

# **G|SCORE**

**An Institute for Civil Services**

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## **IAS TOPPER'S**

## **TEST COPY**

# **KALLAM SRIKANTH REDDY**

**AIR - 801  
(CSE 2022)**

## **GEOGRAPHY OPTIONAL**



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**iasscore.in**

**GEOGRAPHY**

Time Allowed: 3 hr.

Max. Marks: 250

**Instructions to Candidate**

- There are EIGHT question divided in Two Sections.
- Candidate has to attempt FIVE questions in all
- Question No. 1 and 5 are compulsory and out of the remaining, three are to be attempted choosing at least one question from each section.
- The number of marks carried by a question/part is indicated against it.
- Answers must be written in the medium authorized in the Admission Certificate which must be stated clearly on the cover of this Question-cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other than the authorized one.
- Word limit in questions, wherever specified, should be adhered to.
- Attempts of questions shall be counted in chronological order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the Question-Cum-Answer booklet must be clearly struck off.

1. Invigilator's Signature

2. Invigilator's Signature

115.5  
Rohit LodhaName Kallam Srikanth Reddy

Mobile No. \_\_\_\_\_

Date \_\_\_\_\_

Signature Rohit Lodha

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**REMARKS**

## SECTION-A

Attempt all questions:

1. Answer the following questions in about 150 words each: (10 × 5 = 50)

(a) Write a short note on Neo Malthusian theory of population

(b) Write a short note on Core Periphery Model of John R. Friedman regarding regional imbalance.

(c) Write a short note on Principles of Regionalization

(d) Write a short note on Rousseau's attempt at classification of towns.

(e) Write a short note on optimum population

Ques.

4

Neo-Malthusian theory :-

Malthus Thomas in his essay "Principles of Population" (1798), established the relation between population growth and food supply in the following way.

Population grows in geometrical progression 1, 2, 4, 8, 16, 32, 64, 128, 256... due to humans have naturally sex instinct

Food supply in Arithmetic progression as 1, 2, 3, 4, 5, 6, 7, 8 due to law of diminishing returns of land

Preventive checks like celibacy, late marriages, moral restraint

Positive checks like floods, wars, droughts, pestilence, diseases etc.

Lead to Imbalance

Connected by

IT could have been brief because the question is on Neo-Malthusian theory.

Remarks

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This theory faced criticism of

1) No historical evidences

2) Not predicted technology based agriculture practices and high production

3) Not predicted the use of contraceptives and family planning

4) Not differentiated the desire of having sex and desire of having children.

Example

Neo-Malthusian theorist opposed this criticism and supported the malthus. They argued that

1) Today half the world population facing the problem of hunger, malnutrition, undernourishment

2) Due to increase of population the pressure on natural resources is high. Soil productivity decreased,

Soil erosion, floods, droughts, ground water depletion are common problems in today's world.

3) Except Japan almost in all the countries of Asia, Africa are have relevance of malthusian theory.

4) rapid urbanization, slums, refugee problems etc. are because of population growth in rapid way.

Thus, even though malthusian theory has some criticism, as neo-malthusian right supported the fears of malthus.

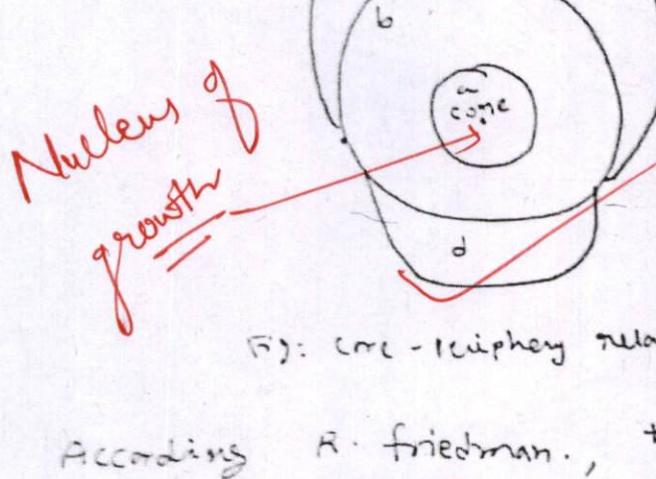
Remarks

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## Core - Periphery model of R. friedman:

(1)

through Core - Periphery model R. Friedman explained the effects of core development and its impact on periphery problems.



a = core  
b = positive effects of core on periphery  
c = Resource transaction zone  
d = periphery which have negative effects on core.

Fig: Core - Periphery relations.

According to R. Friedman, the core regions used the labour and resources from the periphery by using its advantage of capital and it grows.

This growth of core as positive effects on nearby periphery due to trickle down effect.

But, the other periphery can also get the negative effects of its resources transferred to core regions and labour moved towards core and regional imbalance arises.

Add the technical keywords like 'Suction pump', 'Backwash effect'

Remarks

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## Friedman stages of core - periphery development

