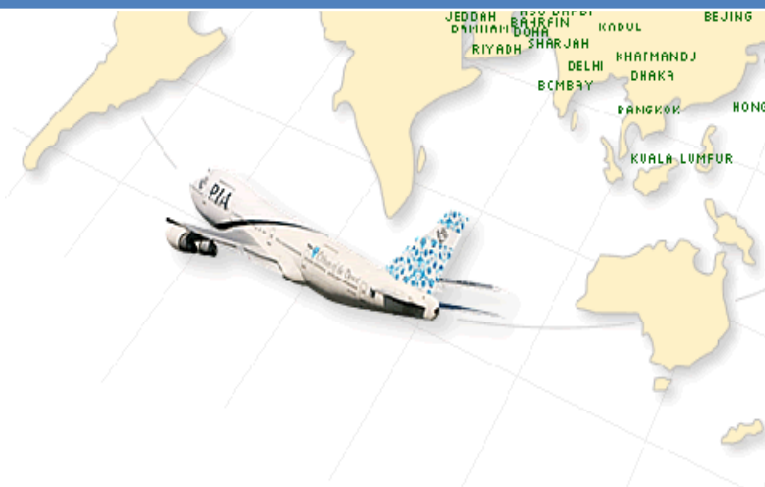




# 2009

## General knowledge



RAVI KUMAR

Special Training program, IEG

1/1/2009

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**INDIA-I**

### Earth Some Important Facts

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Age	4,550 million years
Mass	5.976 x 10 <sup>24</sup> kg
Volume	1.083 x 10 <sup>21</sup> litres
Mean Density	5.518 kg/lt
Total Surface Area	510 million sq.km
Land Area	29.2% of the total surface area
Water Area	70.8% of the total surface area
Equatorial Diameter	12,755 km
Polar Diameter	12,712 km
Escape Velocity	11.2 km/sec
Highest Land Point	Mount Everest (8,852 m)
Lowest Land Point	Dead Sea (396 m)
Greatest Ocean Depth	Mariana Trench (11,033 m)
Equatorial Circumference	40,076 km
Polar Circumference	40,024 km
Mean Surface Temperature	14C
Maximum distance from sun (Aphelion)	About 152 million km
Minimum distance from sun (Perihelion)	About 147 million km
Rotation Speed	23 hrs, 56 min & 40.91 sec
Revolution Speed	365 days, 5hrs & 45.51 sec
Dates when days & nights are equal	Mar,21 (Vernal Equinox); Sept. 23 (Autumnal Equinox)
Dates of longest days and shortest nights	June 21 (Summer Solstice); Dec, 22 (Winter Solstice)

### Indian States International Boundaries

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1	Bordering Pakistan	Jammu and Kashmir, Punjab, Rajasthan, Gujarat.
2	Bordering China	Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh.
3	Bordering Nepal	Bihar, Uttarakhand, UP, Sikkim, West Bengal
4	Bordering Bangladesh	West Bengal, Mizoram, Meghalaya, Tripura, Assam
5	Bordering Bhutan	West Bengal, Sikkim, Arunachal Pradesh, Assam
6	Bordering Myanmar	Arunachal Pradesh, Nagaland, Manipur, Mizoram
7	Bordering Afghanistan	Jammu and Kashmir (Pakistan - occupied area)

### Important Crops India

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1	Rice	West Bengal, Punjab, UP
2	Wheat	UP, Punjab, Haryana
3	Maize	Madhya Pradesh, Andhra Pradesh, Karnataka
4	Bajra	Rajasthan, Gujarat, UP
5	Jowar	Maharashtra, Karnataka, MP, AP
6	TOTAL COARSE CEREALS	Maharashtra, Karnataka, UP
7	TOTAL PULSES	MP, UP, Maharashtra
8	TOTAL FOOD GRAINS	UP, Punjab, West Bengal
9	Groundnut	Gujarat, Tamil Nadu, Andhra Pradesh

10	Rapeseed And Mustard	Rajasthan, UP, Haryana
11	Soyabean	Madhya Pradesh, Maharashtra, Rajasthan
12	Sunflower	Karnataka, Andhra Pradesh, Maharashtra
13	TOTAL OIL SEEDS	MP, Maharashtra, Rajasthan
14	Sugarcane	UP, Maharashtra, Karnataka
15	Cotton	Maharashtra, Gujarat, Andhra Pradesh
16	Jute and Mesta	WB, Bihar, Assam
17	Tea	Assam, West Bengal, Himachal Pradesh
18	Coffee	Karnataka, Kerala, Tamil Nadu
19	Rubber	Kerala, Tamil Nadu, Karnataka
20	Silk	Karnataka, Jammu and Kashmir, Andhra Pradesh. In India all 4 varieties of silk are available; Mulberry, tussar, eri and muga. Mulberry is the main variety, while tussar is mainly found in Bihar.
21	Tobacco	Gujarat, Andhra Pradesh, Karnataka

### Important National Highways

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SNo	National Highways	Connects
1	NH 1	New Delhi - Ambala - Jalandhar - Amritsar.
2	NH 2	Delhi - Mathura - Agra - Kanpur - Allahabad - Varanasi - Kolkata
3	NH 3	Agra - Gwalior - Nasik - Mumbai
4	NH 4	Thane and Chennai via Pune and Belgaun.
5	NH 5	Kolkata - Chennai
6	NH 6	Kolkata - Dhule
7	NH 7	Varanasi - Kanyakumari
8	NH 8	Delhi - Mumbai (Via Jaipur, Baroda and Ahmedabad)
9	NH 9	Mumbai - Vijaywada
10	NH 10	Delhi - Fazilka

### Important Rivers India

SNo	Name	Origin From	Falls into	Length (km)
23	Tungabhadra	Western Ghats	Krishna river	640
1	Ganges	Combined Sources	Bay of Bengal	2525
2	Satluj	Mansarovar Rakas Lakes	Chenab	1050
3	Indus	Near Mansarovar Lake	Arabian Sea	2880
4	Ravi	Kullu Hills near Rohtang Pass	Chenab	720
5	Beas	Near Rohtang Pass	Satluj	470
6	Jhelum	Verinag in Kashmir	Chenab	725
7	Yamuna	Yamunotri	Ganga	1375
8	Chambal	M.P.	Yamuna	1050
9	Ghagra	Matsatung Glacier	Ganga	1080
10	Kosi	Near Gosain Dham Peak	Ganga	730
11	Betwa	Vindhyanchal	Yamuna	480
12	Son	Amarkantak	Ganga	780
13	Brahmaputra	Near Mansarovar Lake	Bay of Bengal	2900
14	Narmada	Amarkantak	Gulf of Khambat	1057
15	Tapti	Betul Distt. In M.P.	Gulf of Khambat	724
16	Mahanadi	Raipur Distt. In Chhatisgarh	Bay of Bengal	858
17	Luni	Aravallis	Rann of Kuchchh	450
18	Ghaggar	Himalayas	Near Fatehabad	494
19	Sabarmati	Aravallis	Gulf of Khambat	416
20	Krishna	Western Ghats	Bay of Bengal	0
21	Godavari	Nasik Distt. In Maharashtra	Bay of Bengal	1465
22	Cauvery	Brahmagir Range of Western Ghats	Bay of Bengal	805



### Important River Valley Projects

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Sno	Project Name	River Name
1	Bhakra Nangal Project	On Sutlaj in Punjab. Highest in India. Ht 226 m. Reservoir is called Gobind Sagar Lake.
2	Mandi Project	On Beas in HP
3	Chambal Valley Project	On Chambal in MP & Rajasthan. 3 dams are there: Gandhi Sagar Dam, Rana Pratap Sagar Dam and Jawahar Sagar Dam.
4	Damodar Valley Project	On Damodar in Bihar. Based on Tennessee Valley Project, USA.
5	Hirakud Project	On Mahanadi in Orissa. World's longest dam: 4801m
6	Rihand Project	On Son in Mirzapur, Reservoir is called Govind Vallabh Pant reservoir.
7	Kosi Project	On Kosi in N.Bihar.
8	Mayurkashi Project	On Mayrukashi in WB.
9	Kakrapara Project	On Tapi in Gujarat.
10	Nizamsagar Project	On Manjra in AP.
11	Nagarjuna Sagar Project	On Krishna in AP
12	Tungabhadra Project	On Tungabhadra in AP & Karnataka
13	Shivasamudram Project	On Cauvery in Karnataka. It is the oldest river valley project of India.
14	Tata Hydel Scheme	On Bhima in Maharashtra
15	Sharavathi Hydel Project	On Jog Falls in Karnataka
16	Kundah & Periyar Project	In TN
17	Farakka Project	On Ganga in WB. Apart from power and irrigation it helps to remove silt for easy navigation.
18	Ukai Project	On Tapti in Gujarat
19	Mahi Project	On Mahi in Gujarat

20	Salal Project	On Chenab in J & K
21	Mata Tila Multipurpose Project	On Betwa in UP & MP
22	Thein Project	On Ravi, Punjab
23	Pong Dam	On Beas, Punjab
24	Tehri Project	On Bhagirathi, Uttaranchal
25	Sardar Sarovar Project	On Narmada, Gujarat/MP.

### Important Indian Town Rivers

SNo	Town	River
1	Allahabad	At the confluence of the Ganga and Yamuna
2	Patna	Ganga
3	Varanasi	Ganga
4	Kanpur	Ganga
5	Hardwar	Ganga
6	Badrinath	Alaknanda
7	Agra	Yamuna
8	Delhi	Yamuna
9	Mathura	Yamuna
10	Ferozpur	Satluj
11	Ludhiana	Satluj
12	Srinagar	Jhelum
13	Lucknow	Gomti
14	Jaunpur	Gomti
15	Ayodhya	Saryu
16	Bareilly	Ram Ganga
17	Ahmedabad	Sabarmati
18	Kota	Chambal

19	Jabalpur	Narmada
20	Panji	Mandavi
21	Ujjain	Kshipra
22	Surat	Tapti
23	Jamshedpur	Swarnarekha
24	Dibrugarh	Brahmaputra
25	Guwahati	Brahmaputra
26	Kolkata	Hooghly
27	Sambalpur	Mahanadi
28	Cuttack	Mahanadi
29	Serirangapatnam	Cauvery
30	Hyderabad	Musi
31	Nasik	Godavari
32	Vijayvada	Krishna
33	Curnool	Tungabhadra
34	Tiruchirapalli	Cauvery

### Hill Stations India

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Hill Stations	State Name
Almora (Kumaon hills)	Uttar Pradesh
Cherrapunji (Shillong)	Meghalaya
Coonoor (Nilgiri hills)	Tamil Nadu
Dalhousie	Himachal Pradesh
Darjeeling	West Bengal
Gulmarg	Kashmir (Highest)
Kasauli (Shimla)	Himachal Pradesh
Kodaikanal	Tamil Nadu

Mahabaleshwar	Maharashtra
Mt. Abu	Rajasthan
Mussoorie	Uttaranchal
Nainital	Uttaranchal
Ootacamund	Tamil Nadu
Pachmarhi	Madhya Pradesh
Ranchi	Jharkhand
Shillong (Khasi hills)	Meghalaya
Shimla	Himachal Pradesh
Srinagar	Jammu & Kashmir

### Sanctuaries and Parks in India

Name	Location	Reserves for
Achanakmar Sanctuary	Bilaspur, Chhattisgarh	Tiger, bear, chital, sambar, bison
Bandhavgarh National Park	Shahdol, Madhya Pradesh	Tiger, panther, chital, nilgai, wild bear
Bandipur Sanctuary	Border of Karnataka and Tamil Nadu	Elephant, tigers, panther, sambar, deer, birds
Banarghatta	Bangalore	Elephant, chital, deer, gray
National Park	Karnataka	Partridges, green pigeon
Bhadra Sancturary	Chikmagalur, Karnataka	Elephant, chital, panther, sambar, wild bear
Bhimabandh Sanctuary	Monghyr, Bihar	Tiger, leopard, sambar, wild bear, chital, water birds

Bori Sanctuary	Hoshangabad, Madhya Pradesh	Tiger, panther, sambar, chital, wild boar, barking deer
Borivli National Park	Mumbai	Panther, sambar, langur, wild boar, chinkara
Chandraprabha Sanctuary	Near Varanasi Uttar Pradesh	Famous for Gir lions, chital and sambar
Corbett National Park named in memory of Jim Corbett, famous sportsman	Nainital, Uttaranchal	Tiger, leopards, elephants, sambar
Dachigam Sanctuary	Dachigam, Kashmir	Kashmiri stag
Datma Sanctuary	Singbhum, Uttaranchal	Elephants, leopard, wild bear, barking deer
Dandeli Sanctuary	Dharwar, Karnataka	Tiger, panther, elephant, chital, sambar, wild bear
Dudhwa National Park	Lakhimpurkheri U.P.	Tiger, panther, sambar, chital, nilgai, barking deer
Gandhi Sagar Sanctuary	Mandsaur, M.P.	Chital, sambar, chinkara, barking deer, wild birds
Garampani Sanctuary	Diphu, Assam	Elephant, leopard, wild buffalo, langur
Ghana Bird Sanctuary	Bharatpur, Rajasthan	Water birds, black- buck, chital, sambar
Gir Forest	Junagarh, Gujarat	India's biggest wild life sanctuary famous for Gir lions
Gautam Buddha Sanctuary	Gaya, Bihar	Tiger, leopard, sambar, chital, barking deer

Hazaribagh Sanctuary	Hazaribagh, Jharkhand	Tiger, leopard, chital, nilgai, sambar, wild cat
Intangki Sanctuary	Kohima, Nagaland	Elephant, gaur, tiger, panther, barking deer, wild boar
Jaldapara Sanctuary	West Bengal	Rhinoceros
Kawal Sanctuary	Adilabad, A.P.	Tiger, panther, gaur, chital, wild bear
Kaziranga National Park	Jorhat, Assam	Horned rhinoceros, gaur, elephant, leopard, wild buffalo
Khangchandzendra National Park	Gangtok, Sikkim	Snow leopard, musk deer, Himalayan bear
Kinnersani Sanctuary	Khamrsan, A.P.	Tiger, panther, gaur, chital, sambar, nilgai
Kolleru Pelicanary	Elluru A.P.	Pelicans, painted stork
Nagerhole National Park	Coorg, Karnataka	Elephant, tiger, panther, sambar, chital
Namdafa Sanctuary	Tirap, Arunachal Pradesh	Elephant, panther, sambar, tiger, chital, king cobra
Nawegaon National Park	Bhandara, Maharashtra	Tiger, panther, sambar, chital, nilgai
Pachmarhi Sanctuary	Hoshangabad, M.P.	Tiger, panther, bear, sambar, nilgai, barking deer
Pakhal Sanctuary	Warangal A.P.	Tiger, panther, sambar, chital, nilgai

Parambikulam Sanctuary	Palghat, Kerala	Tiger, leopard, gaur, elephant, nilgai, chital
Pench National Park	Nagpur, Maharashtra	Tiger, panther, gaur, sambar, chital, nilgai
Periyar Sanctuary	Idukki, Kerala	Elephant, tiger, panther, gaur, nilgai, sambar, wild bear
Ranganthitoo Bird Sanctuary	Islands in Cauvery river in Karnataka	Important bird sanctuary
Rohla National Park	Kulu, H.P.	Snow leopard, brown bear, musk deer, snow cock, snow pigeon
Sariska Sanctuary	Alwar, Rajasthan	Tiger, panther, sambar, nilgai, chital, chinkara
Sharaswathy Valley Sanctuary	Shimoga, Karnataka	Elephant, tiger, panther, sambar, gaur chital, wild bear
Shikari Devi Sanctuary	Mandi, H.P.	Black bear, musk deer, panther, leopard, partridge
Shivpuri National Park	Shivpuri, M.P.	Tiger, panther, sambar, hyena, hyena, sloth bear, nilgai
Similipal Sanctuary	Mayurbhanj, Orissa	Elephant, tiger, leopard, gaur, chital
Someshwara Sanctuary	Canara, Karnataka	Tiger, panther, wild boar, leopard
Sunderban Tiger Reserve	South 24 parganas, West Bengal	Tiger, deer, wild boar, crocodile, Gangetic dolphin

## Mineral Resources of India

1	Coal	West Bengal (Raniganj, Burdwan, Bankura, Purulia, Birbhum, Jalpaigudi, Darjeeling) Jharkhand (Jharia, Giridih, Kharhawadi, Bokaro, Hazaribagh, Karnapura, Rampur, Palamau), Orissa (Rampur, Hindgir, Talcher, Sambhal), Madhya Pradesh and Chhatisgarh (Rewa, Pench valley, Umaria, Korba, Sohagpur, Mand river area, Kanha valley, Betul), etc. Power sector is the largest consumer of coal in India followed by steel industry, cement industry, etc.
2	Manganese	Orissa, Maharashtra (Nagpur, Bhandara, Ratnagiri), Madhya Pradesh (Balaghat, Chhindawara), Karnataka (Keonjhar, Bonai, Kalahandi), Andhra Pradesh (Kadur, Garibadi).
3	Copper	Madhya Pradesh (Balaghat), Rajasthan (Khetri), Jharkhand (Singhbhum, Masobani, Surda), Karnataka (Chitradurg, Hussan)
4	Mica	Jharkhand (Hazaribagh, Giridih, Kodarma, Bihar (Gaya, Bhagalpur), Andhra Pradesh (Guntur, Vizag, Kurnool), Rajasthan (Bhilwara, Udaipur, Jaipur)
5	Petroleum	Assam (Digboi, Naharkatiya, Badarpur, Masinpur and Pallharia), Gujarat (Ankleshwar, Khambhat, Kalol), Mumbai High, Bassein (south of Mumbai High), etc. Recently oil has been discovered in Cauvery basin, Krishna and Godawari basin, Kharmbat basin, etc.
6	Oil Refineries	There are 18 refineries in India, 16 in public sector, one in joint sector and one in private sector. Public sector refineries are located at Digboi, Guwahati, Bongaigaon, Barauni, Haldia, Koyali, Mathura, Kochi, Chennai, Vishakhapatnam, Mumbai (2), Panipat, Narimanam, Numanigarh and Tatipaka. Joint sector refinery is at Mangalore. The private sector refinery of Reliance Limited is at Jamnagar.
7	Iron	India possesses Haematite, a very high-grade iron ore. In Madhya Pradesh (Bailadila, Jabalpur), Goa (North Goa), Karnataka (Bababudan hills, Chikmagalur, Hospet), Jharkhand (Singhbhum, Naomundi), Andhra Pradesh, Orissa India is the fifth largest exporter of Iron ore in the world. Japan is the biggest buyer accounting for about 3/4th of India's total exports. Major ports handling iron ore export are Vishakhapatnam, Paradip, Marmagao and Mangalore.
8	Bauxite	Chief ore for producing aluminium. In Orissa (Kalahandi, Koraput, Sundargarh, Bolangir, Sambalpur), Jharkhand (Lohardaga, Gumla), Madhya Pradesh (Jabalpur, Mandla, Shahdol, Katni, Balaghat), Maharashtra, Andhra Pradesh, Gujarat, Tamil Nadu
9	Gold	Karnataka (Kolar, Hutti, Raichur), Andhra Pradesh (Ramgiri and



		Yeppamanna goldfields in Chittor and Anantapur districts
10	Silver, Zinc and Lead	Rajasthan (Zawar mines near Udaipur), Andhra Pradesh (Mysore, Chitradurg), Karnataka (Kolar mines)
11	Uranium	Jharkhand (Jaduguda), Rajasthan (Ajmer), Andhra Pradesh (Nellore, Nalgonda), Karnataka (Gulbarga)
12	Thorium	Kerala coast (From Monazite sand), rocks of Aravallis in Rajasthan

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INDIA-II

### Important Days

Important Days	Days
National Youth Day	January 12
Army Day	January 21
Desh Prem Diwas	January 23
International Customs Day	January 26
Republic Day	January 26
Martyrs' Day	January 30
Valentine's Day	February 14
Arunachal Day	February 20
Central Excise Day	February 24
National Science Day	February 28
International Women's Day	March 8
World Consumers Rights Day	March 15
World Disabled Day	March 15
International Day for the Elimination of Racial Discrimination Racial Discrimination	March 21
World Forestry Day	March 21
World Day for Water	March 22
World Meteorological Day	March 23
Bangladesh Day	March 26
National Maritime Day	April 5
Samta Diwas	April 5
World Health Day	April 7
Railway week	April 10-16
World Aviation and Cosmonautics Day	April 12
Jallianwala Day	April 13
World Heritage Day	April 18
Earth Day	April 22
World Book Day	April 23

Manav Ekta Divas	April 24
May Day (Workers' Day; International Labour Day)	May 1
World Press Freedom Day	May 3
V-E Day	May 8
World Red Cross Day	May 8
Mothers' Day	May 9
National Solidarity Day	May 13
Anti-terrorism Day	May 21
Commonwealth Day	May 24
International Day of Families	May 15
World Telecommunication Day	May 17
Everest Day	May 29
Mount Everest Day	May 29
No-Tobacco Day	May 31
International Day of Innocent Children Victims of Aggression	June 4
World Environment Day	June 15
Goa Liberation Day	June 18
UN Charter Signing Day	June 25
Anti-Emergency Day	June 26
International Day Against Drug Abuse and Illicit Trafficking	June 26
World Diabetes Day	June 27
Poors' Day	June 28
Doctors Day	July 1
World Population Day	July 11
World Breast Feeding Day	August 1
Breast Feeding Week	August 1-7
Hiroshima Day	August 6
Nagasaki Day	August 9
Quit India Day	August 9
Independence Day	August 15

