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Highway Development & Planning

I. Important events in Road development:

1. Roman's are the pioneers in road construction. At Rome 29 roads were meeting
2. Indian Roads:
 - Indus valley civilization (5000BC), towns are planned with *Grid Pattern*.
 - Mouryans (4000 to 2000 BC) Chandra Guptha Mourya constructed 2400 km long road from Pataliputra (patna) to Takshashila (now in Pakistan)
 - First British Road : GT road from Calcutta to Delhi
3. Treasagat construction (France) (1716-1796)
4. Metcalf (England) (1717-1810)
5. **Telford(1757-1834) construction:**
 - Sub grade is kept horizontal and hence sub grade drainage was not proper .
 - Heavy foundation stones, to total thickness of the order of 35 cm at edge to 41 cm at center.
6. **Macadam construction:** (1756-1856)
 - The importance of sub grade draining and compaction was recognised and cross slope of 1 in 36 was proposed from sub grade level itself.
 - *The first method based on scientific thinking.*

It was realised that the stresses due to wheel loads of traffic gets decreased and the lower layers of the pavement and therefore it is not required to provide large boulder and stones or soiling course at the lower layer of the pavement

II. Highway development in India (Important events) :

1. **Jayakar committee (Indian road development committee)-1927 recommendations:**
 - (a) Road development to be considered as a national interest.

- (b) An extra tax to be levied on petrol from the road users to develop a road development fund called "Central Road Fund"
- (c) A semi official technical body should be formed to pool the technical know - how and act as advisory body.
- (d) A research organisation should be instituted.

2. Central Road Fund -(March 1929) (CRF):

- Extra levy on petrol at the rate of 2.64 paise /liter in 1929
- The levy is revised in 1998, on petrol the new cess is Rs.1/- on petrol and Rs. 0.5/- on diesel.
- 20% of annual revenue is to be retained as a "Central reserve", and towards administration, R and D on road and bridge projects of special importance. Balance 80% to be allotted to various states.

3. Indian Roads Congress: (1934)(IRC):

- An offshoot of Jayakar Committee's recommendations.
- Publishes various codes standardizing the specifications.

4. Motor vehicle's act: (1939) : Revised in 1977

5. Nagpur road conference: (1943)

- The first attempt to prepare a coordinated road development program in a planned manner.
- The first 20 years road development plan (1943-1963) popularly known as "Nagpur road plan"
- All Run way roads were classified into five categories.(viz. : NH,SH,MDR, ODR and VR).
- The target for Nagpur road development plan (1943-63) was aimed at 16 Km per 100 sq. Km area of the country.
- Recommended grid pattern of road system is star and grid.



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