GOVERNMENT OF INDIA
MINISTRY OF MICRO, SMALL AND MEDIUM ENTERPRISES

RAJYA SABHA
UNSTARRED QUESTION NO. 1543
TO BE ANSWERED ON 05.08.2024

R&D CHALLENGES FACED BY THE MSME SECTOR

1543.   Dr. FAUZIA KHAN:

Will the Minister of MICRO, SMALL AND MEDIUM ENTERPRISES be pleased to state:

(a)   whether Government has taken steps to address issues in MSMEs related to research
and development (R&D) studies, testing facilities and project viability assessments, acknowledging
their impact on project planning and success;
(b)   if so, the details thereof and if not, the reasons therefor;
(c)   whether efforts are underway to address the lack of IT literacy and requisite skills at both
managerial and technical levels among MSMEs, considering the importance of digitalization and
technological advancements in modern business operations; and
(d)   if so, the details thereof and if not, the reasons therefor?

ANSWER

MINISTER OF STATE FOR MICRO, SMALL AND MEDIUM ENTERPRISES
(SUSHRI SHOBHA KARANDLAJE)

(a) to (d):   The Government has taken various steps to address issues in Micro, Small and Medium
Enterprises (MSMEs) related to Research and Development (R&D) studies, testing facilities, project
assessment and providing IT literacy and skilling. These, inter alia, include MSME Innovative Scheme,
Atal Innovation Mission, NIDHI inclusive Technology Business Incubator, Tool Rooms & Training
Institutions Scheme.

        Under these schemes subsidy is provided for conversion of ideas to business, IPR costing,
testing and commercialization. The details of MSME Innovative scheme are provided in **Annexure I.**
Further, training, capacity building, skilling and handholding are provided to MSMEs through the
Ministry's network of Technology Centres, Testing Centres and Tool Rooms. The training programs
include coverage on IT literacy, technical skilling and technological advancements. The details of
training are provided in **Annexure II.**

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Details of Ideas approved under Incubation Component of MSME Innovative Scheme (as on 01.08.2024)

S. No.	Name of State	No. of Ideas
1.	ANDHRA PRADESH	86
2.	ARUNACHAL PRADESH	2
3.	ASSAM	6
4.	BIHAR	11
5.	CHANDIGARH	7
6.	CHHATTISGARH	10
7.	DELHI	9
8.	GUJARAT	35
9.	HARYANA	8
10.	HIMACHAL PRADESH	1
11.	JAMMU AND KASHMIR	5
12.	JHARKHAND	14
13.	KARNATAKA	78
14.	KERALA	30
15.	MADHYA PRADESH	17
16.	MAHARASHTRA	53
17.	MEGHALAYA	3
18.	ODISHA	30
19.	PUDUCHERRY	1
20.	PUNJAB	11
21.	RAJASTHAN	33
22.	TAMIL NADU	339
23.	TELANGANA	122
24.	TRIPURA	6
25.	UTTAR PRADESH	53
26.	UTTARAKHAND	8
27.	WEST BENGAL	39
	Total No. of Ideas	**1017**

Details of training provided by 18 Tool Rooms & Training Institutions

S. No	Name of Training Programme
1	Post Graduate Diploma in Tool Design & CAD/CAM
2	Post Graduate Diploma in Mechatronics
3	Aroma Process Assistant
4	Certificate Course in Advance Machining
5	Post Diploma in Tool Design & CAD/CAM
6	Post Diploma in Mechatronics
7	Post Diploma in Tool & Die Manufacturing
8	Post Graduate Diploma in Electronics Product Design
9	Post Diploma in Footwear Technology
10	Post Diploma in CAD/CAM
11	Post Graduate Diploma in VLSI & Embedded Systems
12	Post Graduate Diploma in Advanced Animation & Film Making
13	Post Graduate Diploma in Footwear Technology
14	Advance Certificate Course in Foundry Technology
15	Certificate Course in Machine Operations
16	Advance Certificate Course in Polymer Technology
17	Post Graduate Diploma in Mechanical Product Design Technology
18	Advance Certificate Course in Machine Maintenance
19	Post Diploma in CNC Machine Maintenance
20	Post Diploma in Aroma Process & Its Management
21	Post Diploma in Computer Aided Engineering
22	Post Diploma in Industrial Automation & Robotics
23	Advance Certificate Course in Tool Design & CAD/CAM
24	Advance Certificate Course in Tool & Die Manufacturing
25	Advance Certificate Course in CNC Machining
26	Certificate Course in Machinist Tool Room
27	Post Diploma in Advanced Animation & Film Making
28	Advance Certificate Course in Welding Technology
29	Certificate Course in Heat Treatment
30	Certificate Course in CNC Turning & Milling
31	Condensed Course in Tool & Die Making
32	Diploma In Tool Engineering
33	Post Graduation in Aerospace Manufacturing
34	Post Diploma in Product Design
35	Post Diploma in Structural Analysis and Project Management
36	Certificate Course in Automobile Assembly
37	Advance Certificate in Footwear Design and Product Development

