

Statistical Tables

Table 1

NATIONAL EXPENDITURE ON RESEARCH AND DEVELOPMENT BY SECTOR

Sector	(Rs. Crores)												
	1970-71	1975-76	1980-81	1985-86	1990-91	1995-96	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 *	2007-08 *
Central Sector	112.47	287.63	580.49	1654.06	3058.27	5199.79	11536.33	12251.17	13034.69	15079.95	17851.01	19909.23	22204.77
State Sector	12.58	26.73	59.34	162.78	365.92	657.02	1494.33	1588.15	1689.78	1941.53	2227.42	2461.08	2719.24
Private Sector	14.59	42.35	120.69	251.94	549.98	1627.07	3292.69	3498.30	4471.27	6038.96	7444.21	9128.09	11192.86
Higher Education Sector							714.8	750.54	890.60	1056.80	1254.01	1443.24	1661.03
Total	139.64	356.71	760.52	2068.78	3974.17	7483.88	17038.15	18088.16	20086.34	24117.24	28776.65	32941.64	37777.90

Source : Data collected and compiled by DST.

Note : 1. * Estimated

2. The number of R&D units in the Private Sector varies from year to year as per the DSIR recognition.
3. Central Sector data includes 112 R&D units of Public Sector/Joint Sector companies.
4. Private Sector industries data for the year 2002-03 onwards comprised of R&D units/firms recognised by DSIR, registered with M/o Company Law Affairs & multi-national companies.
5. Data refers to 1643 in-house R&D units of Private Sector industries which include 350 SIRO units, projected data for 185 in-house R&D units and 60 SIRO units
6. Data for the year 2006-07 and 2007-08 has been estimated by applying the rate of growth for the period 2001-02 to 2005-06 sector-wise.
7. Higher Education Sector includes data from 106 universities and 27 PG colleges doing R&D but excludes R&D expenditure of 21 State Agricultural Universities and extramural project funding of central funding agencies. Data for the year 1998-99 onwards has been estimated by applying the rate of growth for the previous 3 years on the expenditure in Higher Education Sector.
8. State Sector includes R&D expenditure of State Agricultural Universities and other state departments/organisations.
9. N.A. : Not available.
10. R&D : Research & Development
11. Central Sector = Central Government + Public Sector

Table 2

NATIONAL EXPENDITURE ON R&D IN RELATION TO GNP/GDP

Year	R&D Expenditure at current prices (Rs. Crores)	GNP at current prices (Rs. Crores)	GDP at current prices (Rs. Crores)	R&D as % of GNP	R&D as % of GDP
1995-96	7483.88	1069805	1083289	0.70	0.69
1996-97	8913.61	1247628	1260710	0.71	0.71
1997-98	10611.34	1388729	1401934	0.76	0.76
1998-99	12473.17	1601114	1616082	0.78	0.77
1999-00	14397.60	1771094	1786526	0.81	0.81
2000-01	16198.80	1902284	1925017	0.85	0.84
2001-02	17038.15	2077658	2097726	0.82	0.81
2002-03	18088.16	2244725	2261415	0.81	0.80
2003-04	20086.34	2519921	2538171	0.80	0.79
2004-05	24117.24	2855331	2877706	0.84	0.84
2005-06	28776.65	3249554	3275670	0.89	0.88
2006-07	32941.64*	3760285**	3790063**	0.88	0.87
2007-08	37777.90*	4263000#	4283000#	0.89	0.88

Source : (i) Data on R&D expenditure collected and compiled by DST.

(ii) Data on GNP & GDP - Economic Survey, 2007- 08.

- Note :
1. GNP : Gross National Product.
 2. GDP : Gross Domestic Product
 3. R&D : Research & Development.
 4. GNP/GDP figures are based on 1999-00 series.
 5. R&D/GNP & R&D/GDP ratio have been revised as per the New Series GNP/GDP figures.
 6. * Estimated
 7. ** Quick estimates.
 8. # Advance estimates.

Table 3**NATIONAL EXPENDITURE ON RESEARCH & DEVELOPMENT**

(Rs. Crores)

Year	National Expenditure on Research and Development	
	Current Prices	Constant Prices (Base: 1999-00)
1980-81	760.52	3674.35
1981-82	940.73	4103.59
1982-83	1206.03	4848.32
1983-84	1381.10	5123.85
1984-85	1781.55	6117.37
1985-86	2068.78	6619.50
1986-87	2435.40	7292.59
1987-88	2853.07	7799.64
1988-89	3347.26	8453.26
1989-90	3725.74	8678.20
1990-91	3974.17	8361.19
1991-92	4512.81	8363.31
1992-93	5004.60	8526.18
1993-94	6073.02	9408.79
1994-95	6622.44	9340.94
1995-96	7483.88	9656.11
1996-97	8913.61	10662.41
1997-98	10611.34	11921.83
1998-99	12473.17	12967.51
1999-00	14397.60	14397.60
2000-01	16198.80	15683.37
2001-02	17038.15	16007.14
2002-03	18088.16	16353.72
2003-04	20086.34	17575.41
2004-05	24117.24	19991.64
2005-06	28776.65	22963.91
2006-07*	32941.64	24821.63
2007-08	37777.90	27213.00

Source : Data collected and compiled by DST.

Note : 1. For working out Research and Development Expenditure at Constant Prices, Economic Survey 2007-08 has been used.

2. * Estimated

Table 4
EXPENDITURE ON RESEARCH & DEVELOPMENT BY MAJOR SCIENTIFIC AGENCIES

Agency\ Year	1958-59	1970-71	1980-81	1990-91	1995-96	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Council of Scientific & Industrial Research	509.94	2155.73	6900.00	24918.80	41169.99	86412.00	89226.00	100965.00	107454.00	126647.00	142704.02
Defence Research & Development Org.	150.00	1755.35	7970.00	68100.00	139540.00	335932.00	317275.00	300811.00	344318.00	371527.00	528333.00
Department of Atomic Energy	775.88	2871.56	7347.81	27554.00	48664.00	100551.54	111560.43	120767.31	124207.85	150902.00	175250.16
Department of Biotechnology	-	-	-	4136.70	7382.70	12057.86	14103.81	18762.72	19813.08	26500.79	31136.28
Ministry of Communication & Information Tech.	-	-	540.55	3303.04	3637.91	5107.00	12919.00	7662.76	8526.02	11093.76	15928.61
Ministry of New & Renewable Energy	-	-	400.44	1602.00	697.64	1227.00	1995.00	1908.00	1723.00	1312.00	1409.00
Ministry of Ocean Development	-	-	-	2780.35	4564.00	8422.57	11868.36	14991.16	14819.83	19846.78	23570.12
Department of Science & Technology	22.13	84.18	4063.69	11982.46	22367.45	31146.34	37051.00	66423.03	73028.79	108651.45	118325.44
Department of Space	-	-	5601.56	38622.18	91788.08	190539.97	190097.37	216222.48	226880.47	253434.86	266760.44
Indian Council of Agricultural Research	372.29	1837.00	9744.67	27625.05	43236.87	116173.60	137212.54	128463.00	129563.65	153071.83	174543.98
Indian Council of Medical Research	50.50	217.63	900.11	4454.01	5060.74	14912.00	16697.00	18000.00	17486.00	24745.00	33100.00
Ministry of Environment & Forest	-	-	373.99	16209.27	24459.50	27286.02	31086.89	27886.27	20828.25	23951.84	23687.02
Total	1880.74	8921.45	43842.82	231287.00	432568.90	929767.90	971092.40	1022862.73	1088648.94	1271684.31	1534748.07

Source : Data collected and compiled by DST.

Note : 1. Not including Public Sector Research and Development Expenditure.

2. - Nil.

Table 5

**EXPENDITURE ON RESEARCH AND DEVELOPMENT BY CENTRAL MINISTRIES/
DEPARTMENTS OTHER THAN MAJOR SCIENTIFIC AGENCIES**

Sl.No.	Ministry/Departments	(Rs. Lakhs)			
		Research and Development Expenditure			
		2002-03	2003-04	2004-05	2005-06
1	Agriculture and Cooperation	2807.38	3239.16	2110.63	1979.66
2	Animal Husbandry and Dairying	2140.1	2305.41	2138.83	2720.98
3	AYUSH	1841.8	1987.51	2399.58	2775.82
4	Chemicals and Petrochemicals	2756.77	2871.56	4347.29	2671.56
5	Civil Aviation	232.56	358.38	178.25	178.78
6	Coal	2266.09	2380.49	3435.96	4757.86
7	Commerce	3843.09	3693.74	4568.66	4828.51
8	Consumer Affairs	30	0	5	0
9	Culture	3345.13	2781.02	3902.04	4395.18
10	Defence	4128.38	3728.97	3909	4643.03
11	Defence Production and Supplies	33825.74	33857.79	36904.55	49947.07
12	Family Welfare	25.88	5.32	89.38	80.48
13	Fertilizers	1782.56	1657.79	1850.42	1444.55
14	Food and Public Distribution	863.21	978.74	995.87	1049.36
15	Food Processing Industries	325.94	204.41	154.03	134.29
16	Health	15785.84	15888.71	17924.29	20640.05
17	Heavy Industry	18302.05	21666.01	24697.79	27617.57
18	Home	1053.46	1719.21	1543.89	1680.19
19	Human Resource Development	12525.64	13393	14895.01	13719.51
20	Industrial Policy and Promotion	5253.66	5551.81	7035.79	6119.54
21	Information and Broadcasting	127.3	33.06	22.15	39.2
22	Labour	491.59	526.45	566.41	611.17
23	Mines	1759.14	1736.78	1963	1956.37
24	Petroleum and Natural Gas	33725.4	31547.94	42162.3	34151.46
25	Power	920.91	1193.19	897.42	2185.01
26	Railways	5932.8	5314.5	6375.6	5986.8
27	Road, Transport and Highways	754.3	343.74	929.14	1132.91
28	Rural Development	349	757.42	913.75	1300.32
29	Shipping	46.84	91.76	54.41	143.96
30	SSI, Agro and Rural Industries	893.05	1185.43	1367.86	1571.52
31	Social Justice and Empowerment	1815.13	2067.64	2385.33	2486.47
32	Statistics and Program Implementation	2185.61	2397.34	2598.5	2754
33	Steel	6696.51	8506.85	7740.04	8034.49
34	Telecommunications	14408	17727	13318	14242
35	Textiles	7910.94	8174.44	9090.06	8936
36	Urban Development	229.54	360	236.33	621.43
37	Water Resources	2828.64	3832.26	3192.98	3517.72
38	Public Sector Under Major Scientific Agencies	4833.79	6752.6	6000.2	5535.66
39	Joint Sector including State Undertaking	3210.19	4002.46	3410.91	3762.47
	Total	202253.96	214819.89	236310.65	250352.95

Source : Data collected and compiled by DST.

Table 6

EXPENDITURE ON RESEARCH AND DEVELOPMENT BY STATE GOVERNMENTS

Sl. No.	State	Research and Development Expenditure			
		2002-03	2003-04	2004-05	2005-06
1	Andhra Pradesh	10746.12	10602.65	11013.99	11881.31
2	Assam	5851.10	6180.37	5674.11	7284.68
3	Bihar	3239.94	3466.73	3709.40	3969.06
4	Chandigarh	28.67	30.02	34.77	37.86
5	Chhattisgarh	1311.88	1366.30	1679.37	1815.72
6	Gujarat	4825.13	4988.26	13786.77	17613.08
7	Haryana	9429.13	10078.72	10460.49	11926.13
8	Himachal Pradesh	6122.33	6581.15	7068.33	9879.63
9	Jammu & Kashmir	5080.42	5879.50	7250.11	9802.06
10	Jharkhand	3069.27	3284.12	4287.15	6199.02
11	Karnataka	13297.85	14953.66	15858.79	18095.22
12	Kerala	8799.28	9617.17	10239.50	11871.27
13	Madhya Pradesh	7074.79	8082.40	9089.94	10376.15
14	Maharashtra	22595.64	23845.02	25102.42	27369.84
15	Manipur	776.80	1142.54	1343.27	2681.31
16	Meghalaya	10.33	2.50	15.00	0.00
17	Orissa	4392.98	5641.02	4591.09	5114.53
18	Punjab	12800.02	13045.61	14365.55	15543.71
19	Rajasthan	6860.88	7341.14	7604.72	9134.80
20	Tamil Nadu	11532.62	12043.07	12959.65	14667.82
21	Uttar Pradesh	8348.48	8814.49	9112.41	10956.75
22	Uttaranchal	8018.02	9159.92	14369.46	10871.87
23	West Bengal	4603.67	2831.40	4536.85	5649.81
Total		158815.35	168977.76	194153.14	222741.63

Source : Data collected and compiled by DST.

Note : States not given in the table have no R&D expenditure during the period 2002-03 to 2005-06.

Table 7**EXPENDITURE ON RESEARCH & DEVELOPMENT BY COOPERATIVE
RESEARCH ASSOCIATIONS**

(Rs. Lakhs)					
Sl. No.	Name	2002-03	2003-04	2004-05	2005-06
1	Ahmedabad Textile Industry's Research Association	427.53	338.90	33.25	349.22
2	Automotive Research Association of India	2536.39	6194.86	4907.88	8907.70
3	Bombay Textile Research Association	124.20	136.77	148.14	119.78
4	Electrical Research and Development Association	751.50	952.22	1165.87	1173.59
5	Indian Jute Industries Research Association	513.14	529.57	546.25	222.51
6	Indian Rubber Manufacturer's Research Association	120.75	480.00	300.00	320.25
7	Man Made Textile Research Association	117.46	99.39	85.34	85.34
8	Northern India Textile Research Association	253.13	323.87	303.44	318.50
9	Petroleum Conservation Research Association	1766.02	2491.17	2417.55	2433.87
10	South Indian Textile Industry's Research Association	279.91	321.42	334.38	309.75
11	Tea Research Association	961.09	1013.55	1210.52	1353.43
12	The Synthetic and Art Silk Mills Research Association	490.03	446.20	383.81	406.40
13	Wool Research Association	148.84	129.55	102.48	97.08
Total		8489.99	13457.46	11938.90	16097.43

Source : Data collected and compiled by DST.

