



AB TUTORIALS

(Bhatara Institute)

2013

GENERAL KNOWLEDGE

KIT II (B) (Sample)

Economics and Science

***NB: This is not the complete module but only
some selected portion for website purpose.***

B-1/14 LG Floor Hauz Khas, New Delhi 110016

Tel Nos: 91-11-42270005-42270040-43

Email: info@abtutorials.com Website: www.abtutorials.com



INDIAN ECONOMY

ECONOMIC PLANNING IN INDIA

History of Planning in India

- First attempt to initiate economic planning in India was made by **Sir M. Visvesvarayya**, a noted engineer and politician, in 1934 through his book, 'Planned Economy For India'.
- In **1938** '**National Planning Commission**' was set-up under the chairmanship of JL Nehru by the Indian National Congress. Its recommendations could not be implemented because of the beginning of the Second World War and changes in the Indian political situation.
- In **1944**, '**Bombay Plan**' was presented by 8 leading industrialists of Bombay.
- In **1944**, '**Gandhian Plan**' was given by SN Agarwal.
- In **1945**, '**People's Plan**' was given by MN Roy.
- In **1950**, '**Sarvodaya Plan**' was given by JP Narayan. A few points of this plan were accepted by the Government.

THE PLANNING COMMISSION

- The Planning Commission was set-up on **March 15, 1950** under the Chairmanship of JL Nehru, by a resolution of Union Cabinet.
- It is an **extra-constitutional, non-statutory body**.
- It consists of **Prime Minister as the ex-officio Chairman**, one Deputy-Chairman appointed by the PM and some full time members.



- The tenure of its members and deputy chairman is not fixed. There is no definite definition of its members also. They are appointed by the Government on its own discretion. The number of members can also change according to the wishes of the Government.

Functions

- Assessment of material, **capital and human resources** of the country.
- Formulation of plans for the most effective and balanced utilization of country's resources.
- To determine the various stages of planning and to propose the allocation of resources on the priority basis.
- To act as an **advisory body to the Union Government**.
- To evaluate from time to time the progress achieved in every stage of the plan and also to suggest remedial measures.
- To advise the Centre and the State Governments from time to time on special matters referred to the Commission.

NATIONAL DEVELOPMENT COUNCIL

- All the plans made by the Planning Commission have to be **approved by National Development Council** first. It was constituted to build co-operation between the States and the Planning Commission for economic planning.
- It is an **extra-constitutional and extra-legal body**.
- It was set-up on August 6, 1952, by a proposal of the Government. The PM is the ex-officio chairman of NDC. Other members are Union Cabinet Ministers, Chief Ministers and Finance Ministers of all States, Lt. Governors of Union Territories and Governors of Centrally-ruled States.



Eleventh Five Year Plan (2007-2012)

On the eve of the 11th Plan, our economy was in a much stronger position than it was a few years ago. After slowing down to an average growth rate of about 5.5% in the 9th Plan period (1997-98 to 2001-02), it has accelerated significantly in recent years. The average growth rate in the last four years of 10th Plan period (2003-04 to 2006-07) is likely to be a little over 8%, making the growth rate 7.2% for the entire 10th Plan period. Though, this is below the 10th Plan target of 8%, it is the highest growth rate achieved in any plan period.

This performance reflects the strength of our economy and the dynamism of the private sector in many areas. Yet, it is also true that economic growth has failed to be sufficiently inclusive, particularly after the mid-1990s. Agriculture lost its growth momentum from that point on and subsequently entered a near crisis situation. Jobs in the organized sector have not increased despite faster growth. The percentage of our population below the poverty line is declining but only at a modest pace. Malnutrition levels also appear to be declining, but the magnitude of the problem continues to be very high. Far too many people still lack access to basic services such as health, education, clean drinking water and sanitation facilities without which they cannot claim their share in the benefits of growth. Women have increased their participation in the labor force as individuals, but continue to face discrimination and are subject to increasing violence, one stark example of which is the declining child sex ratio.