38	Post Graduate Higher Diploma in Footwear Technology & Management Studies
39	Advance Certificate in Footwear Manufacturing Technology
40	Diploma In Footwear Manufacturing & Design
41	Electronics Equipment Technician
42	Analog & Digital Instrumentation Technician
43	Electrical Appliances Technician
44	PCB Design & Manufacturing
45	Certificate Course in Cricket Ball Manufacturing
46	Certificate Course in 3d Animation & Special Effects
47	Advanced Diploma in CNC Programming Techniques and Practices.
48	Master Certificate Course in Computer Aided Tool Engineering
49	Master Certificate Course in CAD/CAM
50	Master Certificate Course in Mechatronics
51	Master Certificate Course in Product Design
52	Master Certificate Course in CNC Technology
53	Master Certificate Course in Tool Design
54	Advance Diploma in Machine Maintenance & Automation
55	Certificate Course in Electrical Equipment Repairing and Maintenance
56	Advanced Diploma in Structural Design and Analysis
57	Master Certificate Course in Automation and Process Control
58	Advanced Diploma in Computer Hardware and Network Management
59	Certificate Course in Machining
60	Certificate Course in CNC Milling
61	Certificate Course in CNC Turning
62	Advance Certificate Course in Inspection & Quality Control
63	Certificate Course in Foundry Technology
64	3D Animation (Maya)
65	Advanced Embedded Technology
66	Certificate Course in Fitter and Rigger
67	Advance Web Designer and Animator
68	Animation And Multimedia Technology
69	Film Compositor & Editor
70	Graphics & Web Designer
71	Certificate Course in Cricket Bat Manufacturing
72	Certificate In Footwear Design and Production
73	Arise Audio Video
74	Arise Hand Held Products

75	Arise Room Air Conditioner & Home Appliances (Racha)
76	Cisco Certified Network Associate
77	ME- Tool & Die Making
78	ME- CAD/CAM
79	ME-Design for Manufacturing
80	MTech- Mechatronics
81	M.E. Tool Design
82	Post Diploma Tool & Die Making
83	Diploma in Production Engineering
84	Diploma in Tool & Die Making
85	Advance Diploma in Tool & Die Making
86	Diploma in Mechatronics
87	DOEAC- O Level
88	DOEAC- A Level
89	Diploma in Vocation (Production Technology)
90	Diploma in 3D Animation & Graphics
91	Diploma in Robotics & Mechatronics
92	Diploma in Computer Science
93	Diploma in Electronics & Communication Engineering
94	Diploma in Automation & Robotics Engineering
95	Post Diploma in Tool Design
96	Electrician
97	Machinist
98	Turner
99	Welder
100	Compressed Machinist
101	ITI Tool & Die Making
102	ITI Computer Hardware & Networking
103	COPA
104	Fitter
105	Draftsman
106	Industrial Training (Mech/Elec)
107	Certificate Course in Tool Room Machinist
108	Certificate Course in Machinist
109	Stitching Operator (Footwear)
110	Stitcher (Goods & Garments)
111	Cutter (Footwear)
112	Cutter (Goods & Garments)

113	Pre-Assembly Operator (Footwear)
114	Skiving Operator (Footwear)
115	Lasting Operator
116	Helper Upper Making (Footwear)
117	Helper Finishing (Footwear)
118	Helper Finishing operations (Leather Goods & Garments)
119	Helper – Parts Making (Leather Goods & Garments)
120	Advance certificate course in Software application
121	SAP Business ONE
122	Internet Of Things
123	Electrical Machine Lab Practice
124	Electronics Machine Lab Practice
125	C, C++ Programming
126	Entrepreneurship Development Program (EDP)
127	Personality Development & Communication skill
128	MATLAB
129	3DS Max
130	STAADPRO
131	REVIT Architecture
132	PLC Programming
133	SCADA
134	Electrical CAD
135	3D Printing
136	JAVA
137	Computer Hardware & Networking
138	Certificate Course on MS Office
139	Certificate Course on Advance Welding
140	Plant & CNC Machine Maintenance
141	AutoCAD- Civil
142	Workshop Practice
143	Improvement of Restaurant Service
144	Basic Computer Application
145	Occupational Health & Safety
146	Civil Surveying using Total Station
147	Advance Pneumatics
148	Automation with Pneumatics using PLC
149	BASIC MECHATRONICS
150	Basic Pneumatics
151	Embedded In Robotics and Automation
152	CNC Machining (Wire-cut)