Table 8

SCIENCE & TECHNOLOGY EXPENDITURE BY TYPE OF WORK BY CENTRAL AND STATE GOVERNMENTS

Year	CENTRAL GOVERNMENT										STATE GOVERNMENTS										TOTAL
	Basic Research	Applied Research	Experimental Development	Other Related S&T Activities	Total S&T	Basic Research	Applied Research	Experimental Development	Other Related S&T Activities	Total S&T	Basic Research	Applied Research	Experimental Development	Other Related S&T Activities	Total S&T						
	(Rs. Lakhs)	(Rs. Lakhs)	(Rs. Lakhs)	(Rs. Lakhs)	(Rs. Lakhs)	(Rs. Lakhs)	(Rs. Lakhs)	(Rs. Lakhs)	(Rs. Lakhs)	(Rs. Lakhs)	(Rs. Lakhs)	(Rs. Lakhs)	(Rs. Lakhs)	(Rs. Lakhs)	(Rs. Lakhs)						
1996-97	105277.80	217363.10	198864.70	47851.89	569357.49	11439.48	51061.76	23006.07	19743.65	105250.96	116717.28	268424.86	221870.77	67595.54	674608.45						
1997-98	129500.90	264909.30	240145.50	62819.99	697375.69	12402.23	55343.46	24929.85	21748.81	114424.35	141903.13	320252.76	265075.35	84568.80	811800.04						
1998-99	154426.22	334158.94	285243.83	34685.26	808514.25	12682.74	57899.68	33557.83	27864.87	132005.12	167108.96	392058.62	318801.66	62550.13	940519.37						
1999-00	180974.84	391606.82	334282.33	40648.28	947512.27	15602.87	71184.82	42201.06	33908.40	162897.15	196577.71	462791.64	376483.39	74556.68	1110409.42						
2000-01	203698.28	440777.48	376255.25	45752.13	1066483.14	19118.44	86621.79	51691.97	39894.46	197326.66	222816.72	527399.27	427947.22	85646.59	1263809.80						
2001-02	214906.63	465030.95	396958.43	48269.60	1125165.61	18199.05	82036.82	49197.24	37529.71	186962.82	233105.68	547067.77	446155.67	85799.31	1312128.43						
2002-03	329440.60	407891.01	379978.48	50977.89	1168287.98	23657.36	79600.27	55557.69	33816.49	192631.81	353097.96	487491.28	435536.17	84794.38	1360919.79						
2003-04	345503.08	436247.83	412614.66	52098.84	1246464.40	25135.30	85085.35	58757.12	36559.86	205537.63	370638.38	521333.18	471371.78	88658.70	1452002.03						
2004-05	420589.37	500579.48	461038.42	62160.28	1444367.55	30991.85	96650.01	66511.28	42185.54	236338.68	451581.22	597229.49	527549.70	104345.82	1680706.23						
2005-06	484391.96	611742.89	558540.45	69146.02	1723821.32	35412.85	111806.91	75521.89	48102.26	270843.91	519804.81	723549.8	634062.34	117248.28	1994665.23						

Source : Data collected and compiled by DST.

Note : 1. R&D : Research and Development = Basic Research + Applied Research + Experimental Development.

2. S&T : Science and Technology = R&D + Other related S&T activities.

3. S&T Expenditure by type of work is not collected for inhouse R&D units of Public, Private Sector Industries & Higher Education Sector.

Table 9

RESEARCH AND DEVELOPMENT EXPENDITURE, ADVERTISING EXPENDITURE, NEW PLANT AND MACHINERY EXPENDITURE VERSUS SALES TURNOVER IN PUBLIC AND PRIVATE SECTOR INDUSTRY

Year	Research and Development Expenditure (Rs. Crores)		Advertising Expenditure (Rs. Crores)		New Plant and Machinery Expenditure (Rs. Crores)		Sales Turnover (Rs. Crores)		Research and Development Expenditure as % of Sales Turnover (%)		Advertising Expenditure as % of Sales Turnover (%)		New Plant and Machinery Expenditure as % of Sales Turnover (%)	
	Public Sector	Private Sector	Public Sector	Private Sector	Public Sector	Private Sector	Public Sector	Private Sector	Public Sector	Private Sector	Public Sector	Private Sector	Public Sector	Private Sector
2002-03	1078.07	2784.69	344.52	11587.97	10677.87	13054.82	286242.80	599988.93	0.38	0.46	0.12	1.93	3.73	2.18
2003-04	1091.03	3642.54	530.42	11452.85	13702.66	12123.01	311134.64	677074.00	0.35	0.54	0.17	1.69	4.40	1.79
2004-05	1257.88	5075.82	461.81	11909.98	11961.14	20231.28	382882.60	814533.64	0.33	0.62	0.12	1.46	3.12	2.48
2005-06	1304.26	6268.43	527.07	14697.47	17600.61	22781.70	436961.09	943123.27	0.30	0.66	0.12	1.56	4.03	2.42

Source : Data collected and compiled by DST

Note : 1. Data for Public Sector refers to 112 industrial R&D units.
2. Data for Private Sector refers to 1108 industrial R&D units.
3. Data does not include SIRO units.

Table 10**EXPENDITURE ON RESEARCH AND DEVELOPMENT BY PUBLIC/JOINT SECTOR UNDERTAKINGS, 2005-06**

Ministry/Department/State	Public/Joint Sector Undertaking	R&D Expenditure (Rs. Lakhs)	R&D Expenditure as % of S.T.O.
Atomic Energy	Electronics Corporation of India Ltd.	3637.00	5.20
	Indian Rare Earths Ltd.	201.90	0.61
Agriculture and Cooperation	Indian Farmers Fertiliser Coop. Ltd. (Consolidated)	61.40	0.01
Biotechnology	Bharat Immunologicals	8.00	0.26
Chemicals and Petrochemicals	Hindustan Antibiotics Ltd.	108.48	2.22
	Hindustan Insecticides Ltd.	112.27	0.64
	Hindustan Organic Chemicals Ltd.	100.00	0.22
	Indian Petrochemicals Corporation Ltd.	1120.00	0.12
Coal	Central Mine Planning & Design Institute Ltd.	2290.00	15.71
	Neyveli Lignite Corporation Ltd.	696.30	0.28
	The Singareni Collieries Company Ltd.	287.56	0.08
Communication & Information Technology	CMC Ltd.	1181.00	12.89
	Semiconductor Complex Ltd.	495.76	18.77
	Central Electronics Ltd.	12.00	0.11
Defence Production and Supplies	Bharat Dynamics Ltd.	457.22	0.86
	Bharat Earth Movers Ltd.	1914.40	86.78
	Bharat Electronics Ltd.	13015.00	3.68
	Hindustan Aeronautics Ltd. (Consolidated)	37128.61	13.01
	Goa Shipyard Ltd.	300.00	***
	Mishra Dhatu Nigam Ltd.	168.78	1.10
Family Welfare	Hindustan Latex Ltd.	80.48	0.38
Fertilizers	Fertilizers & Chemicals Travancore Ltd.	31.17	0.02
	Rashtriya Chemicals & Fertilizers Ltd.	142.28	0.05
Heavy Industry	Bharat Heavy Electricals Ltd. (Consolidated)	10220.38	0.71
	Bharat Heavy Plates & Vessels Ltd.	95.97	0.79
	Bharat Pumps & Compressors Ltd.	6.00	0.06
	HMT Ltd. (Consolidated)	861.66	3.53
	Heavy Engineering Corporation Ltd.	7.37	0.32
	Hindustan Cables Ltd.	90.00	3.00
	Hindustan Newsprint Ltd.	15.34	0.05
	Hindustan Photo Films Mfg. Co. Ltd.	67.57	4.62
	Hindustan Salts Ltd.	0.51	0.08
	Instrumentation Ltd.	26.46	0.12

Contd...../-

Ministry/Department/State	Public/Joint Sector Undertaking	R&D Expenditure (Ra. Lakhs)	R&D Expenditure as % of S.T.O.
Heavy Industry	Jessop & Co. Ltd.	28.00	0.36
	NEPA Ltd.	41.15	0.71
	Sambhar Salts Ltd.	1.73	0.22
	Scooters India Ltd.	53.43	0.30
	Suzuki Motors, Maruti Udyog Ltd.	6514.00	0.44
Mines	Hindustan Copper Ltd.	132.45	0.29
	Hindustan Zinc Ltd.	184.00	0.05
	Mineral Exploration Corporation Ltd.	0.00	0.00
	National Aluminium Co. Ltd.	375.82	0.07
Petroleum and Natural Gas	Balmer Lawrie & Company Ltd.	168.91	0.13
	Bharat Petroleum Corporation Ltd. (Consolidated)	3775.00	0.00
	Bongaigaon Refinery & Petrochemicals Ltd.	5.28	0.00
	Chennai Petroleum Corporation Ltd.	603.54	0.02
	Engineers India Ltd.	637.37	0.81
	GAIL (India) Ltd.	84.40	0.00
	Hindustan Petroleum Corporation Ltd.	395.92	0.01
	IBP Co. Ltd. (Chemicals)	217.15	0.01
	IBP Co. Ltd.	68.02	2.41
	Indian Oil Corporation Ltd.	8986.00	0.00
	Numaligarh Refinery Ltd.	252.00	0.04
	Oil & Natural Gas Corporation Ltd.	15056.28	0.30
Oil India Ltd.	1258.12	0.21	
Power	National Thermal Power Corporation Ltd.	630.00	0.02
Scientific & Industrial Research	Central Electronics Ltd.	12.00	0.11
SSI, Agro & Rural Industries	Prototype Development & Training Centre	26.93	0.13
Social Justice & Empowerment	Artificial Limbs Manufacturing Corporation Ltd.	42.86	0.71
Steel	Bharat Refractories Ltd.	29.70	0.17
	Essar Steels Ltd.	434.55	0.06
	MECON Ltd.	22.84	0.09
	National Mineral Development Corporation Ltd.	617.00	0.17
	Sponge Iron India Ltd.	9.34	0.16
	Steel Authority of India Ltd. (Consolidated)	6921.06	0.53
Telecommunications	ITI Ltd. (Consolidated)	3873.00	2.22
Textiles	National Textile Corporation Ltd. (Consolidated)	49.30	0.36
	The Lagan Jute Machinery Co. Ltd.	17.62	0.01

Contd...../-

Ministry/Department/State	Public/Joint Sector Undertaking	R&D Expenditure (Rs. Lakhs)	R&D Expenditure as % of S.T.O.
Andhra Pradesh	Andhra Pradesh Heavy Machinery & Engg. Ltd.	7.00	0.11
	The Andhra Pradesh Paper Mills Ltd.	93.16	0.21
Gujarat	Gujarat Alkalies & Chemicals	324.98	0.29
	Gujarat Insecticides Ltd.	28.71	0.27
	Gujarat Narmada Valley	128.12	0.06
	Gujarat State Fertilizers & Chemicals Ltd.	721.60	0.24
Haryana	Haryana Leather Chemicals Ltd.	44.00	2.43
	Haryana State Electronics Dev. Corp. Ltd.	190.00	12.39
Karnataka	Karnataka Soaps & Detergents Ltd.	13.75	0.12
	The Hutti Gold Mines Company Ltd.	58.53	0.28
Kerala	Keltron Component Complex Ltd.	1.33	0.05
	Kerala Electrical and Allied Engg. Co. Ltd.	3.87	0.06
	Kerala Minerals & Metals Ltd.	255.00	0.90
	Kerala State Drugs & Pharmaceutical Ltd.	3.44	11.26
	Kerala State Electricity Board	137.97	0.04
	Travancore Titanium Products Ltd.	164.09	1.18
Maharashtra	Haffkine Bio-Pharmaceutical Corpn. Ltd.	2.03	0.05
	Maharashtra State Seed Corporation Ltd.	120.00	0.00
Punjab	Punjab Chemicals & Crop Protection Ltd.	124.02	0.69
	Punjab Tractors Ltd.	768.50	0.79
Rajasthan	Rajasthan State Mines & Minerals Ltd.	31.70	0.06
Tamil Nadu	Tamil Nadu Co-operative Sugar Federation Ltd.	44.56	68.55
	Tamil Nadu Electricity Board	195.00	0.01
	Tamil Nadu Newsprint & Papers Ltd.	89.03	0.11
	Tamil Nadu Petroproducts Ltd.	31.33	0.03
Uttar Pradesh	Pradeshik Co-operative Dairy Federation Ltd.	45.78	1.12
West Bengal	Webel Mediatronics Ltd.	19.13	0.75
	Webfil Ltd.	22.88	1.35
Total		130425.71	0.30

