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A Shankar IAS Academy Initiative

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1. NORTH EAST : AN ECONOMIC PERSPECTIVE

What are the reasons for the tardy progress of North Eastern states ?

- **Geographical factors** : The hills account for 70 percent area of NE and accommodate about 30 percent of population and the plains constituting the remaining 30 percent of area hold about 70 percent of its population.
- The region's accessibility has always remained weak due to geographical reasons and underdeveloped transport links with the rest of India.
- Also, as the region witnesses floods and landslides in the Brahmaputra and Barak valleys of Assam, considerable strain is exerted on the economy of not only Assam but other NE states too.
- **Infrastructural factors** : One of the reasons for the economic backwardness of the North Eastern states is the poor state of basic infrastructural facilities like roadways, waterways, energy and so on as well as social infrastructure like educational institutions, health facilities etc.,.
- The NE region is witnessed with increasingly congested roads, frequent power failures, shortage of drinking water etc.,
- **Constraints on Industrial growth** : After independence, due to partition of India the industrial sectors in Assam received a serious setback as its trade routes were cut-off from the rest of India.
- This, in turn, hindered the economic integration with other parts and also reduced the attractiveness of the region for the investment.
- Tea is a major industry in Assam region but this also faces multiplicity of issues like conflict between labourers, health benefits and welfare issues.
- **Agriculture** : The pace of agricultural growth in the eastern and North eastern regions has been slower than rest of the country.
- The Green revolution was largely limited to the parts of North western parts and has not benefitted the North east region.
- **Natural resource Base** : In spite of having a reservoir of natural resources - soil, water, vegetation and hydrocarbons, the NE is underdeveloped because the resources are being indiscriminately exploited and mismanaged, thereby leading to depletion of the very assets that are usually highlighted as triggering the greatest potential for



growth and development of NER.

- **Transport and Communication** :The road development in the NER is very slow due to various geographical and economic reasons.
- As a result of partition, the region suffered not only economically in the form of relatively high prices of consumer goods but also by a sense of isolation from the rest of the country.
- Miscellaneous factors : With India's "Act East policy" which heralded the tectonic shift of India's west oriented stance towards east oriented posture, it is extremely difficult for the NER to successfully compete with the MNCs and foreign entrepreneurs and trade.
- It is generally accepted that more than 30 percent of the youth population are addicted to drugs and it is a major hindrance in the economic development of this region.

What is the way forward ?

- Empowering people by maximising self governance and participatory development through grass root planning to promote inclusive development.
- Creation of development opportunities for the rural areas through enhancing productivity in agriculture and allied activities such as animal husbandry, horticulture, floriculture, fisheries and generation of livelihood options through rural non - farm employment.

- To develop sectors in the region having a comparative advantage such as agro processing, hydro power generation.
- Enhancing the skills and competencies of the people and building the capacities for institutions within the Government and outside.
- Creating a hospitable investment climate to encourage investment by the private sector particularly for infrastructure.
- Harnessing the resources of the Government and the private sector to realize the objectives of the vision.

2. PROVIDING WORLD CLASS LOGISTICS

What are the problems existing in the railways sector ?

- While the passenger traffic and number of routes operated by IR has increased significantly since its inception, the corresponding growth in the infrastructure is not sufficient.
- In fact IR has only added 10,000 route kms since independence while China has added 50,000 route kms in the same period.
- The incidence of railway accidents in our country is greater when compared to other countries in the world and it occurs mainly of the errors and negligence of the employees.
- Another problem that is faced in India



is large number of passengers travel without purchasing the tickets and it costs around 5 crores annually to the IR.