Sadhbhavana Divas	August 20
National Sports Day	August 29
Teachers' Day	September 5
World Literacy Day	September 8
World Ozone Day	September 16
World Tourism Day	September 27
International Day for the Elderly	October 1
World Vegetarian Day	October 2
World Habitat Day	October 5
International Day for Natural Disaster Reduction	October 7
Air Force Day	October 8
Post Office Day	October 9
World Post Day	October 9
World Standards Day	October 14
World Food Day	October 16
Police Commemoration Day	October 21
UN Day	October 24

### Books and Authors

1	A Bend in the River	V.S. Naipaul
2	A Brief History of Time	Stephen Hawking
3	A China Passage	John Kenneth Galbraith
4	A Critique of Pure Reason	Immanuel Kant
5	A Doll`s House	Ibsen
6	A Farewell to Arms	Ernest Hemingway
7	A Fine Balance	Rohinton Mistry
8	A Handful of Dust	Evelyn Waugh

9	A House for Mr. Biswas	V.S. Naipaul
10	A Million Mutinies Now	V.S. Naipul
11	A Midsummer Night`s Dream	William Shakespeare
12	A Passage to England	Nirad C. Choudhari
13	A Passage to India	E.M. Foster
14	A Prisoner`s Scrapbook	L.K. Advani
15	A Strange and Sublime Address	Amit Chaudhari
16	A Streetcar Named Desire	Tennessee Williams
17	A Study of History	Arnold J. Toynbee
18	A Suitable Boy	Vikram Seth
19	A Tale of Two Cities	Charles Dickens
20	A Thousand Days	Arthur M. Schlesinger
21	A Thousand Suns	Dominique Lappierre
22	A Village by the Sea	Anita Desai
23	A Voice for Freedom	Nayantara Sehgal
24	A Week with Gandhi	Louis Fischer
25	Absolute Power	David Baldacci
26	Adonis	P.B. Shelley
27	Adventures of Tom Sawyer	Mark Twain
28	Afternoon Raag	Amit Chaudhari
29	Agni Veena	Kazi Nazrul Islam
30	Alice in Wonderland	Lewis Carroll
31	All the King`s Men	Robert Penn Warren
32	All the President`s Men	Carl Bernstein & Bob Woodward
33	All Things Bright and Beautiful	James Herriot
34	All`s Well that Ends Well	William Shakspeare
35	Amar Kosh	Amar Singh
36	An American Dilemma	Gunnar Myrdal
37	An American Tragedy	Theodore Dreiser
38	An area of Darkness	V.S. Naipaul

39	An Autobiography	Jawaharlal Nehru
40	An Equal Music	Vikram Seth
41	An Idealist View of Life	Dr. S. Radhakrishnan
42	Anandmath	Bankin Chandra Chatterjee
43	Animal Farm	George Orwell
44	Anna Karenina	Leo Tolstoy
45	Antony and Cleopatra	William Shakespeare
46	Around the World in Eighty Days	Jules Verne
47	Arrowsmith	Sinclair Lewis
48	As You Like it	William Shakespeare
49	Asia and Western Dominace	K.M. Panikkar
50	Asian Drama	Gunnar Myrdal
51	Autobiography of an Unknown Indian	Nirad C. Choudhari
52	Beginning of the Beginning	Bhagwan Sri. Rajneesh
53	Beloved	Toni Morrison
54	Ben Hur	Lewis Wallance
55	Beyond the Horizon	Eugene O`Neill
58	Bharat Bharati	Maithili Saran Gupta
59	Black Holes and Baby Universes	Stephen Hawking
60	Blood, Brain and Beer	David Ogilvy
61	Born Free	Joy Adamson
62	Brave New World	Aldous Huxley
64	Bread, Beauty and Revolution	Khwaja Ahmad Abbas
65	Breakthrough	Gen. Moshe Dayan
66	Bubble, The	Mulk Raj Anand
67	Business @ the Speed of Thought	Bill Gates
68	Caesar and Cleopatra	George Bernard Shaw
70	Candide	Voltaire
71	Catch - 22	Joseph Heller
73	Cherry Orchard	Anton Chekov

74	Chidambara	Sumitranandan Pant
75	Chitra	Rabindra Nath Tagore
76	Chronicle of a Death Foretold	Gabriel Garcia Marquez
77	Circle of Reason	Amitav Ghosh
78	Circles of Silence	Preeti Singh
79	City of Joy	Dominique Lapierre
80	City of Djinns	William Dalrymple
81	Coming of Age in Samoa	Margaret Mead
82	Common Sense	Thomas Paine
83	Communist Manifesto	Karl Marx
84	Confessions	J.J. Rousseau
85	Confidential Clerk	T.S. Eliot
86	Conquest of Self	Mahatma Gandhi
87	Coolie	Mulk Raj Anand
88	Crescent Moon	Rabindra Nath Tagore
89	Crime and Punishment	Feodor Dostoyevsky
90	Crisis into Chaos	E.M.S. Namboodiripad.
91	Comedy of Errors	William Shakespeare
92	Darkness at Noon	Arthur Koestler
93	Das Kapital	Karl Marx
94	David Copperfield	Charles Dickens
95	Days of Grace	Arthur Ashe & Arnold Rampersad
96	Death in Venice	Thomas Mann
97	Death of a City	Amrita Pritam
98	Death of a patriot	R.E. Harrington
99	Death of a Salesman	Arthur Miller
100	Debacle	Emile Zola
101	Descent of Man	Charles Darwin
102	Devdas	Sharat Chandra Chatterjee



103	Dilemma of our Time	Harold Joseph Laski
104	Diplomacy	Henry Kissinger
105	Discovery of India	Jawaharlal Nehru
106	Distant Drums	Manohar Malgaonkar
107	Divine Comedy	Dante Alighieri
108	Divine Life	Swami Sivananda
109	Doctor Zhivago	Boris Pasternak
110	Doctor's Dilemma	George Bernard Shaw
111	Don Juan	Lord Byron
112	Don Quixote	Miguel de Cervantes
113	Dr. Jekyll and Mr. Hyde	Robert Louis Stevenson
114	Durgesh Nandini	Bankim Chandra Chatterjee
115	Down Under	Bill Bryson
116	Earth	Emile Zola
117	Eminent Victorians	Lytton Strachey
118	Emma	Jane Austen
119	Ends and Means	Aldous Huxley
120	English August	Upamanyu Chatterjee
121	Envoy to Nehru	Escott Reid
122	Essays of Elia	Charles Lamb
123	Essays on Gita	Sri. Aurobindo Ghosh
124	Eternal Himalayas	Major H.P.S. Ahluwalia
125	Ethics for New Millennium	The Dalai Lama
126	Expanding Universe	Arthur Stanley Eddington
127	Faces of Everest	Major H.P.S. Ahluwalia
128	Family Matters	Rohinton Mistry
129	Family Reunion	T.S. Eliot
130	Far from the Madding Crowd	Thomas Hardy
131	Farewell the Trumpets	James Morris
132	Farewell to Arms	Ernest Hemingway

133	Fasting Feasting	Anita Desai
134	Father and Sons	Ivan Turgenev
135	Final Days, The	Bob Woodward and Carl Bernstein
136	First Circle	Alexander Solzhermitsyn
137	For Whom the Bell Tolls	Ernest Hemingway
138	Forsyth Saga	John Galsworthy
139	Fortynine Days	Amrita Pritam
140	Freedom at Midnight	Larry Collins and Domonique Lapierre
141	French Revolution	Thomas Carlyle
142	Friends and Foes	Sheikh Mujibur Rahman
143	From Here to Eternity	James Hones
144	Ganadevata	Tara Shankar Bandopadhyaya
145	Gandhi and Stalin	Louis Fisher
146	Gardener	Rabindra Nath Tagore
147	Gathering Storm	Winston Churchill
148	Ghasiram Kotwal	Vijay Tendulkar
149	Gitanjali	Rabindra Nath Tagore
150	Glimpses of World History	Jawaharlal Nehru
151	Godan	Prem Chand
152	Golden Threshold	Sarojini Naidu
153	Gone With The Wind	Margaret Mitchell
154	Good Earth	Pearl S. Buck
155	Good Times, Bad Times	Harold Evans
156	Goodbye, Mr.Chips	James Hilton
157	Grammar of Politics	Harold Joseph Laski
158	Great Expectations	Charles Dickens
159	Guide	R.K. Narayan
160	Gulliver`sTravels	Janathan Swift
161	Gypsi Masala	Preethi Nair

162	Half a Life	V.S. Naipaul
163	Hamlet	W. Shakespeare
164	Harvest	Manjula Padmanabhan
165	Harry Potter and the Order of the Phoenix	J.K. Rowling
166	Harry Potter and the Goblet of Fire	J.K Rowling
167	Heritage	Anthony West
168	Heroes and Hero Worship	Thomas Carlyle
169	Himalayan Blunder	Brigadier J.P. Dalvi
170	Hindu View of Life	Dr. S. Radhakrishnan
171	Hinduism	Nirad C. Choudhuri
172	Homage to Catalonia	George Orwell
173	How to Know God	Deepak Chopra
174	Human Factor	Graham Green
175	Hungry stones	Rabindra Nath Tagore
176	Ideas and Opinions	Albert Einstein
69	Candida	George Bernard Shaw
177	I follow the Mahatma	K.M. Munshi
178	Idols	Sunil Gavaskar
179	If I am Assassinated	Z.A. Bhutto
180	If only	Geri Halliwell
181	Ignited Minds	A.P.J Abdul Kalam
182	In Evil Hour	Gabriel Garcia Marques
183	In Memoriam	Alfred Lord Tennyson
184	In Search of Gandhi	Richard Attenborough
185	India in the New Millennium	Dr. P.C. Alexander
186	India Changes	Taya Zinkin
187	India Discovered	John Keay
188	India Divided	Rajendra Prasad
189	India Emerging power	Stephen Philip Cohen
190	India - Another Millennium	Romila Thapar

191	India Unbound	Gurcharan Das
192	India of Our Dreams	M.V. Kamath
193	India Remembered	Percival & Margaret Spear
194	India Wins Freedom	Abul Kalam Azad
195	India`s Priceless Hertiage	N.A. Palkhivala
196	Indian Philosophy	Dr. S. Radhakrishnan
197	Indira: The Life of Indira Nehru Gandhi	Katherine Frank
198	Inscrutable Americans	Anurag Mathur
199	Inside Asia, Inside Europe, Inside Africa etc	John Gunther
200	Interpreter of Maladies	Jhumpa Lahiri
201	Intimacy	Jean Paul Sartre
202	Invisible Man	H.G. Wells
203	Is Paris Burning	Larry Collins & Dominique Lapierre
204	Isabella	John Keats
205	Islamic Bomb	Stev Weissman & Herbert Krouney
206	It was Five Past Midnight in Bhopal	Dominique Lapierre and Javier Moro
207	Jai Somnath	K.M Munshi
208	Julius Caesar	William Shakespeare
209	Jungle Book	Rudyard Kipling
210	Junglee Girl	Ginu Kamani
211	Jurassic Park	Michael Crichton
212	Kalpana Chawla - A Life	Anil Padmanabhan
213	Kamasutra	Vatsyayana
214	Kane and Abel	Jeffrey Archer
215	Kanthapura	Raja Rao
216	Kasmir : A Tragedy of Errors	Tavleen Singh
217	Kayar	Thakazhi Sivasankara Pillai
218	Kenilworth	Sir Walter Scott

219	Kidnapped	Robert Louis Stevenson
220	Kim	Rudyard Kipling
221	King Lear	William Shakespeare
222	Kubla Khan	Samuel Taylor Coleridge
223	Ladies Coupe	Anita Nair
224	Lady Chatterley`s Lover	D.H. Lawrence
225	Lajja	Taslima Nasreen
226	Last Burden	Upamanyu Chatterjee
227	Last Things	C.P Snow
228	Le Contract (Social Contract)	J.J. Rousseau
229	Leaders	Richard Nixon
230	Leaves of Grass	Walt Whitman
231	Less Miserables	Victor Hugo
232	Life Divine	Sri Aurobindo
233	Life is Elsewhere	Milan Kundera
234	Life of Samuel Johnson	James Boswell
235	Living History	Hillary Clinton
236	Lolita	Vladimir Nobakov
237	Loneliness of the Long Distance Runner	Allan Sillitoe
238	Long Day`s Journey into Night	Eugene O`Neill
239	Long Walk to freedom	Nelson Mandela
240	Look Back in Anger	John Osborne
241	Lord of the Flies	William Golding
242	Love Story	Erich Segal
243	Macbeth	W. Shakespeare
244	Magic Mountain	Thomas Mann
245	Mahatma Gandhi and his Apostles	Ved Mehta
246	Mahatma Gandhi	Romain Rolland
247	Main Street	Sinclair Lewis
248	Malgudi Days	R.K Narayan

249	Man and Superman	George Bernard Shaw
250	Man of Property	John Galsworthy
251	Man, Beast and Virtue	Luigi Pirandello
252	Man - eaters of Kumaon	Jim Corbett
253	Managing for the Furture	Peter Drucker
254	Managing for Results	Peter Drucker
255	Mankind for Mother Earth	Arnold Toynbee
256	Many worlds	K.P.S Menon
257	Mayor of Casterbridge	Thomas Hardy
258	Mein Kampf	Adolf Hitler
259	Memories of Hope	Ge. Charles de Gaulle
260	Men are from Mars, Women are from Venus	John Gray
261	Middle March	George Eliot
262	Midnight `s Children	Salman Rushdie
263	Mill on the Floss	George Eliot
264	Moby Dick	Hermann Melville
265	Moonwalk	Michael Jackson
266	Mother India	Katherine Mayo
267	Mother	Maxim Gorky
268	Much Ado about Nothing	William Shakespeare
269	Murder in the Cathedral	T.S. Eliot
270	My Days	R.K Narayan
271	My India	S. Nihal Singh
272	My Life and Times	V.V. Giri
273	My Music , My Life	Pt. Ravi Shankar
274	My Own Boswell	M.Hidayatullah
275	My Presidential Years	R. Venkataraman
276	Mystic River	Dennis Lehane
277	My Truth	Indira Gandhi
278	My Son`s father	Dom Moraes

279	Nana	Emile Zola
280	Never At Home	Dom Moraes
281	New Dimensions of India`s Foreign Policy	A.B. Vajpayee
282	Nice Guys Finish Second	B.K. Nehru
283	Nineteen Eighty Four	George Orwell
284	No Full Stops in India	Mark Tully
285	O` Jerusalem	Larry Collins & Dominique Lapierre
286	Oliver Twist	Charles Dickens
287	On The Threshold of Hope	Pope John Paul II
288	One Hundred Years of Solitude	Gabriel Garcia Marquez
289	One World and India	Arnold Toynbee
290	One world	Wendell Wilkie
291	Operation Bluestar : The True Story	Lt. Gen. K.S. Brar
292	Operation Shylock	Philip Roth
293	Othello	William Shakespeare
294	Our Films, Their Films	Satyajit Ray
295	Out of Africa	Isak Dinesen
296	Painter of Signs	R.K. Narayan
297	Pakistan: The Gathering Storm	Benazir Bhutto
298	Pale Blue Dot	Carl Sagan
299	Panchatantra	Vishnu Sharma
300	Paradise Lost	John Milton
301	Pather Panchali	Bibhuti Bhushan
302	People Like Us	Pavan Varma
303	Plain Speaking	N. Chandrababu Naidu
304	Pleading Guilty	Scott Turow
305	Portrait of India	Ved Mehta
306	Post Office	Rabindra Nath Tagore
307	Prelude	William Wordsworth

308	Preoccupations	Seamus Heaney
309	Present at the Creation	Dean Acheson
310	Pride and Prejudice	Jane Austen
311	Prince	Niccolo Machiavelli
312	Prison Diary	Jayaprakash Narayan
313	Private Lives	Noel Coward
314	Profiles in Courage	John F. Kennedy
315	Pygmalion	George Bernard Shaw
316	Rabbit, Run	John Updike
317	Rangbhoomi	Prem Chand
318	Rape of Bangladesh	Anthony Mascarenhas
319	Ravan & Eddie	Kiran Nagarkar
320	Rebel, The	Albert Camus
321	Red Badge of Courage	Stephen Crane
322	Red Earth and Pouring Rain	Vikram Chandra
323	Red Star Over China	Edgar Snow
324	Reflections on the French Revolution	Edmund Burke
325	Remembering Babylon	David Malouf
326	Rendezvous with Rama	Arthur C. Clark
327	Revolution from Within	Gloria Steinem
328	Riding the Storm	Harold MacMillan
329	Riot: A Novel	Shashi Tharoor
330	Rise and Fall of the Third Reich	William L. Shierer
331	Robinson Crusoe	Daniel Defoe
332	Romeo and Juliet	William Shakespeare
333	Room at the Top	John Braine
334	Saket	Maithili Sharan Gupta
335	Sanctuary	William Faulkner
336	Scam, The : Who Won, Who Lost, Who Got away	Debashis Basu and Sucheta Dalal
337	Scarlet Letter	Nathaniel Hawthorne



338	Seven Lamps of Architecture	John Ruskin
339	Seven Summers	Mulk Raj Anand
340	Shadow from Ladakh	Bhavani Bhattacharya
341	Shape of Things to Come	H.G. Wells
342	She Stoops to Conquer	Oliver Goldsmith
343	Siddharta	Hermann Hesse
344	Silent Spring	Rachel Carson
345	Small is Beautiful : A Study of Economics as if People Mattered	Ernst Schumacher
346	Snakes and Ladders: Essays on India	Gita Mehta
347	Snow Country	Yasunari Kawabata
348	Sohrab and Rustam	Mathew Arnold
349	Sons and Lovers	D.H. Lawrence
350	Stupid White Men	Michael Moore
351	Sun Stone	Octavio Paz
352	Sunny Days	Sunil Gavaskar
353	Swami and Friends	R.K. Narayan
354	Talisman	Sir Walter Scott
355	Tarzan of the Apes	Edgar Rice Burroughs
356	Tempest	William Shakespeare
357	Thank You, Jeeves	P.G. Wodehouse
358	The Adventures of Sherlock Holmes	Arthur Conan Doyle
359	The Affluent Society	John Kenneth Galbraith
360	The age of Reason	Jean Paul Sartre
361	The Agenda	Bob Woodward
362	The Agony and the Ecstasy	Irving Stone
363	The Ambassadors	Henry James
364	The Banyan Tree	Hugh Tinker
365	The Best and the Brightest	David Halberstam
366	The Better Man	Anita Nair

367	The Bride`s Book of Beauty	Mulk Raj Anand
368	The Cancer Ward	Alexander Solzhenitsyn
369	The Call of the Wild	Jack London
370	The Canterbury Tales	Geoffrey Chaucer
371	The Captive of the Caucasus	Alexander Pushkin
372	The Cardinal	Henry Morton Robinson
373	The Caretaker	Harold Pinters
374	The Changing World of the Executive	Peter Drucker
375	The Civil War	Shelby Foote
376	The Clown	Heinrich Boll
377	The Coup	John Updike
378	The Court Dancer	Rabindra Nath Tagore
379	The Crucible	Arthur Miller
380	The Death of Vishnu	Manil Suri
381	The Degeneration of India	T.N. Seshan
382	The Diary of a Young Girl	Anne Frank
383	The Double Helix	James D. Watson
384	The End of a Beautiful era	Joseph Brodsky
385	The End of History and the Last Man	Francis Fukuyama
386	The Executioner`s Song	Norman Mailer
387	The Eye of the Storm	Patrick White
388	The Castle	Franz Kafka
389	The Far Pavilions	M.M Kaye
390	The Feminine Mystique	Betty Friedan
391	The Fifth Horseman	Larry Collins and Domnique Lapierre
392	The Fire Next Time	James Baldwin
393	The Forbidden Sea	Tara Ali Baig
394	The Fury	Salman Rushdie
395	The Ginger Man	J.P. Donleavy

396	The Glass Palace	Amitav Ghosh
397	The God of Small Things	Arundhati Roy
398	The Godfather	Mario Puzo
399	The Golden gate	Vikram Seth
400	The Grapes and the Wind	Pablo Neruda
401	The Grapes of Wrath	John Steinbeck
402	The Great Challenge	Louis Fischer
403	The Great Indian Novel	Shashi Tharoor
404	The Guns of August	Barbara Tuchman
72	Centennial	James A. Michener
405	The Heart is a Lonely Hunter	Carson McCullers
406	The Hitchhiker`s Guide to the Galaxy	Douglas Adams
407	The Horse Whisperer	Nicholas Evans
408	The Green Knight	Iris Murdoch
409	The Heart of the Matter	Graham Greene
410	The Importance of Being Earnest	Oscar Wilde
411	The Interpreter of Maladies	Jhumpa Lahiri
412	The Interpreters	Wole Soyinka
413	The Invisible Man	Ralph Ellison
414	The Judge	Steve Martini
415	The Judgement	Kuldip Nayar
416	The Last Temptation of Christ	Kazant Zakis
417	The Legends of Khasak	O.V. Vijayan
418	The Making of a Midsummer Night`s Dream	David Selboume
419	The Masters	C.P. Snow
420	The Mandarin	Simon de Beavoir
421	The Men Who Killed Gandhi	Manohar Malgaonkar
422	The Merchant of Venice	William Shakespeare
423	The Middle Ground	Margaret Drabble
424	The Mind of the C.E.O	Jeffrey E.Garten