Source : Data collected and compiled by DST

Note : 1. R&D - Research and Development

2. S.T.O. - Sales Turnover

3. *** Not Available

Table 11

EXPENDITURE ON RESEARCH AND DEVELOPMENT BY INDUSTRY GROUPS FOR PUBLIC SECTOR

Sl. No.	Industry Group	No. of R&D Units	R&D Expenditure (Rs. Lakhs)		R&D Expenditure as % of S.T.O.	
			2002-03	2003-04	2002-03	2003-04
1	Metallurgical Industries	11	7268.71	9025.64	0.21	0.21
2	Fuels	14	31054.35	28508.10	0.21	0.19
3	Boilers & Steam Generating Plants	0	0.00	0.00	0.00	0.00
4	Prime Movers	0	0.00	0.00	0.00	0.00
5	Electricals and Electronics Equipment	12	4670.20	6725.89	0.13	0.19
6	Telecommunications	2	4791.51	5179.67	2.19	3.78
7	Transportation	4	2899.03	4360.92	0.31	0.39
8	Industrial Machinery	2	11482.21	9945.64	1.37	1.07
9	Machine Tools	2	304.18	294.60	1.24	1.38
10	Agricultural Machinery	2	941.55	1165.71	1.13	1.36
11	Earth Moving Machinery	2	1759.44	1503.12	44.27	26.02
12	Misc. Mechanical Engineering Industries	0	0.00	0.00	0.00	0.00
13	Commercial Office, Household Equipments	0	0.00	0.00	0.00	0.00
14	Medical and Surgical Appliances	1	33.84	38.03	0.69	0.76
15	Industrial Instruments	3	104.90	153.06	0.45	1.21
16	Scientific Instruments	1	34.85	35.00	0.26	0.23
17	Math. Surveying & Drawing Instruments	0	0.00	0.00	0.00	0.00
18	Fertilizers	4	1154.73	1039.44	0.10	0.10
19	Chemicals (Other Than Fertilizers)	15	2371.02	2563.37	0.12	0.10
20	Photographic Raw Film and Paper	1	97.69	85.65	3.62	3.08
21	Dyestuffs	0	0.00	0.00	0.00	0.00
22	Drugs and Pharmaceuticals	5	159.12	113.35	0.42	0.36
23	Textiles (Dyed, Printed, Processed)	2	62.12	60.95	0.28	0.26
24	Papers and Pulps	4	394.10	308.94	0.32	0.23
25	Sugar	1	25.73	41.26	47.65	98.24
26	Fermentation Industries	0	0.00	0.00	0.00	0.00
27	Food Processing Industries	1	12.02	9.00	0.31	0.32
28	Vegetables Oil & Vanaspati	0	0.00	0.00	0.00	0.00
29	Soaps, Cosmetics and Toilet Preparations	1	9.54	15.89	0.09	0.17
30	Rubber Goods	0	0.00	0.00	0.00	0.00
31	Leather, Leather Goods & Pickers	0	0.00	0.00	0.00	0.00
32	Glue & Gelatine	0	0.00	0.00	0.00	0.00
33	Glass	0	0.00	0.00	0.00	0.00
34	Ceramics	2	25.84	23.97	0.36	0.21
35	Cement & Gypsum	0	0.00	0.00	0.00	0.00
36	Timber Products	0	0.00	0.00	0.00	0.00
37	Defence Industries	9	35033.05	34453.72	8.33	7.14
38	Information Technology	1	795.00	1154.00	12.93	15.11
39	Biotechnology	1	30.00	42.00	0.00	0.00
40	Consultancy Services	6	2036.48	1956.21	0.23	0.19
41	Miscellaneous Industries	3	255.38	300.16	0.36	0.39
Total		112	107806.59	109103.29	0.38	0.35

Contd.../-

Table 11 (Continued)

EXPENDITURE ON RESEARCH AND DEVELOPMENT BY INDUSTRY GROUPS FOR PUBLIC SECTOR

Sl. No.	Industry Group	No. of R&D Units	R&D Expenditure (Rs. Lakhs)		R&D Expenditure as % of S.T.O.	
			2004-05	2005-06	2004-05	2005-06
1	Metallurgical Industries	11	8561.65	8901.53	0.15	0.14
2	Fuels	14	39389.22	31610.00	0.21	0.14
3	Boilers & Steam Generating Plants	0	0.00	0.00	0.00	0.00
4	Prime Movers	0	0.00	0.00	0.00	0.00
5	Electricals and Electronics Equipment	12	5737.03	5437.90	0.14	0.12
6	Telecommunications	2	3781.62	3963.00	2.68	2.23
7	Transportation	4	8878.49	6895.43	0.66	0.46
8	Industrial Machinery	2	9563.52	9988.00	0.83	0.62
9	Machine Tools	2	289.62	309.03	1.17	1.16
10	Agricultural Machinery	2	818.19	1328.50	0.75	1.09
11	Earth Moving Machinery	2	1693.36	1921.40	22.25	22.19
12	Misc. Mechanical Engineering Industries	0	0.00	0.00	0.00	0.00
13	Commercial Offices, Household Equipments	0	0.00	0.00	0.00	0.00
14	Medical and Surgical Appliances	1	40.17	42.86	0.82	0.71
15	Industrial Instruments	3	137.13	169.99	0.68	0.69
16	Scientific Instruments	1	23.64	26.46	0.13	0.12
17	Math. Surveying & Drawing Instruments	0	0.00	0.00	0.00	0.00
18	Fertilizers	4	1041.90	956.45	0.07	0.05
19	Chemicals (Other than Fertilizers)	15	4215.84	2820.82	0.14	0.09
20	Photographic Raw Film and Paper	1	67.92	67.57	3.91	4.62
21	Dyestuffs	0	0.00	0.00	0.00	0.00
22	Drugs and Pharmaceuticals	5	203.27	202.43	0.58	0.61
23	Textiles (Dyed, Printed, Processed)	2	53.27	49.30	0.18	0.16
24	Papers and Pulp	4	253.01	238.68	0.18	0.15
25	Sugar	1	38.75	44.56	71.76	68.55
26	Fermentation Industries	0	0.00	0.00	0.00	0.00
27	Food Processing Industries	1	98.82	45.78	2.35	1.12
28	Vegetable Oil & Vanaspati	0	0.00	0.00	0.00	0.00
29	Soaps, Cosmetics and Toilet Preparations	1	19.41	13.75	0.19	0.12
30	Rubber Goods	0	0.00	0.00	0.00	0.00
31	Leather, Leather Goods & Pickers	0	0.00	0.00	0.00	0.00
32	Glue & Gelatine	0	0.00	0.00	0.00	0.00
33	Glass	0	0.00	0.00	0.00	0.00
34	Ceramics	2	26.51	29.70	0.18	0.17
35	Cement & Gypsum	0	0.00	0.00	0.00	0.00
36	Timber Products	0	0.00	0.00	0.00	0.00
37	Defence Industries	9	37045.93	50600.83	6.58	7.31
38	Information Technology	1	1012.00	1181.00	12.43	12.89
39	Biotechnology	1	140.00	120.00	0.00	0.00
40	Consultancy Services	6	2308.49	3223.16	0.20	0.27
41	Miscellaneous Industries	3	348.92	237.58	0.39	0.26
Total		112	125787.68	130425.71	0.33	0.30

Source : Data collected and compiled by DST

Note : S.T.O - Sales Turnover

Table 12

EXPENDITURE ON RESEARCH AND DEVELOPMENT BY INDUSTRY GROUPS FOR PRIVATE SECTOR

Sl. No.	Industry Group	No. of R&D Units	R&D Expenditure (Rs. Lakhs)		R&D Expenditure as % of S.T.O.	
			2002-03	2003-04	2002-03	2003-04
1	Metallurgical Industries	50	8260.56	10442.83	0.15	0.15
2	Fuels	9	674.27	808.99	0.02	0.02
3	Boilers and Steam Generating Plants	1	226.83	337.50	0.42	0.56
4	Prime Movers	3	955.07	1253.05	0.60	0.67
5	Electricals and Electronics Equipment	132	17053.84	19768.38	0.35	0.37
6	Telecommunications	30	5503.52	9217.94	1.41	2.21
7	Transportation	60	43427.37	54649.76	0.77	0.80
8	Industrial Machinery	29	2419.87	3528.66	1.00	1.17
9	Machine Tools	11	479.75	534.15	1.36	1.20
10	Agricultural Machinery	8	4150.90	4846.54	1.60	1.48
11	Earth Moving Machinery	7	606.47	885.18	0.41	0.36
12	Misc. Mechanical Engineering Industries	55	7489.02	8667.08	0.16	0.16
13	Commercial Offices, Household Equipment	11	1780.02	2576.29	0.65	0.78
14	Medical and Surgical Appliances	11	832.67	961.93	3.65	3.54
15	Industrial Instruments	33	3760.06	4216.26	0.31	0.35
16	Scientific Instruments	9	285.73	332.53	2.90	2.82
17	Math. Surveying & Drawing Instruments	0	0.00	0.00	0.00	0.00
18	Fertilizers	7	287.31	365.02	0.05	0.06
19	Chemicals (Other Than Fertilizers)	161	19475.28	21317.93	0.37	0.36
20	Photographic Raw Film and Paper	3	367.22	350.57	0.84	0.76
21	Dye-stuffs	9	486.29	599.37	0.47	0.53
22	Drugs and Pharmaceuticals	156	102679.43	144143.38	2.18	2.62
23	Textiles (Dyed, Printed, Processed)	33	2020.79	2488.83	0.03	0.03
24	Papers and Pulps	18	2830.60	4527.54	0.18	0.26
25	Sugar	19	1672.24	1825.36	0.05	0.07
26	Fermentation Industries	4	362.72	281.00	0.24	0.17
27	Food Processing Industries	24	2955.46	3648.79	0.53	0.60
28	Vegetable Oil & Vanaspathi	3	2199.69	2910.77	2.52	3.10
29	Soaps, Cosmetics and Toilet Preparations	10	14263.76	15540.31	0.93	0.99
30	Rubber Goods	27	1232.59	1742.52	0.06	0.08
31	Leather, Leather Goods and Pickers	4	933.79	829.31	0.28	0.20
32	Glue and Gelatin	4	160.65	150.66	0.82	0.68
33	Glass	3	156.77	207.94	0.08	0.10
34	Ceramics	16	922.95	908.79	0.07	0.05
35	Cement and Gypsum Products	8	1242.19	1566.33	0.10	0.11
36	Timber Products	2	22.87	19.81	0.42	0.37
37	Defence Industries	7	619.77	968.83	4.96	4.75
38	Information Technology	20	11002.00	19428.19	1.25	1.82
39	Biotechnology	70	10872.33	13683.82	0.97	1.08
40	Consultancy Services	2	25.26	22.77	0.70	0.67
41	Miscellaneous Industries	39	3770.60	3699.36	0.50	0.41
Total		1108	278468.51	364254.27	0.46	0.54

Contd.../-

Table 12 (Continued)

EXPENDITURE ON RESEARCH AND DEVELOPMENT BY INDUSTRY GROUPS FOR PRIVATE SECTOR

Sl. No.	Industry Group	No. of R&D Units	R&D Expenditure (Rs. Lakhs)		R&D Expenditure as % of S.T.O.	
			2004-05	2005-06	2004-05	2005-06
1	Metallurgical Industries	50	13182.73	14287.15	0.14	0.15
2	Fuels	9	986.89	1085.47	0.02	0.02
3	Boilers and Steam Generating Plants	1	290.71	431.25	0.30	0.28
4	Prime Movers	3	2548.51	4036.97	1.24	1.53
5	Electricals and Electronics Equipment	132	29042.00	37540.45	0.41	0.43
6	Telecommunications	30	8181.37	9867.14	1.51	1.37
7	Transportation	60	86279.81	104719.74	0.99	1.07
8	Industrial Machinery	29	4096.53	3970.15	1.00	0.77
9	Machine Tools	11	467.26	712.30	0.74	0.81
10	Agricultural Machinery	8	5685.55	4863.55	1.32	0.84
11	Earth Moving Machinery	7	1239.97	1355.90	0.39	0.33
12	Misc. Mechanical Engineering Industries	55	11086.27	13730.69	0.18	0.18
13	Commercial Offices, Household Equipment	11	2629.91	2553.22	0.88	0.72
14	Medical and Surgical Appliances	11	1040.61	1203.52	2.93	2.88
15	Industrial Instruments	33	5133.35	6869.49	0.32	0.37
16	Scientific Instruments	9	439.25	486.30	2.61	2.39
17	Math. Surveying and Drawing Instruments	0	0.00	0.00	0.00	0.00
18	Fertilizers	7	736.90	1183.62	0.09	0.12
19	Chemicals (Other Than Fertilizers)	161	23862.35	30086.52	0.36	0.39
20	Photographic Raw Film and Paper	3	463.87	592.88	0.84	1.04
21	Dye-stuffs	9	598.41	593.68	0.45	0.40
22	Drugs and Pharmaceuticals	156	223712.19	282686.34	3.70	3.84
23	Textiles (Dyed, Printed, Processed)	33	2770.30	2513.24	0.03	0.03
24	Papers and Pulps	18	4955.64	6721.70	0.27	0.31
25	Sugar	19	1482.87	1575.73	0.04	0.04
26	Fermentation Industries	4	653.20	511.75	0.45	0.13
27	Food Processing Industries	24	3563.26	4086.68	0.56	0.57
28	Vegetable Oil & Vanaspathi	3	3199.18	3509.92	3.34	3.82
29	Soaps, Cosmetics and Toilet Preparations	10	17387.77	13722.41	1.08	0.76
30	Rubber Goods	27	2182.40	2717.77	0.09	0.10
31	Leather, Leather Goods and Pickers	4	655.72	769.16	0.12	0.17
32	Glue and Gelatin	4	147.64	203.33	0.63	0.81
33	Glass	3	204.68	283.42	0.08	0.13
34	Ceramics	16	906.38	991.20	0.05	0.05
35	Cement and Gypsum Products	8	1392.04	1831.80	0.08	0.11
36	Timber Products	2	23.92	17.76	0.38	0.24
37	Defence Industries	7	1580.43	1567.44	6.21	4.59
38	Information Technology	20	22123.63	30663.30	1.57	1.71
39	Biotechnology	70	18750.86	27773.66	1.06	1.12
40	Consultancy Services	2	25.18	26.99	0.64	0.67
41	Miscellaneous Industries	39	3872.44	4499.20	0.40	0.39
Total		1108	507581.98	626842.79	0.62	0.66

Source : Data collected and compiled by DST.

Note : S.T.O. - Sales Turn Over.