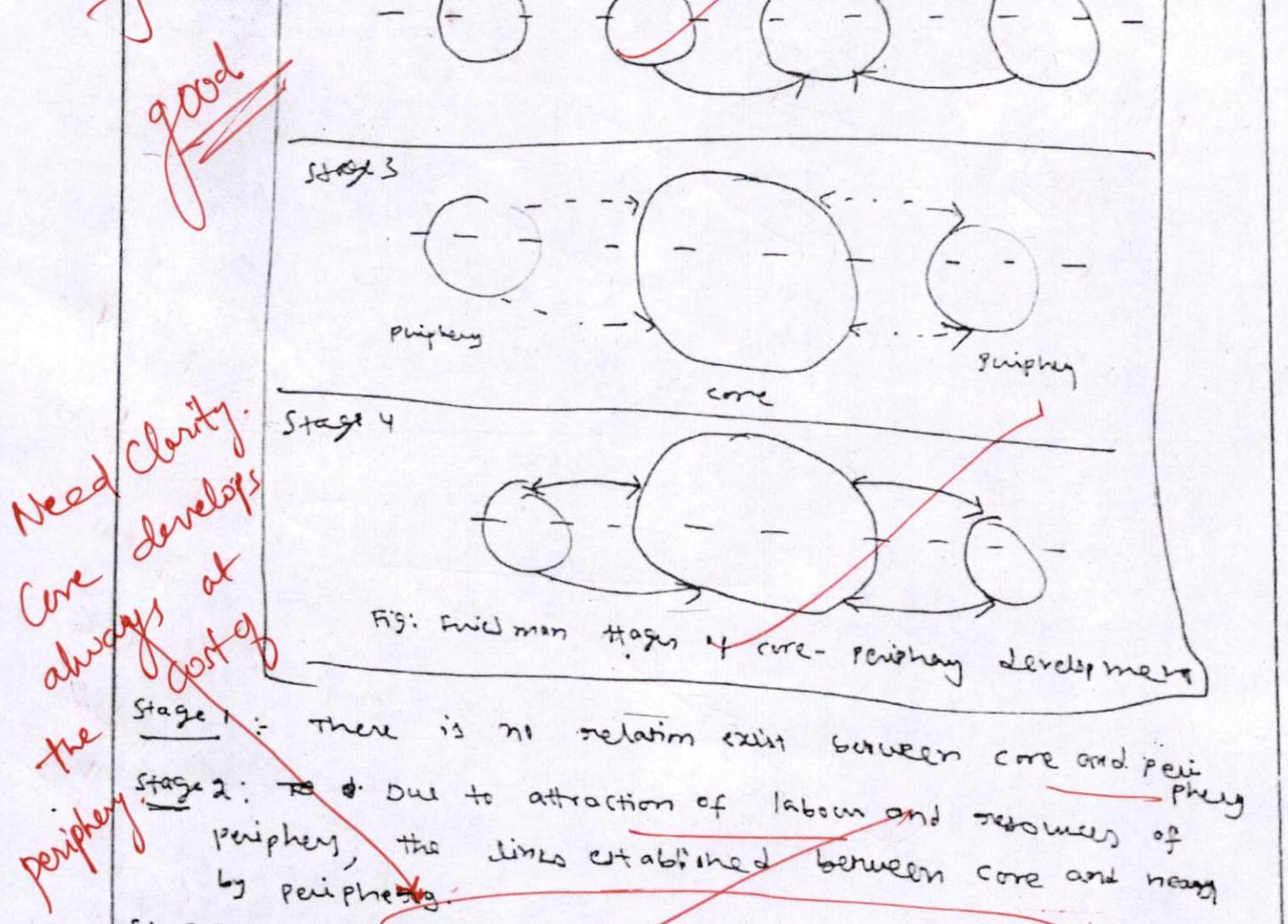


Fig: Friedman stages of core - periphery development

- Stage 1: There is no relation exist between core and periphery.
- Stage 2: Due to attraction of labour and resources of periphery, the links established between core and nearby by periphery.
- Stage 3: The core development positively effects periphery and core - periphery distinction exists with nearby regions.
- Stage 4: The process continues, the core continues to grow and interactions with other periphery regions exists.

Remarks

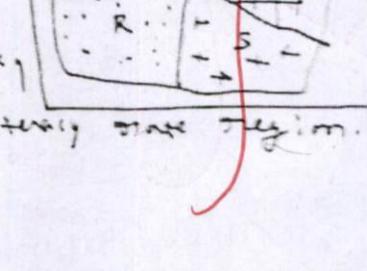
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Q1(c)

Regionalization: ~~Regionalization is the process of demarcating the area into parts/ smaller areas (called as regions) based on specified criteria.~~

For example, area 'A' can be divided into based on ~~availability of health facilities, literacy levels.~~

In the figure, 'P' is the high literacy rate region, 'Q' is medium literacy rate region, 'R' is low literacy rate regions and 'S' is very low literacy rate region.



#### \* Principles of regionalization :

1. The process of regionalization is ~~dynamic~~ ~~rigid~~.

That is, it can change if time changes. Today's

demarcation/classification may or may not be relevant tomorrow.

*gave principles of regionalisation all mentioned them briefly*

2. The process of regionalization should have clearly mentioned ~~criteria~~.

3. Regionalization may have different types like ~~agriculture based, demographic based, economic based, political based etc.~~

4. The process of regionalization helps to compare between regions and plan accordingly to their development and effective use of resources.

Remarks

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Q1(d)

(4)

#### Augusseau's classification of Towns :

~~Augusseau's classification is more general and subjective classification~~

~~He classified towns in 28 ~~types~~ with mainly 6 classes : Administrative,~~

~~defence, cultural, production cities, towns, communication towns and~~

~~recreational towns.~~

~~The towns may have multiple functions but the most dominated function considered in classification.~~

#### Negatives/criticism of classification:

1) Most ~~qualitative and subjective classification~~

2) Not differentiated the location towns and functional towns.

3) Didn't have any empirical base.

Remarks

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Q1(c)Optimum population :-

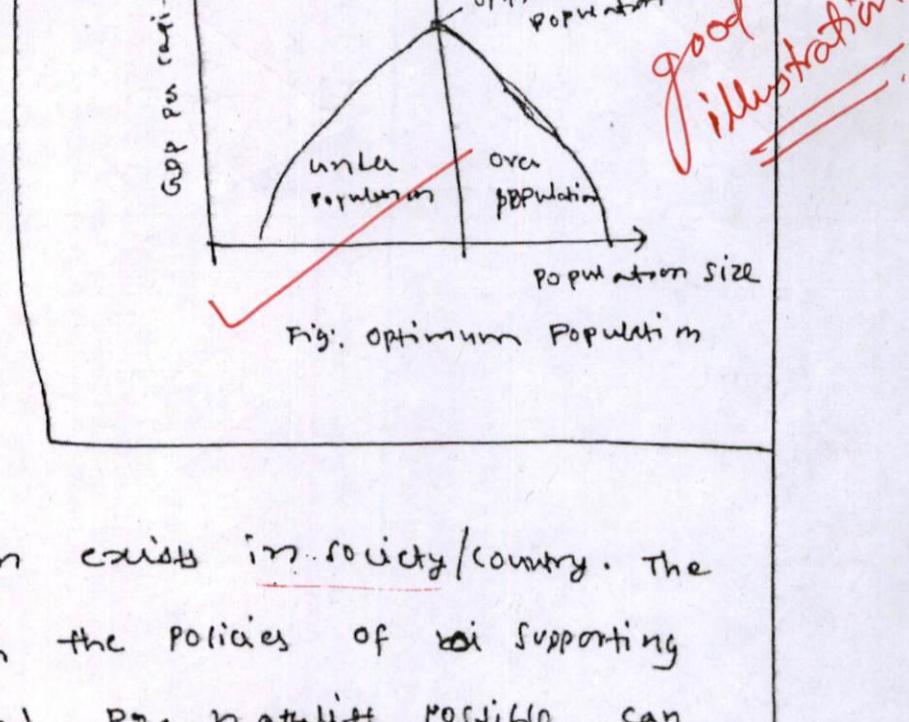
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Although appropriate, but try to give standard definitions given by scholars.

It is the state of equilibrium existed between population of regions and resource availability. With this level of optimum population, the needs of all the population / communities can be fulfilled effectively.

Characteristics of optimum population

1. It is the state, helps in effective use of resources.
2. If there is under population exists in society/country. The countries through the policies of supporting immigration and pro-natalist possible can achieve optimum population. It helps to use exploit the natural resources exist.



## Remarks

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3. If the country having over population, can use policies of family planning,

You can draw world map showing promotion of contraceptive use to decrease population growth to achieve optimum population level.

