by reason of their connection with that territory; and those persons shall be citizens of India as from the date to be specified in the order.
TERMINATION OF CITIZENSHIP—Indian citizenship can be
terminated by renunciation or termination or deprivation. Any
citizen of India of full age and capacity can terminate his Indian
citizenship by making a declaration to that effect, except during a
time of war. Any citizen of India who has been naturalised in a
foreign country shall cease to be an Indian citizen. The Government
of India can also deprive a naturalised citizen of his citizenship on
ground of disloyalty to the State of India or continued absence from
the country for a period of seven years.

OUR NATIONAL EMBLEMS &
AWARDS

NATIONAL FLAG

The first flag in India was hoisted on August 7, 1906 in
the Parsee Bagan Square, Calcutta. The flag was composed of hori-
zontal stripes of red, yellow and green.

The second flag was hoisted by Madame Cama and her band of
exiled revolutionaries in Paris in 1907. It was similar to the first
flag with slight modifications.

The third flag was hoisted during Home Rule Movement in 1917
by Dr. Annie Besant and Tilak. This flag had five red and four
green horizontal stripes and in the left hand top corner (the pole
end) was the Union Jack occupying one-fourth of the space and
seven stars in the centre. There was also a crescent and a star in
one corner.

The Tricolour was first born at A.I.C.C. meeting at Bezwada in
1921 when a flag was shown by an Andhra youth and improved by
Mahatma Gandhi with the addition of a white stripe and charka.
Though not officially accepted by the Congress, it was hoisted on all
Congress occasions. In 1931, when A.I.C.C. met at Karachi, a reso-
lution was passed stressing the need for a national flag. In the
same year a resolution was passed adopting a tricolour flag as our
National Emblem. It had three colours: saffron for courage and
sacrifice, white for truth and peace, green for faith and chivalry. It
also carried a charka in blue on white band. The size was three
lengths by two breadths. On July 22, 1947 with the attainment of
independence, the Constituent Assembly adopted it as free India's
national flag. The colours and their significance remain the same.
The Dharmachakra of Emperor Asoka was adopted instead of
Charka.

The National Flag of India consists of a horizontal tricolour in
the saffron (Kesari) at the top, white in the middle and dark green
at the bottom, all stripes being equal in breadth. The ratio of the
width of the Flag to its length is two to three. The emblem of the
flag is an exact reproduction of the wheel on the capital of the Asoka pillar at Saranath, superimposed on the central band and is as broad as the white stripe. The colour of the emblem is dark blue and the wheel has 24 spikes.

Use of National Flag—

(1) It should not be dipped to any person or anything. The regimental colour, the State Flag, the organisational or institutional flag will be used for this purpose when necessary.

(2) No other flag or emblem should be placed above the National Flag or to its right.

(3) All flags are placed to the left of the National Flag if they hang in a line, and if they are raised, then the National Flag is raised highest.

(4) When other flags are flown along with the National Flag on the same halyard, the latter should be at the peak.

(5) The Flag should not be carried flat or horizontally, but always aloft and free.

(6) When carried in a procession, it must be borne high on the right shoulder of the standard-bearer and carried in front of the procession.

(7) When the Flag is displayed from a staff, projecting horizontally or at an angle from a window sill or a balcony or the front of a building, the saffron end should be at the top.

(8) Normally the National Flag should be flown on important Government buildings at the Centre and in the States. Frontier areas may, however, fly the National Flag at some special points.

(9) The use of the Flag will, however, be unrestricted on certain special occasions, such as the Independence Day, Mahatma Gandhi's birthday and during the National week and on any other days of national rejoicing.

NATIONAL EMBLEM

The National Emblem is replica of the capital of the Asokan pillar at Saranath and is formed of three lions mounted on an abacus with Dharma Chakra carved in relief in the centre, a bull on the right and a horse on the left, and the outlines of the Dharma Chakra on the extreme right and left. The words Satyameva Jayate, meaning 'truth alone triumphs', are inscribed in Devanagri script below the emblem. The lion capital was adopted as National Emblem on January 26, 1950.

The fact that the original lion capital designed between 242—232 B.C. was created by Emperor Asoka to hallow the spot where the Buddha first initiated his disciples in the eight-fold path of salvation, invests the Emblem with historical and spiritual significance. Carved out of a single block of sandstone, the original capital was surmounted by a wheel (Chakra).

NATIONAL SONGS

The Constituent Assembly of India on the 24th January, 1950 adopted Rabindranath Tagore's song Jana-gana-mana as the national
OUR NATIONAL EMBLEMS AND AWARDS

anthem of India. It was concurrently decided that Bankim Chandra Chatterjee’s Bande Mataram shall have equal status.

The Orchestral, Choral and Military Band versions of the National Anthem Jana Gana Mana have been standardised. The Government of India have emphasised that the general public should use the authorised versions of the Anthem, both on public and private occasions.

AWARDS & DISTINCTIONS & TITLES

Bharat Ratna—The award is made for exceptional work for the advancement of art, literature and science and in recognition of public service of the highest order. The decoration takes the form of a peepal leaf. It is of toned bronze. On the obverse side is embossed a replica of the Sun, below which the words Bharat Ratna are embossed in Hindi. On the reverse are the State Emblem and the motto, also in Hindi. The Emblem, the Sun and the rim are of platinum.

Padma Vibhushan—The award is made for exceptional and distinguished service in any field, including service rendered by Government servants.

Padma Bhushan—The Award is made for distinguished service of a high order in any field, including service rendered by Government servants.

Padma Shri—The Award is made for distinguished service in any field, including service rendered by Government servants.

President’s Police & Fire Service Medal, Police Medal.

Krishi Pandit—The title ‘Krishi Pandit’ is given annually by the Indian Council of Agricultural Research to farmers who have made notable contribution to the cause of Indian agriculture.

Gopal Ratna—This title has been instituted in 1956 by the Government of India and will be awarded to the owners of the highest milk-yielding cows and buffaloes of certain breeds in all India milk-yield competition. Owners of each breed of cattle besides title of Gopal Ratna will get cash prizes of Rs. 2,000 each.

HONOUR AND AWARDS FOR ARMED FORCES

Gallantry in the Face of the Enemy—1 Param Vir Chakra is the highest decoration for valour which is awarded for “most conspicuous bravery or some daring or pre-eminent act of valour or self-sacrifice in the presence of the enemy, whether on land, at sea, or in the air.” This decoration is made of bronze and is circular in shape. It has, on the reverse, four replicas of ‘India’s Vajra’ embossed round the State emblem in the centre. On the reverse, the words “Param Vir Chakra” are embossed both in Hindi and English, with lotus flowers in the middle. The decoration is worn on the left crest with a plain purple coloured ribbon, an inch and quarter in width.

2. Mahavir Chakra is the second highest decoration and is awarded for acts of conspicuous gallantry in the presence of the
enemy, whether on land, at sea, or in the air. It is made of standard silver and is circular in shape.

3. Vir Chakra is third in the order of awards given for acts of gallantry in the presence of the enemy, whether on land, at sea and in the air. The decoration is made of standard silver and is circular in shape.

Officers and all other ranks of the Army, Navy and Air Force, the Reserve Forces, the Territorial Army, the militia and any other lawfully constituted Armed Forces, matrons, sisters, nurses and staff of the Nursing and other Services pertaining to Military Hospitals and Civilians of either sex serving regularly or temporarily under the direction or supervision of any of the above-named forces are eligible for any of the three awards.

A recipient of any of these decorations is entitled to special pension.

For gallantry other than in the Face of the Enemy—1. Ashoke Chakra Class I—This medal is awarded for the most conspicuous bravery or some daring or pre-eminent act of valour or self-sacrifice on land, at sea or in the air. The Chakra is made of gilt gold and is circular in shape.

2. Ashok Chakra, Class II—is awarded for conspicuous gallantry. It is made of standard silver and is circular in shape.

3. Ashoke Chakra, Class III—is awarded for an act of gallantry. It is exactly like two Ashoke Chakras except that it is made of bronze.

Officers and all other ranks of the Army, Navy and Air Force, the Reserve Forces, the Territorial Army, the Militia and any other lawfully constituted forces, as also members of the Nursing services of the Armed Forces and Civilian citizens of either sex in all walks of life are eligible for the award of Asoka Chakra, classes 1, 2, 3.

4. Mentioned in Despatches—In recognition of distinguished and meritorous service in operational areas and acts of gallantry of an order not sufficiently high to warrant the grant of gallantry awards, a system of Mentioned in Despatches was instituted with effect from August 15, 1947. Those who are ‘mentioned in despatches’ are entitled to have an emblem—a miniature leaf.

Campaign Medals—1. General Service Medal awarded for services rendered under active service conditions after August 15, 1947. An individual qualifying for it for the first time is awarded the medal together with a clasp indicating the particular operation for which award has been made.

2. Clasps—So far two clasps have been instituted. The Jammu and Kashmir Clasp was awarded for operations in Jammu & Kashmir between October 1947 and January 1949

3 The Overseas Clasp was intended for service overseas. The first issue has been made to those service personnel who saw operational service in Korea between 1950-53.

Medals for Meritorious Service and Long Service and Good Conduct—(1) There are two classes of medals—Meritorious Service Medal is awarded on a Service-wise allotment of vacancies at the rate of one per 900 men of the authorised strength. (2) Long Service
RANK AND PRECEDENCE OF PERSONS

Modal and good conduct medal is awarded on a Service-wise allotment of vacancies at the rate of two per 900 men.

Decorations to Territorial Army Personnel—1. Territorial Army Decoration is awarded to Commissioned Officers of the Territorial Army with 20 years’ meritorious service.

2. Territorial Army Medal is awarded to Junior Commissioned Officers, Non-Commissioned Officers and the men of the Territorial Army who have completed 12 years’ efficient service.

RANK & PRECEDENCE OF PERSONS

1. President.
2. Vice-President.
3. Prime Minister.
4. Governors and Sadar-i-Riyasat, Jammu & Kashmir, within their respective charges.
5. Ex-Presidents and ex-Governors General.
6. Lieutenant Governors within their respective charges.
8. Cabinet Ministers of the Union.
9. Holders of Bharat Ratna Decorations.
10. Ambassadors Extraordinary & Plenipotentiary accredited to India.
11. High Commissioners of Commonwealth Governments in India.
12. Rulers of Indian States with a salute of 17 guns and above within their States.
13. Lieutenant Governors outside their respective charges.
14. Rulers of Indian States with a salute of 17 guns and above outside their States.
15. Chief Ministers of States
16. Ministers of the Union (other than Cabinet Ministers). Members of the Planning Commission.
17. Rulers of Indian States with a salute of 15 guns or 13 guns.
18. Envoys Extraordinary and Ministers Plenipotentiary accredited to India.
19. Judges of the Supreme Court.
20. Visiting Class I Ambassadors of India.
21. Charges d’Affaires and acting High Commissioners abroad and ad interim.
22. Chiefs of Staff and Commanders-in-Chief holding the rank of full General or equivalent rank.
24. Chairmen of Legislative Councils in States.
25. Speakers of Legislative Assemblies in States.
Rank & Precedence of Persons—(Concl.)

24. Ministers of States.
   Deputy Ministers of the Union.
   Attorney-General.
   Comptroller and Auditor General.
   Deputy Chairman of the Rajya Sabha.
   Deputy Speaker of the Lok Sabha.
25. Chiefs of Staff and Commanders-in-Chief holding the rank of Lieutenant-General or equivalent rank.
26. Rulers of Indian States with a salute of 11 guns or 9 guns.
27. Chairman, Union Public Service Commission.
   Chief Election Commissioner.
29. Deputy Ministers of States.
   Deputy Chairmen and Deputy Speakers of State Legislatures.
   Chairman, North West Frontier Province Legislative Assembly.
   Members of the Union Public Service Commission.
31. Officers of the rank of full General or equivalent rank.
   Secretary to the President.
   Secretaries to the Government of India and Principal Private Secretary to the Prime Minister.
   Visiting Class II and Class III Ambassadors of India.
   Commissioner for Scheduled Castes and Scheduled Tribes.
   Officiating Chiefs of Staff and Commander-in-Chief holding the rank of Major-General or equivalent rank.
   Visiting Ministers Plenipotentiary of India and Foreign Ministers Plenipotentiary visiting India.
   Chairman of the Railway Board.
   Financial Commissioner for Railways.
   Solicitor-General.
   Political Officer in Sikkim.
32. Members of the Railway Board.
   Ministers of Foreign and Commonwealth missions other than Ministers Plenipotentiary.
   Officers of the rank of Lieutenant-General or equivalent rank.
33. Additional Secretaries to the Government of India.
   Chairman, Tariff Commission.
   Chairman, Central Water and Power Commission.
   Vice-Chairman of the Indian Council of Agricultural Research.
   Financial Adviser, Ministry of Finance (Defence).
   Chairman, Central Board of Revenue.
   *P.S.Os. of the Armed Forces of the rank of Major-General or equivalent rank.
34. Chairman of the Public Service Commission of a State.
   Chief Secretaries to the States.
   Financial Commissioners.
   Members of the Union Public Service Commission.
   Rear Admiral Commanding, Indian Naval Squadron.
   Members of a Board of Revenue.
35. Director-General, Health Services.
   Director-General, Posts and Telegraphs.
   Director, Intelligence Bureau.
   General Managers of Railways.

* Should a P.S.O hold the rank of Lieutenant-General, his seniority in the Table of Precedence will continue to remain the same as laid down for Officers of the rank of Lieutenant-General or equivalent rank in Article 32 of the Table.
Rank & Precedence of Persons—(Concl.)

Establishment Officer to the Government of India.
Joint Secretaries to the Government of India (including Jt. Secretary to the Cabinet).
Visiting Class IV Ambassadors of India.
Officers of the rank of Major-General or equivalent rank.
Surveyor General.
Members of the Tariff Commission.
Inspectors General of Police in States.
Commissioners of Divisions.
Director-General of Civil Aviation.
Director-General of Supplies and Disposals.
Director-General of Ordnance Factories.