Table 13

EXPENDITURE ON RESEARCH AND DEVELOPMENT BY OBJECTIVES

OBJECTIVE	(Rs. Lakhs)													
	Central Government				State Governments				Private Sector				Total	
	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04		
1. Defence	303806.68	347024.12	0.00	0.00	39204.49	40946.34	2277.97	3089.61	345289.14	391060.07				
2. Development of Agriculture Forestry & Fishing	140027.77	141774.67	145281.66	153455.26	2273.61	2513.27	25127.21	27903.73	312710.25	325646.93				
3. Development of Health Services	72071.26	75299.75	3225.49	3290.23	159.12	113.35	127049.29	174093.96	202505.16	252797.29				
4. Development of Transport & Communications	24102.76	31115.90	382.36	407.51	7854.48	9395.17	55614.22	71046.37	87953.82	111964.95				
5. Exploration & Assessment of Earth Seas & Atmosphere	34023.50	36619.04	1437.84	2771.66	1633.22	1911.80	1035.88	1118.87	38130.44	42421.37				
6. General Advancement of Knowledge	228895.78	252722.25	1539.24	1624.52	346.06	249.76	11571.35	12300.90	242352.43	266897.43				
7. Other Aims	2689.34	2436.66	3638.92	3963.97	302.42	338.34	25339.59	36826.22	31970.27	43565.19				
8. Production Conservation & Distribution of Energy	96498.92	97886.37	1282.60	1374.45	34334.38	31477.00	4267.66	5528.12	136383.56	136265.94				
9. Promotion of Industrial Development	39522.42	42490.68	614.45	610.72	20241.09	21214.60	58765.78	69821.03	119143.74	134137.03				
10. Protection of the Environment	22439.79	15432.05	425.25	440.78	122.83	160.00	3742.47	4807.13	26730.34	20839.96				
11. Social Development & Other Socio-Economic Services	4908.71	5712.41	918.40	963.07	45.86	47.03	8597.64	6953.22	14470.61	13675.73				
12. Space	221798.48	232791.47	69.12	75.61	1289.03	737.63	33.35	82.37	223189.98	233687.08				
13. Urban & Rural Planning	1578.69	2120.19	0.00	0.00	0.00	0.00	397.65	558.03	1976.34	2678.22				
Total	1192364.10	1283425.56	158815.33	168977.78	107806.59	109104.29	323820.06	414129.56	1782806.08	1975637.19				

Contd...../-

Table 13 (Continued)

EXPENDITURE ON RESEARCH AND DEVELOPMENT BY OBJECTIVES

OBJECTIVE	Central Government						State Governments						Public Sector						Private Sector						Total	
	2004-05		2005-06		2004-05		2005-06		2004-05		2005-06		2004-05		2005-06		2004-05		2005-06		2004-05		2005-06			
1. Defence	375326.50	532885.09	0.00	0.00	42846.29	56452.23	4785.89	5596.26	422958.68	594933.58																
2. Development of Agriculture Forestry & Fishing	163939.49	187899.73	177670.53	203826.08	2201.61	2622.19	34319.65	39180.30	378131.28	433528.30																
3. Development of Health Services	95151.41	113371.51	3332.38	4042.27	203.27	202.42	256885.66	327886.58	355572.72	445502.78																
4. Development of Transport & Communications	29647.43	38873.64	428.26	455.71	12237.37	10825.63	104343.46	127049.66	146656.52	177204.64																
5. Exploration & Assessment of Earth Seas & Atmosphere	43077.89	49067.75	1513.20	1216.84	2128.00	2907.00	1401.22	1450.65	48120.31	54642.24																
6. General Advancement of Knowledge	315324.63	359874.90	3327.41	4342.20	199.42	182.19	13878.24	17982.33	332729.70	382381.62																
7. Other Aims	3359.21	3691.66	4182.69	4754.45	377.50	266.75	40988.27	42675.98	48907.67	51388.84																
8. Production Conservation & Distribution of Energy	121610.89	139764.62	1414.50	1522.88	39092.35	33732.35	9608.85	16133.45	171726.59	191153.30																
9. Promotion of Industrial Development	54435.36	56634.23	634.02	700.48	24900.22	22231.76	81256.67	98565.44	161226.27	178131.91																
10. Protection of the Environment	18504.26	16580.43	569.24	678.66	180.00	250.00	6280.25	6957.00	25533.75	24466.09																
11. Social Development & Other Socio-Economic Services	6410.57	6792.34	1011.90	1062.03	138.99	88.64	8349.59	8506.25	15911.05	16449.26																
12. Space	258866.86	271820.44	69.01	140.04	1282.66	664.54	117.52	146.18	260336.05	272771.20																
13. Urban & Rural Planning	2232.77	2819.96	0.00	0.00	0.00	0.00	587.09	561.94	2819.86	3381.90																
Total	1487887.27	1780076.30	194153.14	222741.64	125787.68	130425.70	562802.36	692692.02	2370630.45	2825935.66																

Source : Data collected and compiled by DST.

Note : Central Sector includes higher education.

Table 14

EXPENDITURE ON RESEARCH AND DEVELOPMENT BY FIELD OF SCIENCE

Field of Science	(Rs. Lakhs)									
	Central Government		State Governments		Public Sector		Private Sector		Total	
	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04
Agriculture Sciences	160867.31	173153.59	113896.74	121184.89	302.01	305.64	16803.28	21210.75	291869.34	315854.87
Engineering & Technology	641229.28	690202.25	16113.30	17144.37	89802.04	90882.18	152560.43	197488.49	899705.05	995717.29
Medical Sciences	63090.93	67910.00	7236.79	7699.87	69.70	70.53	49176.21	61636.47	119573.63	137316.87
Natural Sciences	284941.91	306703.32	16649.36	17714.73	16622.26	16822.20	96367.66	123623.24	414581.19	464863.49
Social Sciences	42234.64	45456.41	4919.13	5233.90	1010.58	1022.73	8912.46	10170.61	57076.81	61883.65
Total	1192364.07	1283425.57	158815.32	168977.76	107806.59	109103.28	323820.04	414129.56	1782806.02	1975636.17

Contd:...../-

Table 14 (Continued)

Field of Science	(Rs. Lakhs)									
	Central Government		State Governments		Private Sector		Total			
	2004-05	2005-06	2004-05	2005-06	2004-05	2005-06				
Agriculture Sciences	200738.80	240159.49	139239.78	159742.44	352.38	365.38	34875.07	368725.43	435142.38	
Engineering & Technology	800158.50	957292.17	19698.65	22599.22	104780.15	108643.59	272067.73	335478.42	1196705.03	1424013.40
Medical Sciences	78728.92	94189.49	8847.05	10149.75	81.32	84.32	81824.70	100382.46	169481.99	204806.02
Natural Sciences	355564.10	425389.21	20353.99	23351.06	19394.70	20109.81	168591.22	207599.44	563904.01	676449.52
Social Sciences	52696.94	63045.95	6013.68	6899.18	1179.13	1222.61	11924.24	14356.63	71813.99	85524.37
Total	1487887.26	1780076.31	194153.15	222741.65	125787.68	130425.71	562802.36	692692.02	2370630.45	2825935.69

Source : Data collected and compiled by DST.

Note : Central Sector includes higher education.

Table 15

**FULL TIME EQUIVALENT OF MANPOWER EMPLOYED IN RESEARCH AND DEVELOPMENT
ESTABLISHMENTS AS ON 01.04.2005**

Name of Establishment	Personnel Engaged in			Total (1+2+3)
	R&D Activities (1)	Auxiliary Activities (2)	Administration Activities (3)	
A. INSTITUTIONAL SECTOR				
Major Scientific Agencies	47587	51285	52786	151658
Central Government Ministries/Departments	8645	16410	19665	44720
State Governments	19135	20146	46141	85422
Total Institutional Sector (A)	75367	87841	118592	281800
B. HIGHER EDUCATION SECTOR				
	22100			22100
C. INDUSTRIAL SECTOR				
Public Sector Including Joint Sector	9281	3787	1576	14644
Private Sector	42096	8976	4918	55990
SIRO	5983	5204	5428	16615
Private + SIRO	48079	14180	10346	72605
Total Industrial Sector (B)	57360	17967	11922	87249
Total (A+B)	154827*	105808	130514	391149

Source : Data collected and compiled by DST.

Note : 1. Data for Industrial Sector refers to 1510 in-house R&D units including 1108 Private Sector industries, 112 Public Sector industries and 290 SIRO units.

2. R&D : Research and Development.

3. * Data includes estimated 22,100 researchers employed in the Higher Education Sector.

Table 16

**FULL TIME EQUIVALENT OF WOMEN EMPLOYED IN RESEARCH AND DEVELOPMENT
ESTABLISHMENTS AS ON 01.04.2005**

Name of Establishment	Personal Engaged In			(Number)
	R&D	Auxiliary	Administrative	Total
	Activities	Activities	Activities	
	(1)	(2)	(3)	(1+2+3)
A. INSTITUTIONAL SECTOR				
Major Scientific Agencies	8035	6525	11093	25653
Central Government Ministries/Departments	1814	3492	4321	9627
State Governments	2421	2551	7631	12603
Total Institutional Sector (A)	12270	12568	23045	47883
B. INDUSTRIAL SECTOR				
Public Sector Including Joint Sector	931	345	308	1584
Private Sector	6506	2889	2188	11583
Total Industrial Sector (B)	7437	3234	2496	13167
Total (A+B)	19707	15802	25541	61050

Source : Data collected and compiled by DST.

Note : 1. Data for private sector refers to 1273 in-house R&D units including 248 SIRO units.

2. Data does not include Small Scale Industries (SSI), Higher Education.

3. R&D : Research and Development.

Table 17

R&D MANPOWER BY QUALIFICATIONS AS ON 1st APRIL, 2005

CENTRAL SECTOR (A)

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	4456	11845	1198	90	179	17768
AGRICULTURAL SCIENCE	2832	885	330	51	206	4304
ENGINEERING & TECHNOLOGY	1933	7239	10850	2634	997	23653
MEDICAL SCIENCE	354	827	247	290	93	1811
SOCIAL SCIENCE	297	484	138	47	240	1206
TOTAL	9872	21280	12763	3112	1715	48742

STATE SECTOR (B)

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	362	376	99	1	218	1056
AGRICULTURAL SCIENCE	4945	2039	95	11	134	7224
ENGINEERING & TECHNOLOGY	165	269	348	140	100	1022
MEDICAL SCIENCE	88	362	9	0	0	459
SOCIAL SCIENCE	195	66	16	0	35	312
TOTAL	5755	3112	567	152	487	10073

INSTITUTIONAL SECTOR (A+B)

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	4818	12221	1297	91	397	18824
AGRICULTURAL SCIENCE	7777	2924	425	62	340	11528
ENGINEERING & TECHNOLOGY	2098	7508	11198	2774	1097	24675
MEDICAL SCIENCE	442	1189	256	290	93	2270
SOCIAL SCIENCE	492	550	154	47	275	1518
TOTAL	15627	24392	13330	3264	2202	58815

Contd.../-

Table 17 (Continued)

R&D MANPOWER BY QUALIFICATIONS AS ON 1st APRIL, 2005

PUBLIC SECTOR (A)

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	256	603	393	81	98	1431
AGRICULTURAL SCIENCE	6	8	9	3	0	26
ENGINEERING & TECHNOLOGY	229	1764	4172	974	592	7731
MEDICAL SCIENCE	0	0	6	0	0	6
SOCIAL SCIENCE	1	6	26	1	53	87
TOTAL	492	2381	4606	1059	743	9281

PRIVATE SECTOR (B)

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	1936	7214	4028	318	853	14349
AGRICULTURAL SCIENCE	411	888	632	233	306	2470
ENGINEERING & TECHNOLOGY	656	4831	10746	4629	2019	22881
MEDICAL SCIENCE	917	4212	1606	236	217	7188
SOCIAL SCIENCE	360	449	222	28	132	1191
TOTAL	4280	17594	17234	5444	3527	48079

INDUSTRIAL SECTOR (A+B)

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	2192	7817	4421	399	951	15780
AGRICULTURAL SCIENCE	417	896	641	236	306	2496
ENGINEERING & TECHNOLOGY	885	6595	14918	5603	2611	30612
MEDICAL SCIENCE	917	4212	1612	236	217	7194
SOCIAL SCIENCE	361	455	248	29	185	1278
TOTAL	4772	19975	21840	6503	4270	57360

TOTAL (INSTITUTIONAL SECTOR+INDUSTRIAL SECTOR)

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	7010	20038	5718	490	1348	34604
AGRICULTURAL SCIENCE	8194	3820	1066	298	646	14024
ENGINEERING & TECHNOLOGY	2983	14103	26116	8377	3708	55287
MEDICAL SCIENCE	1359	5401	1868	526	310	9464
SOCIAL SCIENCE	853	1005	402	76	460	2796
GRAND TOTAL	20399	44367	35170	9767	6472	116175

Source : Data collected and compiled by DST.

