

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE**

**LOK SABHA
UNSTARRED QUESTION NO. 4104**

TO BE ANSWERED ON WEDNESDAY, AUGUST 10, 2016

SCRAMJET ENGINE

4104. SHRIMATI VANAROJA R.:

SHRIMATI KOTHAPALLI GEETHA:

Will the PRIME MINISTER be pleased to state:

- (a) whether Indian Space Research Organisation (ISRO) is gearing up to test a scramjet engine based on air breathing propulsion and if so, the details thereof;**
- (b) whether the test flight of the indigenously developed scramjet engine was scheduled to take place in July, 2016 and if so, the details thereof;**
- (c) whether the test is expected to help the country achieve good thrust value with the scramjet engine; and**
- (d) if so, the details thereof?**

ANSWER

**MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG &
PENSIONS AND IN THE PRIME MINISTER'S OFFICE**

(DR. JITENDRA SINGH):

- (a)&(b) Yes Madam. The testing of sub-scale demonstrator scramjet engine is envisaged as a part of technology demonstration, by mounting it on a two stage solid**

rocket. This test intends to demonstrate supersonic combustion in flight and evaluate the integrated functioning of the engine. The preparations for carrying out the test are underway and the test is likely to be conducted in the third quarter of 2016.

(c)&(d) Scramjet engine technology is a complex technology which is yet to be fully proven worldwide. A series of technology demonstration tests are required before inducting the engine with required thrust into future launch vehicles. The technology will be useful only during the atmospheric phase of the flight of launch vehicle and will benefit in bringing down the cost of access to space, by reducing the need of carrying the oxidizer along with the fuel.