Indian Navy Commodores-in-Charge, Naval Ports or Areas.
Commanders of Indian Air Force Commands of the rank of Air Commodore.
*P.S.Os. of Naval and Air Headquarters of the ranks of Commodore and Air Commodore.
Chief Commissioners of Union Territories outside their respective charges.
Director-General, All India Radio
Military Secretary to the President (so long as he also holds the post of Director-General, Government Hospitality Organisation).
Councillors of foreign and Commonwealth missions in India.
Deputy Comptroller and Auditor-General.

TRANSPORT & COMMUNICATIONS

1. RAILWAYS

TRANSPORT AND COMMUNICATIONS—Transport deals with Railways, Roads, Road Transport, Inland Waterways, Shipping, Tourist Traffic and Civil aviation, whilst Communications deal with Postal Services, Telephones, Overseas Communications.

RAILWAYS IN INDIA—India has an extensive railway network, reaching all major cities. With over 34,744 route mileage, the system is exceeded in mileage only in the United States and Canada. Most of the railways are owned and operated by the Central Government. Those which are still privately owned are narrow-gauge feeder lines, are subject to Government regulation, and are usually dependent upon Government assistance. The Government lines have in recent years been reorganised into seven major systems.

Indian railway system is the largest in Asia and it is the single biggest nationalised undertaking in the country. In inter-regional traffic, 80 per cent of the goods and 70 per cent of the passenger
traffic are carried by rail. The Capital-at-charge exceeds Rs. 1,078 crores and gross earnings Rs. 350.6 crores. The railways employ over 10 lakhs of people. Daily, the Indian railways carry about 38 lakh passengers or the equivalent of one per cent of the country's population. For their convenience, they operate over 4,200 passenger trains daily, serving nearly 6,500 railway stations.

BEGINNING OF RAILWAYS IN INDIA—The regular railway projects in India date from 1844. The first line to be opened was a small section of 22 miles by the G.I.P. Railway between Bombay and Kalyan in April 1853. The E. I. Railway line between Calcutta and Pandooa was the second to follow in August 1854 and Mardas had the line upto Arkonam opened in July 1856.

Terms for Opening Railways—In the early stage (between 1844 and 1868) the construction of railways in India was entrusted to British Companies under State guarantee of a minimum return of 4½ p.c. to 5 p.c. on the capital invested. Government provided the land free of cost but retained the right to purchase the lines after 25 or 50 years on certain terms.

This policy, however, entailed heavy loss to the State, amounting by 1869 to about 1.7 crores and after an unsuccessful attempt to enlist the co-operation of companies without any guarantee of return, Government adopted the policy of direct ownership, construction and management by the State. Between 1869 and 1879 about 2,175 miles of lines were so constructed.

The policy of direct State construction, however, did not bear fruit as expected, specially because the exigencies of time necessitated the diversion of capital resources of the State to other directions and political and strategic considerations had led to the spending of large sums on unproductive lines. But the Famine Commission appointed in 1878 strongly urged the early extension of the railway network. Company construction was thereafter revived, and even for State-owned lines management by companies was favoured.

In dealing with the guaranteed companies, the Government exercised as far as found desirable their rights to terminate the contracts as and when opportunities arose in subsequent years: the method of making use of this right and the manner of continuing management of the railways after State acquisition having differed in different cases.

New Era Begins—With the beginning of the 20th century a new era began. Traffic had grown enormously and the railways had ceased to be a burden on public exchequer. In 1901, Mr. Robertson, a Special Commissioner appointed to enquire into the working of the railways, advocated the discontinuance of the dual system of State and Company management and advised the leasing out of all lines to companies, with or without guarantee. Public opinion in India had, however, ceased to remain inarticulate and strong feelings were entertained against management by English Companies, which often acted against the best interests of the people and stood in the way of Indianisation and advancement of Indian trade and industry. The policy, however, continued upto 1920-21.
In 1921 a Railway Enquiry Committee under the Chairmanship of Sir William Acworth examined critically the question of State vs. Company management and advocated State-management. 

In 1923 the Indian Legislative Assembly adopted a resolution advocating State management only and it was decided to eliminate the system of management by Board of Directors in London. Accordingly, the East Indian Railway was taken over under direct State management in January 1925 and the G. I. P. Railway in July next year and since then all company-managed lines have been taken over. After independence in 1947, the railway system has been nationalised. It is now entirely managed by the State.

**CO-ORDINATION OF TRANSPORT SERVICES**—In order to ensure a wellplanned development of Transport and co-ordination between various modes of transport on the one hand and the Central and State Transport policies on the other, Government of India have decided to set up three new transport bodies. They are *Transport Development Council*, *Road and Inland Water Transport Advisory Committee* and the *Central Transport Co-ordination Committee*. These bodies have replaced Transport Advisory Council constituted in 1935, Central Board of Transport and the Standing Committee of the Central Board of Transport.

*Transport Development Council* is a high level body to advise the Government of India on all matters of policy relating to roads, road transport as well as inland water transport. The Council will also advise on problems relating to co-ordination between different forms of transport that may be referred to it by the Government of India.

*Road & Inland Water Transport*—A Committee will be set up to discuss problems relating to roads, road transport and to make recommendations to the Transport Development Council for final decisions.

*Central Transport Co-ordination Committee*—is constituted in place of the Standing Committee of the Central Board of Transport and will deal with the day to day transport problems, confronting the different ministries of the Government of India.

**RAILWAY COMMITTEES**—For the improvement of railway management and also to settle the State vs. Company management question, *Acworth Committee* was appointed in 1921 which made various recommendations for the improvement of Indian Railways. Its main recommendations were: (1) Railways to be managed by the State instead of Company management. (2) Railway Budget should be separated from the general budget and that the general revenues should receive annual contributions from railways. (3) Establishment of Rates Tribunal to adjudicate upon disputes between railways and the public.

The Acworth Committee laid the foundations of State management and State Control of Indian Railways. Its recommendations constituted the broad basis on which the railway system in India developed in subsequent years.
The Pope Committee was appointed in 1932 which inter alia made many recommendations in regard to the intensive use of locomotives, coaching stock and machinery, disposal of uneconomical wagons, combining resources between railways, ticketless travel and methods of increasing earnings.

The Wedgwood Committee in 1936 made the following recommendations: (1) reduction in locomotives and carriage under repairs, (2) amalgamation of workshop for construction of rolling stock, (3) acceleration of trains, (4) withdrawal of unremunerative services, (5) greater caution in capital expenditure, (6) a campaign to root out dishonesty and incivility from amongst railway staff, (7) development of the commercial departments of railways, (8) building of a General Reserve Fund to serve as an equalisation fund for payment of interest charges and amortisation of capital.

Indian Railway Enquiry Committee—The Committee appointed by the Government of India published its report in 1948. The main findings and recommendations are (a) the staff strength in the railways is on the high side while there has been general deterioration in the efficiency of workers, (b) in place of present central organisation under which the Railway Board is part of the Secretariat of the Government of India, the Committee recommended the vesting of control and management of Indian Government Railways in a Statutory Authority, (c) it is desirable to have in the Finance Branch of the Railway Board a separate unit primarily concerned with exploring means to improve earnings, (d) no capital outlay should be incurred other than on strictly financial considerations, except when a capital expenditure is justified on other important considerations, (e) an Amortisation Fund should be created (as recommended by the Wedgwood Committee) in respect of intangible assets of the railways amounting to about Rs. 68 crores, the annual contribution to the fund being one per cent of gross earnings, (f) the existing method of making ad hoc contribution to the General Revenues has to continue until the future position of the railways can be assured with greater precision.

Railway Stores Enquiry Committee—was set up under the Chairmanship of A. D. Shroff to examine the Stores arrangements on the railways with a view to bringing about improvement and rationalisation in procurement, issue and holding of stores in 1951. The Committee recommended that Ministry of Railways should be responsible for the procurement of specialized Railway Stores. This recommendation has been accepted. The procurement of specialised railway stores will be transferred to the Railway Board.

ADMINISTRATION OF RAILWAYS—The Railways are under the direct charge of the Minister of Railways who is responsible for the proper management and running the system throughout the country. The Minister is assisted by two Deputy Ministers and a board of management called the Railway Board with a Chairman and three Members. The Railway Board is the supreme authority in regard to the day to day administration of the railways. The Board enunciates policies and issues instructions for the execution of the same.
TRANSPORT & COMMUNICATIONS

There are three members, viz., the member for engineering, the member for transportation and the member for staff members. There is also a Financial Commissioner who looks after the financial side of the business. There are, in addition, certain Additional members to assist the Board in carrying out the programmes in connection with (1) Works, (2) Mechanical, (3) Commercial, (4) Financial and (5) Staff Matters.

Divisional System—The essence of the divisional system is to provide a unified control of operation and other allied railway activities over a larger area than that of an average district and to vest the responsibility for co-ordinating the working of different departments in the area in an administrative officer called the Divisional Superintendent, located in the Division. Divisional system of administration has been introduced in the Central, Southern and Western Railways. The Central Railway is divided into seven divisions with headquarters at Secunderabad, Bombay, Bhusaval, Nagpur, Sholapur, Jabalpur and Jhansi. Southern Railway is divided into eight divisions:—Bezawada, Hubli, Gunatkal, Olavakkott, Madras, Madurai, Mysore and Tiruchirapalli. Western Railway is divided into eight divisions with headquarters at Bombay, Baroda, Kotah, Jaipur, Ajmer, Rajkot, Bhavnagar and Ratlam.

Each Division is under a Divisional Superintendent who will function in his sphere more or less as the General Manager does for the entire Zonal railway. He will, however, be under the control of the General Manager. Specialised departments, like stores and workshops, are excluded from the divisional scheme. These will continue to be controlled by headquarters direct as hitherto.

RAILWAY FINANCE—In 1924, the railway finance was separated from the general finance with the object of relieving the general budget from violent fluctuations, thus enabling the railways to carry on a continuous policy. Under the Convention, railway revenues had to pay to general revenues a contribution on the capital-at-charge and working results of commercial lines plus a share of the surplus profits. These arrangements were subject to periodic revision. The Convention was reviewed in 1943, when the contribution to general revenues onwards was decided on an ad hoc basis. The Convention was further reviewed in 1949 and in 1954, when it was settled—

(a) The existing relationship between general revenues and railway finance was altered to give the former the status of the sole shareholder in the railway undertaking and general finances were granted a fixed dividend of 4 per cent on the loan capital invested in the undertaking as computed annually. From April 1, 1955, on the element of over-capitalization, the dividend to the general revenues was decided at the rate equivalent to the average rate charged to other commercial departments and on the capital-at-charge of new lines, at the aforesaid rate. During the period of construction and up to the end of their opening for traffic, the deferred amount being repaid from the sixth year onwards in addition to the current dividend out of the net income of the new lines.
(b) The contribution of the Depreciation Reserve Fund was fixed at a minimum of Rs 15 crores a year for the quinquennium, commencing from April 1, 1950. This was raised to Rs. 35 crores from April 1, 1955.

(c) A Development Fund was instituted (merging in it the Betterment Fund) for expenditure on passenger amenities, labour welfare works and unremunerative projects. The scope of the Fund was expanded from April 1, 1955 to include expenditure on the provision of amenities for users of rail, transport and quarters of Class III staff; but the expenditure on the construction of new lines was excluded from the scope of the Fund. The general finance is to advance funds for the purpose of expenditure from the Development Fund in the shape of temporary loans, not to pay interest at the average borrowing rate. This amount is repayable in instalments, if necessary, from accretions to the Fund in more prosperous years.

FARE AND FREIGHT—The fare & freight rates were rationalised in 1948. The rates of passenger fare is on the telescopic basis from April 1, 1955 (i.e rates diminishing with increase in distance travelled). Scale of passenger fares from 1st April, 1955 are given below.

<table>
<thead>
<tr>
<th>Class</th>
<th>Distance in miles</th>
<th>Rates per mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air-conditioned</td>
<td>1—300</td>
<td>34 pies</td>
</tr>
<tr>
<td></td>
<td>301 and above</td>
<td>32</td>
</tr>
<tr>
<td>First class</td>
<td>1—150</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>151—300</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>301 and above</td>
<td>15</td>
</tr>
<tr>
<td>Second Class (Mail or Express)</td>
<td>1—150 (Mail/Exp)</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>1—150 (Ordinary)</td>
<td>9½</td>
</tr>
<tr>
<td>2nd class (ordinary)</td>
<td>151—300 (Mail/Exp)</td>
<td>10½</td>
</tr>
<tr>
<td></td>
<td>(Ordinary)</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>301 and above (Mail/Exp)</td>
<td>9½</td>
</tr>
<tr>
<td></td>
<td>(Ordinary)</td>
<td>8½</td>
</tr>
<tr>
<td>Third class</td>
<td>1—150 (Mail/Exp)</td>
<td>6½</td>
</tr>
<tr>
<td></td>
<td>(Ordinary)</td>
<td>5½</td>
</tr>
<tr>
<td></td>
<td>150—300 (Mail/Exp)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>(Ordinary)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>151—300 (Mail/Exp)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>(Ordinary)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>301 and above (Mail/Exp)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>(Ordinary)</td>
<td>4½</td>
</tr>
</tbody>
</table>

The Railway Passengers Fares Act came into force on September 15, 1959. New taxes on railway passengers fares have been imposed from 15th September, 1957 in all classes at the following rates—

<table>
<thead>
<tr>
<th>Distance</th>
<th>Tax Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 15 miles</td>
<td>No Tax</td>
</tr>
<tr>
<td>16 to 30 miles</td>
<td>5%</td>
</tr>
<tr>
<td>301 and above</td>
<td>10%</td>
</tr>
</tbody>
</table>

Season tickets will be exempted from the levy of the tax.

For vestibuled air-conditioned third class trains running between
TRANSPORT & COMMUNICATIONS

Delhi-Howrah, Delhi-Bombay and Delhi-Madras, an additional charge of 4 pies per mile is charged.