Table 18**FEMALE R&D MANPOWER BY QUALIFICATIONS AS ON 1st APRIL, 2005****CENTRAL SECTOR (A)**

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	661	744	103	12	18	1538
AGRICULTURAL SCIENCE	297	103	16	3	7	426
ENGINEERING & TECHNOLOGY	163	677	1398	355	64	2657
MEDICAL SCIENCE	127	291	60	132	21	631
SOCIAL SCIENCE	48	203	26	17	44	338
TOTAL	1296	2018	1603	519	154	5590

STATE SECTOR (B)

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	70	86	7	0	20	183
AGRICULTURAL SCIENCE	554	281	7	0	12	854
ENGINEERING & TECHNOLOGY	14	40	30	6	10	100
MEDICAL SCIENCE	15	122	3	0	0	140
SOCIAL SCIENCE	40	25	5	0	2	72
TOTAL	693	554	52	6	44	1349

INSTITUTIONAL SECTOR (A+B)

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	731	830	110	12	38	1721
AGRICULTURAL SCIENCE	851	384	23	3	19	1280
ENGINEERING & TECHNOLOGY	177	717	1428	361	74	2757
MEDICAL SCIENCE	142	413	63	132	21	771
SOCIAL SCIENCE	88	228	31	17	46	410
TOTAL	1989	2572	1655	525	198	6939

Contd.../-

Table 18 (Continued)

FEMALE R&D MANPOWER BY QUALIFICATIONS AS ON 1st APRIL, 2005

PUBLIC SECTOR (A)

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	19	72	46	2	3	142
AGRICULTURAL SCIENCE	2	1	0	0	0	3
ENGINEERING & TECHNOLOGY	11	156	531	61	20	779
MEDICAL SCIENCE	0	0	1	0	0	1
SOCIAL SCIENCE	0	1	3	0	2	6
TOTAL	32	230	581	63	25	931

PRIVATE SECTOR (B)

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	299	1373	654	35	69	2430
AGRICULTURAL SCIENCE	44	93	39	3	21	200
ENGINEERING & TECHNOLOGY	52	500	1104	323	98	2077
MEDICAL SCIENCE	152	662	416	62	59	1351
SOCIAL SCIENCE	124	203	99	3	19	448
TOTAL	671	2831	2312	426	266	6506

INDUSTRIAL SECTOR (A+B)

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	318	1445	700	37	72	2572
AGRICULTURAL SCIENCE	46	94	39	3	21	203
ENGINEERING & TECHNOLOGY	63	656	1635	384	118	2856
MEDICAL SCIENCE	152	662	417	62	59	1352
SOCIAL SCIENCE	124	204	102	3	21	454
TOTAL	703	3061	2893	489	291	7437

TOTAL (INSTITUTIONAL+ INDUSTRIAL)

Field	PhD	Post Graduate	Graduate	Diploma	Others	Total
NATURAL SCIENCE	1049	2275	810	49	110	4293
AGRICULTURAL SCIENCE	897	478	62	6	40	1483
ENGINEERING & TECHNOLOGY	240	1373	3063	745	192	5613
MEDICAL SCIENCE	294	1075	480	194	80	2123
SOCIAL SCIENCE	212	432	133	20	66	863
GRAND TOTAL	2692	5633	4548	1014	488	14375

Source : Data collected and compiled by DST.

Table 19

ANNUAL GROSS EMOLUMENTS OF R&D PERSONNEL EMPLOYED AS ON 1st APRIL, 2005

INSTITUTIONAL SECTOR

Salary (Rs. Lakhs)	Central Sector			State Sector			Institutional Sector		
	Male (1)	Female (2)	Total (3)	Male (4)	Female (5)	Total (6)	Male (1+4)	Female (2+5)	Total (3+6)
Less than 2.00	5167	1200	6367	836	180	1016	6003	1380	7383
2.00 - 2.99	9279	2011	11290	2152	491	2643	11431	2502	13933
3.00 - 3.99	8337	1501	9838	2128	407	2535	10465	1908	12373
4.00 - 4.99	5236	653	5889	1634	153	1787	6870	806	7676
5.00 and Above	1776	229	2005	98	8	106	1874	237	2111
Total	29795	5594	35389	6848	1239	8087	36643	6833	43476

INDUSTRIAL SECTOR

Salary (Rs. Lakhs)	Private Sector			Public Sector			Industrial Sector		
	Male (1)	Female (2)	Total (3)	Male (4)	Female (5)	Total (6)	Male (1+4)	Female (2+5)	Total (3+6)
Less than 2.00	13015	3090	16105	1541	123	1664	14556	3213	17769
2.00 - 2.99	8262	1389	9651	1928	221	2149	10190	1610	11800
3.00 - 3.99	7227	832	8059	2078	329	2407	9305	1161	10466
4.00 - 4.99	6366	546	6912	1080	144	1224	7446	690	8136
5.00 and Above	6723	649	7372	1723	114	1837	8446	763	9209
Total	41593	6506	48099	8350	931	9281	49943	7437	57380

TOTAL (INSTITUTIONAL + INDUSTRIAL)

Salary (Rs. Lakhs)	Institutional Sector			Industrial Sector			Grand Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Less than 2.00	6003	1380	7383	14556	3213	17769	20559	4593	25152
2.00 - 2.99	11431	2502	13933	10190	1610	11800	21621	4112	25733
3.00 - 3.99	10465	1908	12373	9305	1161	10466	19770	3069	22839
4.00 - 4.99	6870	806	7676	7446	690	8136	14316	1496	15812
5.00 and Above	1874	237	2111	8446	763	9209	10320	1000	11320
Total	36643	6833	43476	49943	7437	57380	86586	14270	100856

Source : Data collected and compiled by DST.

Table 20**ESTIMATED STOCK OF S&T PERSONNEL**

(Thousands)

S.No. Category	Stock of S&T Personnel at the beginning of the year					
	1991	1996	1998	1999	2000	2001
1. Engineering Degree Holders	519.6	753.3	859.1	913.7	969.5	1024.4
2. Engineering Diploma Holders	859.3	1173.1	1312.3	1379.5	1546.0	1531.7
3. Medical Graduates*	310.3	358.4	380.4	391.7	403.4	415.9
4. Agricultural Graduates	168.4	202.3	216.5	223.8	231.2	238.6
5. Veterinary Graduates	34.4	40.2	42.7	44.0	45.3	46.7
6. Science Graduates	2430.3	3154.8	3479.3	3655.4	3837.7	4024.9
7. Science Post Graduates	482.0	626.1	695.5	730.6	767.1	805.0
Total	4804.3	6308.2	6985.8	7338.7	7800.2	8087.2

Source :Institute of Applied Manpower Research, New Delhi.

Note : * Includes Dental Surgeons.

Table 21

UNIVERSITIES / COLLEGES AND THEIR ENROLMENT FROM 1976 - 77 TO 2006 - 07
(Number)

Year	Universities	Institutions Deemed to be Universities	Colleges	Total Enrolment
1976-77	105	9	4317	2431563
1977-78	108	9	4375	2564972
1978-79	108	10	4460	2618228
1979-80	112	10	4558	2648579
1980-81	116	12	4722	2752437
1981-82	120	12	4880	2952066
1982-83	125	14	5039	3133093
1983-84	126	14	5246	3307649
1984-85	132	16	5590	3404096
1985-86	136	17	5816	3605029
1986-87	143	21	6040	3757158
1987-88	144	22	6685	4020159
1988-89	145	27	6773	4285489
1989-90	149	28	7145	4602680
1990-91	150	29	7346	4924868
1991-92	155	31	7761	5265886
1992-93	159	31	7993	5534966
1993-94	163	34	8441	5817249
1994-95	168	36	9019	6113929
1995-96	171	37	9252	6574005
1996-97	172	38	9940	6842598
1997-98	182	39	10678	7260418
1998-99	182	40	11397	7705520
1999-00	189	42	11865	8050607
2000-01	193	47	12806	8399443
2001-02	196	52	15437	8964680
2002-03	200	81	16206	9516773*
2003-04	213	89	16742	9953506**
2004-05	229	96	18120*	10481042**
2005-06	236	101	19348*	11028020**
2006-07	249	109	20677*	11612505**

Source : University Grants Commission (UGC) Annual Reports

- Note :
1. The number of Universities/Deemed Universities given above does not include thirteen "Institutes of National importance" which are of university status.
 2. The number of colleges given above excludes junior colleges and those offering diploma/certificate courses.
 - 3 * Provisional
 - 4 ** Estimated

Table 22

FACULTY-WISE ENROLMENT IN HIGHER EDUCATION FROM 1985-86 TO 2006-07

Course of Study	1985-86		1995-96		1999-00		2001-02		2002-03		2003-04		2004-05		2005-06		2006-07	
	Enrolment	Percentage of total	Enrolment	Percentage of total	Enrolment	Percentage of total	Enrolment	Percentage of total	Enrolment	Percentage of total	Enrolment	Percentage of total	Enrolment	Percentage of total	Enrolment	Percentage of total	Enrolment	Percentage of total
Science and Technology Disciplines (A)																		
Science	700991	19.4	1288505	19.6	1537666	19.1	1739148	19.4	1884321	19.8	2035059	20.4	2142325	20.44	2255230	20.45	2374758	20.45
Engineering/Technology	176540	4.9	322126.2	4.9	402530	5.0	618563	6.9	713758	7.5	716652	7.2	754635	7.2	795120	7.21	837261	7.21
Medicine	123057	3.4	223516.2	3.4	281771	3.5	277905	3.1	314054	3.3	313489	3.2	330153	3.15	348485	3.16	366954	3.16
Agriculture	41901	1.2	72314.06	1.1	88557	1.1	89647	1.0	57101	0.6	58700	0.6	61838	0.59	63962	0.58	67352	0.58
Veterinary Science	9486	0.3	19722.02	0.3	24152	0.3	17929	0.2	19034	0.2	14858	0.2	15721	0.15	16542	0.15	17418	0.15
Total (A)	1051975	29.2	1926183	29.3	2334676	29.0	2743192	30.6	2988267	31.4	3138758	31.5	3304672	31.53	3479339	31.55	3663743	31.55
Other Disciplines (B)																		
Arts (including Oriental Learning)	1466295	40.7	2655898	40.4	3268546	40.6	4132717	46.1	4292065	45.1	4490723	45.1	4729048	45.12	4976946	45.13	5240727	45.13
Commerce	782068	21.7	1439707	21.9	1763083	21.9	1604678	17.9	1713019	18	1790636	18.0	1885539	17.99	1986146	18.01	2091411	18.01
Law	196106	5.4	348422.3	5.3	418632	5.2	286870	3.2	304537	3.2	303629	3.1	319671	3.05	336356	3.05	354183	3.05
Education	82636	2.3	151202.1	2.3	185164	2.3	116541	1.3	133235	1.4	146039	1.5	154071	1.47	161009	1.46	169542	1.46
Others	25949	0.7	52592.04	0.8	80506	1.0	80682	0.9	85651	0.9	83721	0.8	88041	0.84	88224	0.8	92899	0.8
Total (B)	2553054	70.8	4647822	70.7	5715931	71.0	6221488	69.4	6528506	68.6	6814748	68.5	7176370	68.47	7548681	68.45	7948762	68.45
Total (A+B)	3605029	100	6574005	100	8050607	100	8964680	100	9516773	100	9963506	100	10481042	100	11028020	100	11612505	100

Source : University Grants Commission (UGC)

Table 23

**FACULTY-WISE ENROLMENT OF WOMEN IN HIGHER EDUCATION
FROM 1974-75 TO 2005-06**

(Thousand)

Year	Science & Technology Disciplines					Other Disciplines					Total (1+...+10)
	Science (1)	Engg. (2)	Medicine (3)	Agri. (4)	Vety.Sc. (5)	Arts (6)	Commerce (7)	Law (8)	Education (9)	Others (10)	
1974-75	106.2 (22.9)	1.3 (1.5)	21 (19.7)	0.3 (0.9)	0.08 (1.2)	363 (34.0)	22.1 (5.6)	5.9 (4.4)	29 (37.6)	4.1 (32.6)	553 (23.4)
1985-86	215.7 (30.8)	12.2 (6.9)	37.5 (30.5)	2.3 (5.5)	0.6 (6.3)	576.3 (39.3)	156.7 (20.0)	17.6 (9.0)	38.6 (46.7)	9 (34.7)	1067.5 (29.6)
1992-93	318.6 (33.8)	19.2 (8.2)	53.8 (32.9)	3.8 (7.6)	1 (8.7)	867.5 (44.6)	222 (21.2)	26.2 (10.3)	61.1 (55.3)	15.9 (40.0)	1590.3 (33.1)
1993-94	334.4 (29.3)	20 (7.1)	%	%	%	905.1 (38.5)	235.3 (18.4)	30 (9.7)	65.1 (48.7)	74.1* (23.2)	1664.1 (28.6)
1994-95	415 (34.6)	24.9 (8.3)	%	%	%	1123.2 (45.4)	292 (21.8)	37.3 (11.5)	80.8 (57.5)	91.9* (27.3)	2065 (33.8)
1995-96	440.4 (34.2)	26.4 (8.2)	%	%	%	1191.8 (44.9)	309.8 (21.5)	39.6 (11.4)	85.7 (56.7)	97.6* (27.4)	2191.3 (33.3)
1996-97	462.9 (34.5)	27.6 (8.2)	%	%	%	1252.7 (45.3)	325.7 (21.7)	41.7 (11.4)	90.1 (57.3)	102.5* (27.1)	2303.2 (33.7)
1997-98	469.6 (33.0)	51.3 (14.4)	80.7 (32.7)	14.7 (18.4)	2.4 (11.0)	1330.5 (45.4)	332.6 (20.9)	48.9 (12.7)	83.2 (49.8)	31.8 (54.7)	2445.7 (33.7)
1998-99	494.2 (34.1)	54.1 (14.9)	84.9 (33.7)	15.4 (18.9)	2.6 (11.7)	1400.3 (46.7)	350.1 (21.5)	51.5 (13.1)	87.5 (51.3)	33.5 (56.5)	2574 (36.3)
1999-00	520.9 (33.9)	63.1 (15.7)	90.5 (32.1)	15.5 (17.5)	2.7 (11.2)	1489.5 (45.6)	381.4 (21.6)	54.8 (13.1)	87.6 (47.3)	35.6 (44.2)	2741.6 (34.1)
2001-02	699.4 (40.2)	131.8 (21.3)	123.0 (44.3)	9.1 (10.2)	3.2 (17.8)	1820.1 (44.0)	582.0 (36.3)	56.9 (19.8)	59.4 (51.0)	29.5 (36.6)	3514.4 (39.2)
2002-03	736.9 (39.1)	154.0 (21.6)	134.4 (42.8)	9.3 (16.3)	3.0 (15.8)	1889.8 (44.0)	608.9 (35.5)	61.9 (20.3)	67.1 (50.4)	30.6 (35.7)	3695.9 (38.8)
2003-04	809.0 (39.8)	165.3 (23.1)	145.3 (46.3)	9.9 (16.9)	3.0 (20.2)	2041.8 (45.5)	657.7 (36.7)	62.5 (20.6)	76.0 (52.0)	31.6 (37.7)	4002.1 (40.2)
2004-05	850.2 (39.7)	175.7 (23.3)	153.7 (46.5)	10.6 (17.1)	3.4 (21.6)	2162.4 (45.7)	696.5 (36.9)	68.6 (21.4)	78.7 (51.1)	34.3 (38.9)	4234.1 (40.4)
2005-06	901.3 (40.0)	185.9 (23.4)	162.6 (46.6)	10.8 (16.9)	3.6 (21.8)	2278.3 (45.8)	735.2 (37.0)	73.2 (21.8)	82.7 (51.4)	33.1 (37.5)	4466.7 (40.5)

Source : University Grants Commission (UGC)

Note : 1. Figure in brackets indicate the enrolment of women as a percentage of total enrolment

2. Agri. : Agriculture; Vety. Sc. : Veterinary Sciences; Engg. : Engineering and Technology;

3. % Data included elsewhere with another category

4. * includes Agriculture , Veterinary and Medicine.

