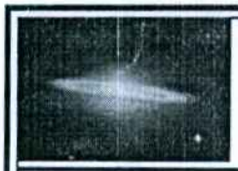

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Subject: ESSAY

Name of Candidate	VISHAL SINGH	Test Code	607
Schedule		Registration No.	16884
Place	GRN	Time	10:35
Module			
Classroom	✓	Distance Learning	
Classroom & Distance Learning			

EVALUATION INDICATORS

1. Alignment Competence
2. Context Competence
3. Content Competence
4. Language Competence
5. Introduction Competence
6. Structure - Presentation Competence
7. Conclusion Competence

INDEX TABLE

Q.No.	Page No.	Maximum Marks	Marks Obtained
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

Total Marks Obtained

Remarks:

Signature of Examiner

INSTRUCTIONS:

1. Do furnish the appropriate details in the answer sheet (viz. Name, ID Number and Test Code) The Candidate should fill the index table, especially for him/her.
2. In the left margin, she/he should write only question number and in the right margin, nothing should be written.
3. The page number should be coded by the candidate himself and the range of page number related to the answer of the question should be used to complete the index table.
4. All Parts of the questions should be written at one place.
5. No Supplementary sheet shall be provided by the management. So the candidate is advised to accommodate required information within the space provided.
6. The candidate need not write anything in his/her answer that derogates the dignity of an individual or an organization.
7. The candidate should respect the instructions, given be the invigilator.
8. The Examinee has to submit the answer sheet to the invigilator after completion of examination.
9. However, he/she is allowed the take away the question paper.

Time to shift from Green Revolution to Evergreen Revolution.

While emphasising on the importance of agriculture in the 21st century, M.S. Swaminathan says- "The future belongs to countries with grains, not guns". His message is clear - the challenges to agriculture have increased manifolds and thus timely initiatives are imperative. In case of India also, this remains equally relevant. Riding on the waves of Green Revolution, India was able to solve most of its problems. But the present trend of farmer suicides creates doubts about the effectiveness of Green Revolution. And it appears that there a more prudent approach

in form of evergreen revolution is required.

Considering the fact that over 49% of the workforce is still engaged in agriculture and allied sector, it can be said that India is primarily an agricultural economy. And hence, the Green Revolution was indeed a welcome development.

Thus, before analysing the requirement of Evergreen Revolution, it would be necessary to look into the different aspects of Green Revolution - the problems prevailing in India in 1960s, the initiatives which came as a saviour etc.

The nascent India, just after Independence was facing

challenges on several fronts. There were riots, different groups with centrifugal tendencies posing a threat to integrity of India, administrative challenges etc. Similarly, on the economic front also there were no less problems and agriculture, still using primitive tools and practices, also suffered. The recurring famines and the drought scenario in 1960s compelled India to plead to USA for assistance. And due to the prevailing geopolitics, India was forced to accept a humiliating - PL480 programme with inferior quality grains.

Having learnt a lesson, the Indian leadership led by ~~then~~ PM, Indira Gandhi revamped the whole agricultural setup. And

with introduction of HYV seeds along with other initiatives, the Green Revolution was unleashed. And since then India never turned back.

It helped India in multiple ways by transforming it her from grain deficit to food surplus country. The famine problems have also been eliminated. And India, following her moral duty, assists the countries in stress using those surplus produce.

However, there were certain inherent limitations of Green Revolution. And In addition to those problems, new challenges have also emerged thereby emphasising on shift towards Evergreen Revolution.

With the 'Revolution', the regional disparities increased along with intra regional disparities (among small farmers and the rich peasants). Further, because of tools like Minimum support price, the agriculture tilted towards wheat and rice, thus affecting diversification of crops. In addition the inefficient irrigation practices for water guzzling crops like paddy, sugarcane resulted in de-lowering of groundwater level thereby posing a question on sustainability of these practices. The problems aggravated with the emergence of populist politics which resulted in increased expenditure on subsidies at the cost of infrastructure development.

Thus, the remedy

appears to have lost its effectiveness and its negative spillovers require certain changes. In this scenario, Evergreen Revolution can be a prudent alternative because of its inherent benefits.

