OBC candidates deprived of reservation due to coming under creamy layer

†1849. SHRIMATI CHHAYA VERMA:
CH. SUKHRAM SINGH YADAV:

Will the PRIME MINISTER be pleased to state:

(a) the numbers of candidates belonging to Other Backward Castes deprived of reservation benefit in the process of appointment to various posts due to their coming under creamy layer;

(b) whether any proposal is being contemplated to enforce the creamy layer factor in promotion process also;

(c) whether Government would also consider to determine a creamy layer for the candidates of general category so that economically weaker people can get chance in Government jobs; and

(d) the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS (DR. JITENDRA SINGH): (a) The concerned appointing authorities take necessary action for appointment of the candidates recommended for selection by the concerned Examination bodies etc. keeping in view the examination rules, applicability of reservation etc. There is no centralized data to determine the number of candidates belonging to Other Backward Castes deprived of reservation benefit in the process of appointment to various posts due to their coming under creamy layer.

(b) No such proposal is under consideration of the Government.

(c) No such proposal is under consideration of the Government.

(d) Does not arise, in view of reply given to Part (c) of the question.

Science examinations conducted by NGOs

1850. SHRI K. SOMAPRASAD: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the Ministry in association with any NGO is conducting science exams/practical lessons for school students in the country; and

(b) if so, the details of such activities along with the names of NGOs?

† Original notice of the question was received in Hindi.

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI Y. S. CHOWDARY): (a) Yes, Sir.

(b) Department of Science and Technology (DST), Ministry of Science and Technology, has been conducting various science-based activities including practical lessons, especially for the student community across the country. One such programme of DST is the Science Express, a mobile science exhibition mounted on a 16-coach, AC train, travelling across India since 2007. Each year, it travels to 50-60 locations covering the length and breadth of the country in a run of 6-7 months duration. In addition to the interesting and innovative exhibits on Several themes like Biodiversity, Climate Change, Bio-technology, Innovation and so on, Several complementary science-based activities and practical lessons are conducted on board this unique train in its exclusive 'Joy-of-Science' lab and 'Kids Zone' besides 'Platform Activities' and 'Outreach Activities' in schools in the vicinity of the Railway Station where it has a scheduled halt. DST has entrusted Vikram A Sarabhai Community Science Centre (VASCSC), Ahmadabad, a pioneering Non-Government Organization (NGO) working in the field of science polarization, with the task of managing and coordinating the Science Express. VASCSC, established in the 1960s by Dr. Vikram A Sarabhai, the eminent space scientist, VASCSC is working towards popularizing science and mathematics education among students, teachers and the lay public. Its mandate is to stimulate interest, encourage and expose the principles of science and scientific method and also to improve and find innovative methods of science education, including practical lessons. Of the 16 coaches of Science Express, one coach has been exclusively devoted for students of standard VI to XII to perform experiments and hand-on activities related to different branches of science and mathematics. This coach, named as 'Joy of Science' (JOS) Lab, has six workstations, where students perform different activities and experiments related to Physics, Chemistry, Biology, Environmental Science and Mathematics. Activities based on concepts like Centre of Gravity, Newton' Laws of Motion, Friction, Working of Lens Camera, Displacement Reaction, Red-ox Reaction, Structure of Atom, Pythagoras's Theorem, Anatomy of Stem and Root, Study of Microscopic Organisms, Working of Human Lungs, Algebraic Equation, Structure of Rubber, Energy Conservation Reflection and Refraction of Light, Primary and Secondary Colors, Magnetic Poles, Temperature and Density, Liquid Thermometer, Elements, Compounds and Mixtures, Nervous System, Soma Cube, Mobius Ring, 3D Shapes, Power of Number 9 and many more are performed by the students in JOS Lab. It is one of the most popular sections of the Science Express, where, till date, more than four lakh students have participated. Besides these, to engage the students who wait for their turn to see the exhibition train, the Science Express team also conducts many practical lessons including activities of JOS Lab, along with different games on the Railway Platform for the students

