INTERNATIONAL INDIAN SCHOOL DAMMAM

Model Examination - 2013 -2014

Class XI **Max marks 90**

Subject - Economics **Time - 3 hrs**

Set-A

GENERAL INSTRUCTION:

(i)All questions in both the sections are compulsory.

(ii)Questions 1,2 and 12,13 are very short answer questions carrying 1 mark each. They are required to be answered in one sentence each.

(iii)Questions 3-6 and 14-17 are short answer questions of 3 marks each. Answers to them should not normally exceed 60 words each.

(iv) Questions 7,8 and 18,19 are long answer questions of 4 marks each. Answers to them should not normally exceed 70 words each.

(v)Questions 9-11and 20-22 are long answer questions of 6 marks each. Answers to them should not exceed 100 words each

(vi)All parts of a question should be answered at one place.

(vii)OTBA is in section c

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Section A

Indian Economic Development

Q1) What do you mean by commercialization of agriculture? 1

Q2) Who was the first to discuss the concept of a poverty line? 1

Q3) What objectives did the British intend to achieve through the policies of infrastructure development in India? 3

Q4) Critically analyze some of the shortfalls of the industrial policies pursued by the British Colonial administration of India. 3

Q5) What was the need for economic reforms in 1991? 3

Q6) What is the difference between relative and absolute poverty? 3

Or

How does investment in human capital contribute to growth?

Q7) What is demand-pull inflation? What are its causes? 4

Q8) Explain 4 measures taken by the government to improve agricultural marketing. 4

Or

What is the present occupational structure in India?

Q9) a) What are the vital functions of the environment? 3+3=6

b) What do you mean by morbidity and what are the factors affecting it?

Q10) Compare and contrast India, China and Pakistan's sectoral contribution towards GDP in the year 2003. What does it indicate? 6

Or

What is sustainable development? Describe any 4 strategies for sustainable development?

Q11) Give 3 arguments in favour and 3 arguments against the economic reforms of 1991. 6

Section B

Statistics

Q12) What is a Lorenz curve? 1

Q13) Define Mode? 1

Q14) Distinguish between quantitative data and qualitative data. Give two examples each. 3

Q15) Prepare a suitable table from the following information. In Bombay 80% of the total population were tea drinkers. Out of which 62% are males and 18% are females. Rest are non-tea drinkers out of which 12% are females. Give suitable title. 3

Q16) Show the following data in a pie diagram 3

Items	Labour	Bricks	Cement	Steel	Timber	Supervision
Expenditure	25%	15%	20%	15%	10%	15%

Or

Represent the following data by means of a component bar diagram.

Year	Males (in crores)	Females (in crores)	Total Population
1991	25	10	35
2001	30	20	50
2011	50	25	75

Q17) Calculate upper quartile from the following data 3

Marks	0-5	5-10	10-15	15-20	20-25
No. of Students	5	8	12	9	6

Q18) Compare the merits of census method and sampling method of collection of data. 4

Or

Explain the exclusive and inclusive methods used in the classification of data.

Give example.

Q19) Find the standard deviation and coefficient of variation from the following 4

Sl.no.	1	2	3	4	5
X	10	20	30	40	50

Q20) Calculate mean deviation from median 6

X	10	20	30	40	50
Frequency	2	8	15	10	4

Q21) Calculate rank correlation co-efficient between 'X' and 'Y' variables. 6

X	10	20	35	14	18	21	16
Y	15	25	18	19	20	26	27

Or

Calculate Karl Pearson's co-efficient of correlation from the following.

X	20	18	16	15	14	12	12	10	8	5
Y	12	16	10	14	12	10	9	8	7	2

Q22) Calculate weighted aggregative Price index from the following data using 6

(i) Laspeyre's method
(ii) Paasche's method

Commodity	Base Period		Current Period	
	Price	Quantity	Price	Quantity
A	2	10	4	5
B	5	12	6	10
C	4	20	5	15
D	2	15	3	10

Section C (Open Text Based Assessment)

Q1) "Processed foods and food Products can give huge boost to the growth of agriculture in India". 5

How 2 Explain

OPEN TEXT MATERIAL

1. Theme – *"Second Green Revolution"*

Abstract:

This case study begins by describing the importance of the agricultural sector in India. It provides a brief background to the rationale for undertaking the Green Revolution and the various kinds of changes that took place for the Green Revolution to be successful. Despite the successful rise in food grain production, agricultural growth rates in the ninth and tenth five year plans have not been up to expectations. Further, when compared to its neighbouring countries, India's performance in the agricultural sector has been far from satisfactory. The time has come for a second Green Revolution. There are certain critical elements that are required for the Green Revolution to take place, both in terms of technology usage and issues to be considered. Further, India's Food Processing Industry is at a fairly nascent stage and needs to develop rapidly in order to reduce wastage of food crops, fruits and vegetables, and help agricultural labour find new employment opportunities through which productivity can improve.