Vision for the 11th Plan

The 11th Plan provides an opportunity to restructure policies to achieve a new vision based on faster, more broad-based and inclusive growth. It is **designed to reduce poverty** and focus on bridging the various divides that continue to fragment our society. The **11th Plan must aim at putting the economy on a sustainable growth trajectory with a growth rate of approximately 10 per cent** by the end of the Plan period. It will create **productive employment at a faster pace** than before, and target **robust agriculture growth at 4% per year**. It must seek to reduce disparities across regions and communities and ensuring access to basic physical infrastructure as well as health and education services to all. It must recognize gender as a cross-cutting theme across all sectors and commit to respect and promote the rights of the common person.

Rapid growth is an essential part of our strategy for two reasons. Firstly, it is only in a rapidly growing economy that we can expect to sufficiently raise the incomes of the mass of our population to bring about a general improvement in living conditions. Secondly, rapid growth is necessary to generate the resources needed to provide basic services to all. Worked one within the Planning Commission and elsewhere suggests that the economy can accelerate from 8 per cent per year to an average of around 9% over the 11th Plan period, provided appropriate policies are put in place. With population growing at 1.5% per year, 9% growth in GDP would double the real per capita income in 10 years. This must be combined with policies that will ensure that this per capita income growth is broad based, benefiting all sections of the population, especially those who have thus far remained deprived.



Agricultural Revolutions in India

Revolution	Area
Yellow Revolution	Oil seeds
White Revolution	Milk
Blue Revolution	Fish
Pink Revolution	Shrimp
Grey Revolution	Wool
Golden Revolution	Horticulture

IMPORTANT INDUSTRIES OF INDIA

Iron and Steel Industry

- **First Steel industry at Kulti, near Jharia, West Bengal** ‘Bengal Iron Works Company’ in 1870.
- **First large scale steel plant TISCO at Jamshedpur** in 1907 followed by IISCO at Burnpur in 1919. Both belonged to private sector.
- The **first public sector unit** was ‘**Vishveshvarayya Iron and Steel Works**’ at **Bhadrawati**.
- All these are managed by SAIL. (At present all important steel plants except TISCO, are under Public Sector).
- **Steel Authority of India Limited (SAIL)** was established in 1974 and was made responsible for the development of the Steel Industry. Presently, SAIL is the 19th largest Steel Producing Company in the World.
- Bhilai, Durgapur and Rourkela were established during the Second Five Year Plan. Bokaro was established during the Third while the



steel plants at Salem, Vijai Nagar and Vishakhapatnam were established in the Fourth Five Year Plan.

- **India 33% growth in steel production in the last 5 years was second only to China among top 5 producing nations.**

SERVICE SECTOR

Services make up over 60 percent of Asia's third-largest economy. Some of India's top services exports are software, back-office support and banking services.

"Service sector activity continued to pick up pace led by a faster inflow of new business," said Leif Eskesen, HSBC's chief economist for India and Southeast Asia, in a release.

The new business sub-index jumped to 58.3, the highest since August 2011, prompting firms to step up the pace of hiring, although not at a very strong rate.

Although companies were optimistic about the future, the business expectations index fell slightly from December.

The survey also showed input and output prices rising at a similar pace to the prior month, though much weaker than a year ago.

Wholesale price inflation eased to a three-year low of 7.18 percent in December 2011, giving the Reserve Bank of India room to cut its key lending rate by 25 basis points to 7.75 percent last week.



"Inflation readings held broadly steady, with fuel, raw material and labour cost pressures still simmering. These numbers underscore the need for the RBI to approach policy easing with caution," said HSBC's Eskesen.

The RBI is expected to cut the repo rate by another 75 basis points to 7 percent by September.

The RBI also lowered country's GDP forecast to **5.5 percent in 2012-13 as against 5.8 percent** estimated earlier.