Freight Structure—From October 1, 1958 there have been a number of changes in the rate structure for goods carried by the Indian Railways. The charge for parcels has also gone up slightly and another change is the introduction of the metric system of weights. With the increase of rate, the average rate per ton mile is expected to be 11.3 pies as against 5.8 in 1938-39. Taking 100 as the pre-war level of prices, the new freight structure represents an increase to about 203 compared with the general price index of 400.

RAILWAY LOCOMOTIVE AND OTHER PRODUCTIONS—Internal production is now able to meet the railway’s normal annual requirements of rails, wagons and coaches. The Government-owned Chittaranjan Locomotive Works and the Government-assisted Tata Locomotive and Engineering Co. Ltd., which have gone into production are helping to attain self-sufficiency in locomotives also. The Government extended financial assistance to the Telco at Jamshedpur by holding shares to the value of Rs. 2 crores for the manufacture of locomotives and spare boilers. The Chittaranjan Works started production in 1950. The first locomotive was turned out in 1950, the 100th in Jan. 1954, the 200th in Feb. 1955 and 300th in Nov. 1955. During the plan period 341 locomotives have been manufactured. The Integral Coach-building Factory at Perambur (Madras) has gone into production in October 1955, making a major step towards making the railways self-sufficient in passenger coaches. The Government-owned Hindustan Aircraft Ltd. at Bangalore are producing all-steel third class passenger coaches.

TRAINING CENTRES AND RESEARCH—Training facilities for officers in the Engineering and Traffic Departments are provided in several railway training and technical institutes. A Staff College for training of Class I and Class II officers and Special Class Apprentices were opened at Baroda in Jan. 31, 1952. The College provides facilities for training of probationary officers and special class apprentices, refresher courses for junior officers of all departments (except medical), and special short-term courses on selected subjects for senior officers. For the training of Class III staff, there are 24 training schools including one each at the Chittaranjan Locomotive Works and the Perambur Integral Coach Factory, some of these are technical schools attached to the railway workshops to train apprentices for eventual appointment of skilled artisans or as supervisors of skilled workers. A Signal Training School to train inspection staff of the Signalling Department of the Indian Railways has been opened in 1957 at Lallaguda in Secunderabad. This is the first of its kind in India and will train 100 candidates at a time.

ELECTRIFICATION OF RAILWAYS—The electrification of railways in India began in 1925. The total electrified route mileage on the Indian Railways is 254.24 miles as follows: Central Railway (Bombay-Kurla-Kalyan, Poona-Igatpuri, and Kurla-Mankhurd) 184.85 miles; Southern Railway (Madras-Tambaram) 18.14 miles; Western Railway (Bombay-Borivili-Virar) 37.25 miles; Eastern 14 miles. A
further 826 miles will be electrified during Second Plan—463 miles on the Eastern Railway, 72 miles on the South-Eastern, 191 miles on the Central and 100 miles on the Southern.

The main line electrification project in the Eastern and South Eastern Railways consists of electrification of 1,350 route miles of track at an estimated cost of Rs. 84 crores. Electrifications between Moghalsarai on the Eastern Railway and between Asansol and Rourkela including Barajamda branch and the Tatanagar-Kharagpur Section on the South-East Railway have been planned to be completed by the end of 1960.

GAUGES OF RAIL—There are three Gauges of Rail in the Indian Railway system, viz., Broad Gauge "-6"; Meter Gauge 3'-3/8" and Narrow Gauge, which is again divided into two, viz., 2'-0" and 2'-6".

RAILWAY ZONES

<table>
<thead>
<tr>
<th>Zone and dates of forming</th>
<th>Former Rys. included</th>
<th>Head-</th>
<th>Route mileage as on March 31, 1956</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Southern</strong></td>
<td>M. &amp; S.M., S.I. &amp; Mysore Railways.</td>
<td>Madras</td>
<td>6,100.04</td>
</tr>
<tr>
<td>April 14, 1951</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Central</strong></td>
<td>G.I.P., Nizam's State, Dholpur and Scindia Railways</td>
<td>Bombay</td>
<td>5,292.92</td>
</tr>
<tr>
<td>Nov. 5, 1951</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Western</strong></td>
<td>B.B. &amp; C.I., Saurashtra, Cutch, Rajasthan and Jai-</td>
<td>Bombay</td>
<td>6,012.93</td>
</tr>
<tr>
<td>Nov. 5, 1951</td>
<td>pur Railways and a short section—Marwar-Phulad</td>
<td></td>
<td>of the Jodhpur Railways.</td>
</tr>
<tr>
<td><strong>Northern</strong></td>
<td>Eastern Punjab, Jodhpur, Bikaner, the three upper</td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 14, 1952</td>
<td>divisions of E. I. Ry. and a portion of the B.B.C.I. Ry.</td>
<td>Delhi</td>
<td>6,333.63</td>
</tr>
<tr>
<td><strong>Eastern</strong></td>
<td>E. I. Ry. (minus the three</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 1, 1955</td>
<td>Upper Divisions).</td>
<td>Calcutta</td>
<td>2,329.43</td>
</tr>
<tr>
<td><strong>South-Eastern</strong></td>
<td>B. N. Ry.</td>
<td>Calcutta</td>
<td>3,423.56</td>
</tr>
<tr>
<td>Aug. 1, 1955</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>North-Eastern</strong></td>
<td>O. T. &amp; Assam Rys. and Fatehgarh Dist. of old B.B.C.I. Ry.</td>
<td>Gorakhpur</td>
<td>3,060.30</td>
</tr>
<tr>
<td><strong>North-East Frontier</strong></td>
<td>do do do</td>
<td>Pandu</td>
<td>1,738</td>
</tr>
</tbody>
</table>

South-Eastern Railway—has the route mileage of 3,399.07. This Railway caters to the needs of six States, that is, West Bengal, Bihar, Orissa, Andhra Pradesh, Madhya Pradesh and Bombay. Starting from Howrah it runs 72 miles west upto Kharagpur. Onwards from Kharagpur, the Railway spreads out in three directions. Westwards the main line goes to Nagpur, 703 miles from Howrah.
To the South, the East coast line runs to Waltair, a distance of 547 miles from Howrah. The third line runs from Kharagpur in the north-westerly direction to serve the coal fields of West Bengal and Bihar. The Raipur-Vizianagram broad gauge section which was opened in 1931, links the port of Visakhapatnam with Madhya Pradesh for carrying the heavy manganese ore traffic for export from this area. The Railway joins the Eastern Railway at Howrah, Asansol, Gomoh, Barkakana and Chandrapura. It joins the southern Railway at Waltair and with the Central Railway at Nagpur and Katni. The broad gauge portion comprises 2,474 route miles and the narrow gauge lines serving mainly the Satpura areas in Madhya Pradesh add up to 925 miles. Connecting the ports of Calcutta and Visakhapatnam with their vast hinterlands, it serves the rich paddy fields of West Bengal, the extensive timberlands of Orissa and Madhya Pradesh, as also the coal and steel industries of Bihar and West Bengal. The area covered by the railway is rich in deposits of essential raw materials, such as iron ore, copper, coal, manganese, lime, bauxite and dolomite. Many of the major development projects in eastern India lie on this railway, such as (1) Hirakud project at Sambalpur, (2) two steel plants at Rourkela and Bhilai, (3) Hindustan Shipyards at Visakhapatnam, (4) oil refinery at Visakhapatnam, (5) two steel works at Tatanagar and Burnpur.

North-Eastern Railway—which came into existence on January 15, 1958 serves the northern part of West Bengal and Assam northern part of Uttar Pradesh, Northern Bihar. This line has been formed with the former Oudh and Tirhut Railway and Assam Railway. It passes through an area which is subject to heavy rains and consequent floods and breaches. The river Brahmaputra divides the railway into two separate portions. This line operates in a well-developed agricultural region and carries large quantities of sugar-cane, tobacco, tea and rice.

Eastern Railway—has a route mileage of 2,321. The railway serves an area of over 80,000 sq. miles and covers the States of West Bengal, Bihar and parts of Uttar Pradesh which have a heavy population density. This Railway is composed of the five Divisions of the old East Indian Railway, east of Moghal-sarai, namely, Dinapore, Dhanbad (transportation division, Asansol, Howrah and Sealdah. This last-named Division was attached to E. I. Ry. after the partition of Bengal-Assam Railway in 1947. Working on the divisional system, the Eastern Railway will have its headquarters at Calcutta. The Eastern Railway connects the port of Calcutta with its rich vast hinterland. It provides transportation facilities, among others, to the rice and jute producing areas of West Bengal and Bihar. The Railway serves the coal-producing areas of Bengal and Bihar and carries 70 to 80 per cent of the total coal produced there.

It serves important industries like metallurgical and steel manufacture at Burnpur and Kulti; chemical fertilizers at Sindri; and locomotives at Chittaranjan. The transport demands of the various industries like jute, chemicals, engineering, cement, leather and
textiles, situated in and around Calcutta and at other industrial points are also met by the Eastern Railway.

Western Railway—serves Bombay, Rajasthan and Madhya Pradesh. The line consists of former B. B. C. I. Railway, Saurashtra Railway, Rajasthan Railway and Jaipur Railway. This line serves the great industrial areas of Bombay, Ahmedabad and Baroda and handles tremendous quantities of cotton.

Central Railway—serves Bombay, Madhya Pradesh and north-western part of Madras. The line consists of the former G.I.P. Railway, Scindia Railway, Dholpur Railway and Nizam’s State Railway.

Southern Railway—On April 14, 1951, the three railway systems, viz., Madras and Southern Mahratta Railway, South Indian Railway and Mysore Railway were integrated into a single railway zone—the Southern Railway serves the densely-populated fertile areas of Madras, Mysore, Kerala and parts of southern Bombay and Andhra. This railway links the northern and southern portion of India.

Northern Railway—This Railway came into being in 1952 through the synthesis of the three divisions of East Indian Railway, a portion of the Bombay, Baroda and Central India Railway and the whole of the Eastern Punjab, Jodhpur and Bikaner Railways. This line serves Punjab, Delhi, northern and eastern Rajasthan and Uttar-Pradesh upto Banaras.

SOME RAILWAY ORGANISATIONS

Central Standards Office—There is a Central Standards Office in New Delhi for the conduct of all works connected with the production of standard design and specifications for all materials, plant and rolling stock in use on Indian railways. Three separate branches of this office deal respectively with mechanical engineering standards, civil engineering standards and specifications, while a separate research branch undertakes civil and mechanical engineering research.

Indian Railway Conference Association—This Association was first organised in 1871. The present organisation was inaugurated in 1902 establishing the permanent Conference, independent of Government. The Association lays down rules for the interchange of stock between railways and acts as a central co-ordinating agency for tackling all problems of common interest pertaining to the different systems of railways in regard to transport, such as coaching tariff, freight structure, interchange rules, cross traffic rules, etc.

Standards Advisory Committee of experts has been set up to introduce standardization in railway working and to remove wide divergencies regarding the stores nomenclature, servicing and repairs to rolling stock, methods of training staff, etc.

Consultative Committees—In order to afford closer consultation between the public and the railway administrations at different levels on matters relating to the service provided by the railway, consultative committees have been established, in place of the advisory committees—

(1) Regional-Users’ Consultative Committees at the regional or divisional levels;
(2) Zonal Railway Users' Consultative Committees at the headquarters of each railway zone, and
(3) National Railway Users' Consultative Committee at the Centre.

The Railway Users' Consultative Committees in the regions or divisions will represent the local users in the territories served by the railways including agricultural interests. The National Railway Users' Consultative Committee at the Centre will deal with matters of all-India importance relating to the services and facilities provided by the railways, while the zonal committees would deal with similar matters in regard to the respective zones.

Railway Rates Tribunal—This Tribunal has been established in 1949. This Tribunal enquires into complaints lodged by the commercial bodies and representative trade associations in the matter of freight charges on railways and other cognate matters. Its office is located in Madras. The Tribunal will deal only with freight rates and have mandatory jurisdiction. It consists of a President and two members. To assist the Tribunal, two panels of assessors are constituted, one representing trade, industry and agriculture and the other, the other railways.

Central Board of Transport—has been formed in 1947 to deal with the major problems of transport and policies in the country and it formulates broad policies. The two main objectives of the Board are (1) maximum co-ordination of all forms of transport and (2) the co-ordination of transport planning and its execution with the plans for agricultural and industrial development. The Board's objective is to secure the optimum movement of goods according to priority and simultaneously relief of the strain on railways by harnessing other forms of transport. The Board consists of the Ministers for Transport and Communications and Commerce and Industry and other senior officers of the Ministries of Finance, Defence, Commerce and Industry, Home Affairs, Railways and Transport.

Railway Service Commissions—There are Railway Service Commissions in Bombay, Calcutta, Lucknow and Madras for the purpose of recruitment of railway personnel for the respective zonal railways. Each Service Commission has a Chairman and one/two members, a Secretary with a Secretariat.

Efficiency Bureau—has been set up, whose function mainly is to investigate problems having a bearing on the efficiency of the railways in various facets of working and to suggest ways and means of securing improvements in efficiency.

Central Clearing House—There is a Clearing Accounts Office at Delhi whose main function is to allocate inter-railway revenue and expenditure under various heads to the different railways.

Standing Committee (Developments)—A Standing Committee consisting of Railway Adviser as Chairman, Economic Adviser, Director Research Centre, Lucknow, the Chief Design Engineer (carriage & wagon) and Joint Director, Efficiency Bureau was set up in order to keep in touch with the new developments in railway working in other countries, as also the changing needs in the country itself.
by a study of the current technical literature published in India and abroad.

**RAILWAY AMENITIES**—Since independence, great improvements have taken place in providing amenities for passengers. Formerly all the amenities were meant for upper class passengers. The third class passengers who form the majority of railway passengers were more or less neglected. During the past few years, much has been done to make rail more comfortable and to remove the gap in the amenities enjoyed by various classes of passengers. The railways have now laid down that certain minimum amenities must be provided at all stations, irrespective of their size or status. These include waiting halls, a pucca platform surface, benches and shady trees on platforms, improved types of latrines, adequate arrangements for lighting and drinking water and sufficient number of booking windows.