153	Certificate Course in Tool Design
154	Certificate Course in Embedded System & VLSI Design
155	Certificate Course In CAD/CAM
156	Entrepreneurship Development Program on Solar Energy
157	Certificate Course in Machine Maintenance & Welding Operations
158	EPLAN
159	Basic Hydraulics
160	Electro Hydraulics
161	AutoCAD
162	SolidWorks
163	Unigraphics
164	CATIA
165	CREO Parametric
166	Ansys
167	Hypermesh
168	CNC Programming on Lathe
169	CNC Machining on Lathe
170	CNC Programming on Milling
171	CNC Machining on Milling
172	DELCAM
173	Master CAM
174	Basic Industrial Electrical Maintenance
175	Advance Industrial Electrical Maintenance
176	Heat Treatment
177	Advanced CAD/CAM & CNC Machines
178	Fundamentals Of Computer Application
179	Basics of Computer Concepts & Internet
180	Advanced Mechanical CAD/CAM
181	Mechanical CAD/CAM
182	Advanced Cam
183	Advanced Cad Cam
184	Computer Aided Engineering (CAE)
185	Mechanical CADD
186	Advanced CAE
187	Integrated Pro-E
188	Integrated Catia
189	Integrated Ansys
190	Integrated Hypermesh
191	Advanced CNC Programming with Mastercam Software

192	A Course on Pipe Designing Using NX / Unigraphics
193	M.Sc Nastran & Patran
194	Welding Simulator for Tig Mig Arc Welding
195	Advanced Digital Design
196	Verilog
197	VHDL
198	HDL Simulation
199	Digital Design in VLSI
200	Analog Integrated Design
201	Industrial Robotics
202	Python Programming
203	IC Physical Design
204	STD.Cell Design
205	HDL Synthesis
206	Advanced Diploma in Automation and Control
207	Graphic Designing
208	2D Animation
209	Desktop Publishing
210	Web Designing & Developing
211	Corel Draw
212	Photoshop
213	Electrical Gadget Repair
214	Automation in Electrical
215	Automation in Electronics
216	Advanced PLC
217	Process Automation & Control
218	Electrical Wireman
219	Video compositing & VFX
220	Advanced Excel
221	Embedded Systems
222	VLSI
223	Microcontroller Programming
224	Repair & Maintenance of Telecom Equipment
225	PCB Design & Manufacturing
226	Small Transformer Manufacturing & Voltage Stabilizer Assembly
227	Microprocessor Programming 8085
228	Project Management
229	Six Sigma Green Belt
230	Six Sigma Yellow Belt

231	Six Sigma Black Belt
232	Digital Marketing
233	Supply Chain Management
234	Solar PV System
235	Gold Appraisal
236	Gold Jewellery Valuation
237	Internal Quality Auditor
238	BIG Data
239	HR Analytics
240	Export Import
241	CCTV Installation
242	Android Development
243	Tally Accounting
244	Start Your Business
245	Casting Simulation
246	Draftsman
247	Field Technician – Computing and Peripherals (FTCP)
248	Self Employed Tailor (PMKVY)
249	Bridal Make - Up Artist
250	Furnace Operator
251	Chemical and Physical Lab testing
252	Fireman
253	Domestic Data entry Operator
254	Glass Painter Decorator
255	Production of fragrant raw materials and it's value addition
256	Quality assessment of essential oils / aroma chemicals using modern instrumental techniques Level 1
257	Quality Assessment of Essential Oils/Aroma Chemicals Level-2
258	Fragrance & Flavour Creation and its Application Level -1
259	Fragrance & Flavour Creation and its Application Level -2
260	Comprehensive Training Programme Covering All Aspects of Essential Oil, Fragrance & Flavour Industry
261	Commercial Cultivation of Aromatic Crops its Processing and Marketing Level-1
262	Commercial Cultivation of Aromatic Crops its Processing and Marketing Level-2

263	Training Cum Workshop on Essential Oil, Perfumery and Aroma Therapy
264	Agarbatti, Dhoopbatti, Havansamgari & Perfumery
265	Summer Training Programme on Essential Oil, Fragrance & Flavour
266	Production Of Fragrant Raw Materials and Fragrance and Flavour Creation
267	Aroma & Herbal Products
268	Herbal Insect Repellent, Floor Cleaner & Perfumery
269	Entrepreneurship & Skill Development Programme on Herbal Cosmetics & Perfumery
270	One Day Farmer Awareness Programme
271	One Year Technology Development Programme in Aroma & It's Management
272	Six Month Diploma in Aroma-Technology
273	Training Cum Project Work on Chemical Technology
274	Training Cum Project Work on Tissue Culture & Biotechnology.
275	Shoe Finishing
276	Sole Attachment (5 different types of materials- PVC, TPR, PU, EVA, MCR)
277	Cement lasting
278	Moccasin Stitching
279	Design and pattern cutting
280	Sample Making
281	Shoe Upper Stitching
282	Shoe Construction (Lasting and Making)
283	Leather Goods Making
284	Chappal and Sandal making
285	Skill Up gradation Training "footwear Designing and manufacturing Technology"
286	Skill and Entrepreneurship Training on Footwear Manufacturing (Residential/stipend)
287	Certificate in Shoe CAD
288	Costing
289	Footwear Retailing & Merchandising
290	Advance Excel
291	Advance Statistics
292	Artificial Intelligence
293	Auto Electrician
294	AWS Cloud Computing