at the respective halts. These activities are based on simple concepts of science and mathematics and help the students to understand the concepts through practical applications. Additionally, the team also conducts Outreach Activity at the schools and institutions, located near to the respective Railway stations of each halt, in which practical lessons, games, demonstrations, activities, etc. based on different concepts of science and mathematics are carried out. Till date, over seven lakh students have participated in the Platform and Outreach Activity of Science Express. A team of well-qualified, trained and motivated Science Communicators of VASCSC travels with the Science Express, explain and interpret the exhibition, answer queries, facilitate the visitors and conduct complementary science based activities and practical lessons. Apart from these, the team also conducts science based activities for students of standard III to V in a 'Kids Zone' aboard Science Express. In this section fun-filled activities and games explaining some of the fundamental concepts of Science and Mathematics are conducted for children to introduce them to the fascinating world of Science and its practical approach. In the Kids Zone, children make Science based models like 'Balloon Spinner', 'Yo-Yo', 'Kaleidoscope', 'Toy Car', 'Straw Fan', 'Climbing Frog', 'Straw Static', 'Turbine Sprinkler', etc. with the help of the on-board Science Express team, through which they learn the concepts by making the models. This section was added in the sixth phase of Science Express in 2013, and till date more than 1.78 lakh kids have participated.

Further, Homi Bhabha Centre for Science Education (HBCSE), a National Centre of the Tata Institute of Fundamental Research (TIFR), Mumbai, HBCSE organizes a major national Olympiad Programme in India in basic Sciences and Mathematics which connects to the international Olympiads. The programme aims at promoting excellence in Science and Mathematics among pre-university students. These are supported by the Government of India through, Department of Science and Technology (DST), Ministry of Human Resource Development (MHRD), Department of Atomic Energy (DAE), and Department of Space (DOS). Among the sciences, the Olympiad Programme in Astronomy (junior and senior level), Biology, Chemistry, Junior Science and Physics is a five stage process for each subject separately, overseen by a National Steering Committee. The Mathematical Olympiad is conducted under the aegis of the National Board of Higher Mathematics (NBHM). The first two stages of the process in each Olympiad are nationwide examinations to test conceptual understanding and problem-solving skills of secondary and higher secondary students. The first stage examination in science subjects, the National Standard Examinations, are taken by nearly 150,000 students and is organized at nearly 1200 centers in the country by the Indian Association of Physics Teachers (IAPT) in collaboration with teacher associations in other subjects. All the remaining stages are organized by HBCSE. The second stage examination, the Indian National Olympiads, is held at 18 centres by

HBCSE for about 2000 students. The third stage, the Orientation-cum-Selection Camp is an intensive 2-3 week integrated camp involving training of about 40 students in each subject and selection of 5-6 students to represent India at the international Olympiads. At these camps, students receive orientation and training at an advanced level at HBCSE in theoretical topics including problem-solving tutorials as well as innovative experiments. The fourth stage is a brief training camp for the international team followed by the final stage of participation of the Indian team in the respective international Olympiad. The Mathematical Olympiad follows a very similar pattern with minor differences in the modalities.

Objectives of Technology Development Board

1851. SHRI ANUBHAV MOHANTY: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) when was the Technology Development Board (TDB) established and what were its objectives;

(b) whether the TDB is progressing satisfactorily towards achieving its set objectives; and

(c) if so, the details of its achievements?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI Y. S. CHOWDARY): (a) The Technology Development Board (TDB) was setup by an Act of Parliament called Technology Development Board Act of 1995. The legislation setting up the TDB as a Statutory Body of Department of Science and Technology came into effect w.e.f. 1st September, 1996. The objectives of the Board are as follows:

(i) provide equity capital, subject to such conditions as may be determined by regulations, or any other financial assistance to industrial concerns and other agencies attempting commercial application of indigenous technology or adapting imported technology for wider domestic applications;

(ii) provide financial assistance to such research and development institutions engaged in developing indigenous technology or adaptation of imported technology for commercial application, as may be recognized by the Central Government;

(iii) perform such other functions as may be entrusted to it by the Central Government.

(b) Yes Sir, TDB is progressing well towards achieving its set objectives.