'Evergreen Revolution' is a term coined to stress upon the changed practices in agriculture by using novel and environmental friendly tools and practices which help in ensuring a inclusive character of the Revolution thereby a strengthening the inclusive growth

It addresses most of the problems of the Green Revolution - the stagnated productivity, inadequate research etc. Further, it also includes the North Eastern and Eastern region while providing

solution for the water deficit central India.

Besides there are several other factors which stress upon the need to shift to Evergreen Revolution. On of the compelling reasons is climate change. With rise increase in global temperature, there various problems have surfaced. The frequency of natural disasters like floods, droughts etc. has increased along with their intensity. Besides, the climatic changes are rendering many parts of the world uncultivable. Thus on one hand the land available for agriculture is decreasing, and on the other hand the global population and hence demand is increased. Hence, Evergreen Revolution becomes the need of the hours. so that

climate resilient crops help to address our vulnerability.

Along with these issues, India has some other problems also with 66% 'rainfed irrigation' for over 60% of agricultural land, Indian agriculture is highly vulnerable to vagaries of monsoon, which itself is showing dramatic trends in last few years. The new generation Evergreen Revolution would tackle this problem by ensuring adequate irrigation facilities and increasing the research output to enable increased productivity.

Further, it would also address other problems. The neglect of pulses, oilseeds etc. has resulted into new challenge

regarding nutrition security. Along with this, the inadequate availability of micronutrients has also resulted into problem of hidden hunger. With its inclusive approach, Evergreen Revolution would ensure that all the required crops are given due importance.

Besides, the hitherto unexplored urban farming (also being and use of modern technology would be included in Evergreen revolution thereby synergising the efforts of technology and land available on building terraces.

Thus it is quite clear that the benefits of Evergreen Revolution make it imperative

for India. However, there are certain roadblocks which need to be addressed. The current level of research in agriculture is abysmally low and is hamstrung due to inadequate financial support. And, as mentioned earlier, the populist politics has resulted in disproportionate expenditure on subsidies (more than 75% of total expenditure, thereby affecting public investment in infrastructure. The relatively low literacy level and lack of awareness among the farmers aggravates the issue. Further, the farmer suicides expose the ineffectiveness of agricultural insurance.

Thus required initiatives should be introduced without any delay. The government should converge all its programmes to avoid any overlap and wastage. For instance, efforts towards National Mission on Sustainable Agriculture, Bringing Green Revolution to Eastern India, Rashtriya Krushi Vikas Yojana etc. should be synergised by proper planning. similarly, the financial resources should be channelised with due planning such that the research institutes like IARI, ICRISAT, CAZRI etc can get required assistance along with improvement in infrastructure.

The irrigation facilities need to be revamped and the benefits of river linking projects should

be utilised. Along with this, micro irrigation practices like drip and sprinkler irrigation need to be encouraged.

At the same time, organic farming which is also environmental friendly needs to be used prudently. And after adequate research, ~~Bt~~ to Biotechnology can also used to promote Bt crops.

Meanwhile, to encourage the farmers to adopt innovate practices and change farming tools, insurance aspect also requires adequate attention.

Such changes can definitely help in making our endeavour more efficient and successful. The lessons from past have taught us that change should

proactive and not reactive. We have already experienced the horrible effects of inadequate efforts in 1950s and 1960s. It appears that the slogan of Lal Bahadur Shastri - 'Jai Jawan Jai Kisan' again requires some attention with attention towards the latter actors. Evergreen Revolution can help in this regard while helping India to guide and assist other countries.

P.T.O

Climate change, a real threat to global economy

It has been the first time in the last 138 years that the Indian daily 'The Hindu' ~~sto~~ had to stop its publication in Chennai. The ~~until~~ sudden floods brought the whole city to a standstill. And its not just the newspaper, almost all the economic activities have stopped.

This incident is only a small part of the effect of the climate change on the globe. If we look at the global level, such problems have become more frequent. The 2015 floods in Europe, and Japan, the ~~the~~ thunderstorms and cyclones in East Asia and Pacific region (e.g Vanuatu in 2015), recurring

hurricanes in USA and mexico, the deadly heatwaves in India and Pakistan - the list can continue without any end. While these problems have affected the globe in all areas, the global economy has been affected severely

The Earth itself is an organic system in which there are many interlinked components and they affect each other. changes in one part would result in modifications elsewhere. The same logic can be extended to climate and global economy. But before exploring the clim linkage between them, an insight into climate change would be helpful.