295	Beautician
296	Big Data Analytics using Hadoop
297	Cell phone services
298	Cyber Security
299	Data Analytics
300	Data Science
301	DevOps Certification
302	Ethical Hacking
303	Export & Import
304	Footwear Designing Using 3D
305	Gold Appraiser
306	GST Practitioner
307	HR -Statutory Compliances
308	HR-Analytics
309	Income Tax-TDS
310	Industrial &Fire Safety
311	IoT (Internet of Things)
312	Laptop Services
313	Lean Six Sigma
314	LED & LCD TV Services
315	Mobile Application Development
316	Robotic Automation Process
317	Safety Audit Training
318	Solar Power Installation
319	Supervisory Skill Training
320	Under Ground Construction
321	Tally ERP with GST
322	Online Course on New Product Development
323	Online Course on Angular Framework
324	Online Course on Fixture Design
325	Computational Fluid Dynamics
326	Training Of Trainers
327	Survey & Material Testing Lab
328	DTH Set Top Box Installation Service Technician
329	Mobile Phone Hardware Repair Technician
330	Agriculture Machinery Repair and Maintenance Service Provider
331	Service And Maintenance Technician (Farm Machinery)
332	Solar Pump Technician

333	Solar PV Project Helper
334	Solar Lighting Technician
335	Iron & Steel – Utility Hand-Plant Operations
336	Fitter: Hydraulic & Pneumatic System
337	Fitter: Levelling, Alignment, Balancing
338	Bearing Maintenance
339	Rigger: Rigging Of Heavy Material
340	Iron & Steel – Machinist
341	Iron & Steel – Plasma Cutter – Manual
342	Iron & Steel – Tungsten Inert Gas Welder (GTAW)
343	Iron & Steel – Fitter Electrical Assembly
344	CNC Programmer
345	Solar PV Installer
346	Tool And Die Maker
347	Architecture & Civil 2d Drafting
348	Turning & Milling
349	CNC Operator / Machining Technician
350	Field Engineer (RACW)
351	CNC Operator (Turning)
352	Aerospace Precision Mechanical Assembly Fitter
353	Aerospace Sheet Metal Technician
354	Aerospace Jigs and Fixture Technician
355	Aerospace Plastics Forming Technician
356	Domestic Cum Industrial Electrician
357	Optical Fiber Splicer (DDU GKY)
358	Basic Welding
359	Carpentry
360	Electric Motor Rewinding & Repair Services
361	Industry 4.0
362	Sensors & Transducers
363	Electric Vehicle
364	Plastic Processing Technique & Mould Making
365	Arc Welding & Gas Welding Techniques
366	Fire & Safety Engineering
367	Occupational Safety Health & Environment Management System
368	Product Design and Analysis
369	Product Design and Manufacturing
370	Design And Manufacturing of Moulds

371	Design And Analysis of Sheet Metal Forming Tools
372	Design And Analysis of Jigs and Fixtures
373	GD&T (Geometrical Dimensioning & Tolerancing)
374	Design Of Press Tools
375	RTL Design Using Verilog HDL
376	RTL Verification Using Verilog
377	Fragrance creation and its application Level - 3
378	Start and Improve Your Business (SIYB)
379	Optimizing Footwear Manufacturing Cost by Improving Productivity & Quality
380	Chemical products making
381	Certified Assessment Centre Analyst
382	Sustaining Competitive and Responsible Enterprises (SCORE) Programme
383	Electro Pneumatics
384	Drone Technology & Application
385	DCAP (Diploma in Computer Application & Programming)
386	Workshop /Webinar
387	Entrepreneureship Skill Development Program (ESDP)
388	Entrepreneureship Awareness Program (EAP)
389	Industrial Motivational Campaign (IMC)
390	Management Development Program (MDP)
391	Short Term Courses in Software/ Hardware/ Networking/ Programming/ HR/ Finance/ Trading/ Real Estate/ Food Industry/ Leather/Fragrance /Any other relevant field