Even in the case of over population, by improving more resource production by using technology and effective conservation of natural resources, can get optimum population with respect to its resources.

## Remarks

## 2. Answer the following questions:

- (a) In spite of its merits, quantitative revolution could not enable the geographers to formulate universal laws and paradigms. Elaborate. (250 Words) (20)
- (b) Establish the relationship between economic development pattern and human development in the world with suitable examples. (200 Words) (15)
- (c) On the basis of Demographic Transition Model discuss the pattern of crude birth rate in various parts of the world. (200 Words) (15)

Quantitative Revolution

The use of mathematical and statistical techniques, theories and proofs in understanding the geographical systems is known as 'Quantitative Revolution' in geography.

Merits

10

- 1) Quantitative Revolution changed descriptive nature (geography) of subject into scientific nature.
- 2) Techniques and models are based on empirical data and observation. Hence, it is possible to verification of the process.
- 3) It helps to minimize the vast and unmeasurable data, observations and facts into manageable numbers.

*Appropriate definition*

*Very valid arguments*

## Remarks

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- 4) Geographical systems and regions have very complex nature and dynamic. model developed on the basic of quantitative techniques helps to simplify these complexities.

- 5) Quantitative techniques helps in better use of locations in scientific manner and increase in economic growth and effective use of resources.

Criticism

But

*Can also  
add  
that  
generalisation  
made were  
mistaken  
to be  
reality  
the  
itself*

- 1) Models developed based on quantitative techniques based on positivism. But to understand complex and dynamic human - environment relations, positivism is not suitable methods.
- 2) Quantitative revolution stressed the use of geometry is the language of geography. But, it is not possible with 'geometry' to explain human - environment relations, which is base of human geography.
- 3) Mathematical techniques ignored the normative questions of belief, faith, morals, culture, tradition, values, ethics etc. These are most important factors in deciding human activities and his behavior.

## Remarks

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- 4) Quantitative methods based locational analysis supports the capitalism. It is exploitative in nature. It makes Rich richer and Poor has more poorer.
- 5) It undermines the man's decision making power and treat him as passive agent. But in reality, man as active agents and influences is surroundings.
- 6) To make effective laws and models, efficient and accurate data is needed. But, it nearly impossible to get accurate data always especially in developing countries. Hence, model made by fault and inaccurate data leads false implementation and patriarchal picture. It creates more harm.
- 7) Even in pure natural sciences like Physics, the pre-assumption ~~of~~ of researcher, influences the research.
- Hence, Even though Quantitative revolution succeed in developing models to make reality as simple but in reality its application received criticism.

Remarks

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- Q2(b)
- ~~good introduction~~
- Economic Development refers to the growth of the country in terms of Gross Domestic Product (GDP), per capita income, industrialization etc.
- Human Development is vast concept, beyond the economic development. Economic development is one aspect of Human development. Along with it, human development involves education, life expectancy, health facilities, good governance, equality, pollution free environment etc. It can be measured with Human Development Index, Global Happiness Index, gender empowerment index etc.
- Relationship between Economic development pattern and human development in the world :-

\* All countries with both economic development and human development

In the world some countries have high GDP growth and per capita income and at the same time maintaining high ranking in United Nations Human Development Index. Most of Scandinavian countries are in this type of relation.

Eg: Norway, Finland, Netherlands, Sweden, New Zealand etc. almost having continuous GDP growth and performing well in Human development parameters.

Remarks

→ no growth  
→ Human development

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2. Countries are economically developed but low in Human development

Some countries in the world having high economic growth, GDP, per capita income but very poor in human development parameters like poverty, inequality, corruption, malnutrition etc.

Eg. India: India has GDP growth of 6.5% in 2017-18 and we taking about double digit growth and 5 trillion dollar economy. But flip side, high in poverty level, high inequality [10% of people have 77.6% of wealth, oxfam report], 130 in HDI Rank, Environmental Performance Index 172 Rank etc.

Add other spatial examples like Arab countries.

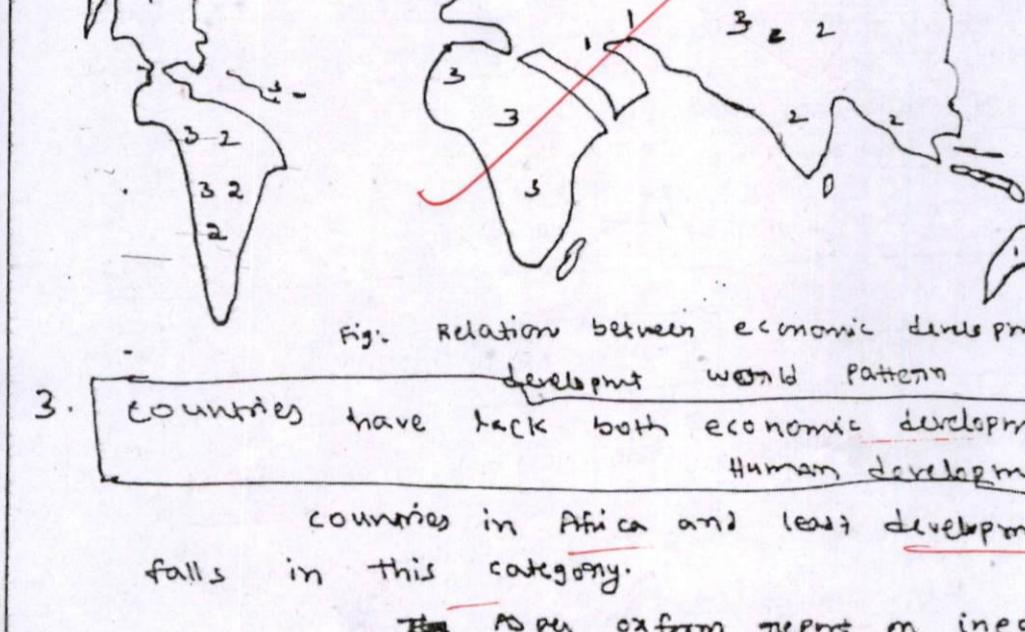


Fig: Relation between economic development and Human development world pattern

3. Countries have both economic development and Human development.

countries in Africa and least development countries falls in this category.

As per oxfam report on inequality, In overall there is no strongly relations between economic growth of countries and their human development.

Remarks

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Q 8(1) Demographic transition model:-

It shows change in birth and death rates in turn changes in population growth rates from pre-industrial to post-industrial times.