425	The Minister`s Wife	Amaresh Mishra
426	The Miser	Moliere
427	The Moor`s Last Sigh	Salman Rushdie
428	The Old Man and the Sea	Ernest Hemingway
429	The Origin of Species	Charles Darwin
430	The Pickwick Papers	Charles Dickens
431	The Pilgrim`s Progress	John Bunyan
432	The Power and the Glory	Graham Greene
433	The Power of Positive Thinking	Norman Vincent Peale
434	The Private Life of Chairman Mao	Dr. Li Zhisui
435	The Proper Study of Mankind	Isaiah Berlin
436	The Rain King	Saul Bellow
437	The Rape of the Lock	Alexander Pope
438	The Return of the Native	Thomas Hardy
439	The Road Ahead	Bill Gates
440	The Robe	Lloyd C. Douglas
441	The Roots	Alex Haley
442	The Satanic Verses	Salman Rushdie
443	The Second World War	Winston Churchill
444	The Seven Spiritual Laws of Success	Deepak Chopra
445	The Social Contract	Rousseau
446	The Songs of India	Sarojini Naidu
447	The Sound and the Fury	William Faulker
448	The Story of My Experiments with Truth	Mahatma Gandhi
449	The Struggle and the Triumph	Lech Walesa
450	The Struggle in My Life	Nelson Mandela
451	The Sword and the Sickle	Mulk Raj Anand
452	The Treatment	John Grisham
453	The Third Wave	Alvin Tofler
454	The Total Zone	Martina Navratilova

455	The Tree of Man	Patrick White
456	The Trial	Franz Kafka
457	The Unfurnished Man	Nizzim Ezekiel
458	The Vendor of Sweets	R.K. Narayan
459	The Wasteland	T.S. Eliot
460	The Wealth of Nations	Adam Smith
461	Theory of War	John Brady
462	Thirteenth Sun, The	Amrita Pritam
463	Thom Birds	Collen McCullough
464	Thousand Cranes	Yasunari Kawabata
465	Time Machine	H.G. Wells
466	Tin Drum	Gunther Grass
467	Tinker, Tailor Soldier	John Le - Came
468	Tom Jones	Henry Fielding
469	To the Lighthouse	Virginia Woolf
470	Train to Pakistan	Khushwant Singh
471	Treasure Island	Robert Louis Stevenson
472	Tropic of Cancer	Henry Miller
473	Tryst with Destiny	S. Gopalan
474	Twelfth Night	W. Shakespeare
475	Two Leaves and a Bud	Mulk Raj Anand
476	The Strange and Sublime Address	Amit Chaudhari
477	Ulysses	James Joyce
478	Under the Net	Iris Murdoch
479	Unsafe at Any Speed	Ralph Nader
480	Unto The Last	John Ruskin
481	Untold Story	General B.M. Kaul
482	Up from Slavery	Booker T. Washington
483	Utopia	Thomas Moore
484	Valley of the Dolls	Jacqueline Susann

485	Vanity Fair	William Thackeray
486	Waiting for Godot	Samuel Beckett
487	Waiting for the Mahatma	R.K. Narayan
488	Wake Up India	Annie Besant
489	War and Peace	Leo Tolstoy
490	Westward Ho	Charles Kingsley
491	What they don't teach you at Harvard Business School	Mark H.Mc Cormak
492	who is Kalam ?	R.Ramanathan
493	Who moved my cheese ?	Dr. Spencer Johnson
494	Wings of Fire	A.P.J. abdul Kalam
495	Winter Solstice	Rosamunde Pilcher
496	Witness to an Era	Frank Moraes
497	Women in Love	D.H. Lawrence
498	World Within Worlds	Stephen Spender
499	Wuthering Heights	Emily Bronte
500	Yayati	V.S.Khandekar
501	Year of the Upheaval	Henry Kissinger
502	Yesterday and Today	K.P.S Menon
503	You Can Win	Shiv Khera

### Independence Days of Various Countries

SNo	Country	Date
1	Afghanistan	19th August
2	Armenia	28th May
3	Australia	4th January
4	U.S.A.	4th July
5	Bangladesh	16th December
6	Belgium	21st July

7	Brazil	7th September
8	Canada	1st July
9	China	10th October
10	Chile	18th September
11	Colombia	20th July
12	Finland	6th December
13	France	14th July
14	Greece	25th March
15	India	15th August
16	Indonesia	17th August
17	Israel	3rd April
18	Italy	26th March
19	Japan	29th April
20	Korea	15th August
21	Mexico	16th September
22	Myanmar	4th January
23	Maldives	26th July
24	Norway	17th May
25	Philippines	12th June
26	Peru	28th July
27	Poland	3rd May
28	Portugal	5th October
29	Pakistan	14th August
30	Rwanda	5th July
31	Sri Lanka	4th February
32	Switzerland	1st August
33	Spain	10th April
34	Thailand	24th June
35	Turkey	1st November
36	Uzbekistan	1st September

37	Ukraine	24th August
38	Uganda	9th October
39	Zimbabwe	18th April

### First in the World

Field	Person
The First person to land on the moon	Neil A. Amstrong (U.S.A)
The First to launch search Satellite or "artificial moon"	U.S.S.R.
The first man to enter space	Late Maj. Yuri Gagarin (USSR)
The first woman cosmonaut in the world	Valentina Tereshkova
The first Woman Astronaut pilot	Lt.Col.Eileen Marie Collin (US)
The first person to float in space	Alexei Leonav (Russia)
The first American astronaut (2nd in world) to float in space	Edward White
The first Russian cosmonaut to make two space flights	Late Col. Vladimir Komarov
The first American astronaut to make two space flights	Gordon Cooper (U.S.A.)
The first manned space ship longest stay in space for 11 days	Apollo - 7 (U.S.A.)
The first manned spaceship to space flight round the moon	Apollo - 8 (U.S.A.)
The first space craft to leave solar system	Pioneer - II (U.S.A.)
The first country to launch a cosmic space rocket towards moon	U.S.S.R.
First crew transfer between orbiting space ships	Soyuz-4 and Soyuz-5 (U.S.S.R.)
The first man to stay long in space	Valery Ryumin
The first space shuttle	Columbia (U.S.A.)
The first woman to command a space shuttle mission (Columbia)	Eileen Collins (U.S.A.)
The first tourist to space	Dennis Tito (U.S.A.)



### Epithets

1	Bengal's Sorrow	Damodar River
2	Blue Mountains	Nilgiri Hills
3	Britain of the South	New Zealand
4	City of the Golden Gate	San Francisco (USA)
5	City of Dreaming Spires	Oxford (UK)
6	City of Magnificent Distance	Washington, DC, USA
7	City of Sky - Scrapers	New York
8	City of Seven Hills	Rome
9	City of Palaces	Kolkata
10	China's Sorrow	Howang-Ho
11	Cockpit of Europe	Belgium
12	Dark Continent	Africa
13	Eternal City	Rome
14	Emerald Island	Ireland
15	Empire City	New York, U.S.A.
16	Forbidden City	Lhasa, Tibet
17	Garden of England	Kent, England
18	Gate of Tears	Bab-el-mandeb, Jerusalem
19	Garden City	Chicago
20	Gateway of India	Mumbai
21	Gift of the Nile	Egypt
22	Granite City	Aberdeen, Scotland
23	Great Whiteway	Broadway, New York
24	Granery of South India	Tanjore
25	Hearing Pond	Atlantic Ocean
26	Hermit Kingdom	Korea
27	Holy Land	Palestine
28	Island Continent	Australia
29	Island of Cloves	Zanzibar

30	Island of Pearls	Bahrain
31	Key to Mediteranean	Gibraltar
32	Lady with a lamp	Florence Nightangle
33	Land of Lakes	Scotland
34	Land of Golden Fleece	Australia
35	Land of Golden Pagoda	Myanmar
36	Land of Kangaroo	Australia
37	Land of Lilies	Canada
38	Land of Morning Calm	Korea
39	Land of Thunderbolt	Bhutan
40	Land of Five Rivers	Punjab, India
41	Land of Rising Sun	Japan
42	Land of Midnight Sun	Norway
43	Land of Thousand Lakes	Finland
44	Land of Maples	Canada
45	Land of White Elephant	Thailand
46	Mysore Tiger	Tippu Sultan
47	Manchester of India	Mumbai
48	Manchester of Tamil Nadu	Coimbatore
49	Never Never Land	Prairies of N. Australia
50	Pearl of the Pacific	Guyayaquil Port of Ecuador
51	Playground of Europe	Switzerland
52	Playground of India	Kashmir
53	Pearl of the Antilles	Cuba
54	Pillar of Hercules	Gibraltar
55	Pink City	Jaipur
56	Quaker City	Philadelphia, U.S.A.
57	Queen of the Adraitic	Venice, Italy
58	Queen of Arabian Sea	Kochi
59	Roof of the World	Pamirs, Central Asia

60	Saint of the Gutters	Mother Terasa
61	Sickman of Europe	Turkey
62	Spice Garden of India	Kerala
63	Sugar Bowl of the World	Cuba
64	Venice of the East	Alappuzha, India
65	Venice of the North	Stockholm, Sweden
66	White City	Belgrade, Yugoslavia
67	Windy City	Chicago, U.S.A.
68	White Man's Grave	Guinea Coast
69	World's Bread Basket	Prairies of N.America
70	World's Loneliest Island	Tristanda Cunha
71	Yellow River	Howang Ho

### **Biggest Highest Largest Longest in the World**

Animal, Tallest	Giraffe
Archipelago Largest	Indonesia
Bird, Fastest	Swift
Bird, Largest	Ostrich
Bird, Smallest	Humming Bird
Bridge, Longest Railway	Huey P.Long Bridge, Louisiana (U.S.A.)
Building, Tallest in the world	Teipei 101, Taiwan
Canal, Longest Irrigational	The Kalakumsky canal
Canal, Longest	Suez canal
Capital, Highest	La Paz (Bolivia)
City, Biggest in area	Mount Isa (Australia)
City, Largest in population	Tokyo
City, Costliest	Tokyo

City, Highest	Van Chuan (China)
Continent, Largest	Asia
Continent, Smallest	Australia
Country, Biggest (Area)	Russia
Country, Largest (population)	China
Country, Largest (electorate)	India
Creature, Largest	Blue Whale
Delta, Largest	Sunderban (Bangladesh & India)
Desert, Largest (World)	Sahara (Africa)
Desert, Largest (Asia)	Gobi
Dam, Largest	Grand Coulee Dam (U.S.A.)
Dam, Highest	Hoover Dam (U.S.A.)
Diamond, Largest	The Cullinan
Dome, Largest	Astrodome, in Houston (U.S.A.)
Epic, Largest	Mahabharat
Irrigation Scheme, Largest	Lloyd Barrage, Sukkhur (Pakistan)
Island, Largest	Greenland
Sea, Largest	Mediterranean Sea
Lake, Deepest	Baikal (Siberia)
Lake, Largest (Artificial)	Lake Mead (Boulder Dam)
Lake, Highest	Titicaca (Bolivia)
Lake, Largest (Fresh Water)	Superior
Lake, Largest (Salt water)	Caspian
Library, Largest	United States Library of Congress, Washington D.C.
Mountain Peak, Highest	Everest (Nepal)
Mountain Range,	Andes (S. America)

Longest	
Museum, Largest	British Museum, London
Ocean, Largest	Pacific
Palace, Biggest	Vatican (Italy)
Park, Largest	Yellow Stone National Park (U.S.A.)
Peninsula, Largest	Arabia
Place, Coldest (Habitated)	Verkhoyansk (Siberia)
Place, Dryest	Iquique (in Atacama Desert, Chile)
Place, Hottest	Azizia (Libya, Africa)
Place, Rainiest	Mausinram (Meghalaya, India)
Planet, Biggest	Jupiter
Planet, Brightest	Venus
Planet, Smallest	Pluto
Plateau, Highest	Pamir (Tibet)
Platform, Longest	Kharagpur (India)
Railway, Longest	Trans-Siberian railway
Railway Station, Largest	Grand Central Terminal, Chicago (U.S.A.)
River, Longest	Nile (Africa)
River, Largest	Amazon (S. America)
Sea-bird, Largest	Albatross
Star, Brightest	Sirius
Statue, Tallest	Statue of Motherland, Volgograd (Russia)
Telescope, Largest Radio	New Mexico (U.S.A.)
Tramway, World's first	New York
Tunnel, Longest (Railway)	Tanna (Japan)
Tunnel, Longest (road)	Mont Blanc Tunnel between France and Italy
Volcano, Highest	Ojos del Salado (Andes, Ecuador)
Volcano, Most Active	Maunaloa (Hawaii - U.S.A.)

Wall, Longest	Great Wall of China
Waterfall, Highest	Angel (Venezuela)
Water, Lowest Body	Dead Sea
Zoo, Largest	Kruger National Park, South Africa

#### Related Web Pages

Biggest Highest Largest Longest in the World | Genera

### **Worlds Highest Mountain Peaks**

Country	Peaks	Height in metre
Asia	Everest (Himalaya-Nepal/Tibet)	8,848
Asia	Godwin Austen (Karakoram-India)	8,611
Asia	Kanchenjunga (Himalaya India / Nepal)	8,598
Asia	Lhotse (Himalaya-Nepal-China)	8,501
Asia	Makalu (Himalaya-Nepal)	8,470
Asia	Dhaulagiri (Himalaya-Nepal)	8,172
Asia	Nanga Parvat (Himalaya-Nepal)	8,126
Asia	Gasherbrum (Karakoram-Tibet)	8,068
Asia	Gosainthan (Himalaya-Tibet)	8,013
Asia	Nanda Devi (Himalaya-India)	7,817
South America	Aconcagua (Andes-Argentina)	6,960
North America	McKinley (Alaska-USA)	6,194
Africa	Kilimanjaro (Solitary-Tanzania)	5,888
Europe	Elborus (Caucasus-CIS)	5,633
Europe	Mont Blanc (Alp-France)	4,810
Antartica	Vinson Massif	5,139
Oceania	Caestensz (Nassau Range-New Guinea)	5,000

### Inventions and Discoveries

1	Air Brake	George Westinghouse
2	Aniline Dyes	Hoffman
3	Antiseptic Surgery	Lord Joseph Lister
4	Archimedean Screw	Archimedes
5	Avogadro's Hypothesis	Avogadro
6	Atomic Number	Mosley
7	Atomic Theory	Dalton
8	Atomic Structure	Bohr and Rutherford
9	Automobile	Daimler
10	Balloon	Montgolfier
11	Barometer	Torricelli
12	Beri - Beri	Eijkman
13	Bicycle	Macmillian
14	Blood Circulation	Harvey
15	Boson	S.N.Bose
16	Boyle's law	Boyle
17	Braille	Louis Braille
18	Breaking up the Nucleus of an atom	Rutherford
19	Celluloid	Parkes
20	Chloroform	James Harrison and James Young Simpson
21	Cholera Bacillus	Robert Koch
22	Cinematography	Thomas Alva Edison
23	Coloured Photography	Lippman
24	Cosmic Rays	R.A.Millikan
25	Crescograph	J.C.Bose
26	Crystal Dynamics	C.V.Raman
27	Cyclotron	Lawrence

28	D.D.T.	Dr.Paul Muller
29	Deuterium (Heavy Water)	H.C.Urey
30	Diesel Oil Engine	Rudolf Diesel
31	Discovery of North Pole	Robert Peary (1909)
32	Discovery of South Pole	Amundson (1912)
33	Discovery of West Indies	Columbus (1492)
34	Discovery of Solar System	Copernicus (1540)
35	Discovery of Laws of Planetary Motion	Kepler
36	Discovery of Specific Gravity	Archimedes
37	Drinker's Chamber of Iron Lung	Dr.Philip Drinker
38	Dynamite	Alfred Nobel
39	Dynamo	Faraday
40	Dynamical theory of Heat	Lord Kelvin
41	Deciphering the genetic code	Dr.Hargobiad Khorana
42	Discovery of Electrons	J.J.Thomson
43	Electric Battery	Volta
44	Electric Lamp	Edison
45	Electricity	Faraday
46	Electron Theory	Bohr
47	Electromagnetic Theory	Maxwell
48	Electrical Waves	Heitz
49	Electric Measurement	Gauss
50	Effect of Pressure on trough bodies	Meghnad Saha
51	Fahrenheit Scale	Fahrenheit
52	Film & Photographic goods	Kodak
53	Fundamental Laws of Electric Attraction	Coulomb
54	Fountain Pen	Waterman



55	Geometry	Euclid
56	Gun powder	Rogei Bacon
57	Gramophone	Thomas Alva Edison
58	Helicopter	Broquett
59	Helium Gas	Lockyer
60	Heavy Hydrogen	Urey
61	Homoeopathy	Hahnemann
62	Hovercraft	Cockrell
63	Hydrogen	Cavendish
64	Hydrophobia	Louis Pasteur
65	Induction of Electric Current	Faraday
66	Incandescent Bulb	Edison
67	Induction Coil	Rohm Korff
68	Insulin	F.Banting
69	Intelligence test	Binet
70	In Number Theory	Ramanujam
71	Jet Propulsion	Frank Whittle
72	Kala-azar Fever	U.N.Brahmachari
73	Laughing Gas	Priestley
74	Life Boat	Henry Great Head
75	Lift (Elevators)	Otis
76	Lightning Conductor	Benjamin Franklin
77	Linotype	Mergenthaler
78	Line of demarcation (ship)	Plimsoll
79	Laws of Electrical Resistance	Ohm
80	Law of Electrolysis	Faraday
81	Law of gases	Gay Lussac
82	Laws of Gravitation	Newton
83	Laws of Heredity	Gregory Mandel
84	Logarithms	John Napier

85	Laws of Motion	Newton
86	Laws of Natural Selections	Darwin
87	Laws of Multiple Proportion	Dalton
88	Liquid Oxygen	Dewar
89	Mathematical Astro Physics	Chandrasekhar
90	Measurement of Electrical Energy	Joule, James Prescott
91	Mauve dye	Perkin
92	Machine Gun	Dr. Gatting
93	Malarial Parasite	Ronald Ross
94	Mechanical Equivalent of Heat	Joules
95	Meson	Hideki Yakawa
96	Microphone	Berliner
97	Microscope	Janes
98	Montessori Method	Maria Montessori
99	Molecular Scattering of light in fluid	Ramanathan
100	Neon Gas	Ramsay, Travers
101	Neutron	Chadwick
102	Nuclear Fission	Otto Hahn, Bohr and Fermi
103	Nylon Plastic	Carothers
104	Origin of Species	Charles Darwin
105	Oxygen	Priestly
106	Paints	Shalimar
107	Penicillin	Fleming
108	Periodic Law	Mendeleef
109	Phonograph	Edison
110	Phonographic Shorthand	Pitman
111	Photograph	Daguerre
112	Principle for lever	Archimedes

	(S.P.Gravity)	
113	Phototherapy	N.R.Finsen
114	Positive Electrons	Anderson
115	Powerloom	Cartwright
116	Pneumatic Tyre	Dunlop
117	Printing for the Blind	Braille
118	Printing Press	Caxton
119	Printing Types	John Guttenberg
120	Psycho-analysis	Dr.Sigmund Freud
121	Quantum Theory	Max plank
122	Radio-activity of Uranium	Henry Becquerel
123	Raman effect	C.V.Raman
124	Radium	Madame Curie
125	Railway Engine	Stephenson
126	Radio transmitter	Alexanderson
127	Rare Gas	Cavandish
128	Replacing human heart	Christian Barnard
129	Revolver	Colt
130	Safety Lamp	Davy
131	Safety Razor	Gillet
132	Salk Vaccine	Salk
133	Seismograph	Roberts Mallet
134	Scientific astronomy	Hippalus
135	Sewing Machine	Elias Howe
136	Sextant	Hadley
137	Space flying	Braun, Dr.Wernher Von
138	Steam boat	Fulton
139	Steam Engine	James Watt
140	Steam Turbine	Parsons
141	Spectroscope	Bunsen

142	Steel Melting Process	Bessemer
143	Stethoscope	Laennec
144	Submarine	Bushwell
145	Sulpha Drugs	Domagk
146	Theory of Relativity	Einstein
147	Theory of Evolution	Darwin
148	Theory of conditioned reflex	Pavlov
149	Talkies	Lee-de-Frost
150	Tank	Swinton
151	Telegraphic Code	Samuel Morse
152	Telephone	Graham Bell
153	Telescope	Galileo
154	Television	Baird
155	Thermometer	Galileo
156	Thermos Flasks	Dewar
157	T.N.T.	Illy Brandt
158	Transistor	Shockley
159	Typewriter	Sholes
160	Uranium fusion	Oho Hahn
161	Uranus (Planet)	Herschel William
162	Vaccination	Jenner
163	Vitamins	Funk
164	Washing Soda	Lablanc
165	Wireless Communication	Oliver Lodge
166	Wireless Telegraphy	Marcony
167	X - Rays	Roentgen
168	Zip Fastener	W.L.Judson

### National Emblems

Australia	Kangaroo
Bangladesh	Water Lily
Barbados	Head of trident
Belgium	Lion
Canada	White Lily
Chile	Candor and huemul
Denmark	Beach
Dominica	Sisserou Parrot
France	Lily
Germany	Corn Flower
Guyana	Canje Pheasant
India	Lioned Capital
Iran	Rose
Ireland	Shamrock
Israel	Candelabrum
Italy	White Lily
Ivory Coast	Elephant
Japan	Lion with Crown
Hong Kong	Bauhinia (Orchid tree)
Lebanon	Cedar tree
Luxembourg	Lion with Crown
Mongolia	The Soyombo
Netherlands	Lion
New Zealand	Southern Cross, Kiwi, Fern
Norway	Lion
Pakistan	Crescent
Papua New Guinea	Bird of Paradise
Spain	Eagle
Senegal	Baobab tree

Sierra Leone	Lion
Sri Lanka	Lion
Sudan	Secretary Bird
Syria	Eagle
Turkey	Crescent and Star
United Kingdom	Rose
U.S.A.	Golden Rod
Zimbabwe	Zimbabwe Bird

### Worlds Prominent Scientists

**Ryle, Sir Martin:** U.K. (1974) Nobel Prize winner in Physics for the development of "aperture synthesis" technique designed to identify stellar objects through radio signals.