Travel standards are also being upgraded. The new all-steel coaches have been introduced. Seats have been specially designed to provide greater sitting comfort, Janata Express trains consisting entirely of third class are now running on the main trunk routes. Dining cars, retiring rooms and upper class entrances and exits have been thrown open to third class passengers. From October 2, 1955, first vestibule train between Delhi and Howrah has been introduced. From October 2, 1956, a fully air-conditioned train for first and third class passengers has been introduced. This train is the fastest operating on the entire Indian railway system.

**NON-GOVERNMENT RAILWAYS**

<table>
<thead>
<tr>
<th>Route</th>
<th>Mileage</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ahmadpur-Katwa</td>
<td>35.57</td>
<td>Under unguaranteed terms</td>
</tr>
<tr>
<td>Arra-Susaram Light</td>
<td>71.67</td>
<td>Subsidised by Dist. Board</td>
</tr>
<tr>
<td>Bankura-Damodar River</td>
<td>67.47</td>
<td>Under guaranteed terms</td>
</tr>
<tr>
<td>Bakhtiyarpur-Bihar Light</td>
<td>36.40</td>
<td>Subsidised by Dist. Board</td>
</tr>
<tr>
<td>Burdwans-Katwa</td>
<td>36.98</td>
<td>Under guaranteed terms</td>
</tr>
<tr>
<td>Dehri-Rohtas Light</td>
<td>50.37</td>
<td>Subsidised by Dist. Board</td>
</tr>
<tr>
<td>Fatwah-Islampur</td>
<td>28.93</td>
<td>Under guaranteed terms</td>
</tr>
<tr>
<td>Howrah-Amta Light</td>
<td>51.49</td>
<td>Subsidised by Dist. Board</td>
</tr>
<tr>
<td>Howrah-Sheikhal Light</td>
<td>21.23</td>
<td>Subsidised by Dist. Board</td>
</tr>
<tr>
<td>Jagadhri Light</td>
<td>3.86</td>
<td>Unassisted</td>
</tr>
<tr>
<td>Kalighat-Falta</td>
<td>32.31</td>
<td>Under guaranteed terms</td>
</tr>
<tr>
<td>Sahadara-Saharanpur Light</td>
<td>106.09</td>
<td>Subsidised by Government</td>
</tr>
</tbody>
</table>

**RAILWAY TRAFFIC**

<table>
<thead>
<tr>
<th>Year</th>
<th>Passengers (000)</th>
<th>Passengers earnings (Lakhs of Rs.)</th>
<th>Goods (000 tons)</th>
<th>Goods earnings (Lakhs of Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951-52</td>
<td>12,32,073</td>
<td>11,142</td>
<td>98,025</td>
<td>15,395</td>
</tr>
<tr>
<td>1952-53</td>
<td>12,12,090</td>
<td>10,183</td>
<td>98,370</td>
<td>14,381</td>
</tr>
<tr>
<td>1953-54</td>
<td>12,20,400</td>
<td>10,135</td>
<td>99,360</td>
<td>14,539</td>
</tr>
<tr>
<td>1954-55</td>
<td>12,60,890</td>
<td>10,374</td>
<td>1,06,979</td>
<td>15,645</td>
</tr>
<tr>
<td>1955-56</td>
<td>12,97,431</td>
<td>10,875</td>
<td>1,15,283</td>
<td>17,792</td>
</tr>
<tr>
<td>1956-57</td>
<td>13,82,540</td>
<td>11,739</td>
<td>1,25,380</td>
<td>20,109</td>
</tr>
</tbody>
</table>
RAILWAY FINANCE
(Crores of Rupees)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(Accounts)</td>
<td>(Revised)</td>
<td>(Budget)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passenger Receipts</td>
<td>102.62</td>
<td>107.71</td>
<td>116.33</td>
<td>120.90</td>
<td>124.73</td>
</tr>
<tr>
<td>Goods Receipts</td>
<td>158.69</td>
<td>180.28</td>
<td>202.96</td>
<td>231.00</td>
<td>250.50</td>
</tr>
<tr>
<td>Dividend to General Revenues</td>
<td>34.96</td>
<td>36.12</td>
<td>38.16</td>
<td>44.24</td>
<td>49.58</td>
</tr>
<tr>
<td>Appropriation to Development fund</td>
<td>9.10</td>
<td>7.08</td>
<td>20.22</td>
<td>21.66</td>
<td>27.34</td>
</tr>
<tr>
<td>Revenue Reserve Fund</td>
<td>—</td>
<td>—</td>
<td>7.14</td>
<td>—</td>
<td>—</td>
</tr>
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RAILWAY FINANCES
(Crores of Rupees)

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>(Accounts)</td>
<td>(Revised)</td>
<td>(Budget)</td>
<td></td>
</tr>
<tr>
<td>I. Capital at charge</td>
<td>1,071.71</td>
<td>1,209.13</td>
<td>1,347.97</td>
</tr>
<tr>
<td>II. Total Receipts</td>
<td>347.94</td>
<td>384.55</td>
<td>407.60</td>
</tr>
<tr>
<td>III. Total Expenses</td>
<td>289.56</td>
<td>313.05</td>
<td>330.68</td>
</tr>
<tr>
<td>IV. Net Revenue (II-III)</td>
<td>58.38</td>
<td>65.90</td>
<td>76.92</td>
</tr>
<tr>
<td>V. Dividend to General Revenue</td>
<td>38.16</td>
<td>44.24</td>
<td>49.58</td>
</tr>
<tr>
<td>VI. Surplus (IV-V)</td>
<td>20.22</td>
<td>21.66</td>
<td>27.34</td>
</tr>
<tr>
<td>VII. Appropriation to (a) Dev Fund</td>
<td>20.22</td>
<td>21.66</td>
<td>27.34</td>
</tr>
<tr>
<td></td>
<td>(b) Rev. Reserve Fund</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>


MILEAGE OF INDIAN RAILWAYS

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1853</td>
<td>20</td>
<td>34,656</td>
<td>34,079</td>
<td></td>
</tr>
<tr>
<td>1863</td>
<td>2,507</td>
<td>38,039</td>
<td>34,119</td>
<td></td>
</tr>
<tr>
<td>1873</td>
<td>5,697</td>
<td>42,953</td>
<td>34,275</td>
<td></td>
</tr>
<tr>
<td>1883</td>
<td>10,447</td>
<td>40,512</td>
<td>34,406</td>
<td></td>
</tr>
<tr>
<td>1893</td>
<td>18,459</td>
<td>33,985</td>
<td>34,705</td>
<td></td>
</tr>
<tr>
<td>1903</td>
<td>26,958</td>
<td>33,861</td>
<td>34,736</td>
<td></td>
</tr>
<tr>
<td>1949-50</td>
<td>34,002</td>
<td>1956-57</td>
<td>34,744</td>
<td></td>
</tr>
</tbody>
</table>

RAILWAY FACTS

The Indian Railway at present is the biggest railway system in Asia and the fourth in the world.

* * * * *

India has the second largest nationalised railway system in the world, the first being that of the U.S.S.R.

* * * * *

There are about 6,000 Railway Stations in India.

* * * * *
Third class passengers contribute 90 p.c. of the railway receipts.

Carrying nearly 2,340 passengers every minute, Indian Railway trains are supposed to be the most crowded trains in the world today.

About 7,000 passenger and goods trains run daily in India traversing distances aggregating an average of 562,000 miles per day.

If all the passenger coaches of the different railways could be put together, a 125-mile long train could be formed.

Today more than one per cent of the Indian people board trains daily.

India has three gauges of railways—Broad Gauge (5½′), Metre Gauge (3′ and 3-⅞′), Narrow Gauge (2′ 6″ and 2′).

Most Indian railway gauges are five feet six inches wide and they are the broadest in the world.

The famous trains of India are the Deccan Queen of the Central Railway which links Bombay with Poona. It is the fastest short distance train maintaining for some time a start to stop speed of 45 miles per hour. Flying Ranee run by Western Railway between Bombay and Surat is a corridor train in India. Delhi Madras Grand Trunk Express runs 1,361 miles and traverses half the sub-continent of India. Frontier Mail, though short of its previous grandeur, provides the shortest and the quickest service between Bombay and the North.

Indian railways carry about 1,300 million passengers per annum, nearly equivalent to four times of India’s population.

Indian Railways carry 80 per cent of the goods traffic and 70 per cent of the passenger traffic.

Railway station with smallest letters is “IB” railway station in South-Eastern Railway between Jharsuguda and Brajarajnagar in Orissa.

With capital of 1,000 crore of rupees invested by the State, the Indian Railways is one of the largest enterprises of the world.

Biggest Indian Railway tunnel is the Torsi Tunnel which is three quarter of a mile long.
TRANSPORT & COMMUNICATIONS

Fully vestibuled third class Janata train was introduced from October 7, 1955 between Delhi and Howrah. Similar trains have since been introduced on other main trunk routes, viz., Delhi-Madras, Madras-Howrah and Madras-Bombay.

* * * * *

Old iron bridge in India is the old iron bridge over river Gumti, Lucknow.

* * * * *

The longest platform in India (2,415 ft) is at Sonepur.

* * * * *

There are 349 bookstalls on the Indian railways. The Railway-wise distribution is: Southern 91, Central 66, Northern 61; Western 41; North-Eastern 40, Eastern 29 and South Eastern 21.

* * * * *

The Indian Railways consume nearly ten million tons of coal every year

* * * * *

The longest bridge, the Sone Bridge, has 95 spans, each a hundred feet apart. It is 10,052 ft. long.

* * * * *

The Indian Railways are the largest employers in the country, employing nearly a million men at an annual cost of about Rs. 123 crores.

Important Railway Dates

1853—First Indian Railway was opened on 16th April, 1853 between Bombay and Thana, a distance of 13 miles

1905—Railway Board came into existence in March, 1905.

1925—First electric train in India ran between Victoria Terminus (Bombay) and Kurla

1937—First air-conditioned coach to run in public service in India was attached to an Indian train in 1937 between Bombay and Delhi.

1951—Formal opening of the Chittaranjan Locomotive Works on 26th Jan 1951.

1952—Railway Staff College at Baroda was opened in Jan, 1952

1953—Indian Railways Centenary Exhibition was opened in New Delhi and Calcutta on 2nd Oct, 1953

1956—First vestibuled Air-conditioned third class express started between Delhi and Calcutta on 2nd Oct, 1956

1956—First All-Indian all-steel integral broad gauge passenger coach was launched at Perambur (Madras) on 14th August, 1956.

2. ROADS IN INDIA

PROBLEM OF ROADS IN INDIA—The importance of roads and the facilities of transport in a vast country like India can scarcely be exaggerated. A system of well-kept and well-constructed roads is essential for country’s economic and cultural progress. The roads
have also a vital role to play in the defence of India. The effective-
ness of defence depends on the ability of our armed forces to con-
centrate at any threatened point within shortest possible time. So the effective ness of our defence to a large extent depends on the effi-
ciency of our road system. India's deficiency in the matter of roads has contributed very largely to her agricultural, commercial and in-
dustrial backwardness today. The most serious defect is the lack of proper and adequate road communication between villages and markets. Another aspect of inadequacy of our road system is that it is unbalanced. The trunk roads are, for example, relatively more highly developed than the district and village roads. Most of the rural roads are fair weather roads. With the arrival of the monsoon, they are turned into mud and pools of dirty water and are rendered unusable.

In the beginning of the first Five-Year Plan, India had about 98,000 miles of surfaced roads and about 1,51,000 miles of unsurfaced roads. At the end of the First Plan this road mileage rose to 3,20,522 miles including roads under Community Development Projects and National Extension Schemes. The break-up of these roads are as follows—surfaced—1,22,170; unsurfaced—1,98,352, total 2,76,153; Community Projects and N.E.S. roads—surfaced 6,029; unsurfaced—38,420, total 3,20,522

SHORT HISTORY OF ROAD PROGRESS—The present road sys-
tem is a superstructure raised on the old Mughal and other roads. Its development began one hundred years ago under the auspices of the Government of India. But Government's entire energy being directed towards opening of railways, the roads came to be regarded as of local importance, a fit subject for devolution. The culmination of the lack of interest was reached in the Government of India Act of 1919 which transferred the subject to the provinces. The Central Government ceased to concern itself with road development except roads of military importance and certain arterial roads in Indian States.

But the circumstances changed after the World War I. Motor transport began to come in the forefront and it became a common feature on the principal roads throughout the country. The result was that the road expansion could not keep pace with the increase of motor traffic and the existing roads began to deteriorate. A resolution was carried in the Council of State in 1927 for the improve-
ment of road system with the result that a committee of both the chambers of the Central Legislature was set up under the chairmans-
ship of Dr. M R. Jayakar to investigate and report. The Jayakar Committee in 1928 reported that onus of road development was pass-
ing beyond the capacity of Provincial Governments and local bodies, that it was becoming a matter of national importance, and to that extent might be a proper charge on central revenues. The Commit-
tee recommended that the Centre should assist co-ordinated develop-
ment by making annual block grants to provinces from out of a Central Road Fund built up by a petrol tax surcharge of two annas per gallon. The Committee considered that the balances in the Fund should not be allowed to lapse at the end of each year, as road pro-
gramme was required to be planned and executed over a number of years and for this purpose continuance of funds should be assured. The Jayakar Committee also recommended the setting up of (i) a separate Road Development Committee in the Central Government, (ii) a Transport Advisory Committee consisting of the representatives from Central Government and the Provinces, (iii) a Central Organisation of Information and Research. A Central Road Organisation was set up in 1930 and a Transport Advisory Council in 1935.

After this, the Indian Road Congress was largely instrumental in producing an integrated road plan for the whole of India known as 'Nagpur Plan'. It visualised an integrated development of roads for the whole country at a time when very few among them were even conscious of countrywide development.

ROAD ADMINISTRATION—Road Development is shared by the Centre and the States, the former being responsible for the National Highways and certain selected roads of strategic or other importance and the States for their own state roads and for village roads. A central Road Fund was created in 1929 from the proceeds of a surcharge on petrol tax. Out of this fund, block grants were made to the provinces for road-building. In 1947, the Central Government assumed the responsibility for the construction and maintenance of the "National highways". Under the Indian Constitution, national highways have become Central subjects, while other roads, namely State highways and district and village roads, are the responsibility of the State Governments.

