



**An Institute for Civil Services**

# **IAS TOPPER'S TEST COPY**

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**AIR 113**

**CSE 2023**

**GEOGRAPHY**



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# GS SCORE

Geography Test Series 2023

TEST - 04

## GEOGRAPHY

Time Allowed: 3 Hrs.

Max. Marks: 250

### Instructions to Candidate

- There are FIVE questions. All Questions are compulsory.
- 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 answer book must be clearly struck off.

91.5

Name Rishendra Singh

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

Date \_\_\_\_\_

Signature Rishendra

1. Invigilator's Signature \_\_\_\_\_

2. Invigilator's Signature \_\_\_\_\_

① Sir, Please help in delineating the approach in time management. How long one should take to complete 10 marks (2 questions) & for 15 & 20 marks?

② What should be our strategy to approach the question paper (which to attempt first)

3 non compulsory or 2 compulsory questions

\* Dear Rishendra,

\* Please refer QIP Class-1 video on youtube. (Discussed Approach and basic in details).

\* In exam hall you have approximately 9 min/Q.

\* Your content is fine however try to work on Articulation & presentation.

\* Try to Avoid writing in Margins. All the Best!

## GEOGRAPHY

Time Allowed: 3 Hrs.

Max. Marks: 250

1. Write short notes on the following in about 150 words:

- (a) Discuss the patterns and impacts of rural-urban migration on population distribution and urbanisation. (10 Marks)
- (b) Discuss the role of globalisation in shaping migration patterns. (10 Marks)
- (c) Analyse Thomas Malthus' perspective on population growth, resource availability, and the concept of carrying capacity. (10 Marks)
- (d) Discuss the concept of social well-being and its importance in assessing the quality of life. (10 Marks)
- (e) Analyse the concept of the "industrial triangle" in Weber's model. (10 Marks)

2. Attempt all the questions:

- (a) Discuss the concept of population as social capital. Analyse how population, when properly harnessed, can contribute to the social and economic development of a region. (15 Marks)
- (b) Analyse the concept of dependency ratio and its significance in understanding demographic trends. (15 Marks)
- (c) Discuss the importance of considering environmental issues in regional planning. Analyse the impacts of human activities on the environment and the role of regional planning in promoting sustainable development. (20 Marks)

3. Attempt all the questions:

- (a) Analyse the factors influencing population growth at a global scale. (15 Marks)
- (b) Discuss the role of fertility rates, mortality rates, in shaping population growth trends in different regions of the world. (15 Marks)
- (c) Discuss the social and cultural implications of migration. Analyse how migration influences cultural diversity, social cohesion, identity formation, and the dynamics of multicultural societies. (20 Marks)

4. Write short notes on the following in about 150 words:

- (a) Discuss the concept of the threshold population in Christaller's central place theory. (10 Marks)
- (b) Discuss the concept of system analysis in human geography. (10 Marks)
- (c) Discuss the role of integrated planning approaches in promoting sustainable development. (10 Marks)



- (d) Discuss the concept of regional imbalances in human geography. (10 Marks)
- (e) Discuss the concept of growth centres and growth poles in human geography. (10 Marks)
5. Attempt all the questions:
- ✓(a) Discuss the relevance and criticisms of the Heartland and Rimland theories in contemporary geopolitics. (15 Marks)
- ✓(b) Discuss the factors influencing the location of different agricultural activities in Von Thünen's model. (15 Marks)
- ✓(c) Analyse the relevance and applicability of Rostow's model in contemporary development contexts. Discuss how changes in technology, globalisation, and the dynamics of the global economy have influenced the development trajectories of countries. (20 Marks)



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1. (a) Discuss the patterns and impacts of rural-urban migration on population distribution and urbanisation. (150 Words) (10)

Recent UNFPA reports highlight the global urbanisation level at 56% which is bound to become 60% by 2030. Around 4.2 bn people live in urban areas highlighting significant changes in population patterns.

### Population Pattern :

#### Developed world

- 1) Rural to urban migration in cities dominated by Females

Reason: service sector push and high level of independence

- 2) Males - remain in villages & commercial agriculture on large farms

- 3) urbanisation in developed world is around 56% (UNFPA)

#### Developing world

- 1) Rural to urban migration dominated by Males

Reason: Employment search

Manufacturing & service sector

- 2) Females remain behind helping in agriculture & livestock

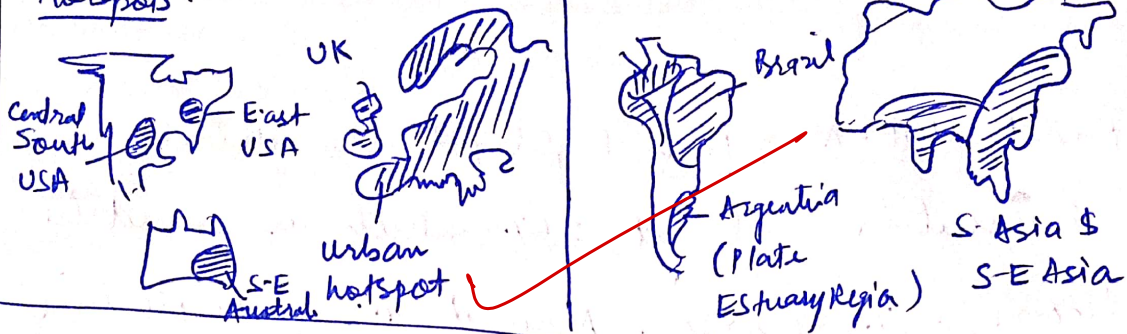
Urbanisation  $\Rightarrow$  44%

Remarks

Zimmerman's Model of Migration  
+ Ravenstein's Model of Migration  
+ Gravity etc