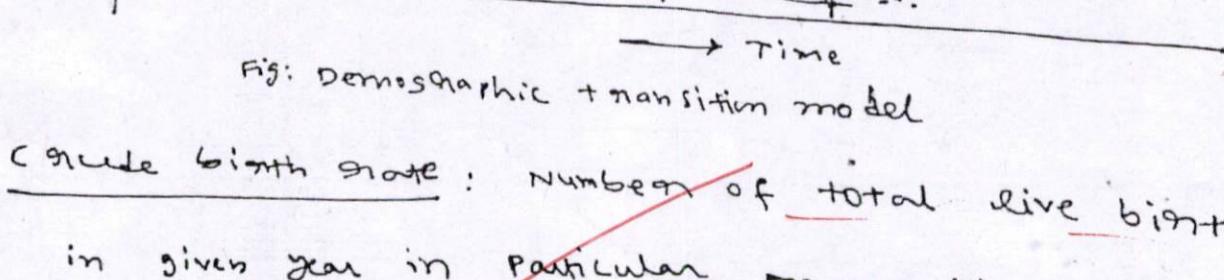


Fig: Demographic transition model

Crude birth rate: Number of total live birth in given year in particular geographical area per 1000 of mid-population.

Demographic transition - crude birth in the world :-

1) Stage I and stage II : High crude birth

In these stages, the Birth rates high due need of more children for agriculture practices, high rate death rates due to

Remarks

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Poor medical facilities, religion and society promotes population growth and more children.

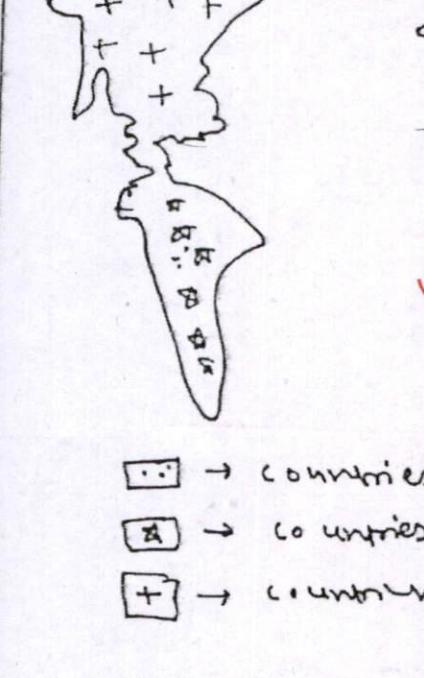
In these stages, the countries have high fertility rate. Eg: Sub-Saharan Africa: 4.6,

Oceania except Australia

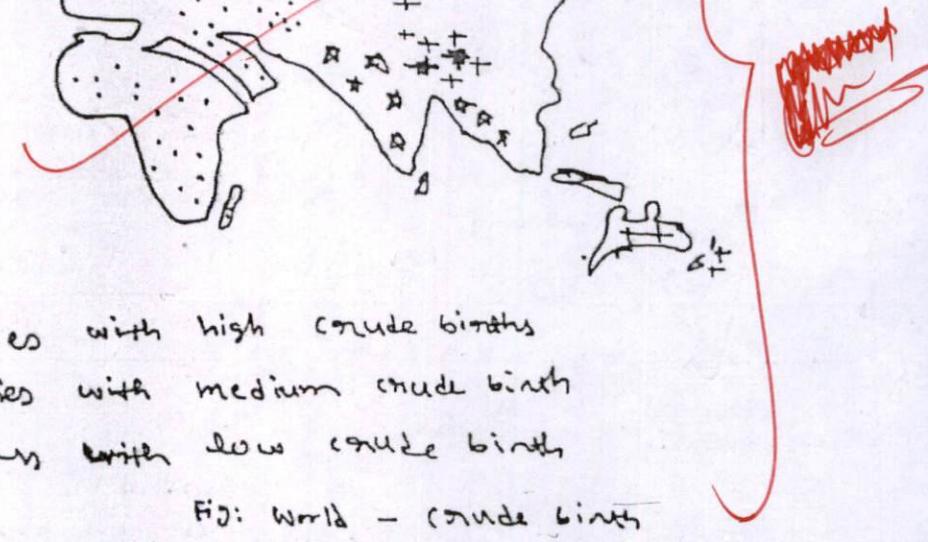
and New Zealand: 3.1

The shape of the period is males funds

Well substantiate



Add title to the map



→ countries with high crude births

→ countries with medium crude birth

→ countries with low crude birth

Fig: World - crude birth

### 2) Stage III: medium crude birth

In these stage, due to government policies and economic development, social capitality, increase in awareness, etc. Need of less people in agriculture due to development technology and

Remarks

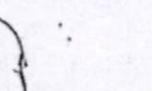
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Improved medical facilities, led to countries reaching near to replacement level fertility.

Eg: India: Total fertility: 2.3

Brazil: Total fertility: 2.0

The shape demographic pyramid:



Low crude birth

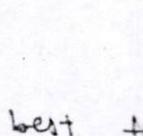
Due high growth, urbanization, individualistic ideas, reliable food availability, high medical facility and life expectancy, the crude birth are low and fertility rate is slow.

Eg: Japan: Fertility rate 1.5

Europe: fertility rate 1.3.

Germany  
France

The pyramid shape:



These countries following pro-natalist policies to improve birth rate and overcome under-population problem.

transition

Thus, Demographic model tried best to

explain birth rate and development stage

relationship.

Remarks

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## 3. Answer the following questions:

(a) Discuss various causes of energy crisis in the world. Also discuss possible solutions.  
(250 Words) (20)

(b) Summarize the impact of Darwin on the development of geographical concepts.  
(200 Words) (15)

(c) 'The ratio between effort and return can be looked upon as the price nature extracts from man for the particular choice he makes.' In the light of above statement, explain the relevance of Neo Determinism in Indian context.  
(200 Words) (15)

Q3(a)

Due to high growth, Industrialization, Urbanization etc. the need for various energy sources increased around the world. The world is in the phase of energy dilemma. Energy crisis i.e., availability, accessibility and affordability is existed.

9.5

Fair  
introduction**causes of Energy crisis**\* Economic causes:

- Rise and rapid growth of Industrialization, technology and modern form of development, machines etc.
- New methods of machines based production in Agriculture.
- More countries slowly moving from underdeveloped to developing and to development. In this process they need more energy use.

good

**Remarks**

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\* Environmental causes : → Severe hot summers or winters.

*Can also add other like:*

- World is the phase of energy dilemma. i.e., they don't know how much resource/ energy production can not lead environment degradation [They don't exactly the limits].

→ Poor distribution system - Due to high use of energy resources like oil, gas etc. caused pollution and climate change. Hence, concept of 'environmentalism' existed. They opposing high use of energy.

\* Social causes:

→ delay Commissioning of power plants - Per Capita incomes are rising. Hence, people thinking to use more luxury goods like cars, Fridge, Air condition etc. to maintain social prestige.

→ International issues:

- civil wars and political turmoil in oil producing countries. E.g.: Venezuela, Gulf countries, African countries etc.

