

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS**

**LOK SABHA
UNSTARRED QUESTION NO. 1615
TO BE ANSWERED ON 27.07.2016**

R&D UNITS

1615. DR. C. GOPALAKRISHNAN:

Will the Minister of RAILWAYS be pleased to state:

- (a) the aims and objectives for setting up of Research and Development (R&D) units under the Railways in the country;**
- (b) the total number of R&D units presently functioning in the country, region wise and the works done by R&D units during the last three years; and**
- (c) the total budget allocated for R&D units in the Railways during the above period?**

ANSWER

MINISTER OF STATE IN THE MINISTRY OF RAILWAYS

(SHRI RAJEN GOHAIN)

(a) to (c): A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) OF UNSTARRED QUESTION NO. 1615 BY DR. C. GOPALAKRISHNAN TO BE ANSWERED IN LOK SABHA ON 27.07.2016 REGARDING R&D UNITS

(a) & (b): Research, Designs and Standards Organization (RDSO), situated at Lucknow, is the sole Research and Development (R&D) organisation of Indian Railways and functions as the technical advisor to Railway Board and Zonal Railways. The aims and objectives assigned to RDSO include the following:

- Development of new and improved designs of systems and equipments**
- Development, adoption and absorption of new technology for use on Indian Railways**
- Development of overall system standards**
- Development of specifications for equipment, components & materials**
- Testing and Recommending authority for Statutory clearances (including Metro system)**
- Assistance in technical investigations**
- Quality Assurance of delegated items**

Some of the important work done by RDSO, during the past three years, are listed below:

- Advance Warning System (Radio Based) to pre-warn road user about approaching trains at unmanned level crossing gate**
- Crashworthy design of coach**

- **Fog PASS (Pilot Assistance System for Safety) with enhanced features**
- **Development of indigenous Advanced Auxiliary Warning System (AAWS)**
- **Development of satellite based accident site communication system**
- **Development of double decker coach design**
- **High capacity milk tank van**
- **Upgradation of existing wagons to 25t**
- **Development of energy efficient HOG (Head on Generation) train power system for Indian Railways in electric locos**
- **Development of WDG5 locomotive for increasing throughput**
- **Development of 9000 HHP locomotive for DFCCIL Western Corridor**
- **Development of Crew Voice and Video Recording System(CVVRS)**
- **Operation of Gatimaan Express**
- **Design & development of new wagon for salt loading**
- **Design & development of auto car wagon**
- **Development of world-class Interiors in ICF type coaches**
- **Differently-abled passenger coaches**
- **Broadband internet on running trains through two-way satellite communication**
- **Development of Integrated passenger information system (PIS) for mainline and EMU coaches**
- **Environment friendly coach toilet discharge system**

- **Introduction of biodiesel over IR**
- **Introduction of natural gas operated trains over IR**

(c): The total budget allocated to RDSO is as under:

(₹ in Crores)

Financial year	Budget allotment (Revenue & Capital)
2014-15	216.11
2015-16	241.19
2016-17	313.10