Central Government is also responsible for the development of roads other than national highways in the Union Territories of Delhi, Himachal Pradesh, Manipur, Tripura, Andaman & Nicobar Islands and the North-East Frontier Agency area.

CENTRAL ROAD FUND—The creation of Central Road Fund in 1929 on the recommendation of Jayakar Committee, constitutes a milestone in the history of road transport in India. This fund was built up out of an additional tax of two annas (now 2½ annas) a gallon on motor spirit. The Road Fund is administered by the Central Government with the advice of a standing committee of the Central Legislature. Part of the fund—one sixth—was to be reserved for central administration, research, intelligence, and grants for undertakings of special or all-India importance. The balance of the fund is for allocation to the provinces and States according to the consumption of petrol in each administrative unit. Block grants to the provinces from the fund is intended to augment principal allotments for road development. The Central Road Fund continues to provide an important source for financing road development and research activities. It now provides about Rs. 4½ crores annually for the development of roads other than national highways. A part of the Fund, now one-fifth, has been reserved for works of special all-India importance, the balance being allocated to the States for approved works.

NAGPUR PLAN—In December, 1943, a Conference of Chief Engineers was convened by the Government of India at the instance of
the Indian Road Congress. This conference is an important landmark in the history of Indian roads so far as the road development in India is concerned. This conference drew up a ten-year plan of road development which is known as Nagpur Plan. The Nagpur Plan called for an increase of road mileage from 265,000 to 400,000 and an improvement of the existing roads. The Plan visualised the growth of a network of road communications at a cost of Rs. 372 crores within ten years. The programme, however, has had to be drastically reduced owing to a shortage of money, material and trained personnel.

The Conference classified roads under the following heads—National Highways, Provincial or State Highways, Major District Roads, Minor District Roads and Village Roads. National Highways are to be the framework for the country's road system. The National Highways will connect capitals of provinces and States, ports and highways and constitute the main arteries of communication in the country. They will include roads of strategic importance. The Provincial or State Highways will be the main trunk roads of a province or state. Districts Roads will connect areas of production and markets with either a highway or a railway. They will also form the main links between headquarters of neighbouring districts. Minor District Roads and Village Roads will mostly meet the requirements of rural population; they connect villages and groups of villages with one another and with nearest district road or river ghat.

Nagpur plan recommends the assumption by the Central Government of complete financial liability covering both fresh development and annual maintenance of roads designated as National Highways. These are to be administered by an impartial Road Board. With effect from 1st April, 1947 complete financial liability for the construction and maintenance of every road, which is classified as a National Highway, has been undertaken by the Government of India.

National Highways—The National Highway routes generally follow the existing trunk roads which are already largely surfaced. The total mileage of National Highways is about 13,800. These include Grand Trunk Road from Calcutta to Amritsar via Banaras, Kanpur, Agra, and Delhi; Agra-Bombay Road; Bombay-Bangalore-Madras Road; Madras-Calcutta Road; Calcutta-Nagpur-Bombay Road; Banaras-Nagpur-Hyderabad-Kurnool-Bangalore-Cape Comorin Road; Delhi-Ahmedabad-Bombay Road; road from Ahmedabad to Kandla Port with a branch road to Porbandar; Hindustan-Tibet road from Ambala to Tibet border via Simla; road from Delhi to Lucknow. Gorakhpur and Mazaffarpur with a branch road to the Nepal border; Assam Access Road; Assam Trunk Road on the south bank of the Brahmaputra and the road branching off from the Assam Trunk Road towards the Burma border through the State of Manipur. A sum of Rs. 34 crores was spent on the development of national highway up to the end of the First Five-Year Plan. A provision of Rs. 55 crores has been made in the Second Plan for the development of national highways. It is to be noted that the construction of the National Highways is the entire responsibility of the Central Government.

The targets aimed at in the Second Five-Year Plan for the
development of National Highways are the construction of 900 miles of mixing links, bypasses and diversions, 60 major bridges, the improvement of 4,000 miles of existing sections of the national highways and the widening of 1,500 miles of improved sections to two-lane carriage ways. The important national highways under construction are (1) Jawahar (Banhal) Tunnel on the Jammu-Srinagar-Uri National Highway. This is one of the longest tunnels in the world (2) construction of motorable road from Narkanda to Chini on the Hindustan-Tibet National Highway (3) construction of an all-weather road from Bombay to Delhi via Ahmedabad (4) the improvement of National Highway approaches to Delhi (5) the construction of a rail-cum-road bridge across Ganga at Mokameh.

INDIAN ROADS CONGRESS—The Central Government took steps to promote the creation of a semi-official body known as Indian Roads Congress in 1934. The membership of the body is open to qualified engineers dealing with roads. The Roads Congress is designed to provide a forum for the regular pooling of experience and ideas on all matters affecting the construction and maintenance of roads, to recommend standard specifications, and to provide a platform for the expression of professional opinion on matters relating to road engineering, including such questions as those of organisation and administration.

The most important contribution of Indian Roads Congress to the science of road engineering in India, besides the study of roads from various aspects, is the “standard specifications and Code of Practice for Road Bridges in India” which has been accorded general acceptance throughout India.

When the highway engineers got busy to complete the projects and were ready with their blueprints to start work, a sudden setback came in the shape of the partition of India which dislocated all transport and various organisations concerned with the procurement of road materials. The financial stringency of the Government of India compelled the progress to slow down. As a result, in the period of three years from 1947, not even one hundredth part of the Nagpur target of building and improving roads could be completed.

GOVERNMENT ORGANISATIONS—At the Centre, the Government have built up the Central Roads Organisation under the Consulting Engineer to the Government of India (Roads). The Roads Organisation activities are not confined to National Highways; it tackles a host of other problems concerning road development in general, grants to State Governments for development of roads other than National Highways, road research, road statistics, bulk procurement of machinery and overseas training of road engineers.

Second Five-Year Plan—The second Five-Year Plan provides for Rs. 269.5 crores for road construction, comprising Rs. 55 crores for National Highways, Rs. 27.5 crores as Central aid to States, Rs. 25 crores as Central Road Fund—representing a part of road usage taxation and Rs. 162 crores as States expenditure.

RESEARCH AND TECHNICAL ACTIVITIES AND TRAINING The Central Designs Office of the Road Organisation deals with items,
such as, type designs for route marking for the national highways and for furlong and boundary stones, principles to be followed in the erection of advertisement boards on road-sides, form of recording data on bridges, etc.

Central Road Research Institute has been started at Okhla in Delhi in July 16, 1952 for the research on road engineering in its various aspects and construction and maintenance of all kinds of roads. Technical advice is also given to State Governments on various problems concerning road work. It seeks to provide cheap and durable roads to suit growing transportation needs of a rapidly expanding economy.

Facilities for acquiring advanced practical training in modern methods of highway and bridge engineering are now being provided under various schemes such as under Commonwealth Technical Co-operation Scheme, Point Four Aid Programme. The Central Roads Organisation also imports training to engineers from State Governments in modern methods of road and bridge designs.

Road Mileage in Various Countries in Relation to Area and Population

<table>
<thead>
<tr>
<th></th>
<th>Mileage of motorable roads</th>
<th>Mileage of unmotorable roads</th>
<th>Total mileage of roads</th>
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<tr>
<td>India</td>
<td>181,406</td>
<td>57,579</td>
<td>238,981</td>
</tr>
<tr>
<td>U. S. A (1940)</td>
<td>1,000,000</td>
<td>2,009,000</td>
<td>3,009,000</td>
</tr>
<tr>
<td>U. K. (1939)</td>
<td>160,120</td>
<td>19,170</td>
<td>179,290</td>
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<td>France (1939)</td>
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<td>405,028</td>
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Indian Union's Road Development Plan

<table>
<thead>
<tr>
<th></th>
<th>Existing</th>
<th>Nagpur plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Road mileage (1943)</td>
<td>239,081</td>
<td>385,226</td>
</tr>
<tr>
<td>Motorable road mileage (1943)</td>
<td>181,406</td>
<td>289,855</td>
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<tr>
<td>Total road mileage per million persons</td>
<td>749.89</td>
<td>1,208.18</td>
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<tr>
<td>Motorable road mileage per million persons</td>
<td>568.99</td>
<td>909.14</td>
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<tr>
<td>Total road mileage per 1,000 sq miles of area</td>
<td>196.45</td>
<td>316.53</td>
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<tr>
<td>Motorable road mileage per 1,000 sq. miles of area</td>
<td>149.06</td>
<td>238.17</td>
</tr>
</tbody>
</table>

(161 of India pamphlet "Our Roads")

3. ROAD TRANSPORT

The Constitution empowers the Central Government to legislate on the principles of motor vehicles taxation—but the power to levy taxes on motor vehicles vests in the States. Motor vehicles are now playing an important part in the road transport of India and are slowly replacing bullock-carts. It was virtually unknown before World War I, but soon after the war ended, public transport services rapidly sprang up. The Motor
TRANSPORT & COMMUNICATIONS

Vehicles Act of 1939 was a big step towards creating for condition enabling motor transport to develop along sound lines. Direct taxation of motor vehicles is a State subject in India. The two main disabilities from which the motor transport in India suffers are heavy taxation and the threat of nationalisation. Three agencies levy taxes on motor transport, viz, the Centre, the States and the Local Bodies. Further, the taxes are not based on any common policy but only on the exigencies of Budget. The Central taxes are import duties on cars, etc., and customs and excise duties on motor spirit. The present duty of Rs. 0.15-9 per gallon of motor spirit is the heaviest ad valorem duty levied in the country on any commodity including the most luxurious ones like gold and diamond. The States levy two taxes, a sales tax on motor spirit and a motor vehicle tax, both varying from state to state. The local taxes are octroi, transit fees and wheel tax. The motor transport in this country has been solely developed by private enterprise and it is estimated that the value of vehicles in circulation and their spare parts is about Rs. 300 crores. The second Five-Year Plan says that the total number of motor vehicles on the roads is only 353,000, which “must be considered very small, having regard to the size of the country, its road mileage and its population. The main reason for this arrested development is the crushing taxation levied on motor vehicles of all types.”

Under Indian Motor Vehicles Act, each State is divided into two or more regions with a Regional Transport Authority in each such region. To co-ordinate the work of Regional Authority there is in addition a Provincial Transport Authority in each State. The Act has also provided for compulsory insurance of motor vehicles in respect of third parties.

Under the Road Transport Corporations Act, 1950, statutory transport corporations are being formed on tripartite basis by the State Governments, railways and private operators. The State operated services mainly provide passenger transport. State operated services exist in almost all the States in India.

Motor Vehicles (Amendment) Act to amend the Act of 1939 was passed in 1956. The Act provides for the implementation of the motor transport reorganisation schemes of the State Governments and several other measures connected with the planned development of motor transport in the country. The Act will facilitate the development of motor transport generally in the country to meet the additional demand on transport created by the large-scale development of industries. The Act contains the provisions for the nationalisation of motor transport service. It also seeks to remove the defects of the old Act. The Act provides for the establishment of Inter-State Transport Commission which would be appointed by the Central Government. There is also provision for the payment of compensation to private operators whose transport undertakings are nationalised before the expiry of their permits.

Nationalisation of Transport—About all the major States of India have accepted nationalisation of bus services as a basic policy and many have reached a stage where they have nearly taken over
the entire private bus transport in their area with a view to ensuring autonomy and efficient administration. But in consultation with the Ministry of Transport, the Planning Commission has advised the State Governments to defer the nationalisation of goods transport during Second Plan and to nationalise the passenger transport service according to a phased programme.

INTER-STATE TRANSPORT COMMISSION—The Government of India have appointed an Inter-State Transport Commission in 1958 for the purpose of developing and regulating the operation of transport vehicles of any area or route common to two or more States and performing such other functions as may be prescribed by the Union Government. The Commission will prepare schemes for the development, co-ordination or regulation of the operation of transport vehicles and in particular of goods in an inter-state region.

ROPEWAYS—Ropeways are used in India in areas of hilly and broken country where valleys and streams abound and gradients are steep and where other forms of communication are primitive or non-existent. These conditions obtain in the foothills of the Himalayas and in some parts of South India. In India the use of ropeways is confined to the movement of materials and merchandise. The following are the Ropeways operating in India at present—(1) Darjeeling-Bijanbari mono-cable ropeway which is five miles long with one span of 6,000 ft. (2) Mono-cable ropeway at Kalmpong which climbs 3,400 ft. in its length. Both these ropeways are regarded as extensions to railway system (?) Cherra Chatak Ropeways at Cherrapunji in Assam (4) Annamala Ropeway in South India serves tea and coffee on the 5,000 feet high plateau.

Apart from these several purposes public or semi-public applications, ropeways transport is extensively used in the tea planting districts. It is also found in coal-mining area mainly in Bihar and Bengal where it provides a particularly economical method of transporting waste to spoil damps. It is used in the manufacture of cement and in the working of quarries, mines and, gravel and clay pits. Ropeways are used elsewhere in civil engineering for large constructions, such as masonry dams and bridges. There are approximately 100 ropeways operating in India today.

STATISTICS OF Carts, ETC—There were in 1958 about one crore bullock carts in India, 40 lakhs bicycles and 4 lakhs motor vehicles including 40,000 motor vehicles.

SAFETY ON ROADS—Although the total of fatal road accidents in India is much less than of U.S.A., our death rate per 10,000 vehicles is 75 as against 16 and 8 in the U.K. and the U.S. respectively.

3. INLAND WATER TRANSPORT

POSITION OF INLAND WATERWAYS IN INDIA—From ancient times, the trade and commerce of northern India has been facilitated by the abundance of navigable streams. History records evidence of a flourishing trade carried on along the rivers and canals of India from the earliest times. Inland navigation in India was highly developed, judged by relative standards of the
The importance of waterways gradually diminished with the development of railways with the result that steamer service was gradually withdrawn and country boat traffic also decreased.