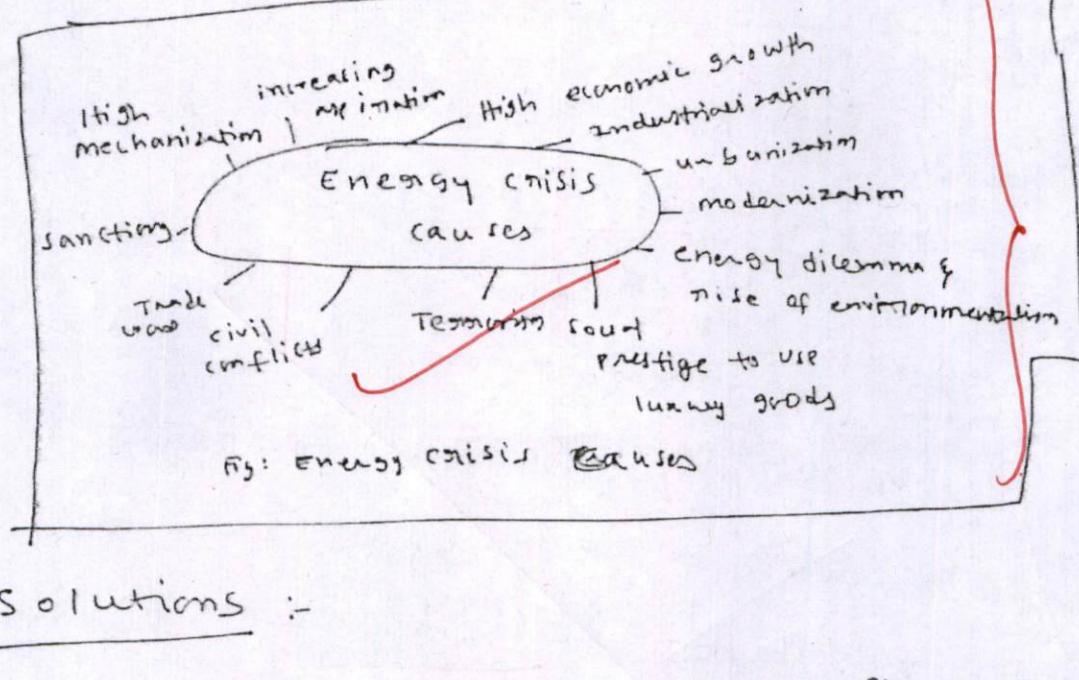
- Trade wars

- America's Sanctions on Iran and Russia

- Rise of terrorism led to threat to Pipeline network, Terrorism in maritime transportation, oil theft etc.

**Remarks**

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Solutions :-

- 1) Focus on development of new sources of energy. Eg: US production of shale gas helped to reduce oil and gas demand.
  - 2) Diversify energy sources to renewable sources like solar, wind, safe nuclear energy, bio-energy sources etc.
  - 3) Sensitization people to use energy in sustainable and conservation methods.
  - 4) Improve cooperation between world community. Eg: International solar alliance is good step in this direction.
  - 5) Active role of International organizations like United Nations, WTO etc. to remove conflict, sanctions, trade war etc.
- These solutions help to overcome energy crisis to achieve sustainable development goals in long run.

## Remarks

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## 3(b) Charles Darwin concept of evolution

(1) Try to make the introduction brief.

Charles Darwin made a revolution in the field of ecology, geography, biology and earth science through his theory of evolution. According to this, there is always struggle between organism to exist in the earth space. The organism who have more adaptability to the existing environmental conditions in the ecosystem or space which living will survive more than its competitor.

It is continuous process. The organism evolves by changing itself to the changing surroundings and its environment.

Impact of Darwin's concept on geography:

→ Impact on geomorphology

- It is the concept of Darwin, made along with biology, geology and geography has ambitious

## Remarks

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field of study in natural sciences.

- Along with Geology and Paleontology (related to fossils study) helped to evolution of animals and plants.

It made the geography to develop the geographical time scales & demarcation of various rock types.

- Based on Darwin evolution and development concept, American Geographer W.M. Davis proposed geographical cycle of erosion. Through this, Davis explained landform evolution in three stages: 1> young, 2> maturity and 3> old. He stated that landforms are product of structure, process and stage (Time). This made revolution in geomorphology in later times. Darwin <sup>human</sup> <sup>on</sup> <sup>geography,</sup> <sup>you can also</sup> base to this.

#### → Impact on human geography

- Darwin concept of environment has influence on organism/various species evolution. Through this basic concept, environmental <sup>influence or</sup> <sup>Ellen Semple</sup> <sup>Huntington,</sup> marks

*good argument.*

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determinism occupied vital position in

Human Geography.

- Geographers like Ritter, Oscar Peschel,

Alexander von Humboldt are strongly supported the environmental determinism.

- Later, possibilism concept also evolved to counter environmental determinism.

#### → Impact on political geography

Ratzel concept 'Lebensraum' (Living Space) has base of Darwin concept of species evolution. According to Ratzel, the States/Countries are need to expand its limit/boundaries to survive and security purpose. Superior countries continuously evolves and expands its territory and inferior countries unable to do this and faces security problems and finally loses its existence.

#### → Impact on cultural geography

Carl O. Sauer in 1925 through his work morphology of landscape, explained that culture works on itself and on nature and creates way of life. This has base of Darwin ~~economic~~ ecological space. Sauer compared that ecological space with culture.

Remarks

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36) Neo-Determinism :

75

Griffith Taylor, an Australian geographer in 1948 gave the concept of neo-determinism. 1920s

It is a middle path approach in between environmentalism and Possibilism.

Neo-determinism concept is against the Possibilism. According to Possibilism: Nature sets certain limits and offers opportunities. It is the man who act according to his traditional way of life. Nature is never been a more than an adviser. Taylor opposed this view and stated that supporters of Possibilism based their idea on the environment of Western-Europe. It offers various alternatives. But this type of climate is not exists every where. For example, in Australia the terrain is difficult.

As per Neo-determinism, man should follow the nature's programme; if he is wise. The best economic programme of the country is one which follows the nature's programme. It

Remarks +

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is the duty of geographers to interpret this programme.

Taylor gave the concept of stop and go determinism. Man should have capability of accelerate, slow or stop the development process. He compared it with traffic control system of city. The wise man can follow the direction of environment. He can only change the rate but not direction.

There is neither absolute necessities (determinism) nor absolute freedom (possibilism).

The effects, both positive or negative, by men on environment give results/returning accordingly.

→ It is wise nature reacts on man's actions.

Relevance to India :

1) The negative effects of unplanned haphazard urban planning results the Chennai floods, Mumbai floods etc. in negative way.

2) The effects of Green revolution, caused the results of today's regional imbalances and agriculture distress.

