GAWP Phase-2 DAY-3 Synopsis

Q.1) "Whittlesey's agricultural regions are relevant even today." Discuss. (10 marks)

An area with similar functional attributes is as an agricultural region. The demarcation of agricultural region is also seriously constrained by the non-availability of reliable data on the various aspects of agricultural patterns. The first scientific attempt for the Whittlesey in his proper.

The relevancy of Whittlesey's classification of agricultural regions are briefly as follows:

1. It provides a classification and description of major agricultural regions of the world used in atlases etc.

2. The five basic functioning forms are subjected to statistical determination.

3. A comparative study of the agricultural regions is possible by plotting the system of the first degree of magnitude on a single map.

4. The study focuses on the observable items in the agricultural landscape. .

5. The classification serves as a framework in which further refinements can be suggested.

There are limitations to the classification as well. The various bases of classification, viz., the institutional, cultural and political factors are not static but are continually changing because of changes in the local, national and global situations. So, Whittlesey's scheme has recently been modified by Thoman Fryer. Whittlesey has not taken into consideration some relevant indicators like land tenancy, land ownership, size of holdings, fragmentation of holdings, government policies, etc.

Q.2) "The intensity of energy crisis varies regionally." Explain. (15 marks)

An energy crisis is any significant bottleneck in the supply of energy resources to an economy. It usually refers to the shortage of oil and additionally electricity or other natural resources.

Intensity of energy crisis varies regionally, because

Some regions are highly industrialised where the energy requirement is large due to very nature of its activities. Example- USA, UK, Japan etc.

As these regions are highly dependent on energy, any slight variation in energy supply intensifies the energy crisis to many factors. The standard of life and living style of these regions, the per capita energy consumption is very high.

Some regions are less dependent on energy for their economic activities. Example- prairie regions of Canada, Steppe regions of Siberia, Sahara region of Africa. In these areas even the large bottleneck in energy supply does not cause much energy crisis.

And there are some regions in developing countries like Brazil, India, China, ASEAN etc. which are energy hungry regions. Any disruption in supply of energy largely impacts their economic activities.

Due to this, many countries/regions these days going for energy mix i.e their source of energy is mix of renewable and non-renewable, domestic generation and imported. This helps the countries to cope up with any disruption in energy supply as that of Oil crisis 1973.

Q.3) Discuss in brief the main thesis in "Limits to Growth" (1972) and also provide a critique of the same. (20 marks)

"Limits to Growth" is a report issued by 'Club of Rome' in 1972 on global resource and pollution trends.

It represents the computer modelling of the world system based on the new concept 'System Dynamics' carried out by authors J Forrester and D H Meadows. Extrapolating the interaction of global trends into future they asserted that there is likelihood of an overshoot of the earth's resource capacity and a consequent collapse of population and economy.

The model used data for the period 1900 to 1970. Meadows in his report considered the interrelationship between-

- Population growth

- economic development (including agriculture and industries)

- environment degradation.

- impact of renewable resource degradation.

The report is based on following assumptions

- Finite stock of exploitable non-renewable resources.
- Finite amount of arable land.
- Finite capacity of environment to absorb pollutants.
- Finite quantity of yield per unit land.
- Exponential growth of population.

The processed data published and findings were published in 1972 as 'Limits to Growth'. And these are mere projections and not predictions.

The key findings from the system dynamics models about the basic behaviour of the world is that exponential growth of population, industrial output, pollution will be followed by global

collapse. The conclusion stands irrespective whatever variations in their assumptions are made.

Critique

- Treats the whole world as a single unit. In reality different regions of the world have different resource use, population and pollution contribution.
- Extremely crude model. Largely multivariate sub-systems had been lumped into under single variable.
- It does not consider of the dynamic of resource i.e resources are not, but they become.
- The report is pessimism.
- The model considered certain features and ignored the other important features.
- It is based on inadequate data.
- It is biased towards rich countries. Growth is necessary for developing countries than that of environmental conservation. Control of population is rather than consumption.

Despite these limitations the thesis urges humankind to rearrange its priorities and call for a co-ordinated effort towards a sustainable earth system.

Q.4) Examine the potential and performance of wind energy sector in India. (15 marks)

Wind energy emerges that a big source of clean energy has not been given the policy focus it deserves.

The latest wind energy potential study carried out by Chennai-based National Institute of Wind Energy (NIWE) estimates 302 gigawatt (GW) at 100 metre above ground level (AGL). Almost 90 per cent of this potential is concentrated in just five states. With only 35 GW installed so far, the country has a sizable untapped potential.

Given the high variability of wind energy, this has important implications on the evacuation infrastructure needed and grid integration measures adopted.

In 2015, the Ministry of New and Renewable Energy (MNRE) set a target for 60 GW of wind installations by 2022. While the capacity additions in 2016-17 were a sizable 5.4 GW, the pace slowed down considerably in 2017-18, with only 1.7 GW of projects commissioned, against a target of 4.1 GW.

If the wind energy industry is planning to meet the target of 60 GW by 2022, it must auction 20 GW of capacity within the next two years, considering the two to three years needed to commission wind projects.

The industry blamed the abrupt introduction of **reverse auctions and bidding**—moves that it felt were not fully thought through—in addition to the untimely withdrawal of support mechanisms. In contrast, the MNRE called the move a necessary “course correction” to develop a competitive market.

However, over the last decade, wind has become the largest contributor to renewable energy capacity additions in India. It now accounts for 50 per cent of all renewable energy capacity and 10 per cent of the total installed power capacity in India.

At the end of 2017, India was in the fourth spot globally for cumulative installed capacity—behind USA, China and Germany—and fifth for annual capacity installations.

The sector has been marked by the introduction of large incentives and sudden withdrawals that has, alternately, boosted installations and disrupted the market. Growth began with the introduction of high feed-in tariffs (FiTs), which ensured long-term guaranteed sale of power at attractive tariffs.

Historically, the growth in wind energy capacity has followed a pattern, with individual states dominating for a few years before the focus shifts to another state. In the first phase, before 2004-05, Tamil Nadu was responsible for a majority of the capacity addition—in March 2005, its share of the country's total wind energy capacity was around 56 per cent.

Subsequently, Maharashtra, Gujarat and Karnataka began making sizable investments in wind energy. Rajasthan was the next state to show rapid growth beginning in 2009-10, followed by Andhra Pradesh where installations increased sharply post 2012-2013. During 2014-16, Madhya Pradesh was the clear leader.

The wind energy sector in India stands at crossroads today. Although its tariffs are similar to that of solar, there are questions about their sustainability. Over the longer term, its competitive position vis-à-vis solar may worsen if costs of solar drop faster and as the best wind sites are taken up. Indeed, the country's plans call for a far smaller capacity of wind compared to solar.

Q.5) The hegemony of USA in the world trade. (15 marks)

https://www.thehindubusinessline.com/opinion/columns/c-p-chandrasekhar/worrying-trends-in-the-global-trade-scenario/article27428642.ece

- write answer to this question on your own. Refer multiple resources.