

**RAJYA SABHA STARRED QUESTION NO. 190 FOR 16.03.2015 ASKED BY SHRI P. L. PUNIA, HON'BLE MEMBER OF PARLIAMENT REGARDING ESTABLISHMENT OF CENTRES OF EXCELLENCE.****INDEX**

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**GOVERNMENT OF INDIA  
MINISTRY OF HUMAN RESOURCE DEVELOPMENT  
DEPARTMENT OF HIGHER EDUCATION**

**RAJYA SABHA**

**STARRED QUESTION NO. 190**

**TO BE ANSWERED ON 16.3.2015**

**Establishment of Centres of Excellence**

†\*190. SHRI P. L. PUNIA:

Will the Minister of HUMAN RESOURCE DEVELOPMENT be pleased to state:

- (a) whether Government is considering to establish Centres of Excellence to promote the education sector;
- (b) if so, the locations identified to establish such centre, State-wise;
- (c) whether guidelines have been issued to the State Governments to establish such centres and if so, the details thereof ; and
- (d) the details of rules made to identify the areas to establish such centres?

**ANSWER**

**MINISTER OF HUMAN RESOURCE DEVELOPMENT  
(SMT. SMRITI ZUBIN IRANI)**

(a) to (d): A statement is laid on the table of the House.

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**STATEMENT REFERRED TO IN REPLY TO PART (a) TO (d) OF THE RAJYA SABHA STARRED QUESTION NO. 190 FOR 16.03.2015 ASKED BY SHRI P. L. PUNIA, HON'BLE MEMBER OF PARLIAMENT REGARDING ESTABLISHMENT OF CENTRES OF EXCELLENCE.**

- (a) : Yes, Sir.
- (b) : Centres of Excellence have been set up under two schemes of this Ministry. State- wise and scheme-wise detail of these Centres may be seen at **Annexure I & II.**
- (c) : No guidelines have been issued to the State Governments to establish such centres.
- (d) : The detail of procedures to identify the aforesaid Centres of Excellence may be seen at **Annexure-III.**

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**ANNEXURE-I AS REFERRED TO IN REPLY TO PART (b) OF THE RAJYA SABHA STARRED QUESTION NO. 190 FOR 16.03.2015 ASKED BY SHRI P. L. PUNIA, HON'BLE MEMBER OF PARLIAMENT REGARDING ESTABLISHMENT OF CENTRES OF EXCELLENCE.**

**CENTRES OF EXCELLENCE UNDER FRONTIER AREAS OF SCIENCE AND TECHNOLOGY (FAST)**

| <b>S. No.</b> | <b>Name of the Institution</b>   | <b>Name of the State</b> | <b>Name of the Centre of Excellence</b>  |
|---------------|--|--------------------------|--|
| 1             | Indian Institute of Technology, Guwahati   | Assam                    | Advanced Molecules and Materials   |
| 2             | Tezpur University, Napam, Tezpur, Sonitpur   |                          | Machine Learning Research and Big Data Analysis (MLRBDA)   |
| 3             | Indian Institute of Technology, New Delhi  | Delhi                    | Nanoscale Devices & Systems  |
| 4             | TERI University, Vasant Kunj, New Delhi  |                          | Energy Storage   |
| 5             | Central University of Jharkhand, Ranchi  | Jharkhand                | Green & Efficient Energy Technologies (GEET)   |
| 6             | Indian School of Mines, Dhanbad  |                          | Renewable Energy   |
| 7             | Indian Institute of Science, Bangalore   | Karnataka                | Biomolecular Interaction Studies -   |
| 8             | National Aerospace Laboratories, Bangalore   |                          | Development of 3 dimensional composite concurred structures using Tufting technology   |
| 9             | National Institute of Technology, Surathkal  |                          | Renewable Energy Integrated Smart Grid Technologies: Energy  |
| 10            | National Institute of Technology, Calicut  | Kerala                   | Transportation Research  |
| 11            | Department of Computational Biology & Bioinformatics, University of Kerala, Karyavattom Campus, Thiruvananthapuram |                          | Computer Aided Drug Discovery  |
| 12            | Indian Institute of Science Education and Research, Thiruvananthapuram   |                          | Computation, Modelling & Stimulations  |
| 13            | Indian Institute of Science Education and Research, Bhopal   | Madhya Pradesh           | Centre for Research on Environment and Sustainable Technologies (CREST): Clean Environment (air, water, soil) and sustainable technologies |
| 14            | Indian Institute of Technology, Bombay   | Maharashtra              | Urban Science and Engineering  |
| 15            | Indian Institute of Science Education and Research, Pune   |                          | Research in Energy and Sustainable Materials   |
| 16            | National Institute of Technology, Rourkela   | Odisha                   | Tissue Engineering   |
| 17            | Indian Institute of Technology, Bhubneshwar  |                          | Novel Energy Materials (NEM)   |