**Sarabhai, Dr. Vikram A:** Former Chairman of India's Atomic Energy Commission and the Indian Space Research Organization (ISRO) died on December 30, 1971. Dr. Sarabhai was an eminent physicist mainly interested in the astro-physical implications of Cosmic Ray Time Variations

**Sanger, Dr. Frederick (b.1918):** First Scientist to receive two Nobel Prizes for Chemistry in 1958 (composition of the insulin molecule) and in 1980 (molecular structures for nucleic acids)

**Sen, P.K. (Dr.):** is the Indian surgeon who performed Asia's first heart transplant operation in Mumbai.

**Simpson, Sir James Young (1811 - 1870):** British physicist to introduce chloroform as an anaesthetic in 1847

**Soddy, Frederick (1877 - 1956):** British radio chemist pioneer to research in the atomic disintegration, discovered "isotopes"; for which he received the Nobel Prize for Chemistry in 1921.

**Solvay, Earnest (1838 - 1922):** Belgian chemist devised a process for manufacture of sodium carbonate

**Sutherland, Dr. Earl W:** Recipient of the Nobel Prize for Medicine, 1971, credited with the discovery, "that the hormones in the human body produce another substance known as cyclic A.M.P., can influence its disease-resisting capacity in the body".

**Teller, Edward (Dr.):** U.S. nuclear scientist developed the hydrogen bomb.

**Thomson, Sir J.J. (1856 - 1940):** British physicist discovered the electron which inaugurated the electrical theory of the atom.

**Tsiolkovsky (1857 - 1940):** Russian pioneer who developed the basic theory of rocketry.

**Verne, Jules (1828 - 1905):** French science-fiction writer; author of the book "From the Earth to the Moon". The book carried a more or less accurate prediction of the launching and flight of Apollo-8.

**Volta, A. (1745 - 1827):** Italian physicist and pioneer of electrical science; invented voltaic cell, the electrophorus and electroscope.

**Voronoff, S:** Russian scientist known for grafting healthy animal glands, into the human body.

**Watson and Crick:** Known for DNA double helix.

**Watson-Watt, Sir Robert:** British physicist. He developed radar.

**Watt, James (1736 - 1819):** Scottish engineer who invented steam engine

**Yukawa, Dr. H:** (born 1907) Predicted a new particle meson which holds the protons and neutrons of the atomic nucleus, first Japanese to win the Nobel Prize in Physics (1949).

**Alvares, Luis W:** An American Won the Nobel Prize for elementary physics in 1960 when he discovered a new resonance particle - a discovery that shattered the then prevailing notions as to how matter was built.

**Anfinsen, Dr. Christian B:** U.S.A. 's one of the three co-winners of the Nobel Prize in Chemistry, 1972.

**Archimedes:** Greek mathematician who lived about 250 B.C. discovery of the Archimedes' principle Archimedean Screw, a cylindrical device for raising water

**Arrow, Kenneth, J:** Harvard University, U.S.A. is co-winner of the Nobel Prize for Economics, 1972 with Sir John Richard Hicks of Oxford University. The two men are known for their pioneering contributions to general economic equilibrium and welfare theories.

**Aryabhata:** (476 - 520 A.D.) after whom India's first scientific satellite has been named, was a great Indian astronomer and mathematician. Among his important contributions are the recognition of the importance of the movement of the earth round the Sun, determination of the physical parameters of various celestial bodies, such as diameter of the earth and the moon. He laid the foundations of algebra and was responsible for pointing out importance of "zero".

**Avogadro, Amedeo:** Italian physicist; founder of Avogadro's hypothesis. He also defined a

molecule. He lived between 1776 and 1856.

**Bardeen, Prof. John:** U.S.A.'s co-winner of the Nobel Prize for Physics, 1972 (with Prof. Leon N.Cooper and Prof. John Robert Schrieffer) for researches into the "theory of super-conductivity" called BCS theory.

**Barnard, Christian** South African surgeon who did the first heart transplant operation on Louis Washkansky in 1967.

**Beadle, Dr. G:** American scientist awarded Nobel Prize for medicine in 1958 for the actual basis of heredity.

**Becquerel, Henri:** French physicist discovered in 1896 of Becquerel rays, the first indications of radio-activity; later named gamma rays. He shared Nobel Prize for Physics with the Curies in 1903. He lived between 1852 and 1908.

**Berzelius, J.J:** Swedish Chemist, known for chemical shorthand symbols and atomic weights. He lived between 1779 and 1848

**Bessemer, Sir Henry:** English engineer invented the process for the manufacture of steel. He lived between 1813 and 1898.

**Bhabha, Dr. H.J:** Indian scientist. He published important papers on Cosmic Rays and Quantum Theory. He was professor at the Indian Science Institute, Bangalore; Chairman, Atomic Energy Commission; Director, Tata Institute of Fundamental Research; President, Indian Science Congress in 1951 and presided at the Atoms for Peace Conference held at Geneva in 1956. He had many significant researches in structure of atom and contributed largely to the setting up of atomic reactors at Trombay (Mumbai).

**Bohr, Neils:** (born 1885) Danish Physicist awarded Nobel Prize for Physics in 1922. He extended the theory of atomic structure of devising an atomic model in 1913

**Boyle, Robert:** Irish natural philosopher; one of the founders of modern chemistry and Boyle's law. He lived between 1627 and 1691.

**Bragg, Sir William:** British physicist researched on the behaviour of crystals with regard to X-rays incident upon them. He lived between 1862 and 1942.

**Cavendish, Henry:** English physicist and chemist; discovered properties of hydrogen in 1766. He lived between 1731 and 1810

**Chadwick, Sir James:** British physicist discovered the particle in an atomic nucleus known as the neutron, because it has no electric charge. He lived between 1891 and 1974.

**Charles, Jacques Alexander Cesar:** A French scientist first to make a balloon ascension with hydrogen. He has worked on the effect of temperature on the volume of gases. He lived between



1746 and 1823.

**Clark Maxwell, James:** British physicist worked wireless telegraphy and telephony. His principal works include : Perception of Colour, Colour Blindness, Theory of Heat, Electricity and Magnetism, Matter and Motion. He lived between 1831 and 1879.

**Claude, Albert:** A Biologist shared the 1974 Nobel Prize in Medicine. His field of research relates to causes and treatment of cancer.

**Columbus, Christopher:** Italian navigator discovered West Indies Islands, Cuba, Bahamas, South America in 1498. He lived between 1446 to 1506.

**Cooper, Leon N:** Of U.S.A. one of the three co-winners of the Nobel prize in Physics, 1972 for theory of superconductivity

**Copernicus:** Astronomer of Poland who discovered the "Solar System". He lived between 1413 and 1543.

**Curie, Madame Marie:** Polish physicist and chemist; discovered radium awarded Nobel Prize in chemistry in 1911 and Prize in physics in 1903, lived between 1867 and 1934.

**Dalton, John:** British scientist, founder of the Atomic Theory and law of Multiple Proportions. He lived between 1766 and 1844.

**Darwin, Charles:** British scientist who discovered the principle of natural selection. He lived between 1809 and 1882.

**Davy, Sir Humphrey:** British chemist. First to apply electric current for the isolation of metals. He lived between 1771 and 1829.

**Debreu, Gerard:** 1983 Nobel memorial prize in economics, is known for his research on market equilibrium incorporated "new analytical methods into economic theory".

**Delbrueck, Dr. Max:** American doctor, was one of the three American co-winners of the Nobel Prize for Medicine, 1969 for discoveries in molecular genetics

**Edelman, Dr. Gerald Maurice:** Of U.S.A. is co-winner of the Nobel Prize for Medicine, 1972 found out "the chemical structure of blood-proteins or antibodies which shield the human body against infection".

**Edison, Thomas Alva:** American inventor of phonograph, the incandescent lamp, a new type of storage battery, an early form of cinematography etc. He lived between 1847 and 1931.

**Einstein, Prof. Albert:** German-Swiss, famous scientist known for his theory of relativity. He lived between 1879 and 1955.

**Faraday, Michael:** English scientist; prominent in the field of electro-magnetism; discovered the laws of electrolysis. He lived between 1791 and 1867

**Fleming, Sir John Ambrose:** British physicist and engineer pioneer in the development of the telephone, electric light and radio. He lived between 1849 and 1945.

**Fraunhofer:** German physicist researched on 'Light' while performing spectrum-analysis of Sunlight; discovered 'Fraunhofer Lines'.

**Freud, Sigmund:** Psycho-analysist. Works: The Interpretation of Dreams; The Psychopathology of Every-day Life; The Ego and the Id; Civilization and Its Discontents. He lived between 1856 and 1939

**Gabor, Dr Dennis:** 1971 Nobel Prize award for Physics for his "invention in development of the holographic method" - three dimensional photography.

**Galileo:** Italian scientist viewed that all falling bodies, great or small, descend with equal velocity, invented telescope and became the first man to see the satellites of Jupiter. He lived between 1564 and 1642.

**Gell-Mann, Prof. Murray:** Recipient of the 1969 Nobel Prize in Physics, for his "classification of elementary particles and their interactions".

**Goddard, Robert H:** An American pioneer of space research who mentioned the possibility of shooting a rocket to the moon in a paper entitled "A Method of Reaching Extreme Altitudes" published by him in 1919.

**Graham, Thomas:** Scottish chemist called the "father of colloidal chemistry". He worked on diffusion of substances in solution. He lived between 1805 and 1914.

**Hahn, Otto:** German pioneer of nuclear research, won the Nobel Prize for Chemistry in 1944, proved in 1938 that atomic fission can be achieved by bombarding uranium with neutrons.

**Hall, Charles Martin:** American chemist discovered the modern method of extraction of aluminium by electrolysis of bauxite in 1886. He lived between 1863 and 1914.

**Harvey, William:** English physician who discovered the circulation of blood. He lived between 1578 and 1675

**Herzberg, Dr. Gebard:** The 1971 Nobel Prize winner in Chemistry, for his researches in atomic and molecular structures, particularly free radicals.

**Holley, Robert:** Nobel Prize winner for Medicine, 1968, the genetic code and its function in building protein led to the discovery of "the complete structure of a transfer of RNA molecule"

**Hopkins, Sir Frederick Gowland:** English biochemist worked on proteins and vitamins. He

received the Nobel Prize in medicine in 1929 for the discovery of Vitamin D.

**Hoyle, Fred:** A British scientist and science-fiction writer who won the £ 1,000 Kalinga Prize in 1968.

**Jenner, Edward:** English physician discovered the vaccination system of alleviating small pox. He lived between 1749 and 1823.

**Josephson Dr. Brian:** British scientist who co-shared the 1973 Nobel Prize for physics for his "theoretical predictions of the properties of a super-current through a tunnel barrier, known as Josephson effects".

**Joule, James Prescott:** English physicist who first demonstrated the mechanical energy can be converted into heat. He lived between 1874 and 1937.

**Kepler, Johannes:** German astronomer discovered 3 laws of planetary motion (1) The orbit of each planet is an ellipse with the Sun at one of the foci; (2) the Radius vector of each planet describes equal areas in equal times; (3) The squares of the periods of the planets are proportional to the cubes of their mean distances from the Sun. He lived between 1571 and 1630.

**Khorana, Hargobind:** Who shared with two other the 1968 Nobel Prize for Medicine is an Indian by birth and an American by domicile. He deciphered the genetic code and later created an artificial gene.

**Krishnan, Dr. K.S:** (born 1898) collaborated with Sir C.V.Raman in the discovery of "Raman Effect". President, Indian Science Congress, 1949, delegate to several international scientific conferences; Director, National Physical Laboratory, New Delhi.

**Lavoisier A.L:** French chemist; established "law of Indestructibility of Matter, Composition of Water and Air". He lived between 1743 and 1794.

**Lister, Joseph:** British surgeon who used antiseptic treatment for wounds; introduced antiseptic surgery. He lived between 1827 and 1912.

**Lodge, Sir Oliver Joseph:** British physicist, known for his researches on radiation, and the relation between matter and ether. He lived between 1851 and 1940.

**Lysenko:** Soviet geneticist declared the "Mendelian theory obsolete and erroneous" in 1948.

**Marconi:** Italian scientist pioneer in wireless telegraphy and radio. He lived between 1873 and 1937.

**McClintock, Barbara:** 1983 Nobel Prize winner in Medicine for her discovery of mobile genetic.

**Max Planck:** German theoretical physicist who formulated the quantum theory. He was awarded

the Nobel Prize in 1918.

**Mendel, Johann Gregory:** Austrian monk and naturalist discovered certain principles of inheritance of heredity. He lived between 1822 and 1884.

**Mendeleef, D.I:** Russian chemist, founder of periodic law and the development of petroleum and other industries in Russia. He lived between 1834 and 1901.

**Meyer, Victor:** Discovered a method to determine the molecular weights of volatile substances. He lived between 1848 and 1897.

**Morley, Edward William:** American chemist and physicist known for his work in determining the composition of water by weight. He lived in 1818 and 1923.

**Moseley, Henry G:** British physicist worked on atomic structure, and in 1913, devised the series of atomic numbers. He lived between 1887 and 1915.

**Newton, Sir Isaac:** British natural philosopher discovered "binomial theorem, the differential and integral calculus and the universal law of gravitation". He lived between 1642 and 1727.

**Nirenberg, Dr. Marshall:** U.S. molecular biologist 1968 Nobel Prize winner for Medicine with Dr. Robert Holley and Dr. Hargobind Khorana.

**Ohm, George Simon:** Physicist and mathematician; discovered the law known as Ohm's Law. He lived between 1787 and 1854.

**Onsager, Lars:** U.S. Professor who became a Nobel laureate of 1968 for Chemistry the discovery of "the reciprocal relations bearing his name which are fundamental for the thermodynamics of irreversible processes".

**Paracelsus:** Swiss mystic and chemist, he was the first to employ laudanum and antimony in Pharmacy. He lived between 1493 and 1541.

**Pasteur, Louis:** French chemist discovered the causes of fermentation in alcohol and milk and founded the Pasteur Institute in 1888. He lived between 1822 and 1895.

**Pauling, Linus:** American bio-chemist applied the quantum theory to chemistry received Nobel Prize (1954) for his contribution to the electrochemical theory of valency.

**Porter, Dr. Rodney Robert:** Biochemist known for his discoveries relating to the chemical structure of antibodies.

**Prelog, Vladimir:** Yugoslavian stereo-chemistry-research of organic molecules and reactions. He received (1975) Nobel Prize in Chemistry.

**Priestley, Joseph:** British Chemist; discovered oxygen and methods of collecting gases. He

lived between 1733 and 1804.

**Rao, Prof. U.Ramachandra:** Is the Director of Indian Scientific Satellite Project (ISSP) at Peenya near Bangalore.

**Rainwater, James:** U.S.A. (1975) Nobel Prize winner in Physics for the development of the theory that atomic nucleus is not always spherical but can also be egg-shaped which has no immediate practical meaning but is extremely essential to scientists

**Richards, T.W:** He worked for the accurate determination of atomic weights and was awarded Nobel Prize in 1916.

**Roger Bacon:** Inventor of Gun Powder and founder of experimental science. He lived between 1214 and 1294.

**Rontgen, W.Konrad:** German physicist, discovered X-rays, or Rontgen rays for which he was awarded the first Nobel Prize for Physics in 1901. He lived between 1845 and 1923.

**Ross, Ronald:** British physician discovered the cause of Malaria; awarded Nobel Prize for medicine in 1902. He lived between 1857 and 1932.

**Rutherford, Daniel:** Scottish scientist discovered nitrogen. He lived between 1749 and 1819.

**Rutherford, Lord:** Won a Nobel Prize for his work on structure of atom and radio-activity. He lived between 1871 and 1937.

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INDIA-III

### Nick Names of Important Indian Places

SNo	Nick name	Place
1	Golden City	Amritsar
2	Manchester of India	Ahmedabad
3	City of Seven islands	Mumbai
4	Queen of Arabian Sea	Cochin
5	Space City	Bangalore
6	Garden City of India	Bangalore
7	Silicon Valley of India	Bangalore
8	Electronic city of India	Bangalore
9	Pink city	Jaipur
10	Gateway of India	Mumbai
11	Twin city	Hyderabad - Sikandarabad
12	City of festivals	Madurai
13	Deccan Queen	Pune
14	City of Buildings	Kolkata
15	Dakshin Ganga	Godavari
16	Old Ganga	Godavari
17	Egg bowls of Asia	Andhra Pradesh
18	Soya region	Madhya Pradesh
19	Manchester of the South	Coimbatore
20	City of Nawabs	Lucknow
21	Venice of the east	Cochin
22	Sorrow of Bengal	Damodar river
23	Sorrow of Bihar	Kosi river
24	Blue Mountains	Nilgiri
25	Queen of the Mountains	Mussoorie (Uttaranchal)
26	Sacred river	Ganga
27	Hollywood of India	Mumbai

28	City of Castles	Kolkata
29	State of five rivers	Punjab
30	City of weavers	Panipat
31	City of lakes	Srinagar
32	Steel city of India	Jamshedpur (Called Tatanagar)
33	City of temples	Varanasi
34	Manchester of the north	Kanpur
35	City of Rallies	New Delhi
36	Heaven of India	Jammu & Kashmir
37	Boston of India	Ahmedabad
38	Garden of spices of India	Kerala
39	Switzerland of India	Kashmir
40	Abode of the God	Prayag (Allahabad)
41	Pittsburg of India	Jamshedpur

### Recipients of Bharat Ratna

Name	Awarded in
Dr.Sarvepalli Radhakrishnan (1888 - 1975)	1954
Chakravarthi Rajagopalachari (1878 - 1972)	1954
Dr.Chandrasekhar Venkatraman (1888 - 1970)	1954
Dr.Bhagwan Das (1869 - 1958)	1955
Dr.Mokshagundam Viswesvaraya (1861 - 1962)	1955
Jawaharlal Nehru (1889 - 1964)	1955
Govind Vallabh Pant (1887 - 1961)	1957
Dr.Dhondo Keshav Karve (1858 - 1962)	1958
Dr.Bidhan Chandra Roy (1882 - 1962)	1961
Purushotham Das Tandon (1882 - 1962)	1961
Dr.Rajendra Prasad (1884 - 1963)	1962
Dr.Zakir Hussian (1897 - 1969)	1963



Dr.Pandurang Vamman Kane (1880 - 1972)	1963
Dr.Lal Bahadur Shastri (Posthumous) (1904 - 1966)	1966
Indira Gandhi (1917 - 1984)	1971
Varaha Giri Venkata Giri (1884 - 1980)	1975
Kumaraswami Kamaraj (Posthumous) (1903 - 1975)	1976
Mary Teresa Bojaxhiu (Mother Teresa) (1910-1997)	1980
Acharya Vinoba Bhave (Posthumous) (1895-1982)	1983
Khan Abdul Ghaffar Khan (1890 - 1988)	1987
M.G.Ramachandra (Posthumous) (1917 - 1987)	1988
Dr.B.R.Ambedkar (Posthumous) (1891 - 1956)	1990
Dr.Nelson Mandela (1918)	1990
Morarji Desai (1896 - 1995)	1991
Rajiv Gandhi (Posthumous) (1944 - 1991)	1991
Sardar Vallab Bhai Patel (Posthumous) (1875 - 1950)	1991
J.R.D. Tata (1904 - 1993)	1992
Satyajit Ray (1922 - 1992)	1992
Moulana Abul Kalam Azad (Posthumous) (1888 - 1958)	1992
Aruna Asaf Ali (Posthumous) (1909 - 1996)	1997
Gulzarilal Nanda (Posthumous) (1898 - 1997)	1997
A.P.J. Abdul Kalam (1931)	1997
M.S.Subbulakshmi (1916 - 2004)	1998
C.Subramaniam (1910 - 2000)	1998
Jayaprakash Narayan (Posthumous) (1902 - 1979)	1999
Dr.Amartya Sen (1933)	1999
Pandit Ravi Shankar (1920)	1999
Gopinath Bordoloi (Posthumous) (1890 - 1950)	1999
Latha Mangeskar	2001
Bismilla Khan	2001