Table 24

ENROLMENT OF WOMEN IN HIGHER EDUCATION BY SCIENCE AND TECHNOLOGY DISCIPLINES

Year	Science & Technology Disciplines					Other Disciplines	Total
	Science (1)	Engg. (2)	Medicine (3)	Agri. (4)	Vety.Sc. (5)	(6)	(1+...+6)
1998-99	494.2 (19.2)	54.1 (2.1)	84.9 (3.3)	15.4 (0.6)	2.6 (0.1)	1922.9 (74.7)	2574 (100.0)
1999-00	520.9 (19.0)	63.1 (2.3)	90.5 (3.3)	15.5 (0.6)	2.7 (0.1)	2048.9 (74.7)	2742 (100.0)
2001-02	699.4 (19.9)	131.8 (3.8)	123.0 (3.5)	9.1 (0.3)	3.2 (0.1)	2547.9 (72.5)	3514 (100.0)
2002-03	736.9 (19.9)	154.0 (4.2)	134.4 (3.6)	9.3 (0.3)	3.0 (0.1)	2658.3 (71.9)	3696 (100.0)
2003-04	809.0 (20.2)	165.3 (4.1)	145.3 (3.6)	9.9 (0.2)	3.0 (0.1)	2869.6 (71.7)	4002 (100.0)
2004-05	850.2 (20.1)	175.7 (4.1)	153.7 (3.6)	10.6 (0.2)	3.4 (0.1)	3040.5 (71.9)	4234 (100.0)
2005-06	901.3 (20.2)	185.9 (4.2)	162.6 (3.6)	10.8 (0.2)	3.6 (0.1)	3202.6 (71.7)	4466 (100.0)

Source : University Grants Commission (UGC)

Note : 1. Figure in brackets indicate the enrolment of women as a percentage of total enrolment.
 2. Agri. : Agriculture; Vety. Sc. : Veterinary Sciences; Engg. : Engineering and Technology.
 3. Others include Arts, Commerce, Law, Education, etc.

Table 25

OUT-TURN OF SCIENTIFIC AND TECHNICAL PERSONNEL FROM UNIVERSITIES IN INDIA 1947-2003

Degree/Year	1947	1950	1954	1956	1958	1960	1964	1966	1968	1970	1974	1975	1978	1979	1984	1985	1986	1987	1988	1989	1995	2003
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
B.Sc. (Science)	5996	9628	14427	16139	18925	22706	34085	42463	59651	83654	123822	95395	103594	99749	115085	120006	122579	129940	129981	134366	139257	334865
M.Sc.(Science)	905	1425	2911	3255	3841	5382	8906	10106	12822	16742	17633	17557	17680	17638	20691	19377	20300	23669	24301	24591	23807	75459
Ph.D.(Science)	N.A.	N.A.	164	210	216	361	537	776	1101	1212	1515	1484	2044	2262	2977	2838	2814	3038	3038	3044	3155	4740
BE/B.Sc. (Engg.)	270	2198	3207	4558	4841	6031	9892	14099	17170	19204	15043	15316	18237	18364	21963	22998	25272	28345	27894	28927	32250	127499
ME./M.Tech(Engg.)	30	100	147	331	457	764	620	943	1347	1733	1984	2068	2832	3155	2681	3228	3806	4465	4306	4560	3667	12249
Ph.D.(Engg.)	N.A.	N.A.	19	23	27	38	47	94	181	247	266	445	319	506	464	559	603	675	573	560	546	779
MBBS	959	1557	2582	2732	2839	3387	4452	6558	8916	9562	10578	10144	14997	15090	15818	16370	16105	17538	18038	17968	19613	31697
MD/MS	N.A.	88	110	171	281	397	771	1049	1254	1266	2081	2204	3633	3485	4888	5017	5319	5228	5802	5945	4634	7071
B.Sc.(Agr.)	535	1000	910	886	994	1700	4099	5259	6239	5909	4505	3966	6280	6280	8116	8257	7414	7810	7757	8301	5752	9109
M.Sc.(Agr.)	79	154	208	214	313	488	823	1191	1372	1670	1419	1511	2384	2384	2785	3119	2767	2827	2752	2876	2284	4416
Ph.D.(Agr.)	N.A.	N.A.	4	11	8	11	19	94	120	217	287	289	422	480	678	782	684	832	832	792	827	1195
Total	8774	16150	24689	28530	32742	41265	64251	82632	110173	141406	179133	150379	172422	169393	196146	202551	207663	224367	225274	231930	235792	609079

Source :

University Grants Commission (UGC) University Development in India (Basic facts & figures)

- Note :
1. Figures for Engineering and Technology Degree Holders include IITs also.
 2. Information for the year 2003 Pertains to 271 Universities/ Deemed Universities/ Institutes of National Importance.
 3. MD/MS include Doctorates in Medical Science.
 4. Medicine includes degrees awarded in Indian Systems of Medicine, Pharmacy, Dentistry and Nursing.
 5. Agriculture includes Veterinary Science.
 6. Agr. : Agriculture.
 7. Engg. : Engineering and Technology.
 8. N.A. : Not Available.

Table 26

**ESTIMATED STOCK OF ENGINEERING DEGREE HOLDERS
IN THE WORKING AGE GROUP BY SELECTED DISCIPLINES**

(Number)

S No.	Discipline	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1.	Civil	146790	153690	160470	166750	172830	178860	184860	190760	196560	200544
2.	Mechanical	162870	172860	184810	194810	204620	214430	224210	233820	243280	256518
3.	Electrical	102920	108050	113890	119720	125640	131970	138250	144430	150500	156000
4.	Chemical	31960	33520	35490	37590	39670	41760	43830	45850	47850	50951
5.	Electronics & Telecom	72120	82410	93740	104850	115580	132020	148320	164340	180090	190284
6.	Metallurgy	14380	14790	15301	15990	16690	17370	18050	18710	19370	19875
7.	Mining	5760	6170	6590	6990	7380	7800	8210	8610	9010	9357
8.	Automobile	2060	2360	2720	2960	3250	3490	3720	3950	4180	4390
9.	Aeronautical	1760	1830	1900	1980	2070	2150	2220	2300	2370	2459
10.	Agriculture	3650	3880	4120	4300	4490	4680	4860	5040	5220	5550
11.	Production	9240	11030	12970	14840	16680	18600	20500	22360	24190	26152
12.	Sugar	1340	1430	1540	1610	1640	1670	1700	1730	1750	1773
13.	Oil	730	770	810	880	940	1000	1060	1120	1180	1213
14.	Textile	9180	9680	10280	10770	11300	11900	12490	13080	13650	14226
15.	Architecture	12320	13330	14450	15740	16910	18150	19390	20600	21800	23073
16.	Food	1020	1090	1150	1230	1300	1390	1480	1570	1650	1766
17.	Instrumentation	5920	7540	9470	11360	13340	15190	17040	18850	20640	22259
18.	Ceramic	980	980	1040	1100	1140	1200	1260	1320	1370	1656
19.	Leather	730	760	810	850	880	930	970	1020	1060	1161
20.	Others	59020	71800	84420	96810	109370	122350	136210	149830	163230	193979
Total		644750	697970	755971	811130	865720	926910	988630	1049290	1108950	1183186

Source : National Technical Manpower Information System (NTMIS) and AICTE, Govt .of India

Note : Stock is at the beginning of the year

Table 27

DOCTORATE DEGREES AWARDED FACULTY-WISE (1984-85 TO 2005-06)

	1984-85	1990-91	1992-93	1993-94	1995-96	1996-97	1997-98	1998-99*	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Faculty															(Number)
	Science & Technology Disciplines (A)														
Science	2922	2950	3386	3467	3861	3498	3894	3836	3885	3727	3955	4497	5612	5549	5625
Engineering/Technology	509	629	323	329	374	298	744	696	723	778	734	779	882	968	1058
Medicine	70	140	116	145	135	133	200	190	228	221	219	243	317	456	438
Agriculture	576	715	611	769	780	968	849	785	787	889	838	1042	1026	888	1119
Veterinary Science	102	145	112	114	138	152	122	101	146	110	110	153	116	132	180
Total (A)	4179	4579	4548	4824	5288	5049	5809	5608	5769	5725	5856	6714	7953	7993	8420
	Other Disciplines (B)														
Arts	2754	3210	3621	4039	3957	4245	4058	4189	4280	4398	4524	5034	7473	7532	7605
Commerce	185	290	453	515	612	502	541	541	571	621	728	857	1096	1010	1115
Education	239	188	247	308	295	295	342	310	364	399	420	554	613	491	599
Law	25	51	72	73	75	65	67	75	74	105	110	138	144	179	182
Others *	56	65	129	164	170	252	249	228	238	296	336	436	574	693	809
Total (B)	3259	3804	4522	5099	5109	5359	5257	5343	5527	5819	6118	7019	9900	9905	10310
Total (A+B)	7438	8383	9070	9923	10397	10408	11066	10951	11296	11544	11974	13733	17853	17898	18730

Source : University Grants Commission (UGC)

Note : * Others includes Music, Fine Arts, Library Science, Physical Education, Journalism etc.

Table 28

EXPENDITURE ON EDUCATION BY CENTRE AND STATE GOVERNMENTS

(Rs. Crores)

Source	1985-86+	1990-91	1995-96	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07+	2007-08*
Central Government	942.10	2420.45	5551.02	9676.52	10907.63	10196.06	14135.74	16156.61	17100.97	18025.96	23211.13	30638.25	39345.08
State Government	8269.76	18340.88	33217.67	52342.98	64242.25	72683.10	66370.23	69732.78	72630.66	79348.81	91177.69	109084.13	119892.27
TOTAL	9211.86	20761.33	38768.69	62019.50	75149.88	82879.16	80505.97	85889.39	89731.63	97374.77	114388.82	139722.38	159237.35

Source : Analysis of Budgeted Expenditure on Education (various issues), Department of Education, Ministry of Human Resource Development.

- Note :
1. The Centre and State Education Department budget is total of the Revenue, Capital, loans and advances and other Departments for the respective years.
 2. Total Expenditure on Education includes Expenditure by the Education Department and Other Departments , Where Other Department Expenditure also includes Expenditure for training (formal/informal) but excludes the budget of Railways and Posts and Telecommunications.
 3. + Revised Estimate.
 4. * Budget Estimate.
 5. State include States and Union Territories.

Table 29

**SECTOR-WISE EXPENDITURE ON EDUCATION BY CENTRAL AND STATE GOVERNMENTS
(REVENUE ACCOUNT)**

(Rs. Crores)

Sl. No.	Sector	1985-86+	1990-91	1995-96	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
1.	Elementary Education	3310.01	7955.53	15217.8	25114.68	27905.10	29758.13	32493.85	33474.33	36365.97	41874.17	50181.99
2.	Secondary Education	2349.36	5531.11	10344.1	16721.54	20844.76	19743.17	20431.30	22049.21	23349.72	25110.62	27804.63
3.	Physical Education	%	18.8	31.73	35.63	57.05	45.32	40.18	49.65	44.42	50.18	47.57
4.	University & Other Higher Education	1106.59	2311.85	3871.33	6116.77	8248.42	9194.79	8087.72	8859.64	9060.15	9503.21	11013.34
5.	Adult Education	%	273.15	259.72	189.45	186.53	226.12	291.99	322.61	325.00	351.26	396.16
6.	Language Development	%	111.73	160.84	252.19	283.81	334.27	340.48	356.96	394.49	420.82	392.82
7.	Special Education	145.66	%	%	%	%	%	%	%	%	%	%
8.	Technical Education	350.26	753.01	1290.25	2073.14	2458.96	2528.02	2560.39	2820.51	2833.08	3146.22	3657.00
9.	Sports and Youth Welfare	99.33	%	%	%	%	%	%	%	%	%	%
10.	General	%	238.48	340.27	721.86	1296.80	668.23	601.80	628.63	672.05	824.40	990.19
11.	Other educational programmes	172.62	%	%	%	%	%	%	%	%	%	%
Total		7533.83	17193.7	31516	51225.26	61281.43	62498.05	64847.71	68561.54	73044.88	81280.88	94483.70

Source Analysis of Budgeted Expenditure on Education (various issues),
Department of Education, Ministry of Human Resource Development.

Note † Revised Estimate.

* Budget Estimate.

% Data included elsewhere with another category.
State include States and Union Territories.