Historically, India has been an agrarian economy. When we mention the word agrarian – it implies agriculture and its allied activities that have dominated not only in the contribution to India's GDP but have also been the highest employer of the labour force. Over the years, the decline in the population engaged in agriculture has not been as substantial as compared to its decline in share of India's GDP. The Economic Survey of India (2012-13), states that the contribution of agriculture and its allied activities has been to only about 14.1% of India's GDP at constant prices (2004-05) in 2011-12 but the sector continues to be important in the Indian economy as it provides over 58% of India's employment as per 2001 census. The importance of agriculture is also based in the fact that it produces foodgrain to match the population of the country.

Over the years, especially post independence, India's population has seen a rapid increase. This can be seen from the table 1.

Table-1:

Year	Population (in millions)
1700	127
1900	271
1947	345

1970-71	548
1980-81	683
1990-91	846
1999	1,000
2000-01	1,027

Source: Mission India: A Vision for Indian Youth

Prima facie it would seem to be a herculean task to match food grain requirements to the population needs of the country. This was particularly true in the 1960s when there were acute food shortages, especially when there was a long drought. This made India greatly dependent on wheat imported from the United States of America. The late G. Subramaniam, (who catapulted the Green Revolution from the political angle) and Dr. M. S. Swaminathan, (the agricultural scientist who handled the technological aspect), described India's mid 1960 crisis as: *'During.... That critical period of drought [1966-67], President Johnson, because of certain policies he had adopted, was releasing wheat only in driblets. At one point, we reached a stage where there were stocks for only two weeks and nothing else in the pipeline.'* The 1960s crisis made India's leaders determined to take her out of this situation. They used India's strengths to remove its dependence on international supplies and become self-sufficient in food grains. It was felt that by adopting modern methods of production and bringing India's enterprising farmers together, there could be solutions to this problem. This effort became popularly known as the Green Revolution.

The Green Revolution was launched to liberate India from what was called 'ship to mouth existence'. During the period 1967 to 1978, there were *three major changes made* to the traditional agriculture practiced in India. *More land was brought under irrigation* through the use of diesel and electric pumps, *double-cropping was introduced* on existing farming land, and most importantly, *new, high yielding varieties of seeds were used* along with fertilizers, herbicides and pesticides. These changes were supplemented by institutional support to the farmers in terms of better transportation facilities and marketing of their produce. Certain *social innovations* were also initiated through l*and reforms, easier credit facilities and changes in the distributive system.* As a result of this effort, yields increased, weeds and pests were controlled, farmers were able to buy seeds and other inputs. With mechanization on farms, less labour was needed on farms. India achieved food grain sufficiency in the 1970s, with a record 131 million tons of food grains produced in 1978-79.

Figure–1: *Source: www.pbs.org/thestoryofindia/gallery/photos/7.html*

The table below shows that as a result of the Green Revolution, India's food grain production has grown dramatically. When two of the worst droughts occurred in 1979 and 1987, there was no need to ask any aid giving nation for food. The need to import food grains is now minimal, and there are adequate buffer stocks. In June 2002, buffer stocks stood at 64 million tons. India even exports certain quantities of food grains. For example, between 1997 and 2007, agricultural exports have increased 10.9 percent annually. Milled paddy rice is the major agricultural export followed by cotton lint, soya bean cake, buffalo meat, sugar and maize. During the same time period, agricultural imports have grown at an annual rate of 9.8 percent. Main agricultural imports include palm oil, soya bean oil, dry peas, wheat, cashew nuts, and dry bean.

