



## CSIR PRIMA ET11 and Simplified Tractor Testing Process

**For Prelims:** Tractor Testing Guidelines, [Ease of Doing Business](#), Electric Tractor- CSIR PRIMA ET11.

**For Mains:** Significance of Electric Vehicles in Sustainable Agriculture and Ease of doing business.

[Source: PIB](#)

### Why in News?

Recently, [CSIR's Central Mechanical Engineering Research Institute \(CSIR-CMERI\)](#) has indigenously designed and developed compact **100% Pure Electric Tractor** named **CSIR PRIMA ET11** mainly to cater **small and marginal farmers** of **India**.

- Additionally, in a major step towards encouraging [Ease of Doing Business](#) and **promoting trust-based governance**, the Government has simplified the **process of testing tractors for performance evaluation**.

### What are the Important Features of CSIR PRIMA ET11?

- **About:** The introduction of the **CSIR PRIMA ET11, a 100% Pure Electric Tractor**, underscores India's commitment to **sustainable agriculture**.
  - The **entire tractor** has been **designed** and **manufactured** with **indigenous components** and **technologies** and to cater the demand of agriculture field application.
- **Features:** The **developed technology** is designed to be **user-friendly**, with particular consideration for the convenience and ease of use by women.
  - The tractor is provided with a port called [V2L i.e. vehicle to load](#), This means when the tractor is not in operation, its battery power can be utilised for other secondary applications like pump and irrigation etc.
- **Significance:**
  - Traditionally tractors use diesel, thus contributing significantly to the environmental pollution.
    - According to an estimate they **consume about 7.4% of our country's annual diesel usage** and account for **60% of total agricultural fuel usage**.
    - Also their [PM2.5](#) and **NOx emissions are likely to increase 4-5 times** the current level in next two decades.
  - Global carbon footprint reduction strategy necessitates rapid transition of this sector towards electrification.
    - Therefore, **electrification of tractors is a necessary step** that aids our country in achieving climate related targets.

### Note:

- **The CSIR-CMERI** is a premier research institute located in **Durgapur, West Bengal**. It was established in 1958 under the CSIR

- CSIR CMERI has a long history in design and development tractors of various ranges and capacities; the **very first indigenously developed being SWARAJ Tractor** in 1965, followed by **35hp Sonalika tractor** in 2000 and then **Small diesel tractor of 12hp Krishishakti** in 2009 for small and marginal farmers demand.

## What is the Simplified Procedure for Tractor Testing?

- Tractor manufacturers shall now be allowed to participate in the **subsidy scheme** on the basis of **CMVR/Conformity of Production (COP) certificates** and a **self-declaration** to be given by the company that the tractor proposed for inclusion under subsidy conforms to the benchmark specifications given by **Department of Agriculture & Farmers' Welfare**.
- The manufacturers shall give a **minimum of three years warranty** on the **tractor** to be supplied under subsid.
- The tractor testing process will follow the some mandatory tests i.e., **Drawbar Performance Test, PTO Performance and Hydraulic Performance Test** and **Brake Performance**.
  - All these tests will be done through the use of load cars Central Farm Machinery Training and Testing Institute ( CFMTTI) or at Mahindra Research Valley (MRV) or any other Government authorised institute or at their own facilities provided.
- **Brake Performance Test** shall be done as per the requirements under **Central Motor Vehicles Rules (CMVR)**.

## UPSC Civil Services Examination, Previous Year Question (PYQ)

### Prelims:

**Q. Which of the following has/have occurred in India after its liberalization of economic policies in 1991? (2017)**

1. Share of agriculture in GDP increased enormously.
2. Share of India's exports in world trade increased
3. FDI inflows increased.
4. India's foreign exchange reserves increased enormously.

**Select the correct answer using the codes given below:**

- (a) 1 and 4 only  
 (b) 2, 3 and 4 only  
 (c) 2 and 3 only  
 (d) 1, 2, 3 and 4

**Ans: (b)**

- Economic reforms in India refer to the neo-liberal policies introduced by the government in 1991 and in the later years. The central point of the reforms was the liberalization of the economy, simplifying regulations and giving more role to the private sector. The New Industrial Policy of 1991 is the heart of the new economic reforms.
- Following are the main features of New Economic Reforms:
  - De-reservation of the industrial sector.
  - Industrial de-licensing policy.
  - Opening up of the economy to foreign competition- the economic reforms introduced extensive liberalisation of foreign trade and foreign investment. The import substitution and import restriction policies were abandoned and instead import liberalisation and export promotion policies were introduced. This increased India's share in exports. **Hence, statement 2 is correct.**

◦ Liberalisation of trade and investment

- However, there was a gradual decline in the agriculture sector's contribution to the Indian economy. Presently agriculture contributes about 17% to the GDP, down from 29% in 1991. **Hence, statement 1 is not correct.**
- Foreign investment was almost negligible before 1991. On the investment front, the economic reforms mark the era of capital mobility in the country. Foreign capital in the form of FDI (Foreign Direct Investment) and FPI (Foreign Portfolio Investment) entered into the country. **Hence, statement 3 is correct.**

**Mains:**

**Q.** How far is the Integrated Farming System (IFS) helpful in sustaining agricultural production? **(2019)**

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