3) The effects of more ground water extraction, flood irrigation caused ground water extraction crisis.

thus, our negative efforts giving negative results and this is price of nature extracted from our action.

Well Substantiated Points

Remarks

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Attempt all questions:

## SECTION-B

5. Comment on the following into 150 words: (10 × 5 = 50)
- Write a short note on Habitat-III conference and its analysis with respect to India.
  - Healthy ecosystems are essential to increase resilience and agricultural production in the face of looming food crisis. Elaborate.
  - Radicalism in geography
  - What do you understand by a modeling? Discuss the need of modeling in geography.
  - Write a short note on Vance's Urban Realms Model

Q5C4.

Habitat - III Conference held in Quito, Ecuador. It stressed the following:

- 1) Need of Sustainable urbanization
- 2) Housing for all
- 3) issues of slums
- 4) urban transportation etc.

**Relevance to India**

According to recent estimation, 30% of India's population living in urban areas. It will reach 40% by 2030. This rapid urbanization may lead to urban sprawls and pressure on natural resources. Hence, Sustainable cities concept is more relevant to India. Our Smart cities and AMRUT programme is

*Sustainable development of town, cities and other settlements both urban and rural.*

Remarks

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36

is the right step in this direction.

2) India's ambitious programme of Housing for All by 2022 is because of concern of need of own house to the urban people. same as stressed in Habitat - III.

3) Slums are biggest problems of sustainable and planned urbanization. In India, in 2001 census data, 9 states are slum free and in 2011 the number is just 4. Slums are more vulnerable to diseases, spread of infections, crimes, vandalism etc. Hence, Government of India focused on rehabilitation of slums programme.

**Smart  
oriented  
Development  
model** Due to rapid urbanization, urban lands are congested, polluted and trafficked. Government focused on new metro policy and public transportation etc.

Hence, Habitat - II rightly emphasized the urbanization issues of India.

Remarks

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Q5(b)

74.5

The world especially developing countries are facing the twin problem of decrease in agricultural productivity and food crisis.

According to World Food Programme and UN latest reports about 50% of world population facing problems of hunger, mal-nutrition, Anemia, under-nourishment etc.

Good Contextual introduction

- This is because of:
- Unsustainable agricultural practices
- flood irrigation
- High and unnecessary uses of resources like inputs like fertilizers, pesticides, water, energy etc.
- Mono culture etc.

These all led due disturbance to

the ecosystem.

Hence, to overcome

this food crisis, we need healthy ecosystem and in turn it help in agriculture production. It can

Remarks

Scanned by CamScanner

be achieved through:

- 1) Diversification of crops
- 2) Precision cultivation
- 3) organic farming
- 4) Encourage and develop intra and inter country supply chains
- 5) Drop more crop approach
- 6) Climate smart Agricultural techniques.

These helps to achieve sustainable

development goal 3: End hunger by

2030.

Remarks

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~~Q5W~~

## Radicalism in geography

(45')

Radicalism concept came into picture in 1970's against the quantitative revolution in geography. Radicalism supporters strongly emphasized that inequality is inherent feature of capitalism.

Appropriate  
Introduction

Following are three political issues that caused to rise of radicalism.

- 1) vietnam war (1955-1975) & gender discrimination
- 2) civil rights movements (especially in American blacks) [Inequality]
- 3) Pervasive poverty of people living ghettos etc.

### \* Objective of radical geography

Also mention  
the  
scholars

- 1) To raise voice against the inequality, discrimination, exploitation, poverty in the capitalist mode of countries.
- 2) To expose the weaknesses of quantitative revolution and its approach of positivism.
- 3) To raise the revolution against the permissiveness, sexism and discrimination against females.
- 4) To abolish the gender imbalances.

like  
peet'

### Remarks

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Basically, a quest for social relevance of the discipline of geography. Radicalism is against the imperialism and economic concentration.

They opposed the marxism & natural charism

### \* Weaknesses / Criticism

- Can mention  
~~'Antipode'~~
- 1) Radicalist are radical in theory but not in their implementation.
  - 2) They adopted sophisticated ideas from various theories especially from marxist materialism without any success.
  - 3) This approach is less flexible comparative to other approaches.
  - 4) It lacks strong theoretical base.
  - 5) Failed to succeed ideas from communist countries in the implementation
  - 6) collapse of USSR, lost its relevance.
- But, In present time due to increase in inequality, gender insecurity, environment exploitation, the relevance of radical geography is more.

### Remarks

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85(d)

Modelling: In the opinion of Ackoff,

modelling is the process of model representation in simple way of complex laws/theories by using tools of set theories, data techniques.

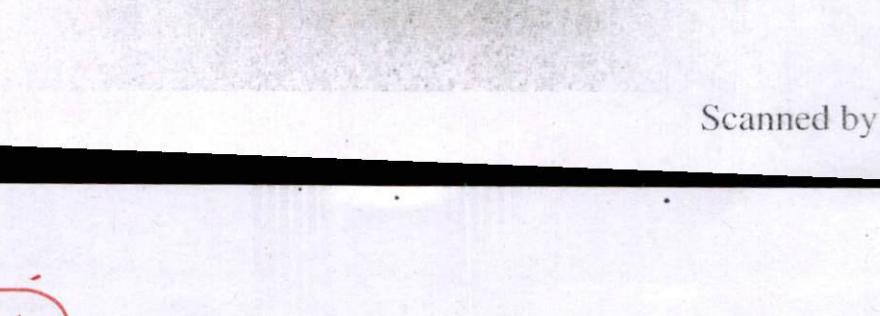
models helps simple representation of complex process.

Need of modelling in geography:

1) Modeling helps to understand the complex geographical process in simple way and expand the subject understanding further. Eg: Davis, cycle of erosion helped to understand complex landform development.

2) It helps to effective use of land and set up industries etc. Eg: Industrial location theory of Weber, von Thunen agriculture land use model etc.

3) In urban geography models helped to understand ~~urban~~ city growth trends. Eg: Multi nuclei model of Ultman and Hagni.