Table–2: *All figures in million tonnes*

	1950	1960	1970	1980	1990	2000
Food grain production	50.8	82.0	108.4	129.6	176.4	201.8
Food grain import	4.8	10.4	7.5	0.8	0.3	-
Buffer stock	-	2.0	-	15.5	20.8	40.0

Source: Mission India: A Vision for Indian Youth

Despite a rise in agricultural output, the sector has not shown the growth rates demonstrated by other sectors of the economy. In fact, the Eleventh Plan sought to reverse the deceleration of

some success, in that foodgrain production touched a new peak of 250.42 million tonnes in 2011-12. The Agriculture Secretary mentioned that the country was able to achieve a bumper wheat crop in 2011-12 as crop yields rose due to favourable weather during February and March. This shows that the performance in the agriculture sector is still largely dependent on the vagaries of nature. Despite efforts, the Approach Paper to the Twelfth Plan states that agriculture and allied sectors is expected to grow at 3.3 – 3.5 percent per year against the target of 4 percent of the Eleventh Plan. The increasing divergence between the growth trends of the total economy and that of agriculture & allied sectors suggests an under performance by agriculture. It is also important to note that unlike the overall economic growth pattern, agricultural performance in India has been quite volatile.

Data collected by the Food and Agricultural Organisation of the United Nations shows that even though India is an agrarian economy, it does not compare well with its neighbours on several agricultural indicators.

Table–3: Comparative study of continuation and growth of agriculture with regard to India.

Country	Average annual growth rate of agriculture production 1998-2008	Average annual growth rate of food production 1998-2008	Wheat yield per hectare in 2008 (in tonnes)	Rice yield per hectare in 2008 (in tonnes)
Afghanistan	0.8	0.9	2.06	2.16
Bangladesh	3.9	4.0	1.22	3.99
Bhutan	5.7	5.8	2.17	2.69
India	2.6	2.5	1.29	3.37
Nepal	3.1	3.1	-	2.77
Pakistan	2.9	2.9	2.22	3.52
Sri Lanka	1.6	1.7	2.45	3.75
China	3.2	3.1	4.76	6.56
Asia Pacific	3.0	2.9	2.75	4.38
World	2.3	2.3	3.07	4.31

Source: Food and Agricultural Organisation of UN, Report 2008

According to Dr. APJ Abdul Kalam if all Indians have to have good nutrition and plenty of food, then India needs 360 million tons of food grains by 2020. This will allow for good domestic consumption and still leave a sufficient margin for food exports and aid to other countries in need. This mission demands a great revolution in research, technology development, agricultural extension services and, above all, a major network of marketing, storage and distribution. Further the biggest challenge is that India is still heavily dependent on the rains for the success of its agricultural produce. If there is a succession of bad years, output gets affected. To resolve all these remaining problems, we require a Second Green Revolution.

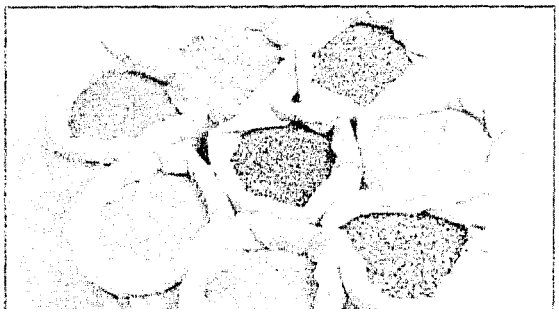
The Second Green Revolution will enable India to further increase its productivity in the agricultural sector. This revolution focuses on matching soil to seed, and product to market. The key parameters required in this endeavour are high productivity and better value addition by agro-processing.

Some of the important issues that India needs to consider during the Second Green Revolution are:

Better use of resources: Since productivity of land needs to be increased to feed the rising population it is suggested that poorer land be utilized for building roads, agro-processing industries and storage facilities, all of which are needed for processing and selling farming produce. Further a lot of present-day farming techniques result in wastage of water. India needs to adopt water-conserving technologies, as many developed countries have done. This will also aid farming in areas with less water, and be environmentally more sustainable.

Changing mindsets: Farmers typically believe that their role is limited to growing of crops. A change in their mindset is required to help them realize that their scope of work can increase from grain production to food processing and marketing. For this, new technologies should be pressed into service. Nearly 60 percent of India's population depends on agriculture for a living. This should be reduced to 40 percent or less, and the people formerly employed in agriculture should ideally move to agro-processing and services, where earnings are higher. This will enable both the farmers as well as the people shifting to the new areas to become prosperous.