Services sector **account for 56% of India's GDP in 2011-12.**

Financial Commission

- Finance Commission is constituted to define financial relations between the Centre and the States. Under the provision of **Article 280 of the Constitution**, the President appoints a Finance Commission for the specific **purpose of devolution of non-plan revenue** resources. The functions of **the Commission are to make recommendations to the President** in respect of:
 - (1) The distribution of net proceeds of taxes to be shared between the Union and the States and the allocation of share of such proceeds among the States.
 - (2) The principles which should govern the payment of grants-in-aids by the Centre to the States.
 - (3) Any other matter concerning financial relations between the Centre and the States.



13th Finance Commission Presents its Report

The 13th Finance Commission has submitted its report to President which contained the distribution of tax revenues between the Central government and the states.

The Finance Commission led by former finance secretary Vijay Kelkar described the recommendations made in the report to the President Pratibha Patil. The report contains the details for the time period between 2010 and 2015.

The commission was formed so that a decision could be reached regarding the sharing of the tax revenues between the central and the state governments and also in making recommendations on related issues.

Finance Commission	Estd. in	Chairman	Operational Duration	Year of Submitting Report
I	1951	KC Niyogi	1952-57	1952
II	1956	K Santhanam	1957-62	1956* and 1957
III	1960	AK Chanda	1962-66	1961
IV	1964	PV Rajamannar	1966-69	1965
V	1968	Mahaveer Tyagi	1969-74	1968* and 1969
VI	1972	Brahma Nand Reddy	1974-79	1973
VII	1977	JM Shellet	1979-84	1978
VIII	1983	YB Chawan	1984-89	1983* and 1*84
IX	1987	NKP Salve	1989-95	1989



X	1992	KC Pant (Late)	1995-2000	Nov 26, 1994
XI	1998	AM Khusro	2000-2005	Jan 15, 2000* and 7 July, 2000 and 31 Aug 2000
XII	2003	C Rangarajan	2005-1010	Report submitted on Nov. 30, 2004.
XIII	2007	Vijay Kelkar	2010-2015	Report submitted on Dec. 31, 2009.
XIV	2012	Y. Venugopal Reddy	2015-2020	

* Interim Report



GENERAL SCIENCE

BIOLOGY

The Live Matter:

All living things, are composed of cells. The cells are formed of an organic compound Protoplasm which is a semi viscous liquid. Enclosed with the wall of a cell are cytoplasm and nucleus. The nucleus controls all the cellular activity. The cell wall is a semi-permeable membrane which allows passage of material in and out of cell by a process called osmosis. The nucleus is an important part of the cell. It contains a net work of rod like bodies called Chromosomes. They are the structures which control the hereditary characteristics of the organisms.

The Cytoplasm of cells contains Proteins carbohydrates and fats. They may contain some minerals as well. For substance, it is incumbent upon cells to carry on the vital activities of taking in nutrients, excretion of waste matter, respiration and growth.

Parts of an Animal Cell:

Animal cells like plant cells has a nucleus. Nucleus is a compact spherical body. Its functions are: (a) to control and regulate the activity of the cell, (b) Help in the division of the cell.

Nucleus is in cytoplasm which contains non-living substances.



Plant cells are different from animal cells because (i) plant cells are covered with cell walls but animal cells are covered by thin cell membrane; (ii) a large granule called centriole is close to the nucleus; (iii) in animal cells there are no plastids.

Chromosomes:

There are minute granules in the nucleus of an animal cell. When the cell is about to divide, they become thicker. These are called Chromosomes. (i) These contain the material which control the hereditary character. The number of chromosomes in an organism is constant.

Function of a cell:

(a) takes nutrients; (b) respire; (c) grows; (d) throws out waste products; (e) ability to respond to a change; (f) reproduction.

What is a Tissue?

A group of similar cells is called a *tissue*. These are of four types; (a) epithelial; (b) connective; (c) muscular (d) nervous.



CHEMISTRY

Mixture and Compound:

Compound is a substance formed by the union of two or more elements in a definite proportion by weight.