The Earth is more than 4.5 billion years old and has been experiencing changes in the climate continuosly. Thus climate change is a natural process and studies have shown that its also a cylical process (as evident from the ice ages) The average However, this natural process can be affected by the anthropogenic activities. Human beings because of their intellect, have been experiencing continuous developments But during this journey of development, some unplanned and self serving initiatives by few countries resulted in a whole new phenomenon which affected the climate

Climate change in general, involves change in the average

temperature of the Earth. But since, this change is towards the increasing side, climate change, now a days is synonymous with global warming. And this warming has resulted into a series of changes in the natural process thereby affecting the whole organic system.

As mentioned earlier, the global economy and the climate are interlinked. And it was primarily the quest to expand the global economy which resulted into some undesirable changes in towards the climate. The 'Industrial revolution' which started in 18th century in Europe resulted in an unhealthy competition among the

economies to develop grow by outpacing others. The only aim was high growth rate and everything else was sidelined. Thus the culture of unsustainable exploitation of energy resources like coal, oil etc. continued. And since the earth was assumed too large a planet for the small population during those times, the industries and factories were indifferent to any kind of environmental norms. Gradually, the pollutants accumulated in air as well as ocean, the greenhouse gases like CO_2 also increased in quantity.

Now in the 21st century, after more than two centuries, the cumulative effect of those steps is more visible. And it appears that it has transformed into Frankenstein's

Monster. Earlier, the economy resulted into increased pace of global climate change, and now the climate change has become a threat to global economy.

In the present era, global economy has experienced many transformations. In the era of globalisation, the world has been reduced to a global village. Thus changes in one part of the globe affect the whole world within no time. It was also seen during the European floods this year when the already slow global economy suffered a setback.

Similarly, even today agriculture continues to be the one of the primary actors in

global economy eventhough its share in global trade is very low. And the effect of climate change on agriculture doesn't require any explaination. The global warming has resulted into more frequent natural disasters like floods and droughts and their intensity has also increased substantially.

Further, the rise in global temperature has resulted in undesirable changes in the ocean also. One of the pervasive changes is the increasing sea level. This it has been estimated by International Panel on Climate change (IPCC) that a rise of 2°C (global temperature) would result in rise of sea level by 5metres. Thus, one cone hand

it all is resulting into dec- shinking of available land, and on the other hand it would result in displacement of people thereby creating 'climatic refugees'. The problem become more severe when it is realised that most of the cities developed and growing cities are located in coastal regions.

Besides, the natural disasters due to climate changes, because of increase in intensity have be resulting into more losses to the national economies. For instance, a World Bank study estimated that India lost 2.5% of its GDP between 1995 to 2000 due to natural disasters. This also affects the global economy in

obvious manner.

In addition, the changes are taking a such a fast high rate that proactive decisions with respect to new initiatives have suffered. And the relatively late action forces us to adopt the costly environmental friendly technologies which would have been cheaper if more research was done. It also affects the global economy negatively.

Thus, the answer to the question that whether climate change is threat to global economy is pretty clear. Although there may be some positive effects like increase in trade of climate friendly technologies, the overall effect of climate change on global

is negative. And since the climate change is a global problem, the efforts should also be global and should be supplemented with local (national) initiatives.

~~To Thus~~ Therefore, to check these changes, global fora should be utilised. The Sustainable Development Goals in the post MDG phase have the potential to address such problems. There are some specific goals (like SDG-13 for climate change) as well as other goals ~~with~~ which are implicitly linked to climate change. It needs to be ensured that these goals are achieved.

At the same time, promoting the concept of blue

economy would help in multiple ways. 'Blue economy' primarily focuses on ocean centric development which is also inclined towards developing countries especially the coastal and island regions. Thus while it would address the problem of climate change, it would also help the global economy to expand.

further, global consensus should be achieved about protecting the 'Global Commons' like Antarctica ~~area~~ and not exploit them.

similarly, the trade practices should also focus on environment friendly green technologies.