Diversifying products: Farmers need to be encouraged to move to producing crops where they have a natural advantage, and for which there is good demand. Animal husbandry and growing cash crops are two of the many new areas which are emerging.



As mentioned before, there are certain important technologies that are required for the Secon Green Revolution to be successful. These include:

1. **Soil matching:** Using modern sensors, it is now possible to examine the soil and find out its characteristic deficiencies and excesses. If there are excessive salts, these have to be neutralized with chemical or biological treatment. Some deficiencies, such as that of zinc or phosphorus, can be rectified by adding supplements. Another aspect of soil matching is that it becomes possible to say which crop would grow best on that soil, and farmers can devote themselves to growing that crop, provided of course that there is a demand in the market for it.

2. **Water technologies:** The amount of water used should be minimized. Technologies like drip irrigation, at its most sophisticated, using microelectronic circuits to control irrigation, should be increased. We should heed the example of Israel, a country with practically no rain, which is today a leader in many agricultural products and milk production.

3. **Crop rotation and better seeds:** Farmers must more systematically implement age-old ways of increasing production. For example, they must use the multiple cropping technique, which gives greater yield from the same land, and judicious crop rotation, which helps in protecting the soil. High-yielding and hybrid seeds are now available, which give new and varied types of genetically improved crops. Simple biotechnological tools-like tissue culture-help to improve growth of vegetables like potatoes. Farmers can also look at new crops, such as herbs, as possible areas of diversification.

4. **Fertilizers and pesticides:** Whilst fertilizers and pesticides are considered necessary for improving crop output, they can be reduced to a minimum if soil tests are conducted properly and irrigation is controlled. As chemical fertilizers are often expensive and polluting, farmers could consider using organic fertilizers. Biotechnology can help in creating these. Similarly, pesticide usage can be minimized through biological control of pests.

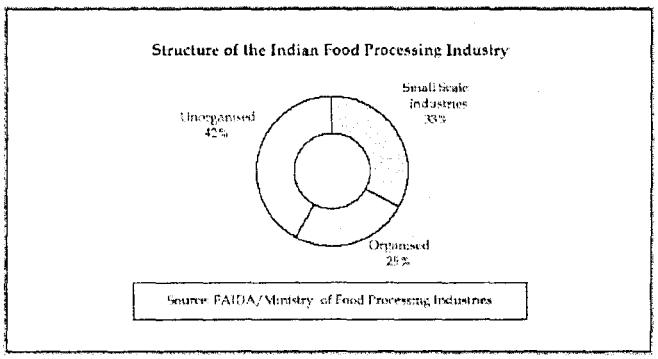
5. **Animal husbandry:** India is one of the top milk-producing nations of the world. However, there is difficulty in exporting milk as we do not meet certain international standards in bacterial control. Agencies like the TIFAC (Technology Information, Forecasting and Assessment Council) have worked to establish such standards, especially in Punjab, Karnataka and Andhra Pradesh. Such standards need to be adopted nationally.

6. **Phytosanitary conditions:** In order to reach export markets, it is important that all agricultural produce-whether poultry, animal or plants-meet certain international cleanliness levels in chemical, bacterial and other residues. Indian agricultural produce does not always meet these standards, as a result of which these products cannot reach export markets. If Indian villages have to prosper, the produce of the farms have to reach the high-value export markets. To achieve such phytosanitary conditions, the technologies involved are not complex, but farmers have to be made aware of these and provided with the tools necessary to achieve these.

7. **Cash crops:** Crops like tea, cotton and spices have the potential to be high earners. It is essential that these are given the technological attention they require. New cash crops also need to be explored. For example, in Uttaranchal, farmers, in collaboration with agricultural researchers, have made geranium into an important mass-produced crop that yields valuable revenue. Aloe vera, which grows in abundance in the wild in India, is much in demand internationally. It is only one of many herbs which may sell well internationally. Vanilla beans and flowers are other cash crops which yield high incomes.

There are many specialists at different agricultural universities who have been working on these areas. For example, TIFAC has been providing information and help to the farmers in areas of Bihar, UP and Uttaranchal where the crop yield was low. In Bihar alone, between 1999 and 2003, the yield in paddy went up from 2 tons per hectare (1 hectare = 2.54 acre) to 5.8 tons per hectare, and the yield in wheat went up from 2 tons a hectare to almost 5. This caused dramatic changes in the income of the farmers.