### Important Sites in India

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Sno	Place	City/State
1	Ajanta	Aurangabad
2	Akbar's Tomb	Sikandara
3	Ambernath Cave	Kashmir
4	Amber Palace	Jaipur
5	Anand Bhavan	Allahabad
6	Bhakra Dam	Punjab
7	Birla Planetarium	Kolkata
8	Black Pagoda	Konark (Orissa)
9	Bodhisattva	Ajanta Caves
10	Brihadeeswara Temple	Tanjore
11	Brindavan Gardens	Mysore (Karnataka)
12	Buland Darwaza	Fatepur Sikri
13	Charminar	Hyderabad
14	Chenna Kesava Temple	Belur
15	Chilka Lake	Near Bhubaneswar
16	Dal Lake	Srinagar
17	Dilwara Temples	Mt. Abu
18	Elephanta Caves	Mumbai
19	Golden Temple	Amritsar
20	Gol Gumbaz	Bijapur
21	Hanging Gardens	Mumbai
22	Hawa Mahal (Palace of Winds)	Jaipur
23	Howrah Bridge	Kolkata
24	Island Palace	Udaipur
25	Itmad-ud-Daulah's Tomb	Agra
26	Jagannath Temple	Puri

27	Jama Masjid	Delhi
28	Jantar Mantar	Delhi
29	Jog (Geresoppa) Falls	Mysore
30	Kailasanath Temples	Ellora
31	Kanyakumari Temples	Cape Comorin
32	Khajuraho	Bhopal
33	Konark	Puri
34	Lal Bagh Gardens	Bangalore
35	Mahakaleswar Temple	Ujjain
36	Mahesuramurthi (Trimurti)	Elephanta Caves
37	Malabar Hills	Mumbai
38	Manmandir Palace	Gwalior Fort
39	Marble Rocks	Jabalpur
40	Marina Beach	Chennai
41	Meenakshi Temple	Madurai
42	Padmanabha Temple	Trivandrum
43	Panch Mahal	Fatepur Sikri
44	Tower of Fame	Chittorgarh

### First in India Men

Field	Person
First Indian to swim across the English Channel	Mihir Sen
First to Climb Mount Everest	Tenzing Norgay
First to climb Mount Everest without Oxygen	Phy Dorjee
First Indian to join I.C.S. (I.C.S. now IAS)	Satyendra Nath Tagore
First Indian to get Nobel Prize	Rabindra Nath Tagore
First Indian in Space (first Indian cosmonaut)	Sqn. Ldr. Rakesh Sharma
First British Governor General	Warren Hastings
First Governor General of Free India	Lord Mountbatten
First and the last Governor General of free India	C. Rajagopalachari

First President of India	Dr. Rajendra Prasad
First Vice-President of India	Dr. S. Radhakrishnan
First Muslim President of India	Dr. Zakir Hussain
First Sikh President of India	Giani Zail Singh
First Prime Minister	Pt. Jawahar Lal Nehru
First Speaker of Lok Sabha	G.V. Mavlankar
First Chief Justice of India	Justice H.L. Kania
First President of Indian National Congress	W.C. Bannerjee
First Indian to become member of Viceroy's Executive Council	Lord S.P. Sinha
First Indian to become President of International Court of Justice	Dr. Nagendra Singh
First Emperor of Moghul Dynasty	Babar
First Field Marshal	S.H.F.J. Manekshaw
First Indian Commander-in-Chief of India	Gen. K.M. Cariappa
First Chief of the Army Staff (Indian)	Sinhji
First Chief of the Naval Staff (Indian)	Vice Admiral R.D. Katari
First Chief of the Air Force Staff (India)	Subroto Mukherjee
First Indian in British Parliament	Dada Bhai Nauroji
First Indian recipient of Victoria Cross (highest award before independence)	Khudada Khan
First Indian to circumnavigate the globe	Lt. Col K.S. Rao
First Indian to reach the South Pole	Col J.K. Bajaj (1989)
First Indian to make a solo air flight	JRD Tata
First Indian to visit England	Raja Rammohan Roy (1832)
First Indian Member of House of Lords (British)	Lord S.P. Sinha
First Bar-at-Law	J.M. Tagore
First Chairman of Rajya Sabha	Dr. S. Radhakrishnan (1952 - 62)
First Indian Test Cricketer	K.S. Ranjitsingh
First Air Marshall	Arjan Singh
First Judge to face impeachment in the Lok Sabha	Justice V.Ramaswami (1993)
Fastest Shorthand writer	Dr. G.D. Bhist (250 wpm)

### First in India Women

Field	Person
First Prime Minister	Mrs. Indira Gandhi
First Chief Minister of State	Mrs. Sucheta Kripalani
First Minister	Mrs. Vijayalakshmi Pandit
First Central Minister	Rajkumari Amrit Kaur
First Speaker of Lok Sabha	Mrs. Shanno Devi
First Governor of a State	Mrs. Sarojini Naidu
First President of Indian National Congress	Dr. Annie Besant
First Indian President of Indian National Congress	Mrs.. Sarojini Naidu
First President of UN General Assembly	Mrs. Vijayalakshmi Pandit
First Muslim to sit on the throne of Delhi	Razia Sultan
First to swim across the English Channel	Mrs. Arti Shah
First to climb Mount Everest	Bachhendri Pal
First to circumnavigate (sail round the world)	Ujwala Rai
First IAS Officer	Anna George Malhotra
First IPS Officer	Kiran Bedi
First Advocate	Cornelia Sorabji
First Judge of a High Court	Anna Chandi
First Judge of Supreme Court	Ms M. Fathima Beevi
First Chief Justice of a High Court	Ms. Leila Seth
First Doctor	Kadambini Ganguli
First editor of English newspaper	Dina Vakil
First Chief Engineer	Mrs. P.K. Thresia
First to receive a Sena Medal	Constable Bimla Devi (88 BN of CRPF) - 1990
Youngest to Climb Mount Everest	Dicky Doima (19) from Manali - 1993
First to climb Mount Everest two times	Santosh Yadav (ITBF Officer) - 1993
First Magistrate	Mrs. Omana Kunjamma

First to win Nobel Prize	Mother Theresa
First to be crowned Miss India	Reita Fariq
First to be crowned Miss Universe	Sushmita Sen
First to be crowned Miss World	Reita Faria
First DGP	Kanchan Chowdhry Bhattacharya

### Persons & Places

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Bardoli	Sardar Patel
Belur	Ramakrishna Paramahamsa
Brindaban (U.P.)	Lord Krishna
Chittor, Haldighat	Rana Pratap
Corsica, Elba, Wateriloo	Napoleon
Fathepur Sikri	Akbar the Great
Jerusalem	Jesus Christ
Kapilavastu, Lumbini	Buddha
Kanchipuram	C.N.Annadurai
Macedonia	Alexander, the Great
Maniyachi	Vanchinathan
Mecca	Mohammed the Prophet
Paunar	Acharya Vinoba Bhave
Pondicherry	Aurobindo Ghosh
Porbandar, Rajghat, Sabarmathi	Mahatma Gandhi
Srirangapattinam	Tipu Sultan
Sriperumpudur	Rajiv Gandhi
Shakti Sthal	Indira Gandhi
Shanti Van	Jawaharlal Nehru

Trafalgar	Nelson
Tuticorin	V.O.Chidambaram Pillai
Ujjain	Mahavira
Vedaranyam	C.Rajagopalachari
Vijay Ghat	Lal Bahadur Shastri

4

INDIAN-

HISTROY



## **Buddhism**

### **The Buddha:**

- The Buddha also known as Sakyamuni or Tathagata.
- Born in 563 BC on the Vaishakha Poornima Day at Lumbini (near Kapilavastu) in Nepal.
- His father Suddhodana was the Saka ruler.
- His mother (Mahamaya, of Kosala dynasty) died after 7 days of his birth. Brought up by stepmother Gautami.
- Married at 16 to Yoshodhara. Enjoyed the married life for 13 years and had a son named Rahula.
- After seeing an old man, a sick man, a corpse and an ascetic, he decided to become a wanderer.
- Left his palace at 29 in search of truth (also called 'Mahabhinishkramana' or The Great Renunciation) and wandered for 6 years.
- Attained 'Enlightenment' at 35 at Gaya in Magadha (Bihar) under the Pipal tree.
- Delivered the first sermon at Sarnath where his five disciples had settled. His first sermon is called 'Dharmachakrapracartan' or 'Turning of the Wheel of Law'.
- Attained Mahaparinirvana at Kushinagar (identical with village Kasia in Deoria district)

of UP) in 483 BC at the age of 80 in the Malla republic.

### **Buddhist Councils:**

- **First Council:** At Rajgriha, in 483 BC under the Chairmanship of Mahakassapa (king was Ajatshatru). Divided the teachings of Buddha into two Pitakas-Vinaya Pitaka and Sutta Pitaka.
- **Second Council:** At Vaishali, in 383 BC under Sabakami (King was Kalasoka). Followers divided into Sthaviravadins and Mahasanghikas.
- **Third Council:** At Pataliputra, in 250 BC under Mogaliputta Tissa (King was Ashoka) In this, the third part of the Tripitaka was coded in the Pali language.
- **Fourth council:** At Kashmir (Kundalvan), in 72 AD under Vasumitra (King was Kanishka, Vice-Chairman was Ashwaghosha). Divided Buddhism into Mahayana and Hinayana sects.

**Buddist Literature:** In Pali language.

**Vinaya Pitaka:** Rules of discipline in the Buddhist monasteries.

**Sutta Pitaka:** Largest, contains collection of Buddha's sermons.

**Abhidhamma Pitaka:** Explanation of the philosophical principles of the Buddhist religion

### **Newspaper Journals**

<b>Newspaper/Journal</b>	<b>Founder/Editor</b>
Bengal Gazette(1780) (India's first newspaper)	J.K.Hikki
Kesari	B.G.Tilak
Maharatta	B.G.Tilak

Sudharak	G.K.Gokhale
Amrita Bazar Patrika	Sisir Kumar Ghosh and Motilal Ghosh
Vande Mataram	Aurobindo Ghosh
Native Opinion	V.N.Mandalik
Kavivachan Sudha	Bhartendu Harishchandra
Rast Goftar (First newspaper in Gujarati)	Dadabhai Naoroji
New India (Weekly)	Bipin Chandra Pal
Statesman	Robert Knight
Hindu	Vir Raghavacharya and G.S.Aiyar
Sandhya	B.B.Upadhyaya
Vichar Lahiri	Krishnashastri Chiplunkar
Hindu Patriot	Girish Chandra Ghosh (later Harish Chandra Mukherji)
Som Prakash	Ishwar Chandra Vidyasagar
Yugantar	Bhupendranath Datta and Barinder Kumar Ghosh
Bombay Chronicle	Firoze Shah Mehta
Hindustan	M.M.Malviya
Mooknayak	B.R.Ambedkar
Comrade	Mohammed Ali
Tahzib-ul-Akhlaq	Sir Syyed Ahmed Khan
Al-Hilal	Abdul Kalam Azad
Al-Balagh	Abdul Kalam Azad
Independent	Motilal Nehru
Punjabi	Lala Lajpat Rai
New India (Daily)	Annie Besant
Commonweal	Annie Besant
Pratap	Ganesh Shankar Vidyarthi
Essays in Indian Economics	M.G.Ranade
Samvad Kaumudi (Bengali)	Ram Mohan Roy

Mirat-ul-Akhbar	Ram Mohan Roy (first Persian newspaper)
Indian Mirror	Devendra Nath Tagore
Nav Jeevan	M.K.Gandhi
Young India	M.K.Gandhi
Harijan	M.K.Gandhi
Prabudha Bharat	Swami Vivekananda
Udbodhana	Swami Vivekananda
Indian Socialist	Shyamji Krishna Verma
Talwar (in Berlin)	Birendra Nath Chattopadhyaya
Free Hindustan (in Vancouver)	Tarak Nath Das
Hindustan Times	K.M.Pannikar
Kranti	Mirajkar, Joglekar, Ghate

### **Viceroy's Of India**

#### **Lord Canning (1856 – 1862):**

- The last Governor General and the first Viceroy.
- Mutiny took place in his time.
- On Nov, 1858, the rule passed on to the crown.
- Withdrew Doctrine of Lapse.
- The Universities of Calcutta, Bombay and Madras were established in 1857.
- Indian Councils Act was passed in 1861.

#### **Lord Elgin (1862 – 1863)**

#### **Lord Lawrence (1864 – 1869):**

- Telegraphic communication was opened with Europe.
- High Courts were established at Calcutta, Bombay and Madras in 1865.
- Expanded canal works and railways.
- Created the Indian Forest department.

#### **Lord Mayo (1869 – 1872):**

- Started the process of financial decentralization in India.

- Established the Rajkot college at Kathiawar and Mayo College at Ajmer for the Indian princes.
- For the first time in Indian history, a census was held in 1871.
- Organised the Statistical Survey of India.
- Was the only Viceroy to be murdered in office by a Pathan convict in the Andamans in 1872.

#### **Lord Northbrook (1872 – 1876):**

#### **Lord Lytton (1876 – 1880):**

- Known as the Viceroy to reverse characters.
- Organised the Grand 'Delhi Durbar' in 1877 to decorate Queen Victoria with the title of 'Kaiser – I – Hind'.
- Arms Act(1878) made it mandatory for Indians to acquire license for arms.
- Passed the infamous Vernacular Press Act (1878).

#### **Lord Ripon (1880 – 1884):**

- Liberal person, who sympathized with Indians.
- Repealed the Vernacular Press Act (1882)
- Passed the local self – government Act (1882)
- Took steps to improve primary & secondary education (on William Hunter Commission's recommendations).
- The I Factory Act, 1881, aimed at prohibiting child labour.
- Passed the libel Bill (1883) which enabled Indian district magistrates to try European criminals. But this was withdrawn later.

#### **Lord Dufferin (1884 – 1888):**

- Indian National Congress was formed during his tenure.

#### **Lord Lansdowne (1888 – 1894):**

- II Factory Act (1891) granted a weekly holiday and stipulated working hours for women and children, although it failed to address concerns such as work hours for men.
- Categorization of Civil Services into Imperial, Provincial and Subordinate.
- Indian Council Act of 1892 was passed.
- Appointment of Durand Commission to define the line between British India and Afghanistan.

#### **Lord Elgin II (1894 – 1899):**

- Great famine of 1896 – 1897. Lyall Commission was appointed.

**Lord Curzon (1899 – 1905):**

- Passed the Indian Universities Act (1904) in which official control over the Universities was increased.
- Partitioned Bengal (October 16, 1905) into two provinces 1, Bengal (proper), 2. East Bengal & Assam.
- Appointed a Police Commission under Sir Andrew Frazer to enquire into the police administration of every province.
- The risings of the frontier tribes in 1897 – 98 led him to create the North Western Frontier Province (NWFP).
- Passed the Ancient Monuments Protection Act (1904), to restore India's cultural heritage. Thus the Archaeological Survey of India was established.
- Passed the Indian Coinage and Paper Currency Act (1899) and put India on a gold standard.
- Extended railways to a great extent.

**Lord Minto (1905 – 1910):**

- There was great political unrest in India. Various acts were passed to curb the revolutionary activities. Extremists like Lala Laipat Rai and Ajit Singh (in May, 1907) and Bal Gangadhar Tilak (in July, 1908) were sent to Mandalay jail in Burma.
- The Indian Council Act of 1909 or the Morley – Minto Reforms was passed.

**Lord Hardinge (1910 – 1916):**

- Held a durbar in Dec, 1911 to celebrate the coronation of King George V.
- Partition of Bengal was cancelled (1911), capital shifted from Calcutta to Delhi (1911).
- A bomb was thrown at him; but he escaped unhurt (Dec 23, 1912).
- Gandhiji came back to India from S. Africa (1915).
- Annie Besant announced the Home Rule Movement.

**Lord Chelmsford (1916 – 1921):**

- August Declaration of 1917, whereby control over the Indian government would be gradually transferred to the Indian people.
- The Government of India Act in 1919 (Montague – Chelmsford reforms) was passed.
- Rowlatt Act of 1919; Jallianwala Bagh Massacre (April 13, 1919).
- Non – Cooperation Movement.
- An Indian Sir S.P. Sinha was appointed the Governor of Bengal.
- A Women's university was founded at Poona in 1916.
- Saddle Commission was appointed in 1917 to envisage new educational policy.

**Lord Reading (1921 – 1926):**

- Rowlatt act was repealed along with the Press act of 1910.

- Suppressed non-cooperation movement.
- Prince of Wales visited India in Nov.1921.
- Moplah rebellion (1921) took place in Kerala.
- Ahmedabad session of 1921.
- Formation of Swaraj Party.
- Vishwabharati University started functioning in 1922.
- Communist part was founded in 1921 by M.N.Roy.
- Kakory Train Robbery on Aug 9, 1925.
- Communal riots of 1923 – 25 in Multan, Amritsar, Delhi, etc.
- Swami Shraddhanand, a great nationalist and a leader of the Arya Samajists, was murdered in communal orgy.

#### **Lord Irwin (1926 – 1931):**

- Simon Commission visited India in 1928.
- Congress passed the Indian Resolution in 1929.
- Dandi March (Mar 12, 1930).
- Civil Disobedience Movement (1930).
- First Round Table Conference held in England in 1930.
- Gandhi – Irwin Pact (Mar 5, 1931) was signed and Civil Disobedience Movement was withdrawn.
- Martyrdom of Jatin Das after 64 days hunger strike (1929).

#### **Lord Willington (1931 – 1936):**

- Second Round Table conference in London in 1931.
- On his return Gandhiji was again arrested and Civil Disobedience Movement was resumed in Jan 1932.
- Communal Awards (Aug 16, 1932) assigned seats to different religious communities. Gandhiji went on a epic fast in protest against this division.
- Third Round Table conference in 1932.
- Poona Pact was signed.
- Government of India Act (1935) was passed.

#### **Lord Linlithgow (1936 – 1944):**

- Govt. of India Act enforced in the provinces. Congress ministries formed in 8 out of 11 provinces. They remained in power for about 2 years till Oct 1939, when they gave up offices on the issue of India having been dragged into the II World War. The Muslim League observed the days as ‘Deliverance Day’ (22 December)
- Churchill became the British PM in May, 1940. He declared that the Atlantic Charter (issued jointly by the UK and US, stating to give sovereign rights to those who have been forcibly deprived of them) does not apply to India.
- Outbreak of World War II in 1939.
- Cripps Mission in 1942.
- Quit India Movement (August 8, 1942).

**Lord Wavell (1944 – 1947):**

- Arranged the Shimla Conference on June 25, 1945 with Indian National Congress and Muslim League; failed.
- Cabinet Mission Plan (May 16, 1946).
- Elections to the constituent assembly were held and an Interim Govt. was appointed under Nehru.
- First meeting of the constituent assembly was held on Dec. 9, 1946.

**Lord Mountbatten (Mar.1947 – Aug.1947):**

- Last Viceroy of British India and the first Governor General of free India.
- Partition of India decided by the June 3 Plan.
- Indian Independence Act passed by the British parliament on July 4, 1947, by which India became independent on August 15, 1947.
- Retired in June 1948 and was succeeded by C.Rajagopalachari (the first and the last Indian Governor General of free India).

**Constitutional Development****Regulating Act, 1773:**

- End of Dual govt.
- Governor of Bengal to be the Governor – General of British territories of India.
- Establishment of Supreme Court in Calcutta.

**Pitts Act of 1784:**

This Act gave the British Government a measure of control over the company's affairs. In fact, the company became a subordinate department of the State.

**Act of 1786:**

- Governor General given the power to over-ride the Council and was made the Commander-in-chief also.

**Charter Act of 1793:**



- Company given monopoly of trade for 20 more years.
- It laid the foundation of govt. by written laws, interpreted by courts.

#### **Charter Act of 1813:**

- Company deprived of its trade monopoly in India except in tea and trade with China.

#### **Charter Act of 1833:**

- End of Company's monopoly even in tea and trade with China. Company was asked to close its business at the earliest.
- Governor General of Bengal to be Governor General of India (1<sup>st</sup> Governor General of India was Lord William Bentinck).

#### **Charter Act of 1853:**

- The Act renewed the powers of the Company and allowed it to retain the possession of Indian territories in trust of the British crown.
- Recruitment to Civil Services was based on open annual competition examination (excluding Indians).

#### **Government of India Act, 1858:**

- Rule of Company in India ended and that of the Crown began.
- A post of Secretary of State (a member of the British cabinet) for India created. He was to exercise the powers of the Crown.
- Secretary of State governed India through the Governor General.
- Governor General received the title of Viceroy. He represented Secretary of State and was assisted by an Executive Council, which consisted of high officials of the Govt.

#### **Indian Council Act, 1861:**

- The Executive Council was now to be called Central Legislative Council.

**Indian Council Act, 1892:**

- Indians found their way in the Provincial Legislative Councils.

**Indian Council Act, 1909 or Morley-Minto Act:** It envisaged a separate electorate for Muslims.

**Government of India Act, 1919 Or Montague-Chelmsford Reforms:**

- Dyarchy system introduced in the provinces. The Provincial subjects of administration were to be divided into 2 categories: Transferred and Reserved. The Transferred subjects were to be administered by the Governor with the aid of ministers responsible to the Legislative Council. The Governor and the Executive Council were to administer the reserved subjects without any responsibility to the legislature.
- Indian legislature became bicameral for the first time, it actually happened after 1935 Act.

**Government of India Act, 1935:**

- Provided for the establishment of All-India Federation consisting of the British Provinces and the Princely States. The joining of Princely States was voluntary and as a result the federation did not come into existence.
- Dyarchy was introduced at the Centre (Eg, Department of Foreign Affairs and Defence were reserved for the Governor General). Provincial autonomy replaced Dyarchy in provinces. They were granted separate legal identity.
- Burma (now Myanmar) separated from India.

**Jainism**

- Jainism founded by Rishabha.
- There were 24 Tirthankaras (Prophets or Gurus), all Kshatriyas. First was Rishabhdev (Emblem: Bull).

