(c) if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE DEPARTMENT OF EDUCATION IN THE MINISTRY OF HUMAN RESOURCE DEVELOPMENT (PROF. M.G.K. MENON): (a) The Space Programme during the current year is aimed at continuing the activities related to satellite and launch vehicle projects and programmes for:

— Sustaining the space segment for remote sensing activities by launching remote sensing satellites following the operational Indian Remote Sensing Satellite (IRS-1A). IRS-1B launch is scheduled for June 1991.

— Sustaining the Indian National Satellite (INSAT) System to provide services in the areas of domestic communication, TV broadcasting, radio networking, meteorological and date relay. Activities for the launch of INSAT-1D in June of this year, which will replace INSAT-1B, and continuing work on the second generation INSAT class satellites, INSAT-II Test Spacecraft (A&B);

— Continuing the work on improving the launch capability to launch satellites of 150 kg. class through development of Augmented Satellite Launch Vehicle (ASLV-D3) and to achieve capability to launch 1000 kg. class Remote Sensing Satellite through development of Polar Satellite Launch Vehicle (PSLV) and initiating actions to further augment the capability to launch INSAT class satellites;

— Sustaining the National Natural Resources Management System (NNRMS) through various application Projects/Programmes and utilising data from the available and future remote sensing satellites;

— Supporting space-related activities in research and educational institutions.

(b) No, Sir.

(c) Does not arise.

Satellites Proposed to be Launched

3956. SHRI M.M. PALLAM RAJU: Will the PRIME MINISTER be pleased to state:

(a) the names and the purpose of all Indian satellites in Orbit now including all relevant information regarding the satellites; and

(b) the details of other satellites proposed to be launched over the next three years and the purpose thereof?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE DEPARTMENT OF EDUCATION IN THE MINISTRY OF HUMAN RESOURCES DEVELOPMENT (PROF. M.G.K. MENON): (a) Details of the Indian Satellites currently operational in orbit are given below:

Sl.No.	Name of the Satellite	Launch details	Purpose & present status
1	2	3	4
1.	Indian Remote Sensing Satellite-1A (IRS-1A)	Successfully, launched from USSR on March 17, 1988	IRS-1A is the first indigenously developed operational remote sensing satellite consisting of state-of-the-art imaging instruments using Charge Coupled Devices (CCDs). The satellite is meant for taking remote sensing imageries of earth's resources over the Indian Region. Presently the Satellite is sending high resolution imageries which are being received at the IRS ground station at Bangalore. These imageries are being used for various applications such as monitoring of forest, delineation and categorisation of the extent of wasteland at village level, identification of underground water tables for drilling borewells, yield estimates of major crops, flood/drought monitoring etc.
2.	Indian National Satellite-1B (INSAT-1B)	Built by Ford Aerospace Corporation of USA to Indian specifications. Launched from USA by Space Shuttle on August 30, 1983	INSAT-1B satellite is in operational services for the last about 6 1/2 years. This provides telecommunications, TV broadcasting, Radio networking Meteorological earth obser-

Sl.No.	Name of the Satellite	Launch details	Purpose & present status
1	2	3	4
			vation and data collection and Disaster Warning Services.

(b) Details of satellites proposed to be launched over the next three years are given below:

	Satellite	Launch Vehicle	Year	Purpose
	1	2	3	4
1.	Indian Remote Sensing Satellite (IRS-1B)	Soviet Launch Vehicle	1991-92	Second indigenous operational satellite in IRS series and identical to IRS-1A meant for applications of remote sensing data in the survey and assessment of earth's resources.
2.	Indian Remote Sensing Satellite (IRS-1E) (Engineering Model of IRS-1A)	Polar Satellite Launch Vehicle (PSLV D1)	1991-92	Indigenous satellite similar to IRS-1A satellite meant for applications of remote sensing data in the survey and assessment of earth's resources.
3.	Stretched Rohini Satellite Series (SROSS-C)	Augmented Satellite Launch Vehicle (ALSV-D3)	1991	Indigenous satellite for carrying out experiments for investigations of ionospheric phenomena.

	Satellite	*Launch Vehicle*	*Year*	*Purpose*
	1	*2*	*3*	*4*
4.	Indian National Satellite (INSAT-1D)	US Delta Launch Vehicle	1990	To provide continuity to INSAT services.
5.	Indian National Satellite (INSAT-II-A) (Test Spacecraft)	European Ariane Launch Vehicle	1991-92	To provide continuity INSAT services.
6.	Indian National Satellite (INSAT-II-B) (Test Spacecraft)	European Ariane Launch Vehicle	1992-93	To provide continuity INSAT services.