In the past decade or so, Indian shops have increasingly become flooded by processed foods of various kinds. As a result, there has been a rise in demand for agricultural products which are used in the food processing industry.



Figure–2

There is a wide variety of processed foods available today that people now eat which was not

kind of corn, and potato chips required by fast food places need a special kind of potato. Since there is a demand for these products, it makes sense for farmers to grow these.

Some agricultural produce have very short shelf-lives if they are unprocessed. Processing helps to preserve and add value to agricultural products such as rice, wheat, vegetables, fruits, potato and fish. As a result of preserving and proper refrigeration, these products can reach more people without getting spoilt. This ensures less loss for the producers as well as better food for people. Farmer's incomes will also increase.

India is the largest producer of fruit in the world (annual production 46 million tons in 2002). However, more than 30 per cent of the fruit is wasted as it cannot reach the market and there is limited scope for processing it. In the US, 70 per cent of the fruit produced is processed, in Malaysia 83 per cent. In India this is a mere 2 per cent. Recently, however, with the increasing popularity of processed fruit juices in the market, this tread is improving. Other major processed items include fruit based ready-to-serve beverages, canned fruits and vegetables, jams, squashes, pickles and chutneys. The new arrivals in this segment are vegetable curries in reportable pouches, canned mushrooms, dried fruits and fruit juice concentrates.

Processing is especially important for dairy farming. Milk needs to be pasteurized in order to last for any length of time. It is essential that processing facilities are available reasonably close at hand for the dairy farms.

India has the highest livestock population in the world. It accounts for 50% of the buffaloes and 20% of the world's cattle population, most of which are milch cows and milch buffaloes. India's dairy industry is considered as one of the most successful development industries in the post-Independence era.

In 2005-06 total milk productions in the country was over 90 million tonnes with a per capita availability of 229 gms per day. During 1993-2005, the dairy industry recorded an annual growth of 4%, which is almost 3 times the average growth rate of the dairy industry in the world. The total milk processing in India is around 35%, of which the organized dairy industry accounts for 13% while remaining is either consumed at farm level, or sold as fresh, non-pasteurized milk through unorganized channels.

In an organized dairy industry, dairy cooperatives account for the major share of processed liquid milk marketed in India. Milk is processed and marketed by **170 Milk Producers' Cooperative** Unions, which federate into **15 State Cooperative Milk Marketing Federations.** Over the years, several brands have been created by cooperatives like Amul (GCMMF), Vijaya (AP), Verka (Punjab), Saras (Rajasthan). Nandini (Karnataka), Milma (Kerala) and Gokul (Kolhapur).

The milk surplus states in India are Uttar Pradesh, Punjab, Haryana, Rajasthan, Gujarat, Maharashtra, Andhra Pradesh, Karnataka and Tamil Nadu. The manufacturing of milk products is very much concentrated in these states due to the availability of milk in huge quantity.

According to the Ministry of Food Processing Industries, exports of dairy products have been growing at the rate of 25% per annum in terms of quantity and 28% in terms of value since 2001. Significant investment opportunities exist for the manufacturing of value-added milk products like milk powder, packaged milk, butter, ghee, cheese and ready-to-drink milk products.

In the book 'An Unfinished Dream' by the milkman of India, Dr. Verghese Kurien, he says, "It was by chance I became a dairy man." He heard a British expert say that "the sewer water of London is superior to the milk of Bombay". This served as a challenge to young Kurien, who started the Anand cooperative in Gujarat in the 1950s. He has taken dairying from strength to strength over the decades so that today India is the world's second largest milk producer.

However, it is not enough merely to grow good crops. In order to reach the markets where they will be sold or processed, it is important that a good transportation network is built.

Management of agricultural waste is another important area which can turn out to be a source for revenue generation. Agricultural waste should be put to use by developing appropriate and cost-effective technologies, such as generation of biogas, and production of vermin-compost and paper, as well as other products.

This discussion highlights the large potential that exists within the agricultural sector of India. Whilst India's growth patterns mirror those around the world – that the contribution of agriculture to GDP decreases, in India's case what is significant is that agricultural industries needs to provide employment opportunities for farmers. This will not only improve productivity in agriculture but also farm income.