- The fares of the trains and routes are not periodically revised and due to these populist measures of the Government the IR got trapped into the fiscal trap.
- IR has a huge employee base of 1.3 million, which includes powerful trade unions which makes the quicker decision making impossible.
- Operating ratios are likely to worsen as costs pile up, including money for the 7th pay Commission recommendations which is nearly Rs 28,000 crores this year to retirees and saving employees of Railways.
- Indian Railways spends heavily on revenue expenditure and there is little left on the capital expenditure side.
- Another major impediment is the tracks of IR are old and outdated and it leads to many accidents.
- In every new timetable of IR, the running time of all the trains has been increased while railways in other advanced countries are reducing it drastically.
- There is a lack of modern management as railways failed to attract adequate incentives and suitable talent.

- The rolling stock technology is outdated and this had made railways incapable of coping with increasing transport demands and of raising and improving the traffic volume and flows at lower unit of operation.
- The problem of replacement of old and obsolete railway engines, wagons and other equipment has created serious problems in India.
- Most of the railway lines are single lines which create great inconvenience to the railway organisations and passengers.
- The railway transport lagged behind the requirement due to inadequate investment and not opening the investment window to the private enterprises.
- The lack of coordination between the roadways and railways has lowered the earning capacity of the railways.

What are the recommendations to settle these issues ?

- Redevelopment of station like installing the escalators, Wi Fi facilities will enhance the experience of the passenger and it will promote the sector further.
- As a measure to avert accidents, the trains are to be equipped with "ditch lights" and painted bright yellow that will enable more visibility even during twilight hours.



- The level crossings and paths are to be painted with a crosshatched pattern that can alert and highlight the dangers for the people in the area.
- The authorities have been suggested that to review timetables such that maintenance block of four hours is provided weekly on all main lines as well as review safety performance in terminal operations with the intent of recognising prevailing risks.

Some of the other measures can be

- Classification of new commodities
- Tariff rationalisation
- Expansion of freight basket through containerisation
- new policy guidelines for station to station
- Policy guidelines for Merry Go Round system
- Discount for loading of bagged consignment in open and flat wagons
- Complete transformation to LHB rake coaches.
- Liberalised automatic freight rebate system for traffic loaded in empty flow directions.
- Digital payment for freight business and Long term tariff contract policy.

- Withdrawal of dual freight policy on the iron ore.
- Reintroduction of short lead concession and reduction in minimal distance for charge.

3. BAMBOO MISSION : A TOOL FOR ECONOMIC PROSPERITY

What is National Bamboo Mission ?

- Bamboo is a versatile group of plants which is capable of providing ecological, economic and livelihood security to the people.
- Till recently, it has remained confined to the forests (12.8% of forest cover); two third of the growing stock located in the North-Eastern States.
- Importance of the crop as a source of raw material for industrial and domestic use with its growing demand all over the country necessitated its cultivation in farm lands as well.
- With a view to harness the potential of bamboo crop, Department of Agriculture & Cooperation (DAC), Ministry of Agriculture & Farmers Welfare is implementing a 100% Centrally Sponsored Scheme called Mission for Integrated Development of Horticulture (MIDH) in which National Bamboo Mission (NBM) is being implemented as a sub scheme.
- The Mission envisages promoting holistic growth of bamboo sector by adopting area-based, regionally



differentiated strategy and to increase the area under bamboo cultivation and marketing.

- Under the Mission, steps have been taken to increase the availability of quality planting material by supporting the setting up of new nurseries and strengthening of existing ones.
- To address forward integration, the Mission is taking steps to strengthen marketing of bamboo products, especially those of handicraft items.

What are its objectives ?

- To promote the growth of the bamboo sector through as an area based regionally differentiated strategy;
- To increase the coverage of area under bamboo in potential areas, with improved varieties to enhance yields;
- To promote marketing of bamboo and bamboo based handicrafts;
- To establish convergence and synergy among stake-holders for the development of bamboo;
- To promote, develop and disseminate technologies through a seamless blend of traditional wisdom and modern scientific knowledge.
- To generate employment opportunities for skilled and unskilled persons, especially unemployed youths.

How the mission can bring revolution in NER ?