|    |  |               |   |
|----|--|---------------|---|
| 18 | Indian Institute of Science Education and Research, Mohali                                     | Punjab        | Protein Science, Design & Engineering   |
| 19 | Banasthali University, Banasthali Vidyapith  | Rajasthan     | Water and Energy  |
| 20 | Indian Institute of Technology, Madras   | Tamil Nadu    | Nonintrusive Diagnostics  |
| 21 | National Institute of Technology, Tiruchirapalli   |               | Transportation  |
| 22 | Amrita Vishwavidyapeetham University, Coimbatore   |               | Advanced Material Green Technologies  |
| 23 | Coimbatore Institute of Technology, Coimbatore   |               | Manufacturing Science   |
| 24 | Anna University, Chennai   |               | Bio - medical Applications  |
| 25 | Centre of Advanced Study in Marine Biology, Annamalai University, Annamalai Nagar, Chidambaram |               | Energy & Environment  |
| 26 | Thiagarajar College, Madurai   |               | Bio-resource Management   |
| 27 | Sathyabama University, Rajiv Gandhi Salai, Chennai   |               | Energy Research   |
| 28 | Tamil Nadu Agriculture University, Coimbatore  | Tamil Nadu    | Microbes to Feed the World :Plant – Microbe Interactions to boost Agricultural Production |
| 29 | International Institute of information Technology, Hyderabad                                   | Telangana     | Signals Processing  |
| 30 | Indian Institute of Technology, Hyderabad  |               | Sustainable Urban Development   |
| 31 | Sanjay Gandhi Post Graduate Institute of Medical Science, Lucknow                              | Uttar Pradesh | Bio-medical Science & Modern Biology  |
| 32 | Indian Institute of Technology, Kanpur   |               | Advanced Computer Research  |
| 33 | Indian Institute of Technology, (Banaras Hindu University) Varanasi                            |               | Energy and Resources Development  |
| 34 | Indian Institute of Science Education and Research, Kolkata                                    | West Bengal   | Computational Space Science   |
| 35 | Indian Institute of Technology, Kharagpur  |               | E-Business  |
| 36 | West Bengal University of Technology, Salt Lake, Kolkata                                       |               | Environment Technology and Management: Water treatment for clean and green environment    |

**ANNEXURE-II AS REFERRED TO IN REPLY TO PART (b) OF THE RAJYA SABHA STARRED QUESTION NO. 190 FOR 16.03.2015 ASKED BY SHRI P. L. PUNIA, HON'BLE MEMBER OF PARLIAMENT REGARDING ESTABLISHMENT OF CENTRES OF EXCELLENCE.**

**CENTRES OF EXCELLENCE UNDER TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP)**

| <b>S. No.</b> | <b>Name of the Institution</b>   | <b>Name of the State</b>                 | <b>Name of the Centre of Excellence</b>  |
|---------------|--|--|--|
| 1             | Andhra University College of Engineering, Vishakhapatnam               | Andhra Pradesh                           | Challenges of Nano-Technology for 21st century generation - Indian perspectives in global scenario |
| 2             | SVU College of Engineering, Tirupati                                   |  | Atmospheric Remote Sensing and Advanced Signal Processing  |
| 3             | Sardar Vallabhbhai National Institute of Technology, Surat             | Gujarat                                  | Water Resources and Flood Management   |
| 4             | Birla Institute of Technology, Mesra, Ranchi                           | Jharkhand                                | Bio-resources and Bio-prospecting  |
| 5             | BMS College of Engineering, Bangalore                                  | Karnataka                                | Advanced Materials Research  |
| 6             | RV College of Engineering, Bangalore                                   |  | Microelectronics   |
| 7             | PES Institute of Technology, Bangalore                                 |  | Knowledge Analytics & Ontological Engineering (KAnOE)  |
| 8             | Siddhaganga Institute of Technology, Tumkur                            |  | Applied Research and Nano Technology   |
| 9             | Maulana Azad National Institute of Technology, Bhopal                  | Madhya Pradesh                           | Geo-informatics (Remote Sensing, GPS & GIS)  |
| 10            | College of Engineering, Pune   | Maharashtra                              | Signal and Image Processing  |
| 11            |  |  | Smart Renewable Energy Systems   |
| 12            | Shri Guru Gobind Singhji Institute of Engineering & Technology, Nanded |  | Signal and Image Processing  |
| 13            | Institute of Chemical Technology, Mumbai                               |  | Process Intensification for process industries   |
| 14            | Veer mata Jijabai Technology Institute, Mumbai                         |  | Complex and Nonlinear Dynamical Systems  |
| 15            | Visvesvaraya National Institute of Technology, Nagpur                  |  | Combedded Systems: hybridization of communications and Embedded Systems                            |
| 16            | National Institute of Technology, Rourkela                             |  | Odisha   |
| 17            |  | Orthopaedic Tissue Engg & Rehabilitation |  |
| 18            | Thapar University, Patiala   | Punjab                                   | Environment & Energy Management  |
| 19            | Govt. College of Technology, Coimbatore                                | Tamil Nadu                               | Alternate Energy Research  |
| 20            |  |  | Environmental Studies  |
| 21            | JNTU College of Engineering, Hyderabad                                 | Telangana                                | Disaster Management  |
| 22            | Osmania University College of Technology, Hyderabad                    |  | Intensification of Chemical and Bio-processes  |
| 23            | National Institute of Technology, Warangal                             |  | Sustainable Energy Studies   |