Table 30

**SECTOR-WISE PLAN AND NON-PLAN BUDGET ESTIMATES (REVENUE ACCOUNT) FOR EDUCATION
BY CENTRAL AND STATE GOVERNMENTS, 2007-08**

(Rs. Crores)

Sl. No.	SECTOR	PLAN			NON - PLAN			TOTAL		
		States	Central	Total	States	Central	Total	States	Central	Total
1.	Elementary Education	6523.53	18626.00	25149.53	43730.73	3.00	43733.73	50254.26	18629.00	68883.26
2.	Secondary Education	2230.51	3164.00	5394.51	31408.39	946.00	32354.39	33638.90	4110.00	37748.90
3.	Physical Education	19.90	0.00	19.90	56.06	0.00	56.06	75.96	0.00	75.96
4.	University & Other Higher Education	1101.83	3026.00	4127.83	9766.68	1682.53	11449.21	10868.51	4708.53	15577.04
5.	Adult Education	65.83	401.00	466.83	122.73	2.22	124.95	188.56	403.22	591.78
6.	Language Development	35.20	172.50	207.70	285.21	42.85	328.06	320.41	215.35	535.76
7.	Technical Education	1082.61	3240.00	4322.61	1756.72	941.03	2697.75	2839.33	4181.03	7020.36
8.	General	426.77	42.00	468.77	697.64	62.59	760.23	1124.41	104.59	1229.00
		11486.18	28671.50	40157.68	87824.16	3680.22	91504.38	99310.34	32351.72	131662.06

Source : Analysis of Budgeted Expenditure on Education (various issues).
Department of Education, Ministry of Human Resource Development.

Note : State include States and Union Territories.

Table 31

**NUMBER OF JOB SEEKERS ON THE LIVE REGISTERS OF EMPLOYMENT EXCHANGES,
DURING THE PERIOD 1971- 2006**

Year	Engine- ering Diploma Holders	Graduates					Post-graduates					
		Medical	Agricul- ture	Vety. Sci.	Science	Engine- ering*	Total	Medical	Agricul- ture	Vety. Sci.	Science	Total
1971	54056	3848	7325	361	99189	19050	129773	105	682	31	10114	10932
1972	59847	5127	9092	200	160644	22808	197871	128	810	7	13642	14587
1973	55215	5664	8913	371	210716	23093	248757	184	959	19	16036	17198
1974	53901	6682	7370	376	215089	19344	248861	238	775	11	17565	18589
1975	55564	7301	7958	511	237607	17316	270693	422	887	4	19374	20687
1976	62447	8249	8285	489	241319	18385	276727	321	911	13	24557	25802
1977	74319	8948	9763	299	265656	19798	304464	385	1064	46	25529	27024
1978	84317	10637	9765	399	281693	20113	322607	627	871	25	25751	27274
1979	87275	12923	10841	433	286639	21781	332617	924	850	35	25788	27597
1980	90306	14809	11375	356	310692	21862	359094	1836	546	66	25651	28099
1981	106183	15536	13046	353	337190	20393	386518	618	762	51	28003	29434
1982	119345	17700	16075	578	353918	22982	411253	799	1009	19	34891	36718
1983	135141	17607	17027	528	379931	23825	438918	1066	1252	15	38822	41155
1984	148985	20636	18938	661	416623	27044	483902	844	1235	18	43500	45597
1985	189836	21800	24437	713	430095	35523	512568	1499	1489	14	54047	57049
1986	232965	26772	26677	864	515342	45226	614881	2194	1672	26	64610	68502
1987	248179	27233	24539	1613	494812	56992	605189	2406	1912	71	67539	71928
1988	298535	24781	26805	1138	500694	63538	616956	2505	2096	52	74173	78826
1989	368561	28051	28860	1619	545552	80198	684280	2818	2320	36	82101	87275
1990	315502	28988	29352	2067	636505	95563	792475	2743	2672	49	92953	98417
1991	333174	30827	31705	2503	659813	128422	853270	2913	2667	102	90948	96630
1992	407837	28080	29701	2826	675481	141225	877313	3206	3866	139	94332	101543
1993	430577	28560	29529	3328	676099	152015	889531	3334	3932	133	100249	107648
1994	401832	27446	28495	3566	695084	158509	913100	3186	4658	401	104923	113168
1995	421029	28207	31322	3887	704059	168066	935541	3275	4991	433	97715	106414
1996	...	28600	27800	4400*	696900	171400*	753300	3300	4700	#	103600	111600
1997	...	33700*	33000*	5100*	873100*	186100*	1131000	#	#	#	#	#
1998	553000	31310	36600	5000	784000	180900	1037810	3800	5100	500	120000	129400
1999	...	46600	35300	6800	966700	212200	1267600	#	#	#	#	#
2000	731700	46400	35200	6700	963300	211400	1263000	#	#	#	#	#
2001	762500	47900	36300	6900	993800	218200	1303100	#	#	#	#	#
2002	648400	46000	34900	6700	954000	209400	1251000	#	#	#	#	#
2003	690891	48000	37300	5300	997600	218800	1307000	#	#	#	#	#
2004	730944	47300	36800	5200	984000	215800	1289100	#	#	#	#	#
2005	773908	48500	37700	5400	1007400	220900	1319900	#	#	#	#	#
2006	810229	60700	47200	6700	1261400	276700	1652700	#	#	#	#	#

Source : Directorate General of Employment & Training.

Note : * Including Post Graduates.

... Not Available

Included in Graduates, break-up not available

Vety Sci. Means Veterinary Science.

Table 32

**APPLICATIONS FOR PATENTS FROM PERSONS IN INDIA AND
ABROAD IN THE YEARS 1980 - 81 TO 2006 - 07**

	1980-81	1985-86	1990-91	1995-96	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Year	1178	999	1180	1606	2179	2371	2693	3218	3630	4521	5314
India	19	—	1	—	—	—	—	—	—	—	—
Foreigners Resident in India	1776	2527	2583	5430	6324*	8221*	8773	9395*	13836 *	19984*	23626
Foreigners Resident abroad	2973	3526	3764	7036	8503	10592	11466	12613	17466	24505	28940
Total											

Source : Annual Reports of the Controller General of Patents, Designs and Trade Marks.

Note : * Includes number of phase applications for patents filed at the designated office/elected office in India.

Table 33
APPLICATIONS FOR PATENTS FILED IN INDIA FROM 1980-81 TO 2006-07
BY FOREIGN COUNTRIES

Sl. No.	Country	Number of applications filed												
		1980-81	1985-86	1990-91	1995-96	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
1.	U.S.A.	570	968	1130	2239	2807	936	2271	2916	2416	3165	5265	8048	8389
2.	Germany*	274	277	294	676	912	317	829	1072	857	959	1614	1736	2329
3.	U.K.	210	278	230	405	401	103	359	461	391	438	430	796	933
4.	France	133	188	150	242	351	101	309	359	299	456	860	1022	1226
5.	Japan	96	140	134	431	688	432	787	920	731	504	1122	1555	1887
6.	Switzerland	90	116	141	206	350	197	338	432	418	361	464	927	1330
7.	Italy	77	62	50	112	122	49	86	151	118	167	207	377	576
8.	Russia**	57	68	53	3	5	5	23	39	11	20	9	34	45
9.	Netherlands	50	56	66	157	167	24	202	302	391	264	540	837	1108
10.	Others	219	374	336	959	904	454	1120	1569	3141	3061	3325	4652	5803
Total		1776	2527	2584	5430	6707	2618	6324	8221	8773	9395	13836	19984	23626

Source : Annual Reports of the Controller General of Patents, Designs and Trade Marks.

Note : * Data prior to the year 1993-94 refers to FRG.

** Data prior to the year 1994-95 refers to USSR.

Table 34

APPLICATIONS FOR PATENTS FILED FROM 1980-81 TO 2006-07 BY DIFFERENT STATES

Sl. No.	Name of the State/ Union Territory	1980-81	1985-86	1990-91	1995-96	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
1.	Delhi	333	230	364	499	581	648	663	678	726	795	935	1018	1310
2.	Maharashtra	296	291	283	381	695	607	545	650	681	921	1093	1233	1607
3.	Tamil Nadu	112	81	109	125	148	155	174	220	290	330	397	433	2
4.	West Bengal	110	110	96	192	196	137	143	161	116	154	131	214	244
5.	Gujarat	72	53	44	75	58	178	147	120	161	189	179	203	337
6.	Karnataka	38	53	69	57	125	122	112	147	118	180	216	428	596
7.	Uttar Pradesh	37	38	39	35	55	67	90	80	103	126	72	193	205
8.	Bihar	36	29	26	21	49	29	31	8	2	9	41	29	14
9.	Kerala	35	35	60	72	91	62	77	70	85	88	79	96	128
10.	Andhra Pradesh	34	14	35	53	130	106	100	120	196	222	254	408	385
11.	Haryana	15	3	9	7	17	15	20	27	75	45	48	93	93
12.	Punjab	17	9	9	16	20	9	15	14	46	27	27	29	74
13.	Rajasthan	10	15	3	17	17	12	7	13	13	28	28	17	44
14.	Madhya Pradesh	13	18	18	29	31	21	30	19	30	29	45	55	33
15.	Others	20	20	16	27	34	38	25	44	51	75	85	72	242
Total		1178	999	1180	1606	2247	2206	2179	2371	2693	3218	3630	4521	5314

Source : Annual Reports of the Controller General of Patents, Designs and Trade Marks

Table 35

PATENTS FILED AND SEALED IN THE YEARS 1976-77 TO 2006-07

(Number)

Year	No. of applications made	No. of applications brought forward from preceding year	Total No. of applications to be examined	No. of applications examined	No. of applications deemed to have been abandoned filling of complete specifications	Total No. of complete specifications notified as accepted the year	No. of applications deemed to have been abandoned non-acceptance of Complete Specifications	No. of patents sealed		No. of patents in force	
								Indian	Foreign	Indian	Foreign
1	2	3	4	5	6	7	8	9	10	11	12
1976-77	3104	3876	6980	3612	295	2840	533	928	1964	2746	19780
1977-78	2870	3067	5937	2369	378	2507	577	657	1857	3065	19795
1978-79	2932	3190	6122	1266	283	2070	498	281	499	2469	13966
1979-80	2980	4573	7533	1498	304	1210	429	516	1657	2786	14474
1980-81	2954	5751	8705	2301	325	1007	372	349	670	2757	14448
1981-82	2989	6079	9068	2984	274	1191	422	421	936	3038	14892
1982-83	3085	5810	8895	3165	310	1580	734	405	822	3329	15291
1983-84	3145	5420	8565	3043	295	1447	774	340	980	3523	15726
1984-85	3319	5227	8546	2270	224	3267	710	263	1206	3008	13162
1985-86	3526	6052	9578	2490	214	1495	824	451	1500	2549	10844
1986-87	3489	6874	10363	4846	267	1706	729	532	1594	2004	10059
1987-88	3457	5250	8707	3582	158	2966	912	588	1516	2150	10115
1988-89	3598	4967	8565	3650	166	2386	1049	795	2585	2584	11015
1989-90	3661	4746	8407	3333	225	1760	984	519	1371	2468	10941
1990-91	3764	4849	8613	2185	183	2170	878	379	1112	2238	8210
1991-92	3552	6255	9807	2431	213	2060	789	551	1125	1206	9093
1992-93	3467	7163	10630	2347	289	1600	567	251	1021	1034	8997
1993-94	3869	7994	11863	2590	224	1250	686	442	1304	1995	7281
1994-95	5330	9049	14379	2745	130	1590	765	476	1283	1923	7052
1995-96	7036	11504	18540	2862	204	1400	972	415	1118	2098	6694
1996-97	8562	15474	24036	3042	375	2049	675	293	614	2003	7202
1997-98	10155	20619	30774	2688	59	2580	803	619	1225	2047	6882
1998-99	8954	28027	36981	2931	820	1600	804	645	1155	2088	6691
1999-00	4824	33230	38054	2824	362	1310	195	557	1324	2200	6458
2000-01	8503	34968	43471	4264	89	1950	460	399	919	1495	6530
2001-02	10592	39118	49710	5104	325	1669	1031	654	937	1578	6742
2002-03	11466	44281	55747	9538	290	2780	1633	494	885	1479	6518
2003-04	12613	NIL	12362	10709	933	2805	1695	945	1524	2075	4331
2004-05	17466	NA	19001	14813	267	3307	775	764	1147	2200	4657
2005-06	24505	NA	21926	NA	414	NA	894	1396	2924	4486	11933
2006-07	28940	NA	20645	NA	694	NA	1121	1907	5632	3473	13593

Source : Annual Reports of Controller General of Patents, Design and Trade Marks

Table 36

**RESEARCHERS PER MILLION PEOPLE FOR SELECTED
COUNTRIES, 2004- 2006**

Sl. No.	Country	No of Researchers per million people	Population in Million	Total Researchers
1	Argentina	895	39	34905
2	Australia	4053	21	85113
3	Austria	3657	8	29256
4	Brazil	461	189	87129
5	Canada	3922	33	129426
6	China	926	1312	1214912
7	Czech Rep.	2578	10	25780
8	Denmark	5277	5	26385
9	Finland	7681	5	38405
10	France	3353	61	204533
11	Germany	3386	82	277652
12	Hungary	1745	10	17450
13	India	140	1106	154840
14	Italy	1407	59	83013
15	Japan	5546	128	709888
16	Korea, Rep.	4162	48	199776
17	Mexico	464	104	48256
18	Netherlands	2524	16	40384
19	Norway	4668	5	23340
20	Pakistan	80	159	12720
21	Russian Fed.	3255	143	465465
22	Singapore	5713	4	22852
23	Spain	2639	44	116116
24	Sri Lanka	141	20	2820
25	Sweden	6139	9	55251
26	United Kingdom	3033	61	185013
27	United States	4651	299	1390649
28	Venezuela	86	27	2322

Source : Researchers Per Million - UIS,UNESCO(Website accessed on 15 October, 2008)
Population Figures - World Development Indicators 2008, The World Bank