- In the North East, for generations - the natives and traditional bamboo growers have always used bamboo for overall rural and urban benefits.
- People have made adequate commercial use as bamboos can be grown on non agricultural land with annual harvests.
- Besides industrial benefits, the communities have been using bamboo shoots as nutritious food which has medicinal values.
- Growing bamboo also facilitates soil quality improvements, improved water holding capacity, higher water capture and water recharge benefitting agriculture and food security.
- The state governments in Manipur and Arunachal Pradesh agreed to supply bamboo to the Assam based Numaligarh Refinery's upcoming bio refinery which can be a game changer in the region.
- In states like Tripura, an official estimate suggests that bamboo sector can be developed as a major livelihood provider and provide dependable and respectable employment opportunities to a least 20,000 bamboo growers.
- Multiple products like Bamboo pickles, Bamboo vinegar, Flower vase, Furniture, Ornament etc.,. can be made from the "Green gold" and it will



bring economic prosperity to the region.

- Despite the fact that the hat and other products have huge export potentials, the market has not been exploited.

4. REAPING BENEFITS OF ARTIFICIAL INTELLIGENCE

What is Artificial Intelligence ?

- Artificial Intelligence is defined as the ability of a machine to perform cognitive functions we associate with the human mind such as perceiving, reasoning, learning, interacting with the environment, problem solving and even exercising creativity.
- There are varying views of AI globally - some see this as the next biggest disruptive technology that would bring accelerated growth and productivity, whereas others view in a negative sense combined with huge job losses.
- PricewaterhouseCoopers (PwC) estimates the global AI market business opportunity of an additional 15.7 trillion dollars making it the biggest commercial opportunity in today's fast changing economy.

What is the history of AI ?

- Alan Turing introduced Turing Test for evaluation of intelligence and published "Computing Machinery and Intelligence" in 1950.

- John McCarthy coined the term "Artificial Intelligence" and demonstrated the first running AI program at Carnegie Mellon University in 1956.
- In 1964, Danny Bobrow's dissertation at MIT showed that computers can understand natural language well enough to solve algebra word problems correctly.
- In 1969, scientists at Stanford Research Institute Developed "Shakey", a robot, equipped with locomotion, perception, and problem solving.
- Harold Cohen created and demonstrated the drawing program, Aaron in 1985.
- In 1997, The Deep Blue Chess Program beats the then world chess champion, Garry Kasparov.
- By 2000 interactive robot pets become commercially available. MIT displays Kismet, a robot with a face that expresses emotions.

What are the various applications of AI?

- **Gaming** – AI plays crucial role in strategic games such as chess, poker, tic-tac-toe, etc., where machine can think of large number of possible positions based on heuristic knowledge.
- **Natural Language Processing** – It is possible to interact with the computer



that understands natural language spoken by humans.

- **Expert Systems** – There are some applications which integrate machine, software, and special information to impart reasoning and advising.
- They provide explanation and advice to the users.
- **Vision Systems** – These systems understand, interpret, and comprehend visual input on the computer.
- For example, A spying airplane takes photographs, which are used to figure out spatial information or map of the areas.
- Doctors use clinical expert system to diagnose the patient.
- Police use computer software that can recognize the face of criminal with the stored portrait made by forensic artist.
- **Speech Recognition** – Some intelligent systems are capable of hearing and comprehending the language in terms of sentences and their meanings while a human talks to it.
- It can handle different accents, slang words, noise in the background, change in human's noise due to cold, etc.
- **Handwriting Recognition** – The handwriting recognition software reads the text written on paper by a pen or on screen by a stylus. I
- It can recognize the shapes of the letters and convert it into editable text.
- **Intelligent Robots** – Robots are able to perform the tasks given by a human.
- They have sensors to detect physical data from the real world such as light, heat, temperature, movement, sound, bump, and pressure.
- They have efficient processors, multiple sensors and huge memory, to exhibit intelligence. In addition, they are capable of learning from their mistakes and they can adapt to the new environment.