|    |  |               |  |
|----|--|---------------|--|
| 24 | College of Technology - GB Pant University of Agriculture & Technology, Pantnagar, | Uttarakhand   | Energy Studies in Industries and Agro Systems of Uttarakhand (Energy Management) |
| 25 | Harcourt Butler Technological Institute, Kanpur                                    | Uttar Pradesh | Applied Research, training & education in Lipid Science                          |
| 26 | Faculty of Engineering and Technology - Jadavpur University, Jadavpur              | West Bengal   | Phase Transformation and Product Characterization                                |
| 27 | University College of Technology-University of Calcutta                            |               | Systems Biology and Bio Medical Engg.  |
| 28 | Indian Institute of Engineering and Technology, Shibpur, Howrah                    |               | Micro structurally Designed Advanced Materials Development                       |
| 29 | National Institute of Technology, Durgapur   |               | Advanced Materials   |
| 30 | PEC University of Technology, Chandigarh   | UT Chandigarh | Industrial and Product Design SPC  |

**ANNEXURE-III AS REFERRED TO IN REPLY TO PART (d) OF THE RAJYA SABHA STARRED QUESTION NO. 190 FOR 16.03.2015 ASKED BY SHRI P. L. PUNIA, HON'BLE MEMBER OF PARLIAMENT REGARDING ESTABLISHMENT OF CENTRES OF EXCELLENCE.**

**PROCEDURE FOR IDENTIFICATION OF CENTRES OF EXCELLENCE**

**Centres of Excellence have been set up under the schemes of Training & Research in Frontier Areas of Science & Technology (FAST) and Technical Education Quality Improvement Programme (TEQIP) :**

**Frontier Areas of Science and Technology:**

1. All State Universities, Central Universities, Centrally Funded Technical Institutions, State Government/government aided and private institutions are eligible for being considered under this Scheme.
2. Applications under the scheme are invited through advertisements in local newspapers and announcements on MHRD website.
3. The Selection is based on the Detailed Project Reports (DPRs) submitted by the institutions/universities. The DPRs are evaluated by the experts in the respective field to check their feasibilities of the Project. The proposals are evaluated on the basis of following criteria:
  - Overall proposal implementation feasibility in terms of choice of area and its relevance to the national development goals;
  - Institutional preparedness and collaboration;
  - Reasonability of proposed budget;
  - Multidisciplinary
  - Technological development and translation into proto types/patents/publications.

Further, a presentation is made by the institutions/universities, shortlisted on the basis of marks awarded by the experts, before the Selection Committee.

4. A grant of upto Rs. 4 crore may be allocated to each Centre of Excellence for the entire project life period.

**Technical Education Quality Improvement Programme:**

1. All the Centrally funded, Government aided and private unaided institutions already participating under the sub-component 1.2 of the Scheme are eligible for being considered for establishment of Centres of Excellence. Institutions under sub-component 1.2 are those which are participating in the Project for



scaling up Post Graduate education and demand driven research and development. The institutions are required to meet the following bench marks:

| <b>S. No.</b> | <b>Eligibility Parameters</b>  | <b>Benchmark values</b> |
|---------------|--|-------------------------|
| 1.            | Autonomous institution status by UGC   | Yes                     |
| 2.            | Percentage of eligible UG programmes in the institutions accredited or applied for   | 75%                     |
| 3.            | Percentage of eligible PG programmes in the institution accredited or applied for  | 60%                     |
| 4.            | Percentage of regular faculty with Ph.D in Engineering as percentage of total faculty available in Engineering in the institution  | 20                      |
| 5.            | Number of sponsored research projects completed in the institution in the last three academic years.   | 07                      |
| 6.            | Cumulative number of PhDs produced in the last three academic years in the Departments participating for establishing CoEs   | 12                      |
| 7.            | Faculty position filled on regular full time basis as percentage of total faculty positions sanctioned in accordance with the AICTE prescribed student-to-faculty ratio in the Departments participating for establishing CoEs | 70%                     |

The specific thematic areas considered are Manufacturing, Information and Communication Technology (ICT), Renewable Energy, Hydrology and Water Resource Management, Intelligent Transport System, Advanced Materials, Nanotechnology, Waste Management, Bio-Technology, Image Processing etc.

2. Proposals are invited from the Project institutions. A Committee of subject experts from the pool of members of National Evaluation Committee (NEC) of TEQIP evaluates the proposals through a rigorous technical appraisal and may ask the institutions to make a presentation. On the basis of evaluation, NEC recommends meritorious proposals for selection. National Steering Committee (NSC) for TEQIP selects the institutions for establishing CoEs on the basis of comments and recommendations of NEC.
3. Rs. 5.00 crore is allocated to each Centre of Excellence for the entire project life period.