At present inland water transport in India is mainly confined to the States of Assam, West Bengal, Bihar, Uttar Pradesh, Madras, Andhra and Kerala. At present total mileage of navigable waterways in India is over 5,000 miles. At present 1,557 miles of rivers are navigable by mechanically-propelled vessels and 3,587 miles by large country boats. This excludes tidal creeks on the coast, which are not connected with any inland waterway. River navigation is practically confined to the Ganga and Brahmaputra. There are some irrigation-cum-navigation canals. These are coastal canals fed by salt water along the east and west coast, such as Hijilli tidal canal in West Bengal, the Orissa coast canal, the Buckingham and Vedaraniyam canals in Andhra Pradesh and Madras along the east coast, and west coast canals and backwaters of Kerala and Mysore which are providing useful means of transport of large quantities of goods.

The new multipurpose river valley projects include schemes for navigation channels. D.V.C., for instance, envisages a channel from Calcutta to Raniganj coal fields, which is under construction; Kakrapar Project in Bombay will provide navigable channels from the sea to Kakrapar Dam and 50 miles further inland; and the Hiralakud Project will make the Mahanadi navigable for the last 300 miles down the sea.

The need for developing inland waterways has now been realised. As things stand, the railways and road services are unable to cope with the transport requirements of the country. A number of plans are now under consideration. A beginning has already been made with the constitution of the Ganga-Brahmaputra Water Transport Board in 1952 by the Government of India. This Board has been charged with the responsibility of improving the Ganga-Brahmaputra river systems for navigation and to extend it as far as possible.

The Board is under the control of the Central Ministry of Transport. The functions of the Board are the development of water transport, the improvement of navigable facilities, the handling of administrative problems, such as those arising out of registration and licensing, the fixing of passenger and freight rates and the administration of a pilot project for towing country craft with shallow draught tugs. The Ganga-Brahmaputra Board has already taken up three experimental projects. Two of these projects are on the upper Ganga and the feeder rivers of Assam and the third is a project in Assam for a passenger and vehicular ferry vessel on the Brahmaputra. Development works in the Ganga-Brahmaputra region include dredging of important waterways and provision for aids to navigation.

The other scheme is Calcutta-Cochin canal. Besides these bold schemes, there are others to link up the major rivers of India. In the Calcutta-Cochin scheme a number of canals exist, such as the Midnapur and Orissa Coastal canals, the Godavari and Krishna delta canals, the Buckingham canal and the Vedaranniyam canal. All these canals could be improved and the gaps linked up to provide a waterway
from Calcutta to the Kaveri. A plan to construct a navigable waterway is under consideration to connect the Brahmaputra with the Ganga through Indian territory. The canal will be of immense service in transporting goods from Assam.

Other schemes suggested to link up the major rivers of India consist of (1) joining the Narbada with Johilla, a tributary of the Sone; (2) connecting the Biran, a tributary of Narbada, with Katni, a tributary of Sone; (3) connecting the Narbada with Bearma, a tributary of Ken which falls in the Yamuna; (4) connecting the Karam, a tributary of the Narbada, with Chambal; (5) linking up the Narbada with Wainganga, a tributary of the Godavari; (6) linking Hasdo, a tributary of the Mahanadi, with Rihand, a tributary of the Sone; (7) joining Wardha, a tributary of the Godavari, with the Tapti. The Upper and Lower Ganga canals which were navigable in the beginning have now partly silted up. They could be improved and thus navigation by boats could be extended up to Hardwar.

These schemes, if successful, will mean the linking up of the Ganga and the Yamuna with the Narbada and the Mahanadi. The Godavari will be linked up with the Narbada and the Tapti. It will then be possible to go from the ports of the Bay of Bengal to the Arabian Sea coast along inland waterways.

ADMINISTRATION OF INLAND WATERWAYS—In our Constitution, ‘national waterways’ have been included in the Union List, while inland navigation with respect to mechanically-propelled vessels appears in the Concurrent List. The Central Water and Power Commission is the departmental body specifically responsible for surveys, planning and development of water transport. Inland Steam Vessels Act of 1947 as amended in 1951 provides compulsory registration of all inland steam vessels. State Governments have been asked to consider the feasibility of registration of dumb craft including country boats.

SECOND PLAN PERIOD—During Second Plan, a provision for Rs. 3 crore has been made for the development of inland water transport. This includes Rs. 115 lakh for the development of the Buckingham Canal and Rs. 43 lakh for the West Coast Canals. The balance of the provision together with contributions from the State Governments to the revenues of the Ganga-Brahmaputra Board will be available for projects to be undertaken by the Board.

4. CIVIL AVIATION IN INDIA

HISTORY OF CIVIL AVIATION—Human flight began in India by balloon, when Mr. Joseph Lynn took off from Lalbagh Gardens, Bombay, in 1877 and rose to a height of 7,500 feet. By 1911, however, army officers were able to make demonstration flights in a “power driven” aeroplane; and in the same year the world’s first “air mail” was flown from Allahabad to Naini Junction—a distance of six miles by a French pilot, M. Picquet. Lord Lloyd, then Governor of Bombay, organised the first regular airmail service in 1920, but it was not until 1926 that the pace of development accelerated.
The plans of Imperial Airways for a service between England and India during that year gave Indian civil aviation a powerful stimulus. A Department of Civil Aviation was established to regulate international and internal services in 1927; aerodromes were constructed, and flying clubs started encouraging public interest in this new form of transport. With the first scheduled flights between London and Karachi in 1929, India joined other countries on the new air maps of the world.

In the following fifteen years, from 1930 to the end of World War II in 1945, Indian Civil aviation expanded until the farthest corners of the sub-continent were linked by air. Foremost in this growth were Tata Airlines Ltd. and Indian National Airways, followed by many other private companies; almost all of which benefited in experience, equipment and finance by their military service during the war years. The war also brought about tremendous advances in other aspects of air transport: hundreds of new aerodromes were built, flight and communications techniques were improved, and the advantages of flying as a safe, efficient and comfortable form of transport were firmly established.

From 1945, passenger and freight traffic steadily increased over the air routes of the eleven companies then licensed to operate. But costs also rose steeply, and it became progressively clear that the industry would be unable to mobilise adequate resources for undertaking urgent prospective development. Taking all this into account, a committee of enquiry was appointed by the Government in 1950 presided over by the late Mr. Rajadhyaksha to examine the working of the air lines and make recommendations regarding putting the Indian civil aviation on a stable basis. The Committee reported that (1) the number of operating units in the country was much greater than that required for the volume of business, (2) cost of most of the companies was excessive, (3) subject to reorganisation and reduction of costs, operation of air lines by private enterprise might be allowed to continue.

The financial position of the companies, however, continued to deteriorate. The companies were not in a position to raise funds in open market and suggested most of the finance should come from the Government in the form of loans on a nominal rate of interest without any early prospects of repayment. Taking all these into consideration, the Government came to the conclusion that all the units of operation should be owned by the State. The result was the passing of the Air Corporation Act, 1953 which came into force on the 28th May, 1953. It provided for the setting up of two Corporations, one for the operation of long distance and another for domestic services and services to neighbouring countries. The two Corporations took over the existing companies as going concerns with their assets and liabilities in accordance with the provisions of the Act.

The main Provisions of the Air Corporation Act—(1) An Air Transport Council to be established to tender advice on matters of public importance. (2) An Advisory Committee for each corporation to be established for the purpose of maintaining liaison with the pub-
lic. (3) There will be Labour Relations Committee for each corporation consisting of representatives of the corporation and of employees. This committee will give advice to the Corporation relating to labour. (4) Finally each Corporation is to act so far as may be on business principles.

The two corporations, viz., Indian Airlines Corporation and Air India International, came into formal existence on the 16th June, 1953. On the 1st August, 1953 Air-India International took over the business of the Air-India International Ltd., while the Indian Airlines Corporation took over as a going concern the assets, liabilities and business of eight units, namely, Airways (India) Ltd., Himalayan Aviation Ltd., Kalinga Airlines, Bharat Airways Ltd., Air-India Ltd., Air Services of India Ltd., Deccan Airways Ltd., and Indian National Airways Ltd.

The Corporation had appointed Resident Representatives stationed at the appropriate Line offices. The total area of operations had also been divided into two Regions, and in each such region one Representative had senior charge of all other Lines. This set-up has now been replaced by a fully integrated one, where the organisation in its entirety is controlled by a strong centre—each Head of a Department being in charge of the relevant sections at the Zones.

The Indian Airlines Corporation consists of a Chairman and 6 members appointed by the Government. The Corporation is a statutory body thoroughly independent to manage its day-to-day business. The Government, however, has the power to issue directives to it from time to time. It further receives their annual programmes of operations and financial estimates. The accounts of the Corporation are audited by the Comptroller and Auditor-General, and are then placed by Government before both Houses of Parliament, together with appropriate audit reports. When development capital is required by the Corporations, it has to be provided either by the Central Government or by authorised borrowing, under issue of bonds, debentures, debenture stock or other security.

PROGRESS OF CIVIL AVIATION—Progress of civil aviation in India can be summed up as follows:—From Frivandrum at the extreme South to Srinagar in the North is a distance of 2051 miles. This great distance is budget by I.A.C which can transport a passenger speedily. With its net works of over 15,000 miles operated by a flat of 90 aircraft from 55 stations, I.A.C. enables the Administration, Industrialist or Tourist to travels across the country in comfort and speed. The new route batter introduced by I.A.C. enables the promotion of commerce and industry by providing facilities for over-lifting cargo. There is a link-up with important neighbouring countries—Pakistan, both West and East, Nepal and Afghanistan. Night air mail services connecting the principal cities of India have also been introduced. Steady progress has been maintained in the establishment of Indian air services to distant lands. Our air lines now ply to Aden, Bangkok, Cairo, Djakarta, Dusseldorf, Geneva, Kabul, Kandahar, London, Nairobi, Paris, Rome, Singapore, Hongkong, Tokio, Australia and Moscow. Air traffic control services, navigational aids, and the ground and point to point
communication have been provided at various aerodromes. A network of radio beacons, radio ranges and radio direct-finding stations are now available to all pilots. At important aerodromes, the instrument landing system is also available to help aircraft in safe approach and landing during bad weather. Aeronautical radio facilities have been brought into operation. Seventy-eight aerodromes are controlled and operated by the Civil Aviation Department of the Government of India. A Civil Aviation Training Centre has been established at Allahabad, where pilots, aircraft maintenance engineers, aerodrome officers, control operators, radio officers and technicians are trained.

**ORGANISATION OF CIVIL AVIATION**—The civil aviation in India is placed in the charge of a Director-General assisted by Deputy Directors General and the functions of the Department are distributed among several directorates, each responsible for several branches of civil aviation activity. The Civil Aviation Department is at present attached to the Ministry of Communications which controls the Posts and Telegraphs Department and which utilises air transport for the carriage of mails. Indian Air Force is in the Ministry of Defence but Civil Aviation is not entirely independent of military aviation. In order to co-ordinate policy with respect to civil and military aviation and to maintain the necessary liaison, a Standing Committee has been constituted comprising officers of the Ministries of Defence and Communications who meet as necessary for the supplement of important questions of policy.

The Director General of Civil Aviation is the administrative authority for controlling all civil aviation activities in India.

**AVIATION TRAINING AND FLYING CLUBS**—To meet the needs of the country for trained technical personnel the Government of India is running the Civil Aviation Training Centre at Allahabad which provides courses in flying, aircraft maintenance engineering, air traffic control, aeronautical tele-communications and air navigation. This Training Centre at Allahabad comprises the following four wings—(1) Flying Schools (2) Aerodrome officers’ Training School (3) Engineering School (4) Communication School. In addition, a Repair and Overhaul Organisation is also attached to the Centre for carrying out repairs and overhaul of the Central aircraft. Twelve subsidised flying clubs, with headquarters at Delhi, Bangalore, Bhubaneswar, Bombay, Jullundur, Lucknow (with satellite centres at Allahabad, Kanpur and Banaras), Madras, Nagpur, Patna, Barrackpore, Jaipur and Indore have been subsidised by the Government of India. These Clubs train ‘A’ and ‘B’ licence pilots. In addition to this, there are Government Gliding Centres at Allahabad, Bangalore, Poona and Delhi Gliding Club with necessary training facilities. Subsidies were also given to the Aero Club of India, Aeronautical Society of India and the Aeromodellers Association, Calcutta.

**AERODROMES & AERONAUTICAL TELECOMMUNICATIONS**—The total number of aerodromes maintained by the Civil Aviation Department at the end of 1957 was 84—of these three are international air ports—Bombay (Santa Cruz), Calcutta (Dum Dum),
Delhi (Palam). The aerodromes at Agartala, Ahmedabad, Patna, Bombay, Calcutta, Delhi (Palam), Delhi (Safdarjung), Madras, Tiruchirapalli, Jodhpur, Bhub and Amritsar have been declared customs aerodromes. At the end of 1957 there were 72 aeronautical communication stations in operation, providing 138 aids to radio navigation and 438 telecommunication facilities.

**AIR TRAFFIC CONTROL**—As a member of the International Civil Aviation Organization, India has to meet the standards laid down by that organization in respect of aerodrome equipment and air traffic control facilities. So Air Traffic Control Organization has been established for the maintenance of air traffic control services for international aircraft landing and passing through the country as well as internal air services. The Air Traffic Control Organisation is responsible for the safety and control of aircraft in the air and on the ground. For this purpose the country has been divided into four regions with area control centres at Delhi, Calcutta, Bombay and Madras.

**AIRCRAFT & PILOTS**—Indian Airlines and Air India International have a large fleet of aircraft consisting Dakotas (twin engined), Skymasters (four engined), Vikings (twin engined), Super Constellations, two Comets, four engined Viscounts and Herons, etc.; the most notable addition in 1957 being Vickers Viscount turbo prop aircraft. It marked the launch of IAC into jet age. This aircraft carries 44 passengers, cruises at a speed of 325 miles per hour at altitudes around 20,000 feet. The number of aircraft, holding current certificates of registration at the end of Dec 1957, was 536 of which 224 hold current certificates of air worthiness. The number of 'A' and 'B' pilots holding licences were 858 and 636 respectively. The number of aircraft maintenance engineers holding Indian licences was 953.