- The 23<sup>rd</sup> Tirthankar Parshwanath (Emblem: Snake) was the son of King Ashvasena of Banaras.
- The 24<sup>th</sup> and the last Tirthankar was Vardhman Mahavira (Emblem: Lion). He was born in kundagram (Distt Muzaffarpur, Bihar) in 599 BC.
- His father Siddhartha was the head of Jnatrika clan.
- His mother was Trishla, sister of Lichchavi Prince Chetak of Vaishali.
- Mahavira was related to Bimbisara.
- Married to Yashoda, had a daughter named Priyadarsena, whose husband Jamali became his first disciple.
- At 30, after the death of his parents, he became an ascetic.
- In the 13<sup>th</sup> year of his asceticism (on the 10<sup>th</sup> of Vaishakha), outside the town of Jrimbhikgrama, he attained supreme knowledge (kaivalya).
- From now on he was called Jaina or Jitendriya and Mahavira, and his followers were named Jains. He also got the title of Arihant, i.e., worthy.
- At the age of 72, he attained death at Pava, near Patna, in 527 BC.

- Mahavira preached almost the same message as Parshvanath and added one more, Brahmcharya (celibacy) to it.

### **Governor Generals of India**

#### **Lord William Bentinck (1828 – 1835):**

- Carried out the social reforms like Prohibition of Sati (1829) and elimination of thugs (1830).
- Made English the Medium of higher education in the country (After the recommendations of Macaulay).
- Suppressed female infanticide and child sacrifice.
- Charter Act of 1833 was passed; made him the first Governor General of India. Before him, the designation was Governor General of Bengal.

**Sir Charles Metcalfe (1835 – 1836):** Abolished all restrictions on vernacular press (called Liberator of the Press).

**Lord Auckland (1836 – 1842):** The most important event of his reign was the First Afghan War, which proved to be a disaster for the English.

**Lord Ellenborough (1842 – 1844)**

**Lord Hardinge I (1844 – 1848)**

**Lord Dalhousie (1848 – 1856):**

- Opened the first Indian Railway in 1853 (from Bombay to Thane).
- Laid out the telegraph lines in 1853 (First was from Calcutta to Agra).

- Introduced the Doctrine of Lapse and captured Satara (1848), Jaipur and Sambhalpur (1849), Udaipur (1852), Jhansi (1853) and Nagpur (1854).
- Established the postal system on the modern lines through the length and breadth of the country, which made communication easier.
- Started the Public Works Department. Many bridges were constructed and the work on Grand Trunk Road was started. The harbors of Karachi, Bombay and Calcutta were also developed.
- Made Shimla the summer capital.
- Started Engineering College at Roorkee.
- Encouraged science, forestry, commerce, mineralogy and industry.
- In 1854, “Wood’s Dispatch’ was passed, which provided for the properly articulated system of education from the primary school to the university.
- Due to Ishwar Chandra Vidyasagar’s efforts, remarriage of widows was legalized by Widow Remarriage Act, 1856).

## **Important National Activities**

### **The Indian National Congress:**

- Formed in 1885 by A.O.Hume, an Englishman and a retired civil servant.
- First session in Bombay under W.C.Banerjee in 1885 (72 delegates attended it).
- In the first two decades (1885 – 1905), quite moderate in its approach and confided in British justice and generosity.
- But the repressive measures of the British gave rise to extremists within Congress like Bipin Chandra Pal, Bal Gangadhar Tilak and Lala Lajpat Rai (Lal, Bal, Pal).

### **Partition of Bengal:**

- By Lord Curzon on Oct 16, 1905, through a royal Proclamation, reducing the old province of Bengal in size by creating East Bengal and Assam out of rest of Bengal.
- The objective was to set up a communal gulf between Hindus and Muslims.
- A mighty upsurge swept the country against the partition. National movement found real expression in the movement against the partition of Bengal in 1905.

### **Swadeshi Movement (1905):**

- Lal, Bal, Pal, and Aurobindo Ghosh played the important role.
- INC took the Swadeshi call first at the Banaras Session, 1905 presided over by G.K.Gokhale.
- Bonfires of foreign goods were conducted at various places.

### **Formation of Muslim League (1906):**

- Setup in 1906 under the leadership of Aga Khan, Nawab Salimullah of Dhaka and Nawab Mohsin-ul-Mulk.
- It was a loyalist, communal and conservative political organization which supported the partition of Bengal, opposed the Swadeshi movement, demanded special safeguards to its community and a separate electorate for Muslims.

### **Demand for Swaraj:**

- In Dec 1906 at Calcutta, the INC under Dadabhai Naoroji adopted 'Swaraj' (Self-govt) as the goal of Indian people.

### **Surat Session of Indian National Congress (1907):**

- The INC split into two groups – The extremists and The moderates, at the Surat session in 1907. Extremists were led by Bal, Pal, Lal while the moderates by G.K.Gokhale.

### **Indian Councils Act or Minto Morley Reforms (1909):**

- Besides other constitutional measures, it envisaged a separate electorate for Muslims.
- Aimed at dividing the nationalist ranks and at rallying the Moderates and the Muslims to the Government's side.

#### **Ghadar Party (1913):**

- Formed by Lala Hardayal, Taraknath Das and Sohan Singh Bhakna.
- HQ was at San Francisco.

#### **Home Rule Movement (1916):**

- Started by B.G.Tilak(April, 1916) at Poona and Annie Besant and S.Subramania Iyer at Adyar, near Madras (Sept, 1916).
- Objective: Self – government for India in the British Empire.
- Tilak linked up the question of Swaraj with the demand for the formation of Linguistic States and education in vernacular language. He gave the slogan: Swaraj is my birth right and I will have it.

#### **Lucknow Pact (1916):**

- Happened following a war between Britain and Turkey leading to anti-British feelings among Muslims.
- Both INC and Muslim League concluded this (Congress accepted the separate electorates and both jointly demanded for a representative government and dominion status for the country).

#### **August Declaration (1917):**

- After the Lucknow Pact, a British policy was announced which aimed at “increasing association of Indians in every branch of the administration for progressive realization of responsible government in India as an integral part of the British empire”. This came to be called the August Declaration.

#### **Rowlatt Act (March 18, 1919):**

- This gave unbridled powers to the govt. to arrest and imprison suspects without trial for two years maximum. This law enabled the Government to suspend the right of Habeas Corpus, which had been the foundation of civil liberties in Britain.
- Caused a wave of anger in all sections. It was the first country-wide agitation by Gandhiji and marked the foundation of the Non Cooperation Movement.

#### **Jallianwala Bagh Massacre (April 13, 1919):**

- People were agitated over the arrest of Dr. Kitchlu and Dr. Satyapal on April 10, 1919.
- General O' Dyer fires at people who assembled in the Jallianwala Bagh, Amritsar.
- As a result hundreds of men, women and children were killed and thousands injured.

- Rabindranath Tagore returned his Knighthood in protest. Sir Shankaran Nair resigned from Viceroy's Executive Council after this.
- Hunter Commission was appointed to enquire into it.
- On March 13, 1940, Sardar Udham Singh killed O'Dyer when the latter was addressing a meeting in Caxton Hall, London.

#### **Khilafat Movement (1920):**

- Muslims were agitated by the treatment done with Turkey by the British in the treaty that followed the First World War.
- Two brothers, Mohd. Ali and Shaukat Ali started this movement.

#### **Non-cooperation Movement (1920):**

- It was the first mass-based political movement under Gandhiji.
- Congress passed the resolution in its Calcutta session in Sept 1920.

#### **Chauri –Chaura Incident (1922):**

- A mob of people at Chauri – Chaura (near Gorakhpur) clashed with police and burnt 22 policemen on February 5, 1922.
- This compelled Gandhiji to withdraw the Non Cooperation movement on Feb.12, 1922.

#### **Simon Commission (1927):**

- Constituted under John Simon, to review the political situation in India and to introduce further reforms and extension of parliamentary democracy.
- Indian leaders opposed the commission, as there were no Indians in it.
- The Government used brutal repression and police attacks to break the popular opposition. At Lahore, Lala Lajpat Rai was severely beaten in a lathi-charge. He succumbed to his injuries on Oct.30, 1928.

#### **Lahore Session (1929):**

- On Dec.19, 1929 under the President ship of J.L.Nehru, the INC, at its Lahore Session, declared Poorna Swaraj (Complete independence) as its ultimate goal.
- On Dec.31, 1929, the newly adopted tri-colour flag was unfurled and on 26, 1930 was fixed as the First Independence Day, was to be celebrated every year.

#### **Revolutionary Activities:**

- The first political murder of a European was committed in 1897 at Poona by the Chapekar brothers, Damodar and Balkishan. Their target was Mr. Rand, President of the Plague Commission, but Lt. Ayerst was accidentally shot.
- In 1907, Madam Bhikaiji Cama, a Parsi revolutionary unfurled the flag of India at Stuttgart Congress (of Second international).



- In 1908, Khudiram Bose and Prafulla Chaki threw a bomb on the carriage of Kingford, the unpopular judge of Muzaffarpur. Khudiram, Kanhaiyalal Dutt and Satyendranath Bose were hanged. (Alipur Case).
- In 1909, M L Dhillon shot dead Col. William Curzon Whyllie, the political advisor of "India Office" in London.
- In 1912, Rasbihari Bose and Sachindra Nath Sanyal threw a bomb at Lord Hardinge at Delhi. (Delhi Conspiracy Case).
- In Oct, 1924, a meeting of revolutionaries from all parts of India was called at Kanpur. They set up Hindustan Socialist Republican Association/Army (HSRA).
- They carried out a dacoity on the Kakori bound train on the Saharanpur-Lucknow railway line on Aug. 9, 1925.
- Bhagat Singh, with his colleagues, shot dead Saunders (Asst. S.P. of Lahore, who ordered lathi charge on Lala Lajpat Rai) on Dec. 17, 1928.
- Then Bhagat Singh and Batukeshwar Dutt threw a bomb in the Central Assembly on Apr 8, 1929. Thus, he, Rajguru and Sukhdev were hanged on March 23, 1931 at Lahore Jail (Lahore Conspiracy Case) and their bodies cremated at Hussainiwala near Ferozepur.
- In 1929 only Jatin Das died in Lahore jail after 63 days fast to protest against horrible conditions in jail.
- Surya Sen, a revolutionary of Bengal, formed the Indian Republic Army in Bengal. In 1930, he masterminded the raid on Chittagong armoury. He was hanged in 1933.
- In 1931, Chandrashekhar Azad shot himself at Alfred Park in Allahabad.

#### **Dandi March (1930):**

- Also called the Salt Satyagraha.
- Along with 78 followers, Gandhiji started his march from Sabarmati Ashram on March 12, 1930 for the small village Dandi to break the salt law.
- He reached the seashore on Apr. 6, 1930.
- He picked a handful of salt and inaugurated the Civil Disobedience Movement.

#### **First Round Table conference (1930):**

- It was the first conference arranged between the British and Indians as equals. It was held on Nov. 12, 1930 in London to discuss Simon Commission.
- Boycotted by INC, Muslim League, Hindu Mahasabha, Liberals and some others were there.

#### **Gandhi Irwin Pact (1931):**

- Moderate Statesman, Sapru, Jaikar and Srinivas Shastri initiated efforts to break the ice between Gandhiji and the government.
- The two (government represented by Irwin and INC by Gandhiji) signed a pact on March 5, 1931.
- In this the INC called off the civil disobedience movement and agreed to join the second round table conference.
- The government on its part released the political prisoners and conceded the right to

make salt for consumption for villages along the coast.

### **Second Round Table Conference (1931):**

- Gandhiji represented the INC and went to London to meet British P.M. Ramsay Macdonald.
- However, the session was soon deadlocked on the minorities issue and this time separate electorates was demanded not only by Muslims but also by Depressed Classes, Indian Christians and Anglo – Indians.

### **The Communal Award (Aug 16,1932):**

- Announced by Ramsay McDonald. It showed divide and rule policy of the British.
- Envisaged representation of Muslims, Sikhs, Indian Christians, Anglo Indians, women and even Backward classes.
- Gandhiji, who was in Yeravada jail at that time, started a fast unto death against it.

### **Poona Pact (September 25, 1932):**

- After the announcement of communal award and subsequent fast of Gandhiji, mass meeting took place almost everywhere.
- Political leaders like Madan Mohan Malviya, B.R.Ambedkar and M.C.Rajah became active.
- Eventually Poona pact was reached and Gandhiji broke his fast on the sixth day (Sept 25, 1932).
- In this, the idea of separate electorate for the depressed classes was abandoned, but seats reserved to them in the provincial legislature were increased.

### **Third Round Table Conference (1932):**

- Proved fruitless as most of the national leaders were in prison. The discussions led to the passing of the Government of India Act, 1935.

### **Demand For Pakistan:**

- In 1930, Iqbal suggested that the Frontier Province, Baluchistan, Sindh and Kashmir be made the Muslim State within the federation.
- Chaudhary Rehmat Ali gave the term Pakistan in 1923.
- Mohd. Ali Jinnah of Bombay gave it practicality.
- Muslim League first passed the proposal of separate Pakistan in its Lahore session in 1940.

### **The Cripps Mission – 1942:**

- In Dec. 1941, Japan entered the World War – II and advanced towards Indian borders. By March 7, 1942, Rangoon fell and Japan occupied the entire S E Asia.

- The British govt. with a view to getting co-operation from Indians sent Sir Stafford Cripps, leader of the House of Commons to settle terms with the Indian leaders.
- He offered a draft which proposed dominion status to be granted after the war.
- Rejected by the Congress as it didn't want to rely upon future promises.
- Gandhiji termed it as a post dated cheque in a crashing bank.

### **The Revolt of 1942 & The Quit India Movement:**

- Called the Vardha Proposal and Leaderless Revolt.
- The resolution was passed on Aug.8, 1942, at Bombay. Gandhiji gave the slogan 'Do or Die'.
- On Aug 9, the Congress was banned and its important leaders were arrested.
- The arrests provoked indignation among the masses and, there being no program of action, the movement became spontaneous and violent. Violence spread throughout the country.
- The movement was however crushed.
- **The Indian National Army:**  
Founded by Rasbehari Bose with Captain Mohan Singh.
- S.C.Bose secretly escaped from India in Jan 1941, and reached Berlin. In July 1943, he joined the INA at Singapore. There, Rasbehari Bose handed over the leadership to him.
- The soldiers were mostly raised from Indian soldiers of the British army who had been taken prisoners by the Japanese after they conquered S.E.Asia.
- Two INA head quarters were Rangoon and Singapore (formed in Singapore).
- INA had three fighting brigades named after Gandhiji, Azad and Nehru. Rani Jhansi Brigade was an exclusive women force.

### **The Cabinet Mission Plan (1946):**

- The struggle for freedom entered a decisive phase in the year 1945-46. The new Labour Party PM.Lord Attlee, made a declaration on March 15, 1946, that British Cabinet Mission (comprising of Lord Pethick Lawrence as Chairman, Sir Stafford Cripps and A.V.Alexander) will visit India.
- The mission held talks with the INC and ML to bring about acceptance of their proposals.
- On May 16, 1946, the mission put forward its proposals. It rejected the demand for separate Pakistan and instead a federal union consisting of British India and the Princely States was suggested.
- Both Congress and Muslims League accepted it.

### **Formation of Interim Government (Sept 2, 1946):**

- Based on Cabinet Mission Plan, an interim government consisting of Congress nominees was formed on Sept.2, 1946. J.L.Nehru was its Vice-President and the Governor-General remained as its President.

### **Jinnah's Direct Action Resolution (Aug 16, 1946):**

- Jinnah was alarmed at the results of the elections because the Muslim League was in danger of being totally eclipsed in the constituent assembly.
- Therefore, Muslim League withdrew its acceptance of the Cabinet Mission Plan on July 29, 1946.
- It passed a 'Direct action' resolution, which condemned both the British Government and the Congress (Aug 16, 1946). It resulted in heavy communal riots.
- Jinnah celebrated Pakistan Day on Mar 27, 1947.

#### **Formation of Constituent Assembly (Dec 9, 1946):**

- The Constituent assembly met on Dec 9, 1946 and Dr.Rajendra Prasad was elected as its president.

#### **Mountbatten Plan (June 3, 1947):**

- On June 3, 1947, Lord Mountbatten put forward his plan which outlined the steps for the solution of India's political problem. The outlines of the Plan were:
- India to be divided into India and Pakistan.
- Bengal and Punjab will be partitioned and a referendum in NEFP and Sylhet district of Assam would be held.
- There would be a separate constitutional assembly for Pakistan to frame its constitution.
- The Princely states would enjoy the liberty to join either India or Pakistan or even remain independent.
- Aug.15, 1947 was the date fixed for handing over power to India and Pakistan.
- The British govt. passed the Indian Independence Act of 1947 in July 1947, which contained the major provisions put forward by the Mountbatten plan.

#### **Partition and Independence (Aug 1947):**

- All political parties accepted the Mountbatten plan.
- At the time of independence, there were 562 small and big Princely States in India.
- Sardar Vallabh Bhai Patel, the first home minister, used iron hand in this regard. By August 15, 1947, all the States, with a few exceptions like Kashmir, Hyderabad and Junagarh had signed the Instrument of Accession. Goa was with the Portuguese and Pondicherry with the French.

### Venue, Year and Presidents of India National Congress (INC)

Year	Venue	President
1885, 1882	Bombay, Allahabad	W.C.Bannerji
1886	Calcutta	Dadabhai Naoroji
1893	Lahore	"
1906	Calcutta	"
1887	Madras	Badruddin Tyyabji (fist Muslim President)
1888	Allahabad	George Yule (first English President)
1889	Bombay	Sir William Wedderburn
1890	Calcutta	Sir Feroze S.Mehta
1895, 1902	Poona, Ahmedabad	S.N.Banerjee
1905	Banaras	G.K.Gokhale
1907, 1908	Surat, Madras	Rasbehari Ghosh
1909	Lahore	M.M.Malviya
1916	Lucknow	A.C.Majumdar (Re-union of the Congress)
1917	Calcutta	Annie Besant (first woman President)
1919	Amritsar	Motilal Nehru
1920	Calcutta (sp.session)	Lala Lajpat Rai
1921,1922	Ahmedabad, Gaya	C.R.Das
1923	Delhi (sp.session)	Abdul Kalam Azad (youngest President)
1924	Belgaon	M.K.Gandhi
1925	Kanpur	Sarojini Naidu (first Indian woman President)
1928	Calcutta	Motilal Nehru (first All India Youth Congress Formed)
1929	Lahore	J.L.Nehru (Poorna Swaraj resolution was passed)
1931	Karachi	Vallabhbhai Patel (Here, resolution on Fundamental rights and

		the National Economic Program was passed)
1932, 1933	Delhi, Calcutta	(Session Banned)
1934	Bombay	Rajendra Prasad
1936	Lucknow	J.L.Nehru
1937	Faizpur	J.L.Nehru (first session in a village)
1938	Haripura	S.C.Bose (a National Planning Committed set-up under J.L.Nehru).
1939	Tripuri	S.C.Bose was re-elected but had to resign due to protest by Gandhiji (as Gandhiji supported Dr.Pattabhi Sitaramayya). Rajendra Prasad was appointed in his place.
1940	Ramgarh	Abdul Kalam Azad
1946	Meerut	Acharya J.B.Kriplani
1948	Jaipur	Dr.Pattabhi Sitaramayya.

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5

INDIAN-

SCI & TECH



*Elements Symbols and Atomic Numbers*

Name	Symbol	Atomic Number
Hydrogen	H	1
Helium	He	2
Lithium	Li	3
Beryllium	Be	4
Boron	B	5
Carbon	C	6
Nitrogen	N	7
Oxygen	O	8
Flourine	F	9
Neon	Ne	10
Sodium (Natrium)	Na	11
Magnesium	Mg	12
Aluminium	Al	13
Silicon	Si	14
Phosphorous	P	15
Sulphur	S	16
Chlorine	Cl	17
Argon	Ar	18

Potassium (Kalium)	K	19
Calcium	Ca	20
Titanium	Ti	22
Vanadium	V	23
Chromium	Cr	24
Manganese	Mn	25
Iron (Ferum)	Fe	26
Cobalt	Co	27
Nickel	Ni	28
Copper (Cuprum)	Cu	29
Zinc	Zn	30
Germanium	Ge	32
Bromine	Br	35
Krypton	Kr	36
Zirconium	Zr	40
Silver	Ag	47
Tin (Stannum)	Sn	50
Antimony (Stabnium)	Sb	51
Iodine	I	53

Barium	Ba	56
Gold (Aurum)	Au	79
Mercury (Hydragerm)	Hg	80
Lead (Plumbum)	Pb	82
Bismuth	Bi	83
Radium	Ra	88
Thorium	U	90
Uranium	U	92
Plutonium	Pu	94
Curium	Cm	96

### National Surveys and Other Institutions in India

Institution	Place
Atomic Energy Commission	Bombay
Bhabha Atomic Research Center	Trombay (Bombay)
Botanical Survey of India	Calcutta
Birbal Sahni Indtitute for Palaeobotanoy	Lucknow
Bose Research Institute	Calcutta
Indian Association for the Cultivation of science	Calcutta

Indian National Science Academy	New Delhi
Indian National Science Congress Association	Calcutta
National Atlas Organisation	Calcutta
Raman Research Institute	Bangalore
Survey of India	Dehra Dun
Wadia Institute of Himalayan Zoology	Delhi
Zoological Survey of India	Calcutta

## Noice Scale

Sounds are tiny vibrations that can travel through air and other materials. The loudness of a sound is measured in decibels (db). Typical sound levels in decibels:

**Note:** 130 db causes damage to hearing.

1	Breathing	10 db
2	Wind in the trees	20 db
3	Whisper	20-30 db
4	Ticking Clock	30 db
5	House in a quiet street	35 db
6	Radio Music	50-60 db

7	Loud Conversation	60 db
8	Office Noise	60 db
9	Children Playing	60-80 db
10	Lawn mower	60-80 db
11	Vacuum cleaner	80 db
12	Traffic Noise	60-90 db
13	Sports Car	80-95 db
14	Heavy truck traffic	90-100 db
15	Loud Radio	100 db
16	Motor Cycle	105 db
17	Pneumatic drill	110 db
18	Thunder storm	110 db
19	Rock Music	120 db
20	Aircraft Noise	90-120 db
21	Jet takeoff(at 100 meter distance)	120 db
22	Jet Engine(at 25 meter distance)	140 db
23	Space Vehicle launch (from a short distance)	140-170 db

## **Indias Dream Launch PSLV C7**

### **India's Dream Launch of PSLV-C7**

The Indian Space Research Organisation (ISRO) added yet another achievement to its list by the successful launch of the PSLV-C7 from the Satish Dhawan Space Centre at Sriharikota on January 10, 2007. The four-stage, 44 metre tall Polar Satellite Launch Vehicle (PSLV-C7) which weighs 295 tonnes took off on the dot at 9.23 a.m. from its beachside launch pad and injected four satellites into precise orbit. This is the PSLV's ninth consecutive successful launch. Of the four satellites two satellites belong to India and two are from abroad. The satellites from abroad are LAPAN-TUBSAT, a joint venture of Indonesia and the Technical University of Berlin and the PEHUENSAT-1 of Argentina. Dr. B.N.Suresh, Director, Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram, which built PSLV-C7, said, "Four satellites being injected into orbit with the same vehicle is a unique experience for us".

