

- \* As per norms, the scholarship for the 153 beneficiaries of 2011 batch will be provided in 2012-13.
- \*\* Year-wise breakup for National Natural Resources Data Management System (NRDMS) and Technology Mission Cell (TMC) of Rs. 16.66 crores is not available.
- # Yearwise breakup not available.
- \*\*\* Allocation made upto 30.04.2012 for financial year 2012-13.

### Shortage of qualified scientists

4942. SHRI KANWAR DEEP SINGH:

SHRI N.K. SINGH:

SHRI N. BALAGANGA:

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) whether there is a shortage of qualified scientists for research and development in various research institutes/laboratories in the country;
- (b) if so, the details thereof and the reasons therefor;
- (c) whether there is migration of these scientists to private sector;
- (d) if so, the details thereof; and
- (e) the steps taken by Government to retain these scientists and to check migration of scientists from the country?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI ASHWANI KUMAR): (a) and (b) No Sir. There is no shortage of qualified scientists for research and development in various research institutions/laboratories under the various departments of the Ministry of Science and Technology in the country.

(c) to (e) No Sir. The number of scientists migrating from Science and Technology (S and T) Departments to private sector is insignificant. However, Government have taken several measures to retain scientists in the research institutions and national laboratories. These measures include successive increase in plan allocations for scientific departments, setting up of new institutions for science education and research, creation of centres of excellence and facilities in emerging and front line areas in academic and national institutes, sharing of proceeds from contractual Research and Development (R and D), consultancy and premia and royalty received from the transfer of technology with scientists, mobility of scientists between national laboratories, academia and industry, setting up of knowledge enterprises while being in service, establishment of incubation centres to nurture start-up companies and enable research commercialisation, induction of new

and attractive fellowships such as Innovation in Science Pursuit for Inspired Research (INSPIRE), enhancement in the fellowship emoluments, financial incentives to outstanding scientists, better pay scales to scientists as per the 6th Pay Commission, creation of additional posts in Scientist 'H' grade, programmes to attract scientists of Indian origin from abroad in scientific research in the country etc.

#### **Encouraging R and D activities**

4943. SHRI HUSAIN DALWAI: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether Research and Development (R and D) activities by MNCs have helped in creating world class technology development;

(b) if so, the details thereof;

(c) whether there is a need to encourage large Indian companies to establish R and D centres; and

(d) if so, the steps taken by Government in this regard?

THE MINISTRY OF THE STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI ASHWANI KUMAR): (a) and (b) The R and D centres created by MNCs work as per the objectives planned by their respective principles and thus, they create IP/technology needed as per their business focus. These centres employ Indian scientists and technologists who while being in employment get some opportunity to sharpen their R and D capabilities. MNCs either establish wholly owned R and D centres or joint ventures with Indian companies. In-house R and D centres of 84 companies, incorporated by MNCs in India are recognized by DSIR.

(c) and (d) In the current context, IP generation and technology development by the Indian companies is a prime national requirement. Considering the challenges of an integrated global economy and the role of S and T innovations in imparting a competitive edge to our companies, large Indian companies need to spend more on R and D and create centres for excellence in Research and Development. DSIR has in place a scheme which encourages R and D by Indian companies. DSIR has recognized around 1600 in-house R and D centres of Industries out of which, around 25 percent are of the large companies. These companies with approved in-house R and D centres are entitled to avail a number of fiscal incentives for scientific research announced by the Government from time to time and operationalized by DSIR, such as weighted tax deduction @ 200% for in-house R and D and sponsored research programs in approved national laboratories.