At the national level, for India, the National Action Plan for Climate Change (NAPCC) should be synergised with others efforts. Even a renewable energy law can also be helpful to ensure that all the actors including the ~~econom~~ players in Indian economy use climate friendly technologies.

Further, norms like Bharat Stage & and policies to 'move people rather than vehicles' would also be helpful in this regard. to help the economy expand in a sustainable manner.

Mankind's endeavour towards a more developed

and convenient world which is more prosperous would continue as long as the aim goals are not achieved. Climate change is a obstacle in realisation of these goals and needs to be tackled. In this scenario, Gandhi's teachings that earth has adequate resources for every man's need but not for any man's greed would be helpful.

(G) Econo - Ecos adequate fr man need but greed.

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CC - a real threat to global economy

CC-?
- G.W
→ Avg T ↑ by 1.5°C
- IPCC → by 2°-3°C
(WB)
- cumulative effect
(∵ t. lag) of Industrial

↳ Linkage with global econo
(a) Global eco → Climate
↳ agriculture, land availability
↳ storm, disasters
↳ changing demand due to CC

↳ How Ecos affecting CC
- ecolog. footprints
- pollution

Reason:
① Industrial
② unsust. practices
↳ agricult
↳ urban
- lifestyle & inten
- transport
- factories

(L) ADT → trade, tourist ays
(b) / How CC affecting G. Econo
SDGs
13th Goal

① On Agricult
↳ prdty ↓, land ↓,
② Nat'l Econo → e.g.
disaster - WB '95-'00 - 2.5%

③ futur genrah - problem
④ ↑g cost of new tech
& inflation
⑤ food resources material &
human → floods (Europe), thunder
storms - gendar paraverse on
↑ Fg frely, disaster risk end
magnitude

- coal cess (cut (changs pollutants)

↳ BS VI vehicle

Read initiatives
→ Blue economy
→ moving pri not
vehicles

Global
→ G. commons Antart
→ Trade → Agri practices
→ Green deript
→ UNEP → Sust. Devpt
→ Joint implement
→ clea-

National
↳ Repurchase obligation
↳ Renewable energy
laws
↳ acheives of
new electri
L Eff B - n Std
Ratings
NAPCC L NMEEE, NMGE
& N
SAPCC - CSR of CO₂

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M.S Swami → future belongs to countries with grains not guns.

change - proactive reactive
Jai Jawan, Jai Kisan

Don't write anything this margin (इस भाग में कुछ ना लिखें)

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Time to shift from G. Revn to Evergreen Revol

H.Y.N. Naman, Borlaug, M.S. Swami

G.R

+ve -
→ famine prob. prevails
→ bounced back for humiliat - PL480
→ deficit to surplus
→ rice & wheat → staple food crops
→

(-)ve
- farmer suicides?
- MSP
- regnl disparities →
- water guzzling crop (rice) paddy, sugarcane
- gnd water level
- irrigat / planning } sust. devpt
- inc vulnerability (pulses)
- pub investment stagnated
- populist politics + era of coalition politics
+ subsidies ferti, free electricity
intra regnl disparities

Need to shift
→ climate change
→ natural disa
→ 60% → rainfed
→ ↑g pop pressure
→ nutrit security
→ invisible hidden hunger
→
→ ↑g E.G Revolt & explain

Limitations
→ pretty stagnated
→ limited to NW & S (ES India)
→ ltd crops
→ research stagnated
→

- Insurance
- organic farming
- bt crops (biotechnology)
- bio vital farming

E. Revl
+ves
- 3rd G. Rev
- urban farming in bldg.

Global perspect. - ves
→ C. change
→ ↑g need ↑g resources
to help India to rise.

Challenges
- finance
- research
- populist politics & subsidies
- fin
- awareness among farmers
→ risk - facto suicides
→ inputs
Suggest
→ collaborat
→ N.M. Sust agri.
→ IARI, ICRISAT, CAZRI
→ planning agroclimatic zones (47) - follow
- BGREI
→ irrigat. infra - (River linking +)
→ micro irrigat. R.K.V. Yojana

(152)