This multi-mission launch is going to be a technological challenge for ISRO as it attempts to deorbit one of the satellites and bring it back to earth on January 22, 2007. The satellite called the Space Capsule Recovery Experiment (SRE) will stay in orbit for 11 days and thereafter fall into the Bay of Bengal from where it will be recovered. This challenging job will be headed by Project Director, Mr. A.Subramoniam. "Right now, I feel that my job has just started. I am looking forward to January 22, 2007 morning when the SRE will be recovered", Mr. Subramoniam said.

ISRO's Cartosat-2 is for mapping purposes and its SRE will be a forerunner to the ISRO mastering the re-entry, recoverable and re-usable launch vehicle technologies. During its stay in orbit the two payloads on board the SRE will help conduct experiments in micro-gravity.

The 555 kilogram SRE is coated with thermal tiles to prevent it from burning up when it re-enters the earth's atmosphere. After it re-enters the atmosphere, about 5 km above the Bay of Bengal, three parachutes in the SRE will open up one after another. First, the pilot chute will pull

out the drogue chute, which will deploy, and then the main chute will deploy. The main chute will slow down the descent of the SRE and it will ultimately splash down into the Bay of Bengal, about 140 km east of Sriharikota island. A floatation system will keep it afloat and dye markers will make it visible. The Coast Guard will recover it.

The entire process involves a lot of precision as the SRE should be de-orbited in the right direction and should be given the right incremental velocity. It should re-enter the atmosphere without burning up. According to the ISRO Chairman, Mr. G. Madhavan Nair, “There are a lot of technological challenges in bringing back an orbiting satellite because we are doing it for the first time”.

Besides the technology of bringing the SRE back to earth in a sequential manner, the PSLV-C7 has also used Dual Launch Adopter (DLA), a device to launch four satellites for the first time. It also used for the first time a video-imaging system on board to take pictures of the separation of the first three satellites from the fourth stage of the rocket.

According to Mr. M. Krishnaswamy, Project Director, Cartosat-2, the satellite's images could be used in town and rural planning as well as in road and drainage alignment. It could also be used in studying the passage of communication lines. The PSLV-C7 has been built at a cost of Rs.80 crore. The Cartosat-2 cost Rs.180 crore and the SRE Rs.30 crore.

After the setback in July 2006 when Geosynchronous Space Launch Vehicle (GSLV) failed, the success of PSLV is a great morale booster. However, it goes without saying that India has a long way to go before it finds itself a place in the world space launch market. The Missile Technology Control Regime embargo on India's space and military rocket programmes debars an Indian rocket to launch any American satellite, or one with US components. According to an official dealing with the issue a joint working group would hold a meeting in Washington in February, 2007 to get this embargo lifted under the Next Steps in Strategic Partnership negotiations. Moreover, countries like Russia, the United States, the European Union or Japan are far more developed in space launch vehicle technology. We compare well with the Chinese Long March CZ4B series when it comes to hoisting satellites to a Low Earth Orbit to about 2,000 kms. But so

far as geosynchronous orbits of 36,000 kms used for communication satellites for beaming.

PSLV Chronology	
Launch Vehicle	Date of Launch
PSLV-D1	Sept. 20, 1993
PSLV-D2	Oct. 15, 1994
PSLV-D3	Mar. 21, 1996
PSLV-C1	Sept. 29, 1997
PSLV-C2	May 26, 1999
PSLV-C3	Oct. 22, 2001
PSLV-C4	Sept. 12, 2002
PSLV-C5	Oct. 17, 2003
PSLV-C6	May 5, 2005
PSLV-C7	Jan. 10, 2007

TV programmes or relaying telephone calls are concerned we are far behind. The success of PSLV cannot fill the void created by the failure of GSLV.

#### *Some Important Facts of Human Body*

Length of alimentary canal	Approximately 8 meters
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BMR (Basal metabolic rate)	1600 K.cal/day
Number cells in body	75 trillion
Longest bone	Femur (thigh bone)
Smallest bone	Ear ossicle, stapes
Weight of brain	1400 gms
Blood volume	6.8 litres (in 70 kg body)
Normal B.P	120/80 mm Hg
Number of R.B.C	(a) In male: 4.5-5.0 million/cubic mm (b) In female: 4.0-4.5 million/cubic mm
Life span of R.B.C	120 days
Normal W.B.C count	5000-10000/cubic mm
Life span of W.B.C	3-4 days
D.L.C (Differential leucocyte count)	(a) Basophils-0.5-1% (b) Eosinophils-1-3% (c) Monocytes-3-8% (d) Neutrophils-40-70% (e) Lymphocytes-2-25%
Blood platelets count	2,00,000-4,00,000/cubic mm
Haemoglobin	(a) In male: 14-15.6 gm/100 c.c of blood (b) In female: 11-14 gm/100 c.c of blood
Hb content in body	500-700 gm
Universal blood donor	O Rh-ve

Universal blood recipient	AB
Blood clotting time	2-5 minutes
Average body weight	70 kg
Normal body temperature	98.4.F or 37.C
Breathing rate	16-20 minutes
Dental formula	adult: $2123/2123=32$ child: $2120/2120=22$ milk teeth
Number of cranial nerves	12 pairs
Number of spinal nerves	31 pairs
Largest endocrine gland	Thyroid
Gestation period	9 months (253-266 days)
Normal heart beat	72-75/ minutes
Largest gland	Liver
Largest muscles in the body	Gluteus maximus (Buttock muscle)
Largest smooth muscle	Uterus of pregnant women
Smallest muscles in the body	Stapedius
Largest artery	Abdominal aorta
Largest vein	Inferior venacava
Largest W.B.C	Monocyte
Smallest W.B.C	Lymphocyte

Greatest regeneration power	In liver
Longest nerve	Sciatic
Longest cell	Neuron (nerve cell)
Menstrual cycle	28 days
Menopause age	45-50 years
Minimum regeneration power	In brain cell
Minimum distance for proper vision	25 cm
Type of placenta	Haemochorial (Chorioallantoic)
Pulse rate	72/minute
Volume of semen	2-4 ml/ejaculation
Normal sperm count	200-350 million/ejaculation
ESR (normal Erythrocyte sedimentation rate)	4.10 min/hour
Thinnest skin	Conjunctiva
pH of gastric juice	1.4
pH of urine	6.0
pH of blood	7.35-7.45

### *Milestones in Medicine*

SNo	Discovery / Invention	Year	Discoverer / Inventor	Country
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1	Adrenaline	1894	Schafer and Oliver	Britain
2	Anesthesia, Local	1885	Koller	Austria
3	Anesthesia, Spinal	1898	Bier	Germany
4	Anti-toxins (Science of Immunity)	1890	Behring and Kitasato	Germany, Japan
5	Aspirin	1889	Dreser	Germany
6	Ayurveda	2000-1000 BC		India
7	Bacteria	1683	Leeuwenhock	Netherlands
8	Bacteriology	1872	Ferdinand Cohn	Germany
9	Biochemistry	1648	Jan Baptista Van Helmont	Belgium
10	Blood Plasma storage (Blood bank)	1940	Drew	U.S.A
11	Blood Transfusion	1625	Jean-Baptiste Denys	France
12	Cardiac Pacemaker	1932	A.S Hyman	U.S.A
13	CAT Scanner	1968	Godfrey Hounsfield	Britain
14	Chemotherapy	1493-1541	Paracelsus	Switzerland
15	Chloroform as anaesthetic	1847	James Simpson	Britain
16	Chloromycetin	1947	Burkholder	U.S.A
17	Cholera T.B germs	1877	Robert Koch	Germany
18	Circulation of blood	1628	William Harvey	Britain

19	Cryo-Surgery	1953	Henry Swan	U.S.A
20	Diphtheria germs	1883-84	Klebs and Loffler	Germany
21	Electro-Cardiograph	1903	Willem Einthoven	Netherlands
22	Electro-encephalogram	1929	Hand Berger	Germany
23	Embryology	1792-1896	Kari Ernest Van Baer	Estonia
24	Endocrinology	1902	Bayliss and Starling	Britain
25	First Test Tube Baby	1978	Steptoe and Edwards	Britain
26	Gene Therapy on humans	1980	Martin Clive	U.S.A
27	Genes associated with cancer	1982	Robert Weinberg and others	U.S.A
28	Heart Transplant Surgery	1967	Christian Barnard	S. Africa
29	Histology	1771-1802	Marie Bichat	France
30	Hypodermic syringe	1853	Alexander wood	Britain
31	Kidney Machine	1944	Kolf	Netherlands
32	Leprosy Bacillus	1873	Hansen	Norway
33	LSD (Lysergic acid diethylamide)	1943	Hoffman	Switzerland
34	Malaria Germs	1880	Laveran	France
35	Morphine	1805	Friderich Sertumer	Germany
36	Neurology	1758-1828	Franz Joseph Gall	Germany
37	Nuclear magnetic resonance	1971	Raymond Damadian	U.S.A

	imaging			
38	Open Heart Surgery	1953	Walton Lillehel	U.S.A
39	Oral Contraceptive Pills	1955	Gregory Pincus, Rock	U.S.A
40	Penicillin	1928	Alexander Fleming	Britain
41	Physiology	1757-66	Albrecht Von Haller	Switzerland
42	Positron emission Tomography	1978	Louis Sokoloff	U.S.A
43	Rabies Vaccine	1860	Louis Pasteur	France
44	Recombinant-DNA technology	1972-73	Paul Berg, H.W. Boyer,S Cohen	U.S.A
45	Reserpine	1949	Jal Vakil	India
46	Rh-factor	1940	Karl Landsteiner	U.S.A
47	Serology	1884-1915	Paul Ehrlich	Germany
48	Sex hormones	1910	Eugen Steinach	Australia
49	Small Pox eradicated	1980	W.H.O Declaration	UN
50	Stethoscope	1819	Rene Laennec	France
51	Streptomycin	1944	Selman Waksman	U.S.A
52	Synthetic Antigens	1917	Landsteiner	U.S.A
53	Terramycin	1950	Finlay and Others	U.S.A
54	Thyroxin	1919	Edward Calvin-Kendall	U.S.A
55	Typhus Vaccine	1909	J. Nicolle	France

56	Vaccination	1796	Edward Jenner	Britain
57	Vaccine, Measles	1963	Enders	U.S.A
58	Vaccine, Meningitis	1987	Gardon, et al. Connaught Lab	U.S.A
59	Vaccine, Polio	1954	Jonas Salk	U.S.A
60	Vaccine, Polio-orai	1960	Albert Sabin	U.S.A
61	Vaccine, Rabies	1885	Louis Pasteur	France
62	Vaccine, Smallpox	1776	Jenner	Britain
63	Virology	1892	Ivanovski and Bajernick	USSR, Netherlands
64	Vitamin A	1913	Mc Collum and M. Davis	U.S.A
65	Vitamin B1	1936	Minot and Murphy	U.S.A
66	Vitamin C	1919	Froelich Holst	Norway
67	Vitamin D	1925	Mc Collum	U.S.A
68	Vitamin K	1938	Doisy Dam	U.S.A
69	Western Scientific Therapy	460-370 BC	Hippocrates	Greece
70	Yoga	200-100 BC	Patanjali	India

## ***SCIENCE TERMINOLOGY***

Science is knowledge, often as opposed to intuition, belief, etc. It is, in fact, systematized knowledge derived from observation, study and experimentation carried on in order to determine the nature or principles of what is being studied. There are many sciences, each concerned with a particular field of study. In each science measurement plays an important part. In each science, too, a study is made of the laws according to which objects react. Here are some sciences.

**ACOUSTICS**The study of sound (or the science of sound).

**ACROBATICS**The art of performing acrobatic feats (gymnastics).

### **AERODYNAMICS:**

- (i) The branch of mechanics that deals with the motion of air and other gases.
- (ii) The study of the motion and control of solid bodies like aircraft, missiles, etc., in air

**AERONAUTICS**: The Science or art of flight.

**AEROSTATICS**The branch of statics that deals with gases in equilibrium and with gases and bodies in them.

**AESTHETICS**The philosophy of fine arts.

**AETIOLOGY**The science of causation.

**AGROBIOLOGY**The science of plant life and plant nutrition.

**AGRONOMICS**The science of managing land or crops.

**AGRONOMY**The science of soil management and the production of field crops.

**AGROSTOLOGY**The study of grasses.

**ALCHEMY**Chemistry in ancient times.

**ANATOMY**The science dealing with the structure of animals, plants or human body.

**ANTHROPOLOGY**The science that deals with the origins, physical and cultural development of mankind.



**ARBORICULTURE:**Cultivation of trees and vegetables.

**ARCHAEOLOGY:**The study of antiquities.

**ASTROLOGY:**The ancient art of predicting the course of human destinies with the help of indications deduced from the position and movement of the heavenly bodies.

**ASTRONAUTICS:**The science of space travel.

**ASTRONOMY:** - The study of the heavenly bodies.

**ASTROPHYSICS:**The branch of astronomy concerned with the physical nature of heavenly bodies.

**BACTERIOLOGY:** The study of bacteria.

**BIOCHEMISTRY:** The study of chemical processes of living things.

**BIOLOGY:** The study of living things.

**BIOMETRY:**The application of mathematics to the study of living things.

**BIONICS:**The study of functions, characteristics and phenomena observed in the living world and the application of this knowledge to the world of machines.

**BIONOMICS:**The study of the relation of an organism to its environments.

**BIONOMY:**The science of the laws of life.

**BIOPHYSICS:**The physics of vital processes (living things).

**BOTANY:**The study of plants.

**CALISTHENICS:**The systematic exercises for attaining strength and gracefulness.

**CARTOGRAPHY:**Science of Map Making.

**CERAMICS:**The art and technology of making objects from clay, etc. (Pottery).

**CHEMISTRY:**The study of elementary and their laws of combination and behaviour.

**CHEMOTHERAPY:**The treatment of disease by using chemical substances.

**CHRONOBIOLOGY:**The study of the duration of life.

**CHRONOLOGY:**The science of arranging time in periods and ascertaining the dates and historical order of past events.

**CONCHOLOGY:**The branch of zoology dealing with the shells of mollusks.

**COSMOGONY:**The science of the nature of heavenly bodies.

**COSMOGRAPHY:** The science that describes and maps the main feature of the universe.

**COSMOLOGY:**The science of the nature, origin and history of the universe.

**CRIMINOLOGY:**The study of crime and criminals.

**CRYPTOGRAPHY:**The study of ciphers (secret writings).

**CRYSTALLOGRAPHY:**The study of the structure, forms and properties of crystals.

**CRYGENICS:**The science dealing with the production, control and application of very low temperatures.

**CYTOCHEMISTRY:**The branch of cytology dealing with the chemistry of cells.

**CYTOGENETICS:**The branch of biology dealing with the study of heredity from the point of view of cytology and genetics.

**CYTOLOGY:**The study of cells, especially their formation, structure and functions.

**DACTYLOGRAPHY:**The study of fingerprints for the purpose of identification.

**DACTYLIOLOGY:**The technique of communication by signs made with the fingers. It is generally used by the deaf.

**ECOLOGY:**The study of the relation of animals and plants to their surroundings, animate and inanimate.

**ECONOMETRICS:** The application of mathematics in testing economic theories.

**ECONOMICS:**The science dealing with the production, distribution and consumption of goods and services.

**EMBRYOLOGY:**The study of development of embryos.

**ENTOMOLOGY:**The study of insects.

**EPIDEMIOLOGY:**The branch of medicine dealing with epidemic diseases.

**EPIGRAPHY:**The study of inscriptions.

**ETHICS:**Psychological study of moral principles.

**ETHNOGRAPHY:**A branch of anthropology dealing with the scientific description of individual cultures.

**ETHNOLOGY:**A branch of anthropology that deals with the origin, distribution and distinguishing characteristics of the races of mankind.

**ETHOLOGY:**The study of animal behaviour.

**ETYMOLOGY:**The study of origin and history of words.

**EUGENICS:**The study of the production of better offspring by the careful selection of parents.

**GENEALOGY:**The study of family ancestries and histories.

**GENECOLOGY:**The study of genetical composition of plant population in relation to their habitats.

**GENESIOLOGY:**The science of generation.

**GENETICS:**The branch of biology dealing with the phenomena of heredity and the laws governing it.

**GEOBIOLOGY:**The biology of terrestrial life.

**GEOBOTANY:**The branch of botany dealing with all aspects of relations between plants and the earth's surface.

**GEOCHEMISTRY:**The study of the chemical composition of the earth's crust and the changes which take place within it.

**GEOGRAPHY:**The development of science of the earth's surface, physical features, climate, population, etc.

**GEOLOGY:**The science that deals with the physical history of the earth.

**GEOMEDICINE:**The branch of medicine dealing with the influence of climate and environmental conditions on health.

**GEOMORPHOLOGY:**The study of the characteristics, origin and development of land forms.

**GEOPHYSICS:**The physics of the earth.

**GERONTOLOGY:**The study of old age, its phenomena, diseases, etc.

**HELIOTHEAPY:** The sun cure.

**HISTOLOGY:**The study of tissues.

**HORTICULTURE:**The cultivation of flowers, fruits, vegetables and ornamental plants.

**HYDRODYNAMICS:**The mathematical study of the forces, energy and pressure of liquid in motion.

**HYDROGRAPHY:**The science of water measurements of the earth with special reference of their use for navigation.

**HYDROLOGY:**The study of water with reference to its occurrence and properties in the hydrosphere and atmosphere.

**HYDROMETALLURGY:**The process of extracting metals at ordinary temperature by bleaching ore with liquids.

**HYDROPATHY:**The treatment of disease by the internal and external use of water.

**HYDROPONICS:**The cultivation of plants by placing the roots in liquid nutrient solutions rather than in soil.

**HYDROSTATICS:** The mathematical study of forces and pressure in liquids.

**HYGIENE:**The science of health and its preservation.

**LCONOGRAPHY:**Teaching with the aid of pictures and models.

**LCONOLOGY:**The study of symbolic representations.

**JURISPRUDENCE:**The science of law.

**LEXICOGRAPHY:**The writing or compiling of dictionaries.

**MAMMOGRAPHY:**Radiography of the mammary glands.

**METALLOGRAPHY:**The study of the crystalline structures of metals and alloys.

**METALLURGY:**The process of extracting metals from their ores.

**METEOROLOGY:**The science of the atmosphere and its phenomena.

**METROLOGY:**The scientific study of weights and measures.

**MICROBIOLOGY:**The study of minute living organisms, including bacteria, molds and pathogenic protozoa.

**MOLECCULAR BIOLOGY:**The study of the structure of the molecules which are of importance in biology.

**MORPHOLOGY:**The science of organic forms and structures.

**MYCOLOGY:**The study of fungi and fungus diseases.

**NEUROLOGY:**The study of the nervous system, its functions and its disorders.

**NEUROPATHOLOGY:**The study of diseases of the nervous system.

**NUMEROLOGY:**The study of numbers. The study of the date and year of one's birth and to determine the influence on one's future life.

**NUMISMATICS:**The study of coins and medals.

**ODONTOGRAPHY:**A description of the teeth.

**ODONTOLOGY:**The scientific study of the teeth.

**OPTICS:**The study of nature and properties of light.

**ORNITHOLOGY:**The study of birds.

**ORTHOEPY:**The study of correct pronunciation.

**ORTHOPEDICS:**The science of prevention, diagnosis and treatment of diseases and abnormalities of musculoskeletal systems.