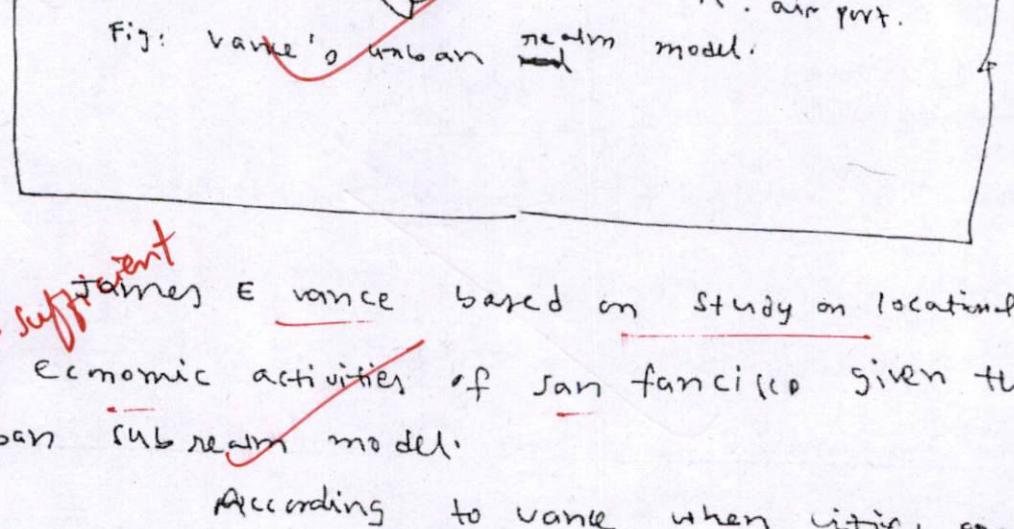


Remarks

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42

Vance's urban Realm model:



Try to start with a brief introduction first.

large urban areas emerge & self-sufficient based on study on locational and economic activities of San Francisco given the urban subrealm model.

According to Vance, when cities grow, the offices and commercial activities will develop in the sub-urban regions. Each sub-urban realm has independent economic activities.

Even, these all sub-realms by combining forms large city. This theory extension of multi-nuclei model of urban land use.

Remarks

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## 8. Answer the following questions:

- (a) 'Rostov illustrates faith in a capitalist system and is highly biased towards a western model of development'. In the light of above statement discuss the Non Communist Manifesto presented by Rostov and its criticism. (250 Words) (20)
- (b) Give the detailed note of Von Thunen's model of agricultural location and present its usefulness in the contemporary world. (200 Words) (15)
- (c) What do you understand by environmentalism? Why even after putting lot of efforts and expenditure environmentalism is not a success? Suggest some of the measures to make it a success. (200 Words) (15)

Q5(a)

9.5

Rostov in 1971 based on his study on "Stages of Economic Growth" gave five stage model of development. According to this model, each country should pass all the 5 stages in its developmental process.

## Rostov - 5 stage model of development

## 1) Traditional society :

- main base of economy is subsistence agriculture. primitive techniques uses.
- orthodox society.
- decisions takes based on religious, traditional and cultural basis than rationality.
- Barter system exists.
- Transition starts with external forces.

Add the diagram showing 5 stages

## Remarks

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60

## 2) Pre-conditions for take-off :

- modern Agricultural practices uses.
- small Industrial development.
- export based economy
- Exploitative agriculture and self-sufficiency achieved.
- most of the African countries are in this stage.

Add examples

## 3) Take-off :

- Rapid Industrial growth in short term
- social-economic elite exists.

- Rapid urbanization and Industrialization develops.



Fig: Rostov's model of development.

Draw it after introduction

## 4) Drive to maturity :-

- Investment in science and technology
- modern societies exists

## Remarks

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- Highly Industrialized and technology based economies
- Highly urbanized societies.

5) High mass consumption:

- People have more opportunities for pleasure but have less time because to get that pleasure need more money. cost of living is high. so, they have to work more. Highly developed western countries are in this stage.

### Criticism

- 1) According to Rostov, Every country have to pass all 5 stages. But, countries like ~~the united states~~ cannot etc are never be in a primitive societies. Even countries like China and Japan skipped the stages and Russia fallen back. In India manufacturing is not much developed but we performing well in service sector.
  - 2) It is criticized as non-communist manifesto and showed triple down modernization effect.
  - 3) He is not considered resource availability and distribution.
  - 4) Countries with Islamic belief even though economically developed but still are orthodox to reach final stages.
  - 5) It emphasizes on industrialization. But countries with agricultural economy all reached high stage. Eg. Australia and New Zealand.
- Hence, Rostov with his biased model, got all around criticism by not considering all aspects in development.

### Remarks

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Appropriate introduction  
of von Thunen

### von Thunen - Agriculture location model

Von Thunen in 1826 through his agricultural location model provided insights into why and how different crops produced in particular location and variations when move away from the market/city.

ASSUMPTIONS 1) Isolated city exists, and it surrounds at the centre

2) Iso-tropic surface by vast agricultural areas

3) only one market/city exists and one agricultural service area

4) Labour costs are same throughout the region

5) only one mode of transportation exists and transportation costs is directly proportional to the distance

6) Farmers are economic men and always try to maximize profit

7) Stable economy

### Basis of von Thunen model

Von Thunen model is

based on the concept of locational rent. It is the profit earned by cultivating particular crop on particular location.

Locational Rent (LR) = Revenue received by selling the crop -

(cost of production + transportation cost).

$$LR = Y(m-c) - t.d.$$

Y = yield per unit Area; m = market price per unit of crop

c = production cost per unit land per specified crop

t = transportation cost per crop to the distance

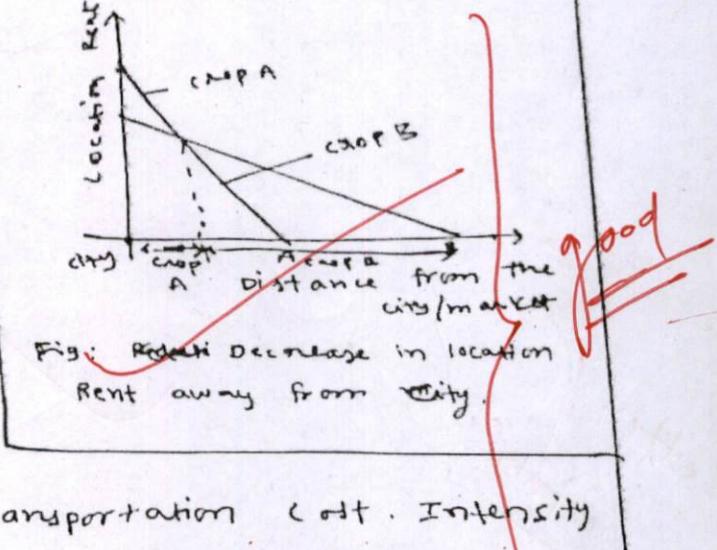
d = distance between city to agricultural location.

### Remarks

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**MODEL I : Intensity model**

According to Thunen,  
Intensity of crop production  
decreases, ones move away  
from the city. Because,  
near to the market, the cost  
due to high locational rents, to  
high market price and low transportation cost. Intensity  
of production calculated based on inputs used in  
production like manure, fertilizers, irrigation etc. To get  
same profit, farmers away from city put less inputs  
in crops hence, it balances high transportation cost.

**MODEL II : Types of crops**

According to von Thunen,  
agricultural crop production location depends on,

- yield of the crop
- market price
- transportation cost
- production cost
- perishability.