**NIGHT MAIL**—Mention must be made of Indian Airlines' operation of the unique Night Airmail system. Every night four IAC aircraft fly between Bombay and Nagpur, Madras and Nagpur, Calcutta and Nagpur, and Delhi and Nagpur. Letters, packets and parcels are re-distributed at Nagpur, then flown back to the four main cities. For no extra charge, the Indian people thus have the fastest possible long distance postal service to all points in the country. And to make full use of these aircraft passengers can "fly with the mails" at specially reduced rates.

**NON-SCHEDULED SERVICES**—In addition to Air India International and Indian Airlines Corporation, twelve subsidised Flying Clubs and six air transport companies hold permits for the operation of non-scheduled services. Besides these two other aircraft companies hold permits for giving joy rides.

**EXTERNAL AIRLINE ROUTES**—In the field of international air transport, Air India International has made vast progress. Air-India International has achieved a large network serving 4 continents and 26 cities of the world. Air-India now operates 24,893 under unduplicated route miles. In the year ending 31st March, 1958,
Air-India International operated 50.66 million capacity ton miles and carried 88,312 passengers, 3.3 million pounds of cargo and 1.5 million pounds of mails. Air India’s fleet now stands at 10 super-constellations and 12 DC-3 with 3 Boeing 707 Intercontinental Jets to be added early 1960. Regular external services are being maintained at Cairo, Rome, Paris, Geneva, London, Aden, Nairobi, Bangkok, Singapore, Ceylon, Burma, Nepal Pakistan, Afganistan, Tokio and Australia. Air Service has also been open between Delhi and Moscow in 1958.

Other Indian Airlines routes bring country’s nearest neighbours within a few hours’ flight, as between Delhi and Karachi via Jodhpur and Jodhpur, Delhi and Lahore, Calcutta and Dacca-Chittagong, Patna and Katmandu in Nepal. Yet another “neighbour” service links Kandahar and Kabul in Afganistan with Karachi and Delhi or Bombay.

### Progress of Civil Aviation (For Scheduled Services)

<table>
<thead>
<tr>
<th>Year</th>
<th>Miles Flown (in 000)</th>
<th>Passengers (in 000)</th>
<th>Freight (in 000 lbs)</th>
<th>Mails (in 000 lbs)</th>
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</thead>
<tbody>
<tr>
<td>1947</td>
<td>9,362</td>
<td>255</td>
<td>5,648</td>
<td>1,405</td>
</tr>
<tr>
<td>1948</td>
<td>12,549</td>
<td>341</td>
<td>11,975</td>
<td>1,583</td>
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<tr>
<td>1949</td>
<td>15,098</td>
<td>357</td>
<td>22,500</td>
<td>5,032</td>
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<tr>
<td>1950</td>
<td>18,896</td>
<td>453</td>
<td>80,007</td>
<td>8,356</td>
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<tr>
<td>1951</td>
<td>19,498</td>
<td>449</td>
<td>87,665</td>
<td>7,182</td>
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<tr>
<td>1952</td>
<td>19,562</td>
<td>434</td>
<td>86,038</td>
<td>8,377</td>
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<tr>
<td>1953</td>
<td>19,202</td>
<td>404</td>
<td>84,820</td>
<td>8,846</td>
</tr>
<tr>
<td>1954</td>
<td>19,798</td>
<td>432</td>
<td>86,415</td>
<td>10,673</td>
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<tr>
<td>1955</td>
<td>21,267</td>
<td>469</td>
<td>98,200</td>
<td>11,478</td>
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<tr>
<td>1956</td>
<td>23,481</td>
<td>559</td>
<td>96,231</td>
<td>12,686</td>
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<tr>
<td>1957</td>
<td>23,345</td>
<td>594</td>
<td>95,094</td>
<td>12,942</td>
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### Air-India International’s Traffic Figures

<table>
<thead>
<tr>
<th>Year</th>
<th>Capacity Ton Miles (Millions)</th>
<th>Passengers Carried (Million)</th>
<th>Mails Carried (Million lbs)</th>
<th>Cargo Carried (Million lbs)</th>
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</thead>
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<tr>
<td>1955-56</td>
<td>35.242</td>
<td>56.445</td>
<td>0.975</td>
<td>2.288</td>
</tr>
<tr>
<td>1956-57</td>
<td>43.567</td>
<td>79.825</td>
<td>1.354</td>
<td>3.256</td>
</tr>
<tr>
<td>1957-58</td>
<td>50.657</td>
<td>88.312</td>
<td>1.475</td>
<td>3.302</td>
</tr>
</tbody>
</table>

### Non-Scheduled Airline Operators

- Air Assam, Calcutta.
- Air Survey Co. of India, Calcutta.
- Associated Airworks, Dum Dum.
- Darbhanga Aviation, Calcutta.
- El Al Israel Airlines Ltd., Bombay
- Indamar Co., Bombay, Calcutta.
- Jamair, Calcutta.
- Kalinga Airlines, Calcutta.

### Flying Clubs

- Aero Club of India, New Delhi.
- Bengal Flying Club Ltd., Barrackpore.
- Delhi Flying Club, Civil Aerodrome, New Delhi.
- Hind Provincial Flying Club, Kanpur.
- Hind Provincial Flying Club, Allahabad
- Hind Provincial Flying Club, Lucknow.
Bihar Flying Club Ltd., Patna.
Bombay Flying Club, Juhu, Bombay.
Hyderabad State Aero Club, Hyderabad (Dn.).
M. P. Flying Club, Indore.

Madras Flying Club, Madras.
Northern India Flying Club, Jullundur Cantt.
Orissa Flying Club Ltd., Bhubaneswar.
Rajasthan Flying Club, Jaipur.

Gliding Clubs

Delhi Gliding Club, Safdarjung, New Delhi.
Government Gliding Centre, Poona.

FOREIGN SERVICES

Air Ceylon Ltd., Madras.
Air France, Calcutta.
B. O. A. C., Bombay, Calcutta, New Delhi.
Cathay Pacific Airways, Calcutta.
Pakistan International Airlines, Bombay, Calcutta, New Delhi.
Swissair (Airline of Switzerland), Bombay/Calcutta to Bangkok, Hong Kong, Taipei, Manila, Tokio.

Qantas Empire Airways Ltd., Bombay, Calcutta, Madras, New Delhi.
Thai Airways, Calcutta.
Union of Burma Airways, Calcutta.
Middle East Airlines (B.O.A.C. Associate) (London via Beirut, Athens, Rome).

SOME IMPORTANT DATES

1911—First Official Air Mail on 18th February, 1911 flown from U.P. Exhibition grounds, Allahabad to Naini Junction by M. Picquet, a French aviator.
1911—First passenger in an aeroplane in India was Sir Sefton Brancker.
1912—Jules Tyck and Baron de Carters gave India her first public flying demonstration at Calcutta (Christmas Eve).
1918—First flight from Egypt to India by Capt. Ross Smith.
1919—First Eng.-India flight by Sqdrn.-Leader McLaren & Lt. Haley.
1920—First Air-mail service was organised by Govt. of India & operated by R.A.F. between Karachi and Bombay.
1927—Imperial Airways sent first air liner to India, January, 8.
1927—Civil Aviation Department formed in India.
1928—First Flying Club in India.
1929—First regular air-mail introduced between England and India on March 30, 1929.
1930—First India-trained pilot with 'B' License was Bhagat Lal.
1932—First Indian air-line came into existence on Oct. 15, 1932 when Tata Air-lines began to operate between Karachi-Bombay-Madras.
1949—First class internal mails by air without a surcharge was introduced on April, 1949.
1958—Indian Airlines nationalised on 1st August.
1957—I.A.C. first introduced Turbo-jet plane Viscount in India.
1958—India-U.S.S.R. Airline opened by the Air India International.

5. INDIAN POSTS AND TELEGRAPHS

EARLY HISTORY—The first British postal system was introduced in 1766 by Lord Clive but this was used mainly for official purposes. During the administration of Warren Hastings, the posts were made available to the public for the first time and a regular organisation was set up in 1774 by Lord Dalhousie who created an Imperial System of post offices. He reduced the rates for carriages of letters and introduced postage stamps. Act 17 of 1837 is the earliest enactment establishing a public service in India. The Act 17 of 1854 is a landmark in the history of postal system in India, for the entire department was placed under Director-General and uniform rates were fixed for all India. The first issue of postal stamps was made in India in Sind in 1825. They were of three kinds—(a) design embossed on white paper without colour (b) blue-embossed on white paper (c) design embossed on vermilion wafers. The basis of authority of the existing postal system in India was Act 6 of 1898.

The honour of laying the first experimental telegraph line from Calcutta to Diamond Harbour in 1839 goes to Dr. William B. O’ Shangnessy, professor of chemistry, Calcutta Medical College. It was then the longest telegraph line in the world—21 miles with a 7,000 feet river crossing.

But it was not 12 years later than in October 1951, to be precise, that the first official telegraph line was opened for traffic between Calcutta and Diamond Harbour. The construction of long distance overhead telegraph line began in Nov. 1853 between Calcutta and Agra. The first telegraph message was sent over the circuit on March 24, 1854. Later on, this line was extended to Bombay on one side and to Peshawar on the other. Telegraph circuits were gradually extended to all parts of India till they reached 14,900 miles of wire in March 1867. Today the total mileage of overhead wires is over 8,00,000.

THE POSTAL SYSTEM—The Posts & Telegraphs Department is under the Ministry of Communications, whose control is vested with the Director-General of Posts and Telegraphs who is assisted by a Posts and Telegraphs Board under the chairmanship of the Director-General. The other members of the Board are the Chief Engineer, the senior Deputy Director-General and the Joint Secretary, Ministry of Finance (Communications Division). The Chief Engineer is the technical advisor to the Director-General on tele-communication matters, while the Senior Deputy Director-General undertakes a similar function in regard to postal and R. M. S. matters. The De-
Department is responsible for postal, telegraph, telephone and wireless communications. In addition, it undertakes the management of P.O. Savings Bank, National Savings Certificates, Postal Life Insurance and collection of Broadcast Receiver Licence fees.

The Posts and Telegraphs organisation functions as a commercial-cum-utility department, but unlike Railways, its finances have not been separated from the general revenues of the Central Government. The working expenses as well as the interests on the capital invested in the service are deducted from the gross receipts. Out of the surplus, an outright contribution is made to the general revenues and the rest is maintained to the credit of the Department. The Department, however, reserves a rebate on such accumulated surpluses.

Territorial Units—The country has been divided into 13 territorial units, including 12 Posts and Telegraph circles and a postal circle for Delhi. In addition, there are four telephone districts in the cities of Calcutta, Bombay, Madras and Delhi. Besides, there are four administrative units on a functional basis, dealing with tele-communication developments, posts and telegraph workshops in Calcutta, Jabalpur and Bombay, telegraph and telephone stores and postal life insurance respectively.

### P. & T. Circles

<table>
<thead>
<tr>
<th>No.</th>
<th>Postmaster-General</th>
<th>Jurisdiction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Postmaster-General, West Bengal</td>
<td>West Bengal, Andaman &amp; Nicobar Islands, Sikkim.</td>
</tr>
<tr>
<td>2.</td>
<td>Postmaster-General, Bihar</td>
<td>Bihar.</td>
</tr>
<tr>
<td>4.</td>
<td>Postmaster-General, Punjab</td>
<td>Punjab, Himachal Pradesh, PEPSU, Bilaspur, Jammu &amp; Kashmir, Delhi (Telegraphs only).</td>
</tr>
<tr>
<td>5.</td>
<td>Postmaster-General, Bombay</td>
<td>Bombay, Saurashtra and Kutch.</td>
</tr>
<tr>
<td>6.</td>
<td>Postmaster-General, Madras</td>
<td>Madras, Mysore, Travancore-Cochin, Coorg, Hyderabad (which is a sub-circle under a Director).</td>
</tr>
<tr>
<td>7.</td>
<td>Postmaster-General, Central Circle</td>
<td>M. P., Vindhya Pradesh.</td>
</tr>
<tr>
<td>8.</td>
<td>Director of Posts &amp; Telegraphs, Rajasthan</td>
<td>Rajasthan, Madhya Bharat Bhopal and Ajmer.</td>
</tr>
<tr>
<td>9.</td>
<td>Director of Posts &amp; Telegraphs, Andhra</td>
<td>Andhra.</td>
</tr>
<tr>
<td>10.</td>
<td>Director of Posts and Telegraphs, Assam</td>
<td>Assam, Manipur and Tripura.</td>
</tr>
<tr>
<td>11.</td>
<td>Director of Posts and Telegraphs, Orissa</td>
<td>Orissa.</td>
</tr>
</tbody>
</table>
12. Director of Postal Services, Delhi (postal only).
13. Director of Postal Services, Hyderabad (Sub-Circle).
14. General Manager, Calcutta Telephone District, Calcutta City.
15. General Manager, Bombay Telephone District, Bombay City.
17. Dist. Manager, Madras Telephone District, Madras City.

FUNCTIONAL UNITS

Additional Chief Engineer P. & T., Jalalpur In-charge of telecommunications development (design & Research)

General Manager, Workshop In-charge of P. and T. workshops Calcutta, Jalalpur & Bombay

Chief Controller of Telegraph In-charge of telegraph & telephone stores

PROGRESS OF POSTAL SYSTEM—The postal system was inaugurated in India in October, 1854. Next to Railways, the Posts and Telegraphs Department is the largest civil undertaking in India. Under the Second Plan, each group of villages with a population of 2,000 will have a post office within a radius of four miles. From April 1, 1953, a new policy for setting up post offices in rural areas has been evolved; it combines the criteria of population in groups of villages and distances from existing post offices.

Introduction of All-Up Air Mail Scheme in 1949 constituted a landmark in the history of mail-communications in this country. All letters, post cards, money orders and insured letters are carried by air wherever air transport is available and is advantageous being without any surcharge. The introduction of night air services connecting the principal cities of India, facilitated the introduction of All-Up Mail Service resulting in the abolition of the surcharge on mails for air conveyance. The scheme was extended to inland money orders from May 1, 1951. Over 27 p.c. of the entire inland mail receive air transmission.

