

2. **Crew Management:** Space flight training of 4 astronaut candidates commenced. Requirements of crew recovery from sea post touchdown is finalised including roles and responsibility of supporting agencies.
3. **National collaboration:** MoUs with DRDO labs have been signed for design, development and delivery of human centric products such as Crew medical kit, Crew health monitoring system, Emergency survival kit, Dosimeters, Earmuffs and Eire suppression system.
4. **International collaboration:**
 - (a) Contracts signed with M/s JSC Glavkosmos, Russia for (1) Selection support, Medical Examination and training of Indian Astronauts. (2) Wind tunnel testing for Crew Module and Crew escape system. (3) Feasibility studies for usage of Soyuz ECLSS components in Gaganyaan. (4) Delivery of view port for Gaganyaan crew module.
 - (b) A 3-week training programme for Flight surgeon was completed at ISRO with participation of CNES, France.
5. **Space Science:** 4 Biological and 2 physical science related microgravity experiments from academic institutions are shortlisted for unmanned mission of Gaganyaan programme.
 - (c) Launch of Gaganyaan is planned by the end of 2022.

Earth observation satellites

2997. SHRI A. MOHAMMEDJAN: Will the PRIME MINISTER be pleased to state:

- (a) whether it is a fact that the Indian Space Research Organisation (ISRO) will send up an unusually large number of 10 earth observation satellites during 2020-21;
- (b) whether it is also a fact that ISRO has planned 36 missions for next fiscal;
- (c) whether during the current fiscal, six out of 17 missions will be completed before 31 March, 2020; and
- (d) if so, the details thereof?

THE MINISTER OF STATE IN THE DEPARTMENT OF SPACE (DR. JITENDRA SINGH): (a) Yes Sir, the target for the fiscal year 2020-21 is 10 earth observation satellites.

(b) Yes Sir, the target for the fiscal year 2020-21 is 36 missions including satellites and launch vehicles. Details of the missions are as follow:—

• Earth observation satellite	10
• Communication satellite	3
• Navigation satellite	2
• Space Science satellite	3
• Technology Demonstration	1
• PSLV	10
• GSLV MK II	3
• GSLV MK III	1
• Small Satellite Launch Vehicle	2
• Gaganyaan (Unmanned)	1

(c) and (d) During the current fiscal year of 2019-20, till date 11 out of the total targeted missions have been completed. Details of which are as follows:—

• Earth observation satellite	4
• Communication satellite	1
• Space science satellite	1
• PSLV	4
• GSLV MK III	1

Prime Minister's vision for Indian space programme

2998. DR. SASMIT PATRA: Will the PRIME MINISTER be pleased to state the details of his vision for Indian space programme?

THE MINISTER OF STATE IN THE DEPARTMENT OF SPACE (DR. JITENDRA SINGH): Indian Space Programme is focused on peaceful uses of Outer Space. Towards this, Space Technology should be used for benefit of the country and society, provide solutions for developmental activities and address problems of the society at large. It should be used as tool for planning, monitoring and evaluation of national level projects and thereby managing natural resources.

Space Technology should also be used for enhancing the scientific temper in the country, provide means to explore space for better understanding of our universe.