Can Add the diagram here

Based on these assumption,  
crop types and uses spreads like concentric zones  
around the city.

Zone I : zone of Dairying and Horticulture

Zone II : zone of silviculture : Forestry and Lumbering.

Remarks

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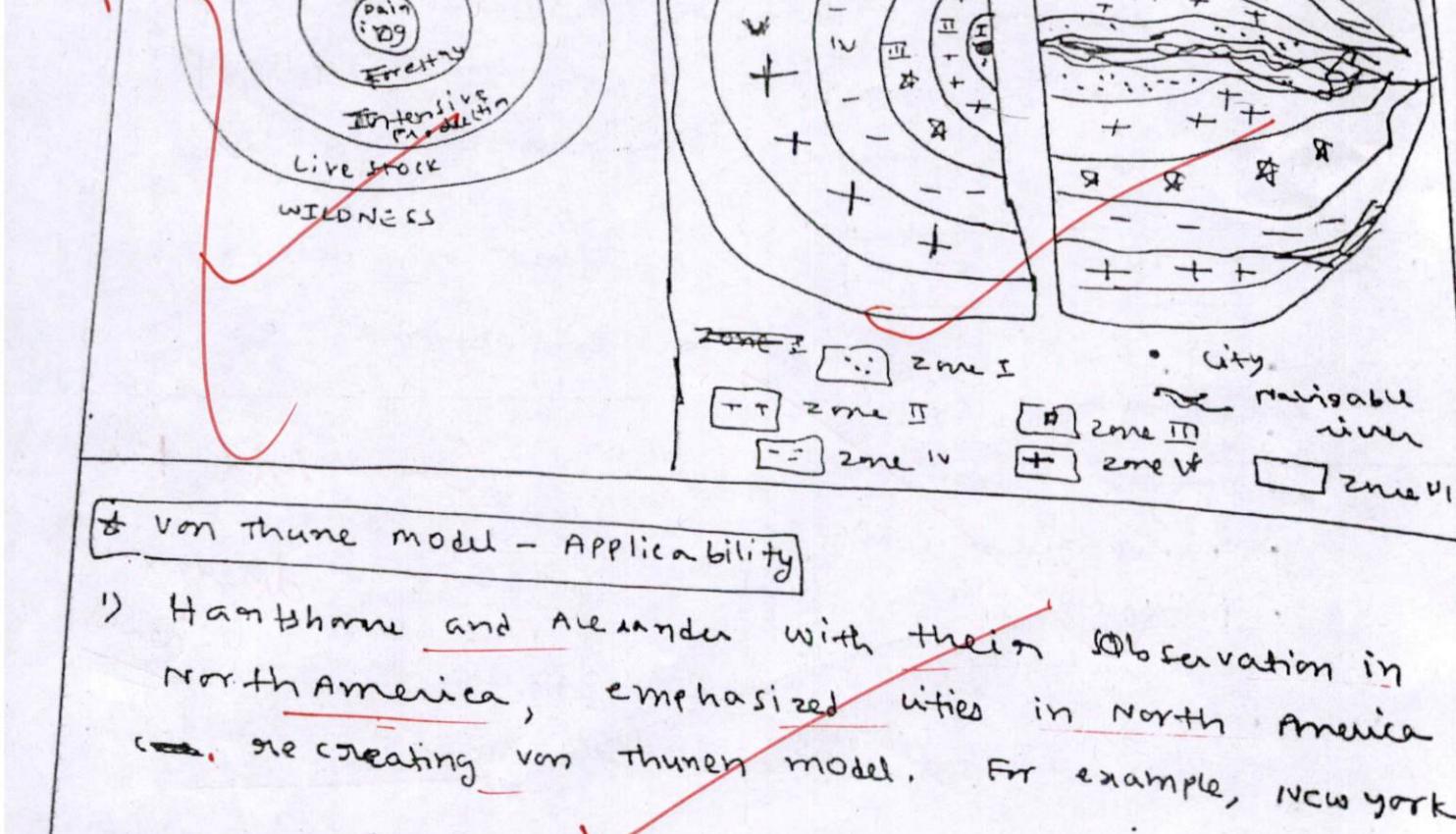
Zone III : zone of farming without fallow and pasture  
(Arable farming)

Zone IV : zone of farming with fallow and pastures  
(Extensive farming)

Zone V : three field system : Land divided into  
3 parts. one part for main crop, other for pasture  
and third one for fallow and this system rotates.

Zone VI : Livestock Ranching.

modified cultivation

**\* Von Thunen model - Applicability**

1) Hawthorne and Alexander with their observation in North America, emphasized cities in North America in creating von Thunen model. For example, New York.



Fig: Von Thunen model - applicability in US.

Remarks

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- 2) If we consider London is city in world, then to it Denmark has Dairying, Canada medium distance, wheat cultivation and Australia, sheep farming.
- 3) In India, If New Delhi is the city, then near to it Haryana has Dairying activities and medium distance Punjab, Paddy cultivation and far distance, kashmir sheep farming.
- 4) As per Prof. Shafi and Jaybeer Singh, If we consider village settlements has centre in UP and Punjab, the land use activities spreads same as von Thunen model.
- 5) Prof. Dalbeera Kaur of Punjab, said that tube well based concentric zone agriculture pattern based on tube well as centre. Hence, even though in reality and changing conditions, von Thunen model not much applicable today but with some modifications, it helps to improve agricultural location use.

*solid arguments  
and justification*

Q8(c)

Environmentalism :- Environmentalism is like a social movement deals with concerns of environmental conservation and improvement. It follows good reduce pollution and improves sustainable development.

According to O'Riordan, environmentalism is the collage of values and views of the world, social movements, human disposition to the society, political movements and green politics.

Remarks

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- Silent Spring by Rachel Carson*
- The focus in environmental conservation increased especially after Rio conference and various steps like earth summits, Kyoto protocol and its mechanisms, Stockholm conference, Montreal protocol, establishment of green climate fund etc. But, the success is minimal because of:
- Limits to Growth*
- Developing countries giving more focus to their interests than environment interests in formulating policies and their implementation. E.g. Diversion from common but differential responsibility.
- 2) Government of countries are in favour capitalists due to political-corporate nexus. These corporates are mostly profit motive, hence, interest in resource exploitation.
- 3) Reluctance of developed countries in technology transfers and fund donations.
- 4) Lack of coordination between countries. E.g. US came out from Paris deal but other countries not strongly raise their voice against the US.
- 5) Top down approach by not considering area based conservation policies and fund allocation and spending.

*Add any positive measure*

1) Strict global interests in policy formulation and implementation in international conferences.

2) Area based and root level approach in fund allocation improvements.

3) Follow the Taylor Neo-deterministic Focus on sustainable impact assessment.

4) Periodic review in fund spending etc.

Remarks

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