Urban Mobile Post Office was first started as an experimental measure in Nagpur. Later, the scheme was extended to Madras, Delhi, Bombay and Calcutta. The mobile post office visits important centres of the city at specified hours after ordinary post offices have closed for the day. It works on all days of the year including Sundays and other postal holidays.

The following are the notable progresses—
(1) The number of post offices in the country rose from 55,042 in 1956 (March) to 58,871 in 1957 (March).
(2) There is today one post office for every single village with a minimum population of 2,000.
Every village with a minimum population of 500 receives a visit from the postman at least once a week.

RESEARCH AND POSTAL EDUCATION—The P. & T. Training Centre had been opened at Saharanpur on April 1951 to give intensive practical training to the operative staff and to instil in them the qualities of discipline, courtesy, punctuality, regularity, cleanliness and a spirit of service to the public. The Tele-communication Research Centre had been set up in 1956, though functioning very recently.

TELEGRAPH SERVICE—The telegraph service in India celebrated its centenary in November, 1953. The policy of opening telegraph offices in every town with a population of over 5,000 and every sub-divisional headquarters is being implemented. Voice Frequency Telegraph (V.F.T.) systems have been introduced in many places.

Indian telegraph is the oldest government owned public utility in the world and it is the second largest employer in India (225,000 workers). The number of telegraph offices rose from 9,893 in 1956 (March) to 10,052 in 1957 (March). The number of telegrams increased from 335 million in 1956 to 345 million in 1957. Indian telegraph has more than 8,670,000 miles of iron, copper, bronze and insulated wire and 10,030,000 miles of cable conductors.

The Hindi Telegraph Service was introduced in 1949. This facility is now available in about 1,145 (from the end of 1956-57) offices in the country. Telegrams can be sent in any Indian language, provided they are written in Devnagari scripts. Hindi teleprinters have also been introduced in some places.

Printgram Service—has been introduced from 1st March, 1956, which is designed to provide a direct teleprinter service between the subscriber and the telegraph office, thus eliminating the intermediary messenger service. This system is now operating in Bombay.

A new class of telegram known as flash message, has been introduced on April 1947 for the press. These telegrams receive a higher priority. Another class of telegram known as Human Life telegram, also receives priority in transmission over all express telegrams in case of accidents, serious illness or death of a person.

Local Telegrams are accepted at all telegraph offices in India at the minimum charges of annas 6 for 8 words or less and 6 pies for each additional word.

Phototelegrams are accepted for the U.K., U.S.A., Canada, Egypt, Australia, South Africa, Finland, Sweden, Belgium, Denmark, Greece, Germany, Italy, Portugal, Switzerland, San Francisco, Norway, China, Japan, U.S.S.R. and France at special rates.

Telegram to follow has been introduced in case of foreign telegrams, which enables the sender who is not quite sure about the exact place at which the addressee will be found, to give various addresses at which the telegram is to be successively presented.

De Luxe telegram has been re-introduced to foreign countries.

TELEPHONE—Only five years after the invention of telephone by Bell in 1876, India had a 50-line telephone exchange in Calcutta in 1881. Though India was almost one of the first countries in the
world to have a telephone exchange, Calcutta was the first place to have it. Calcutta has the largest number of telephones in any single city in India. India has today only .7 telephones per thousand population as against 310 in U.S.A. Licences were granted to a private company known as Oriental Telephone Co., for the establishment of exchanges at Calcutta, Bombay, Karachi, Madras and Rangoon. All these lines, however, were taken up by the Government in 1942. The first automatic telephone was installed in India at Simla with 700 lines in 1913. At the time of partition in 1947 there were only 278 telephone exchanges and 114,922 telephones. The number of telephone exchanges rose from 5,830 (1956) to 6,202 (1957). The total number of telephones rose from 278,000 to 309,000 (1957). To facilitate telephone expansion “own your telephone” scheme was introduced in 1949. Under this scheme, a sum of Rs. 2,500 in Bombay and Calcutta and Rs. 2,000 in other places is realised in advance from the subscriber for a telephone connection for 20 years. The maintenance charge is Rs. 2 per month. Own your Exchange was introduced in 1950. Under this scheme, the Department undertakes to open a 50-line exchange if institutions, firms or individuals advance a loan of Rs. 50,000 at 2½ per cent. interest per annum. This loan is repayable after 20 years.

In most places message-rate system of charges has been introduced. Under this system, a subscriber, besides paying a fixed monthly rental for the telephone, also pays for every call that he makes. This system is in operation in 21 stations.

Telecommunication Research Centre—A research organisation has been set up in 1955-56 and has undertaken number of works and has started functioning with a small staff.

Technical Training—For imparting technical training to the officers and staff of the telephone, telegraph and wireless branches of the Department, the Department has set up fully equipped technical training institution at Jabalpur.

The number of trunk calls made during 1955-56 was 186 lakhs as against 44 lakhs in 1948-49.


Printer-gram Service—was introduced for the first time in the country in 1956-57 as a part of the programme to modernise the tele-communications services. It was introduced in Bombay in May 1956.

Wireless—In addition to telegraph and telephone facilities, India has a wireless communication system, which serves several useful purposes. Wireless stations maintain contact between fixed points as a standby to telegraph system, in case of the breakdown of the latter. Stations at coastal places maintain contact with ships at sea and also aircraft flying over the sea. Such stations have been established at Bombay, Calcutta, Madras and also at some minor ports. Meteorological stations exchange weather data with ships and also with
other countries. Monitoring stations have been established at Jabalpur, Calcutta, Delhi and Bombay. The number of radio telegrams handed by P & T department wireless stations during 1956-57 was 288,000 as against 365,000 in the previous year. The total number of radio receiver licences increased from 1,091,991 in 1955-56 to 1,284,041 in 1956-57—a rise of 17.6 per cent.

OVERSEAS COMMUNICATIONS SERVICE—The Overseas Communications Service is responsible for the working of radio telegraph, radio telephone and radio photo service between India and other countries. These services have four gateway centres at Bombay, Calcutta, Delhi and Madras for handling international communication. Since independence there has been phenomenal increase in the external radio communication services between India and foreign countries. The first foreign electrical communication between India and other countries was established by an underwater cable connecting Bombay with London. In 1927, a radio telegraph line was opened between Bombay and London. The private company in India, Overseas Communications Services, was nationalised in January 1947. It now functions under a Director General with two main branches, (Traffic and Engineering) and four pitc'xv centres at Bombay, Calcutta, Delhi and Madras.

This Service has now 47 direct radio services which link India with foreign countries.

The Overseas Communications Service is a separate department headed by a Director General. Overseas Communications Service is under the Ministry of Communications.

Its functions are provision, operation and development of all facilities for communications between India and outside world.

Following classes of services are carried out by the Overseas Communications Service—

(1) Radio photo service
(2) Wireless Telegraph service
(3) Radio telephone service
(4) Press newscast service
(5) Submarine Cable Telegraph service
(6) Wireless monitoring service at Bangalore, Bombay, Calcutta, Delhi and Jabalpur
(7) Inland photo telegram service was inaugurated for the first time between Bombay and Delhi on January 26, 1955.

POSTAL STATISTICS 1956-57

<table>
<thead>
<tr>
<th></th>
<th>1956</th>
<th>1957</th>
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<td>Post offices</td>
<td>55,042</td>
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<tr>
<td>Telegraph Exchanges</td>
<td>6,840</td>
<td>6,202</td>
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<tr>
<td>Telegraph offices</td>
<td>9,893</td>
<td>10,052</td>
</tr>
<tr>
<td>Air mail routes</td>
<td>18,959 miles</td>
<td>19,416 miles</td>
</tr>
</tbody>
</table>
## TRANSPORT & COMMUNICATIONS

<table>
<thead>
<tr>
<th>Description</th>
<th>1955-56</th>
<th>1956-57</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surplus amount</td>
<td>Rs 3.47 crores</td>
<td>Rs 6.32 crores</td>
</tr>
<tr>
<td>No of postal articles carried</td>
<td>2.997 million</td>
<td>3.262 million</td>
</tr>
<tr>
<td>No of telegrams</td>
<td>38.5 million</td>
<td>34.6 million</td>
</tr>
<tr>
<td>No of Trunk Calls</td>
<td>18.6 million</td>
<td>20.8 million</td>
</tr>
<tr>
<td>Revenue</td>
<td>Rs 50.6 crores</td>
<td>Rs 56.8 crores</td>
</tr>
<tr>
<td>Expenditure</td>
<td>Rs 47.20 crores</td>
<td>Rs 50.51 crores</td>
</tr>
<tr>
<td>Air mail routes</td>
<td>18,959 miles</td>
<td>19,416 miles</td>
</tr>
<tr>
<td>Weight of mails by inland air routes</td>
<td>10,139,947 lb</td>
<td>8,628,781 lb</td>
</tr>
<tr>
<td>Value of Postage Stamps issued</td>
<td>Rs 26.02 crores</td>
<td>Rs 25.35 crores</td>
</tr>
<tr>
<td>No of inland money orders</td>
<td>67 million</td>
<td>67.4 million</td>
</tr>
<tr>
<td>No of Postal orders</td>
<td>3,458,742</td>
<td>3,192,580</td>
</tr>
<tr>
<td>Value of Postal orders</td>
<td>Rs 1,763,008</td>
<td>Rs 1,781,529</td>
</tr>
<tr>
<td>No of V.P. articles</td>
<td>8,981,000</td>
<td>8,997,271</td>
</tr>
<tr>
<td>Value of V.P. articles</td>
<td>Rs 4 crores</td>
<td>Rs 1.5 crores</td>
</tr>
<tr>
<td>No of insured articles</td>
<td>4,913,700</td>
<td>4,673,100</td>
</tr>
<tr>
<td>No of public complaints</td>
<td>Rs 19.40 crores</td>
<td>Rs 11.18 crores</td>
</tr>
<tr>
<td></td>
<td>434,597</td>
<td>466,184</td>
</tr>
</tbody>
</table>

## POSTAL LANDMARKS

- **1625**—1st Indian postage stamp issued at Karachi for India only
- **1830**—First overland post between England and India established when `Hugh Lindsay` made the first voyage from Bombay to Suez
- **1840**—P & O obtained charter for conveyance of mails between London to Suez via route to India
- **1851**—1st Govt Telegraph line opened between Calcutta and Diamond Harbour
- **1851**—1st postage stamp on all India basis issued on 1st October
- **1855**—First telegraph line opened between England and India 27 Jan 1855
- **1870**—G P O Calcutta was opened and occupies the site of the old fort
- **1871**—V P system established
- **1877**—V P system started
- **1980**—M O system introduced
- **1886**—Postal Savings Bank started
- **1888**—M O system started
- **1911**—1st official Air Mail flight on 18th February when 6,500 letters were flown from Allahabad to Naini Junction
- **1929**—U K India Air Mail Service started 4th April 1929
- **1931**—New Delhi inauguration commemoration stamp issued
- **1935**—Silver Jubilee of King George VI Stamp first issued showing various modes of transport of mail
- **1942**—Airmail Service started, February 2
- **1943**—Photo Telegram Service introduced 3rd June
- **1946**—Two Pice Post Card re-introduced from 1st July
- **1947**—Govt of India purchased Overseas Telecommunications Service Jan 1
- **1949**—Telegraph Transmission in Hindi in Devanagari script introduced in June
- **1951**—Indian Postage Stamp Centenary celebration on 1st Oct and International Postal Stamp Philatelic Exhibition
- **1957**—Postage Stamps and postage stationery in decimal coinage issued from 1st April 1957
NEW POSTAGE STAMPS SINCE INDEPENDENCE

1947—India issues three Jaï Hind stamps commemorating Indian Independence depicting the Asoka capital, National Flag and an aircraft.

1948—Commemoration stamp for the first flight of India's first external air service from Bombay to London.

1948—A set of Gandhi memorial stamps in four values on the 1st anniversary of India's Independence (15th August, 1948).

1949—A set of stamps for 75th anniversary of Universal Postal Union.

1949—New stamps representing the illustrations of Ajanta Trimurti Konark Horse Sanchi Stupa Kandaraja Mahavir Temple and Bhuwaneshwar Temple Buddha Gaya Temple, Tomb of Adil Shah of Bijapur, Amritsar Golden Temple, Jowti of Chittorgarh, Red Fort of Delhi, Taj Mahal of Agra, Qutab Minar of Delhi etc. on Independence Day.

1950—Independence stamp commemorating the coming into operation India's new constitution (26th Jan).

1951—One stamp representing a pair of Stegodon Games, an extinct species of modern Indian elephant for the centenary of Geological Survey of India.

1951—Issue of two stamps depicting a torch against the southern coast line of Asia on the occasion of first Asian games in New Delhi March 4 1951.

1951—A new series of stamps bearing the portraits of saints and poets of India.

1953—Two Everest conquest commemoration stamps (2nd Oct).

1955—Two stamps on the centenary of Indian Telegraphs on 1st Nov 1955.

1954—A set of four stamps commemorating the centenary of the 1st issue of Indian stamp.


1954—Two anna stamp on the occasion of 4th World Forestry Congress at Dehra Dun (Oct).


1955—Two Buddha Jayanti stamps of two annas and fourteen annas issued on 24th May.

1957—One stamp on the opening of the 19th International Red Cross Conference at Delhi with picture of Henri Dunant, founder of the Red Cross.

1957—One stamp on the opening of the 19th International Red Cross Conference at Delhi with picture of Henri Dunant, founder of the Red Cross.

1957—A set of three postage stamps for Children's Day.

1957—One stamp for the 50th year of steel industry in India.

1957—Three different stamps for the centenary year of Bombay, Calcutta and Madras Universities.

1958—New postal stamp valued at 8nP.

1958—Postal stamp to celebrate children's day (Nov 11), 15nP.

1958—Bipin Pal centenary stamp on 7th Nov 15nP.

1958—J. C Bose centenary stamp