Table 37

**R&D EXPENDITURE PER CAPITA AND AS PERCENTAGE OF GDP
FOR SELECTED COUNTRIES, 2004-06**

Sl.No	Country	Per Capita R&D in Us \$	Per Capita GDP in Us \$	R&D Exp. as % GDP
1	Argentina	27.21	5493	0.49
2	Australia	559.35	37168	1.78
3	Austria	988.12	40250	2.46
4	Brazil	38.57	5648	0.82
5	Canada	760.45	38533	1.97
6	China	28.72	2016	1.42
7	Czech Rep.	220.80	14302	1.54
8	Denmark	1341.02	55067	2.44
9	Finland	1440.30	42130	3.43
10	France	778.34	36854	2.12
11	Germany	887.67	35328	2.52
12	Hungary	113.10	11292	1.00
13	India	5.90	824	0.88
14	Israel	907.59	20065	4.53
15	Italy	330.48	31372	1.10
16	Japan	1160.35	34128	3.40
17	Korea, Rep.	596.68	18501	3.23
18	Mexico	37.21	8069	0.50
19	Netherlands	696.09	41394	1.69
20	Norway	993.17	66988	1.49
21	Pakistan	3.00	798	0.44
22	Russian Fed.	74.16	6902	1.08
23	Singapore	787.69	33040	2.39
24	Spain	335.66	27834	1.21
25	Sri Lanka	1.89	1348	0.19
26	Sweden	1628.94	42644	3.82
27	United Kingdom	704.40	38967	1.80
28	United States	1149.66	44026	2.61
29	Venezuela	12.34	6736	0.23

Source : UIS, UNESCO (Website accessed on 15th October, 2008)
World Development Indicators (various issues),The World Bank
Note : China excludes Hong Kong

Table 38**COUNTRY OF CITIZENSHIP OF NON-U.S. CITIZENS AWARDED SCIENCE AND ENGINEERING DOCTORATES BY U.S. UNIVERSITIES 1980-2005**

(Number)

Sl. No.	Country of Citizenship	Year					
		1980	1990	1991	1994-97	1998-2001	2002-05
1	Argentina	25	65	62	244	273	321
2	Australia	120	45	35	227	197	164
3	Brazil	123	98	118	681	612	567
4	Canada	155	252	296	1180	1259	1458
5	China	423	1150	1792	11,297	9,947	11594
6	Egypt	74	159	109	365	327	487
7	France	16	65	67	320	327	389
8	Germany	27	123	118	757	838	750
9	India	371	711	752	5,014	3,855	3,587
10	Indonesia	20	53	62	310	223	237
11	Italy	15	63	86	328	366	494
12	Israel	66	74	85	323	164	227
13	Japan	69	147	125	614	596	713
14	Korea Rep.	131	971	1107	4,017	3,218	4,062
15	Nigeria	88	82	77	194	115	77
16	U.K.	...	104	134	485	516	480

Source : Science and Engineering indicators.

Note : ...Not Available

Figures from the year 1994 onwards are given in consolidated form.

Table 39

**FINANCIAL PROGRESS FOR S&T IN THE EIGHTH (1992-97) NINTH (1997-2002)
AND TENTH (2002-07) PLAN PERIOD FOR S&T AGENCIES**

(Rs. Crores)

Sl. No.	Agency	8th Plan (1992-97)		9th Plan (1997-2002)		10th Plan (2002-07)		11th Plan (2007-12)	
		Plan Outlay	A.E.	Plan Outlay	A.E.	Plan Outlay	A.E.	Plan Outlay	A.E.
1	DAE	600.00	663.91	1500.00	1525.60	3501.35	3199.45	11000.00	11000.00
2	DOD/ MoES	130.00	199.40	510.62	452.11	1125.00	1048.69	7004.00	7004.00
3	DST	640.00	936.71	1497.35	1502.32	3400.00	3998.12	11028.00	11028.00
4	DBT	265.00	395.84	675.00	621.72	1450.00	1649.66	6389.00	6389.00
5	DSIR/CSIR	655.00	774.93	1327.48	1356.02	2575.00	2785.77	9000.00	9000.00
6	DOS	1804.00	3154.85	6511.72	6615.35	13250.00	10870.51	30883.00	30883.00
	Total	4094.00	6125.64	12022.17	12073.12	25301.35	23552.20	75304.00	75304.00

Source : S&T Division, Planning Commission.

- Note : 1. A.E. - Anticipated Expenditure
2. DAE - Deptt. of Atomic Energy.
3. DOD - Deptt. of Ocean Development.
4. MoES - Ministry of Earth Sciences
5. DST - Deptt. of Science & Technology.
6. DBT - Deptt. of Bio-Technology
7. DSIR/CSIR - Deptt. of Scientific & Industrial Research/
Council of Scientific and Industrial Research.
8. DOS - Deptt. of Space.

Table 40

SELECTED STATISTICAL INDICATORS FOR INDIA

Indicator	Year	Unit	Numbers	Source
POPULATION AND HEALTH				
(a) Population	1950-51	Million	359	Economic Survey
	2003-04	Million	1072	2007-08
	2004-05	Million	1089	—do—
	2005-06	Million	1106	—do—
	2006-07	Million	1122	—do—
(b) Birth Rate Per Thousand Population	1950-51	Number	39.9	—do—
	2001-02	Number	25.4	—do—
	2004-05	Number	23.8	—do—
	2005-06	Number	23.5	—do—
(c) Death Rate Per Thousand Population	1950-51	Number	27.4	—do—
	2001-02	Number	8.4	—do—
	2004-05	Number	7.6	—do—
	2005-06	Number	7.5	—do—
(d) Female Population Per Thousand Male	1951	Number	946.0	—do—
	1991	Number	927.0	—do—
(e) Registered Medical Practitioners(R.M.P.)	1950-51	Thousand	61.8	—do—
	2000-01	Thousand	577.1	—do—
	2004-05	Thousand	660.8	—do—
(f) Registered Medical Practitioners(R.M.P.) Per Ten Thousand Population	1950-51	Number	1.7	—do—
	2000-01	Number	5.6 *	—do—
(g) Beds All Types Per Ten Thousand Population	1950-51	Number	3.2	—do—
	1990-91	Number	9.5	—do—
(h) Expectancy of Life at Birth				
	(1) Male			
	1950-51	Years	32.50	Economic Survey
	2000-01	Years	61.6	2007-08
	2003-04	Years	62.3	—do—
	(2) Female			
	1950-51	Years	31.7	
	2000-01	Years	63.3	—do—
	2003-04	Years	63.9	
AGRICULTURE PRODUCTION				
(a) Foodgrains	1950-51	Million Tonnes	50.8	Economic Survey
	1990-91	Million Tonnes	176.4	2007-08
	2000-01	Million Tonnes	196.8	
	2003-04	Million Tonnes	213.2	—do—
	2004-05	Million Tonnes	198.4	
	2005-06	Million Tonnes	208.6	
	2006-07	Million Tonnes	216.1d	

Contd...

Indicator	Year	Unit	Numbers	Source
(b) Oilseeds	1950-51	Million Tonnes	5.2	Economic Survey 2007-08
	1990-91	Million Tonnes	18.6	
	2000-01	Million Tonnes	18.4	—do—
	2003-04	Million Tonnes	25.2	
	2004-05	Million Tonnes	24.4	
	2005-06	Million Tonnes	28	
	2006-07	Million Tonnes	23.8	
(c) Pulses	1950-51	Million Tonnes	8.4	Economic Survey 2007-08
	1990-91	Million Tonnes	14.3	
	2000-01	Million Tonnes	11.0	—do—
	2003-04	Million Tonnes	14.9	
	2004-05	Million Tonnes	13.1	
	2005-06	Million Tonnes	13.4	
	2006-07	Million Tonnes	14.2	

PER CAPITA NET AVAILABILITY

(a) Cereals	1951	Gms/day	334.2	Economic Survey 2007-08
	1990	Gms/day	435.3	
	2000	Gms/day	422.7	—do—
	2003	Gms/day	408.5	
	2004	Gms/day	426.9	
	2005	Gms/day	390.9	
	2006	Gms/day	412.1*	
(b) Pulses	1951	Gms/day	60.7	Economic Survey 2007-08
	1990	Gms/day	41.1	
	1998	Gms/day	31.8	—do—
	2003	Gms/day	29.1	
	2004	Gms/day	35.8	
	2005	Gms/day	31.5	
	2006	Gms/day	32.5*	

BASIC ECONOMIC DATA

(a) GNP at Factor Cost (current prices)	1950-51	Rs. Crores	9678	Economic Survey 2007-08
	1990-91	Rs. Crores	507487	
	2000-01	Rs. Crores	1902284	—do—
	2003-04	Rs. Crores	2519921	
	2004-05	Rs. Crores	2855331	
	2005-06	Rs. Crores	3249554	
	2006-07	Rs. Crores	3760285	
(b) Per Capita Net National Product (current prices)	1950-51	Rupees	255	—do—
	1990-91	Rupees	5440.0	
	2000-01	Rupees	16688	
	2003-04	Rupees	20895	
	2004-05	Rupees	23199	
	2005-06	Rupees	25956	
	2006-07	Rupees	29642	
(c) Index of Industrial Production	1950-51	(Base:1993-94)	7.9	—do—
	1990-91	(Base:1993-94)	91.6	
	2000-01	(Base:1993-94)	162.6	
	2003-04	(Base:1993-94)	189	
	2004-05	(Base:1993-94)	204.8	
	2005-06	(Base:1993-94)	221.5	
	2006-07	(Base:1993-94)	247.1	

Indicator	Year	Unit	Numbers	Source
(d) Wholesale Price Index**	1950-51	(Base:1993-94)	6.8	—do—
	1990-91	(Base:1993-94)	73.7	
	2000-01	(Base:1993-94)	155.7	
	2003-04	(Base:1993-94)	175.9	
	2004-05	(Base:1993-94)	187.3	
	2005-06	(Base:1993-94)	195.6	
	2006-07	(Base:1993-94)	206.2	
(e) Consumer Price Index@	1950-51	(Base : 1982)	17	—do—
	1990-91	(Base : 1982)	193	
	2000-01	(Base : 1982)	444	
	2003-04	(Base : 1982)	500	
	2004-05	(Base : 1982)	520	
	2005-06	(Base : 1982)	542	
	2006-07	(Base : 1982)	125	
(f) Number of Villages Electrified	1951	Number	3061	India, 2008 A Reference Annual
	1990	Number	460536	
	2000	Number	506920	
	2005	number	498877	
FOREIGN TRADE				
(a) Exports	1950-51	Rs. Crores	606	Economic Survey 2007-08
	1990-91	Rs. Crores	32553	
	2000-01	Rs. Crores	203571	
	2003-04	Rs. Crores	293367	
	2004-05	Rs. Crores	375340	
	2005-06	Rs. Crores	456418	
	2006-07	Rs. Crores	571779	
(b) Imports	1950-51	Rs. Crores	608	—do—
	1990-91	Rs. Crores	43198	
	2000-01	Rs. Crores	230873	
	2003-04	Rs. Crores	359108	
	2004-05	Rs. Crores	501065	
	2005-06	Rs. Crores	660409	
	2006-07	Rs. Crores	840506	
EDUCATION				
(a) Literacy Rate	1950-51	Percentage	18.33	Economic survey 2007-08
	1980-81	Percentage	43.57	
	1990-91	Percentage	52.20	
	2000-01	Percentage	64.80	
(b) Number of University/ Deemed University	1950-51	Number	27	University Grants Commission
	1990-91	Number	179	
	2000-01	Number	240	
	2003-04	Number	302	
	2004-05	Number	325	
	2005-06	Number	337	
	2006-07	Number	358	
(c) Number of Colleges	1950-51	Number	542	University Grants Commission
	1990-91	Number	7346	
	2000-01	Number	12806	
	2003-04	Number	16885	
	2004-05	Number	18120	
	2005-06	Number	19348	
	2006-07	Number	20677	

Indicator	Year	Unit	Numbers	Source
(d) Number of High/ Higher Secondary Schools	1950-51	Number	7288	Ministry of HRD (Deptt. of Education)
	1990-91	Number	79000	
	1998-99	Number	112438	
	2003-04	Number	145962	
	2004-05	Number	152049*	
	2005-06	Number	159667*	
(e) Number of Primary/Junior Basic Schools	1950-51	Number	209671	—do—
	1990-91	Number	558000	
	1998-99	Number	626737	
	2003-04	Number	712239	
	2004-05	Number	767520*	
	2005-06	Number	772568*	
(f) Number of Middle/Senior Basic Schools	1950-51	Number	13590	—do—
	1990-91	Number	147000	
	1998-99	Number	190166	
	2003-04	Number	262286	
	2004-05	Number	274731*	
	2005-06	Number	288493*	
(g) Education Expenditure	1950-51	Rs. Crores	114.4	—do—
	1990-91	Rs. Crores	20761.3	
	1998-99	Rs. Crores	62019.5	
	2005-06	Rs. Crores	114388.8	
	RESEARCH & DEVELOPMENT			
(a) R & D Expenditure	1950-51	Rs. Crores	4.7	R & D Statistics 2007-08
	1990-91	Rs. Crores	3974.17	
	2000-01	Rs. Crores	16198.80	
	2005-06	Rs. Crores	28776.65	
	(b) R & D Expenditure as Percentage of GNP	1950-51	Percentage	
1990-91		Percentage	0.79	
2000-01		Percentage	0.86	
2005-06		Percentage	0.89	

- Note :
1. * Provisional
 2. ** Figures for the year up to 1993-94 derived by converting the indices on earlier bases in to base 1993-94=100
 3. #- Data from Travancore(Kerala)& Goa Medical Councils have not been included
 4. @ Figures for the period up to 1988-89 derived by converting indices on earlier bases into base 1982=100
 5. \$ Relate to the calender year 1950
 6. + Data available on website of Registrar General & Census Commissioner(RGCCCI), India. ie projected population of India.
 7. c Data refers to average over 1993-97 as estimated by the sample registration system and centred at 1995.
 8. d 4th advance estimates