Mixture is a substance formed by the mere blending of two or more elements or compounds in any proportion by weight, each component of the mixture retaining its individual properties.

Element is a substance which cannot be split up into two or more dissimilar substances (or atoms) by chemical methods alone.

Periodic Law and Periodic Table. When elements are arranged in increasing order of atomic numbers, certain fundamental properties repeat themselves in regular intervals. This is the periodic law. Periodic table is obtained by arranging the element in ascending order of atomic numbers. In such a table elements of similar properties fall in the same group. Meadeleev was able to forecast the existence and properties of them in (1869) undiscovered elements using his original table (he predicted the existence of germanium, gallium and scandium).

Nitrogen Cycle is the circulation of nitrogen compounds in nature through the various organisms to which nitrogen is essential. Each nitrogen atom undergoes a new ceasing cycle as carried on in nature. Besides man contributes to it by utilizing, the nitrogen stored in coal to produce ammonia, or manufacturing it otherwise, and after converting the



ammonia to fertilizers by applying it to the soil so as to make more nitrogen available for the plants.

Carbon Cycle is the sequence followed by the element carbon as it is used by plants and other animals. A carbon atom in a tree of the prehistoric age is buried deep into the earth as a result of some upheaval. It is converted into coal and freed into the atmosphere when the coal burns. The carbondioxide is next absorbed by a plant and converted into starch which is used as food by animals. It is again released into the atmosphere when animals breathe or when dead animals bodies decay.

Water Cycle. The heat of the sun causes water on the surface of the earth to evaporate. The moistair rises to upper atmosphere where the water vapour condenses to form clouds. The same water molecule is then returned to the earth through rain. Thus, the circle goes on endlessly.

An acid is a substance which is formed when we dissolve acidic oxide in water.

A Base is a substance which reacts with an acid to form salt and water e.g. Hydroxides of metals.

An alkali is a base which is soluble in water e.g. caustic soda.



PHYSICS

Traditionally, physics has been divided into Mechanics, Heat, Sound, Electricity and Magnetism. But Modern Scientists have divided Physics into: (a) *Atomic physics*. The study of atomic structure of matter; (b) *Nuclear Physics*. Dealing with nucleus of atoms, fission, fusion, processes and radio activity; (c) *Astro physics*. The study of stars, planets and universe; (d) *Electronics*. Study of emission of electrons.

Force and Motion

Newton's Laws of Motion. They are: Law I: "Every body continues in its state of rest or of uniform motion in a straight line unless acted upon by an external force." Law II: "The rate of change of momentum is directly proportion to the impressed force and takes place in the direction of the force." Law III: "To every action there is an equal and opposite reaction.

Law of Gravitation. Propounded by Newton states: "Every body attracts every other body with a force directly proportional to the product of their masses and inversely proportional to the square of the distance between them".

Heat is a energy a substance possesses in the form of kinetic energy arising out of "molecular agitation." A change in the heat content of a substance can give rise to both physical (rise in temperature, change of state, expansion etc.) and chemical conversion to another chemical substance (effects).



Specific heat. It is quantity of heat energy required by unit mass of any substance to raise its temperature through unit degree.

Calorie. It is that quantity of heat energy required to raise temperature of 1 kg of water through 1 kelvin.

Thermal capacity is the total quantity of heat energy required to raise the temperature of the body through 1°C or 1 K (Kelvin).

Latent Heat is the heat energy used for changing the state of body from solid state to the liquid state and whose effect is not seen on the thermometer.

Latent heat of fusion. The quantity of heat required to convert unit mass of any substance from solid state at its melting point to the liquid state at the same temperature is called the latent heat of fusion.

Conduction is the process of transmission of heat from a place of higher to a place of lower temperature in a substance, through direct physical contact, without any movement of the medium transmitting it.

Convection is the process of transmission of heat from a place of higher to a place of lower temperature through actual movement of the transmitting medium.