**OSTEOLOGY:**The study of the bones.

**OSTEOPATHOLOGY:**Any disease of bones.

**OSTEOPATHY:**A therapeutic system based upon detecting and correcting faulty structure.

**PALEOBOTANY:**The study of fossil plants.

**PALEONTOLOGY:**The study of fossils.

**PALYNOLOGY:**The pollen analysis.

**PATHOLOGY:**The study of diseases.

**PEDAGOGY:**The art or method of teaching.

**PHARYNGOLOGY:**The science of the pharynx and its diseases.

**PHENOLOGY:**The study of periodicity phenomena of plants.

**PHILATELY:**The collection and study of postage stamps, revenue stamps, etc.

**PHILOLOGY:**The study of written records, their authenticity, etc.

**PHONETICS:**The study of speech sounds and the production, transmission, reception, etc.

**PHOTOBIOLOGY:**The branch of biology dealing with the effect of light on organisms.

**PHENOLOGY:**The study of the faculties and qualities of minds from the shape of the skull.

**PTHISIOLOGY:**The scientific study of tuberculosis.

**PHYCOLOGY:**The study of algae.

**PHYSICAL SCIENCE:**The study of natural laws and processes other than those peculiar to living matters,  
as in physics, chemistry and astronomy.

**PHYSICS:**The study of the properties of matter.

**PHYSIOGRAPHY:**The science of physical geography.

**PHYSIOLOGY:**The study of the functioning of the various organs of living beings.

**PHYTOGENY:**Origin and growth of plants.

**POMOLOGY:**The science that deals with fruits and fruit growing.

**PSYCHOLOGY:**The study of human and animal behaviour.

**RADIO ASTRONOMY:**The study of heavenly bodies by the reception and analysis of the radio frequency electromagnetic radiations which they emit or reflect.

**RADIOBIOLOGY:**The branch of biology which deals with the effects of radiations on living organisms.

**RADIOLOGY:**The study of X-rays and radioactivity.

**RHEOLOGY:**The study of the deformation and flow of matter.

**SEISMOLOGY:**The study of earthquakes and the phenomena associated with it.

**SELENOLOGY:**The scientific study of moon, its nature, origin, movements, etc.

**SERICULTURE:**The raising of silk worms for the production of raw silk.

**SOCIOLOGY:**The study of human society.

**SPECTROSCOPE:**The study of matter and energy by the use of spectroscope.

**TELEOLOGY:**These study of the evidences of design or purpose in nature.

**TELEPATHY:**Communication between minds by some means other than sensory perception.

**THERAPEUTICS:**The science and art of healing.

**TOPOGRAPHY:**A special description of a part or region

**TAXICOLOGY:**The study of poisons.

**VIROLOGY:**The study of viruses.

**ZOOLOGY:**The study of animal life.

6

SPORTS



### *Sports*

Field	Person
The first Indian woman to swim across the English Channel	Miss. Arati Shah
The first Indian to win world Billiards Trophy	Wilson Jones
The first to cross the Damelles by swimming	Mihir Sen
The first to conquer Everest	Sherpa Tenzing (1953)
The first to sail round the world	Megellan
The first person to win Wimbledon title five times	Bjorn Borg
The first woman who conquered Everest	Jungo Tabei (Japan)
The first person to reach North Pole	Robert Peary
First woman Olympic Medallist (Weight Lifting)	Karnam Malleswari (2000)
The first person to reach South Pole	Amundsen
The first Indian to win All England Badminton Championship	Prakash Padukone
The first Indian woman to conquer Everest	Bachendri Pal
The first an to climb Everest twice	Nawang Gombu
The first person to complete solo walk to magnetic North pole	David Hingleman Adams (UK)
The first woman to reach North pole	Ann Bancroft
The first woman to sail non stop around the world alone	Kaycottee
The first deaf & dumb to cross the strait of Gibraltar	Taranath Shenoy (India)

The first woman to climb Mt. Everest twice	Santosh Yadav (India)
The first black player to win the Wimbledon men's singles title	Arthur Ashe (US)
The first person to win the Palk Strait ocean swimming contest	Baidyanath

7

WORLD



## FAMOUS TOWNS in WORLD

Name	Famous For
No 10, Downing Street	Official residence of the British Prime Minister.
Abadan(Iran)	Famous for oil refinery
Alaska (U.S.A.)	In 1958 it was declared as 49th State of U.S.A. It is near Canada
Alexandria	City and sea-port of Egypt, founded by Alexander the Great. Handles about 80% of the country's exports.
Angkor Wat	Ruined temple in Cambodia. Signposts of ancient oriental civilisation.
Aswam Dam	A dam in Egypt across the River Nile.
Baku	Oilfields of Azerbaijan.
Bastille	It was a Jail in Paris. Destroyed during the French Revolution.
Beding (Australia)	Famous for gold mines.
Bethlehem	A town Palestine, the birth place of Christ.
Bikini Atoll	In Pacific Ocean, where first hydrogen bomb was tested by U.S.A.
Bikini	An atoll of the Marshall Islands. Atomb Bomb was dropped here experimentally in 1948.
Bratislava	A town in Czechoslovakia on Czech-Russian border.
Buckingham Palace	London residence of the British monarch.
Chushul	In Ladakh, highest airfield in the world. Chinese troops attacked it in 1962.

Corsica	An island where Napoleon was born.
Detroit (U.S.A)	The biggest car manufacturing town in the world.
Elephanta Caves (India)	Situated in an island 15 miles from Bombay. Famous for the statues of Siva and Parvati.
Fleet Street	Press Center in London.
Gaza Strip	In Egypt near Israeli border, was seat of United nations Emergency Force till 1957. Now under Israeli occupation.
Gibraltar	Key to Mediterranean, fortress and naval base situated on rock in the extreme South of Spain.
Golden Temple (India)	Famous temple of the Sikhs at Amritsar, constructed by Guru Ram Dass.
Hiroshima	An industrial center of Japan which was destroyed by atom bomb in 1945.
Hollywood (California. U.S.A.)	Famous for film industry
Hyde Park	A huge park in London.
Jerusalem	City in Israel. Jesus Christ was crucified here (now capital of Israel)
Khajuraho	It is the State of Chattarpur, Bundelkhand in Madhya Pradesh. It is famous for Mahadev Temple.
Kharkov	Important town of Ukraine, manufactures motor cars, tractors and agricultural machinery.
Lop Nor	Palace in Sinkiang (Red China), site for atomic tests.
Los Angeles A part of California (U.S.A.)	The famous film industry of Hollywood is established here. It is famous as Cinema City of the world.
Lusaka	Venue of non-aligned nations summit in September 1970. Capital of Zambia.

Manchester (U.K.)	Cotton manufacturing city. It is one of the world's biggest cloth manufacturing center.
Marseilles	City and Seaport of Southern France. Famous for silk, wine, olive soap, margarine and candles.
Mecca (Saudi Arabia)	Sacred place of the Muslims because Prophet Mohammed was born here.
Montreal	Longest city of Canada. Famous for iron and steel works and motor car factories.
Nagasaki (Japan)	It is noted for its iron and steel industries. Atom was dropped here during World War II.
New Castle	An important port on the Tyne in England, famous for coal industry.
New Orleans (U.S.A.)	It is the greatest cotton and wheat exporting center in the world.
Osaka (Japan)	Known as the Manchester of Japan. It is sometimes called the Venice of Japan.
Pisa	In Italy, famous for Leaning Tower, one of the seven wonders of the world.
Pentagon	Headquarters of American Defence Forces.
Phnom-Penh	Capital of Cambodia.
Plais Des Nations	Venue in Geneva for holding international conferences.
Potala	Dalai Lama's palace at Lhasa (Tibet).
Sinai	Peninsula of Egypt between the Gulfs of Suez and Aquba, at the head of Red Sea.
Seychelles	Island in Indian Ocean, got freedom on June 28, 1976.
Sodom	In Israel, the lowest point on earth.
Vatican	Official residence of the Pope of Rome.

Versaillers (France)	Famous for the treaty of Versailles which ended World War I in 1918.
Vienna	Capital of Austria. The venue of Strategic Arms Limitation Talks (SALT) between Russia and U.S.A.
Walling Wall	Part of the Western Wall of the Temple Court in Jerusalem. Part of the wall, probably dates from the time of Solomon, is regarded by both Jews and Moslems as one of special sanctity.
Wall Street	In Manhattan, New York, famous for American's stock exchange market.
White House	The official residence of the President of U.S.A. in Washington D.C.
Zurich (Switzerland)	Famous for the manufacture of cotton and silk and for its lenses.

## FAMOUS PLACES IN WORLD

Place	Famous For
AUROVILLE	UNESCO sponsored world's first international town near Pondichery in Tamil Nadu named after Aurobindo Ghose. The town with an area of 15sq. miles and a population of 50,000 will be a self-supporting township having gour zones, viz., cultural, industrial, residential and international. It was inaugurated on February 28,1963.
ABU SIMBAL (U.S.A.)	A monument executed by UNSCO in Egypt, the famous temple at Nybia (Egypt) was facing submergence as result of the construction of Aswan Dam. UNSCO has reconstructed it at a cost of 36 million dollars and was inaugurated on 12th Sept. 1968.
ADAM'S BRIDGE	Sand and rock bridge between Sri Lanka and India. Legent has is that was constructed by Lord Rama when he was in invade Lanka of Ravana.
ALICE SPRINGS	Spring with medicinal properties.



(Australia)	
BIG BEN	Name given to the big clock of the British Parliament building.
BILLING'S GATE	London fish market. As a term, it means foul language.
DODOMA	This is going to be the new capital of Tanzania in place of Dar-es-Salam.
EIFFEL TOWER	985 feet high tower in Paris build by Gustav Effel in 1887-89 at a cost of 2,00,000
ELBA	An isolated island in the Meduterranean Sea, where Napoleon was exiled in 1841.
ELLORA	Famous for rock-pruned Kailash Temple (Aurangabad) in Maharashtra. An exquisite piece of Dravidian art. Ellora cave temples, 34 in number, present a blend of caves representing Buddhism and Jainism constructed in 8th century A.D.
ELYSEE PALACE	Official residence of the President of France. It was the venue of Paris Peace parleys on Vietnam.
EMPIRE STATE BUILDING (U.S.A)	World's one of the loftiest structures. It has 103 storeys and a height of 1200 feet.
ESCURIAL	One of the longest palaces in Spain.

## MOUNTAINS,PEAKS OF THE WORLD

MOUNTAIN	HEIGHT IN METERS	RANGE	CONQUERED ON
Mount Everest	8,848	Himalayas	May 29, 1953
K-2 (Godwin Austin)	8,611	Karakoram	July 31, 1954
Kanchenjunga	8,597	Himalayas	May 25, 1955
Lhotse	8,511	Himalayas	May 18, 1956
Makalu I	8,481	Himalayas	May 15, 1955
Dhaulagiri I	8,167	Himalayas	May 13, 1960
Manaslu	8,156	Himalayas	May 9, 1956
Cho Uyo	8,153	Himalayas	Oct 19, 1954
Nanga Parbat	8,124	Himalayas	July 3, 1953
Annapurna I	8,078	Himalayas	June 3, 1950
Gasherbrum I	8,068	Karakoram	July 5, 1958
Broad Peak I	8,047	Karakoram	June 9, 1957

Gasherbrum II	8,034	Karakoram	July 7, 1956
Shisha Pangma (Gasainthan)	8,013	Himalayas	May 2, 1964
Gasherbrum III	7,952	Karakoram	Aug 11, 1975
Annapurna II	7,937	Himalayas	May 17, 1960
Gasherbrum IV	7,923	Karakoram	Aug 6, 1958
Cyachug Kang	7,921	Himalayas	Apr 10, 1964
Kangbachen	7,902	Himalayas	May 26, 1974
Disteghil Sar I	7,884	Karakoram	June 9, 1960
Himal Chuli	7,864	Himalayas	May 24, 1960
Khinyang Chchish	7,852	Karakoram	Aug 26, 1971
Nuptse	7,841	Himalayas	Oct 1970
Gasherbrum East	7,821	Karakoram	July 5, 1960
Nanda Devi	7,816	Himalayas	Aug 29, 1936
Chomo Lonzo	7,815	Himalayas	Oct 30, 1954
Ngojumba Ri I	7,805	Himalayas	May 5, 1965
Rakaposhi	7,788	Karakoram	June 25, 1988
Batura Muztagh I	7,785	Karakoram	July 30, 1976
Zemu Gap Peak	7,780	Himalayas	Unclimbed
Kanjut Sar	7,760	Karakoram	July 19, 1939

Kamet	7,756	Himalayas	June 21, 1931
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### SOME HIGHEST WATERFALLS

Name	Location	Height in Metres
Angel	Venezuela	807
Tugela	Natal, South Africa	410
Kukenaam	Venezuela	610
Sutnerland	South Island, N.Z	589
Takkakaw	British Columbia	503
Ribbon (Yoesmite)	California	491
Upper Yosemite	California	436
Gavarnie	South-West France	421
Vettifoss	Norway	366
Widows' Tears (Yosemite)	California	357
Stubbach	Switzerland	300
Middle Cascade (Yosemite)	California	227
King Edward VIII	Guyana	259
Gersoppa	India	253

Kaieteur	Guyana	251
Skykje	Norway	250
Kalambo	Trnzania-Zambia	426
Fairy (Mt.Rainier Park)	Washington	213
Trummelbach	Switzerland	213
Aniene (Teverpne)	Italy	207
Cascata delle Marmore	Italy	198
Maradalsfos	Norway	196
Feather	California	195
Maletsunyane	Lesotho	192
Bridalveli (Yosemite)	California	189
Multnomah	Oregon	189
Voringsfos	Norway	182
Nevada (Yosemite)	California	181
Skjeggedal	Norway	160
Marina	Guyana	152

## LARGEST LAKES OF THE WORLD

Name and Location	Area in Sq.Km.
Caspian Sea, Russia	393,898
Superior, U.S.A. Canada	82,814
Nyanza, Tansania-Uganda, Kenya	69,485
Aral Russia	66,457
Huron, U.S.A. Canada	59,596
Michigan, U.S.A.	58,016
Tanzania-Zaire, Zambia 4	38,893
Baikal, Russia	31,500
Great Bear, Canada	31,080
Nyasa, Malawi-Mozambique-Tanzania	30,044
Great Salve, Canada	28,930
Chad, Chad-Niger-Nigeria, Cameroon	25,760
Erie, U.S.A.-Canada	25,719
Winnipeg, Canada	23,533
Ontario, U.S.A.-Canada	19,477

Balkash, Russia	18,428
Ladoga, Russia	18,130
Onega	9,891
Titicaca, Bolivia-Peru	8,135
Nicaragua, Nicaragua	8,001
Athabaska, Canada	7,920
Rudolf, Kenya, Ethiopia	6,405
Reindeer, Canada	6,330
Eyre, SouthAustralia	6,216
Issyk-Kul, Russia	6,200
Urmia, Iran	6,001
Torrens, South Australia	5,698
Vanern, Sweden	5,545
Winnipegosis, Canada	5,403
Mobutu Sese Seko, Uganda	5,299
Nettilling, Baffin Island, Canada	5,051
Nipigon, Canada	4,843
Manitoba, Canada	4,706
Great Salt, U.S.A.	4,662

Kiogo, Uganda	4,403
Koko-Nor, China	4,222

## SOLAR SYSTEM

Pluto	Diameter	3,040 Kilometer
	Moons	1
	Avg.Distance to Sun	5,865.5 million KM
	Time to Orbit the Sun	248 Years
	Facts	<ul style="list-style-type: none"> <li>○ This Planet is the farthest, the smallest, the darkest, the coldest and arguably the strangest.</li> <li>○ It follows the most elongated and tilted orbit in the solar system.</li> <li>○ Its moon, Charon, is nearly half its size - appears like a bi-planet.</li> <li>○ NASA used a new infra-red telescope, has learned that Pluto is shrouded in frozen nitrogen- not methane as once thought. Nitrogen makes 78% of the air.</li> </ul>

Neptune	Diameter	49,000 Kilometer
	Moons	8
	Avg.Distance to Sun	4,497 million KM
	Time to Orbit the Sun	165 Years
	Facts	<ul style="list-style-type: none"> <li>○ It is denser &amp; little smaller than Uranus.</li> </ul>



		<ul style="list-style-type: none"> <li>○ Its Atmosphere appear blue, with quickly changing white clouds often suspended high above an apparent surface.</li> <li>○ Atmosphere constituents are mostly hydrocarbon compounds.</li> <li>○ It Emits about 2.3 times more energy than it receives from the sun and the Aurora phenomenon was noticed by Voyager II.</li> </ul>
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Uranus	Diameter	52,096 Kilometer
	Moons	17
	Avg.Distance to Sun	2,852.8 million KM
	Time to Orbit the Sun	84 Years
	Facts	<ul style="list-style-type: none"> <li>○ Waterly Uranus is the only planet that lies on its side.</li> <li>○ One pole, than the other, faces the Sun as it orbits.</li> <li>○ Voyager-I found nine dark, compact rings around the planet and a corkscrew-shaped magnetic field that stretches millions of kilometers.</li> </ul>

Mars	Diameter	6,755.2 Kilometer
	Moons	2
	Avg.Distance to Sun	225.6 million KM
	Time to Orbit the Sun	687 Days
	Facts	<ul style="list-style-type: none"> <li>○ The Viking probes failed to Beneath its thin atmosphere.</li> <li>○ Mars is barren, covered with pink soil and boulders.</li> <li>○ Long ago it was active, the surface is marked with dormant volcanoes and deep chasms where water once freely flowed.</li> </ul>

Venus	Diameter	12,032 Kilometer
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	Moons	None
	Avg.Distance to Sun	107.52 million KM
	Time to Orbit the Sun	225 Days
	Facts	<ul style="list-style-type: none"> <li>o Earth's twin in size and mass, sparingly hot Venus is perpetually veiled behind reflective sulfuric-acid clouds.</li> <li>o Probes and radar mapping have pierced the clouds and carbon-dioxide environment to reveal flat, rocky plains &amp; signs of volcanic activity.</li> </ul>

Mercury	Diameter	4,849.6 Kilometer
	Moons	None
	Avg.Distance to Sun	57.6 million KM
	Time to Orbit the Sun	88 Days
	Facts	<ol style="list-style-type: none"> <li>1. Tiny Mercury, slightly larger than Earth's moon.</li> <li>2. Races along its elliptical orbital 1,76,000 kilometer per hour.</li> <li>3. A speed that keeps it from being drawn into the Sun's gravity field.</li> <li>4. The crated planet has no atmosphere, days are scorching hot and nights, frigid.</li> </ol>

Earth	Diameter	12,732.2 Kilometer
	Moons	1
	Avg.Distance to Sun	148.8 million KM
	Time to Orbit the Sun	365 Days
	Facts	<ol style="list-style-type: none"> <li>1. Uniquely moderate temperature and the presence of oxygen and copious water maker Earth the only planet in the solar system to support life.</li> </ol>

Jupiter	Diameter	1,41,968 Kilometer
	Moons	16
	Avg.Distance to Sun	772.8 million KM
	Time to Orbit the Sun	11.9 Years
	Facts	<ol style="list-style-type: none"> <li>1. Two Pioneer space probes photographed the Great Red Spot on the Solar system's largest planet.</li> <li>2. Voyagers I and II later showed it is an enormous eddy in the turbulent cloud cover. Earth the only planet in the solar system to support life.</li> <li>3. They also spotted dusty rings, three new moons and volcanoes on the Moon.</li> </ol>

Saturn	Diameter	1,19,296 Kilometer
	Moons	20 or more
	Avg.Distance to Sun	1,417.6 million KM
	Time to Orbit the Sun	29.5 Years
	Facts	<ol style="list-style-type: none"> <li>1. Voyager I found that the celebrated rings of the golden giant Saturn are composed of thousands of rippling, spiraling bands just 100 feet thick.</li> <li>2. The moon Titan has a nitrogen atmosphere and hydrocarbons.</li> </ol>

Sun	Diameter	13,84,000 Kilometer
	Statellites	9 Planets
	Age	4.5 billion years
	Facts	<ol style="list-style-type: none"> <li>1. A rather ordinary, middle age star, the gaseous sun may reach a temperature of 27-millon degrees Celsius at its core.</li> <li>2. Its 11 years cycle is now approaching a solar maximum, a period marked by frequent sunspots and flares.</li> <li>3. On Earth, some radio waves will be disturbed and the</li> </ol>

		amazing sky streamers called Northern Lights will appear.
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# Cities Situated on River Sides

CITY	RIVER	COUNTRY	Karachi	Indus	Pakistan
Alexandria	Nile	Egypt	Lahore	Ravi	Pakistan
Amsterdam	Amsel	Netherlands	London	Thames	England
Antwerp	Scheidt	Belgium	Montreal	Ottawa	Canada
Baghded	Tigris	Iraq	Moscow	Moskow	Russia
Bangkok	Menam	Thailand	New York	Hudson	U.S.A.
Belgrade	Danube	Yugoslavia	Paris	Seine	France
Berlin	Spree	Germany	Quebec	St.Lawrence	Canada
Bonn	Rhine	Germany	Rangoon	Irrawadi	Mayanmar
Budapest	Danube	Hungary	Rome	Tiber	Italy
Cairo	Nile	Egypt	Tokyo	Sumida	Japan
Canton	Canton	China	Vienna	Danube	Austria
Glasgow	Clyde	Scotland	Warswa	Vistula	Poland
Hamburg	Elbe	Germany	Delhi	Yamuna	India

**GOOD LUCK.....**

*“Good Fence Makes Good Friends” By Murali Krishna*