Hotspots:



## Impact of Rural-Urban Migration & Urbanisation

- 1) Gender Equality hampered → Developing world rank low in Global Gender Gap Index (India-107)
- 2) Economic dependency in rural areas
- 3) Rising pollution in Urban areas.
  - (a) Urban Heat some
  - (b) Constant Air Quality below required limit (CPCB) - NAQI (India)
- 4) Rising crimes - isolation & neglect
- 5) Urban administration issues - Urban Floods  
Sewage treatment Plants, Landfills  
 (Chazipur, Delhi)

Thus, adequate measures protecting the urban space on lines of Ideal City (Helsinki, Copenhagen) is the need of the hour.

Remarks

3

Conclude with Challenges & Inequalities

1. (b) Discuss the role of globalisation in shaping migration patterns. (150 Words) (10)

globalisation as per UNESCO's official definition means rising interconnectedness in all spheres i.e. Cultural, economic and social in order to create a "global village".

Rising globalisation is significantly impacting Migration pattern too.

How is it <sup>causing</sup> ~~impacting~~?

just stroke in single stroke.

① Core of Ravenstein's law of migration - Economic reasons ⇒ Globalisation leading to economic interconnectivity ⇒ Rural - Urban Migration

② Stouffer's theory of Intervening opportunity also leads to migration ⇒ Urbanisation of Rural-Urban fringe:

③ Ease of information ⇒ increasing opportunities

④ Role of social change (Lee's Model)

Joint family ⇒ Nuclear family ⇒

looking for jobs in urban areas ⇒ enter family move

Remarks



# Migration Patterns

## ① Intra-country migration

Rural-urban migration

(economic opportunity)  
(better lifestyle)  
(pull factors)

Urban-Rural Migration

→ envt. loss  
due to globalisation

↓  
Counter Migration  
(Rural gentrification)

⇒ due to homogenised world (cultural)

↓  
food culture dress education health

## ② Inter-country migration

Developing  
3rd world

Developing  
2nd world

Labour  
(Menial/workers)  
Low paying jobs

UAE, Saudi, Qatar

India China S-Asian  
migrants

Developed  
world

High paying  
jobs

USA Europe Australia  
(Education)

UK France

Source

Destinations

Thus, Globalisation has significantly altered the global sphere creating immense challenges for the source & destination needing govt. care along with variable opportunities.

Remarks

3.5

1. (c) Analyse Thomas Malthus' perspective on population growth, resource availability, and the concept of carrying capacity. (150 Words) (10)

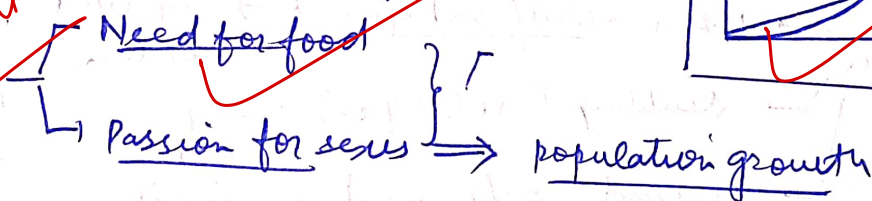
Good  
Start

Thomas Malthus, in 1798 in his book "an essay on principles of population" pioneered the natural theory of population growth studying west european countries.

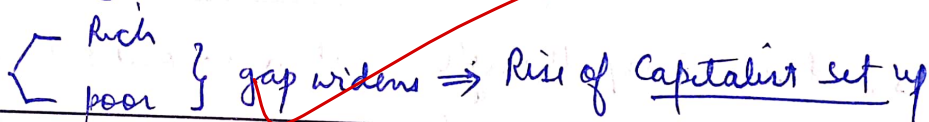
Postulates :

- ① As the society advances, the population growth occurs in geometric progression and food supply occurs in arithmetic progression creating Malthusian catastrophe.

- fairish  
relevant
- ② Man's 2 characteristics which are immutable & antagonistic create population growth.



- ③ Society divided :

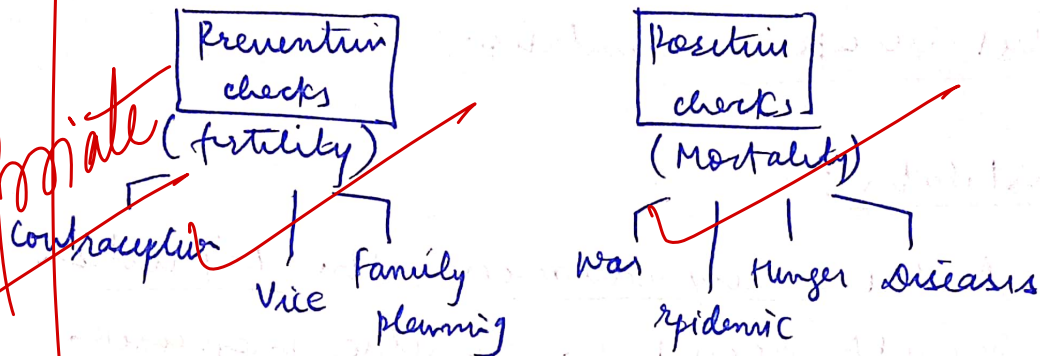


Remarks

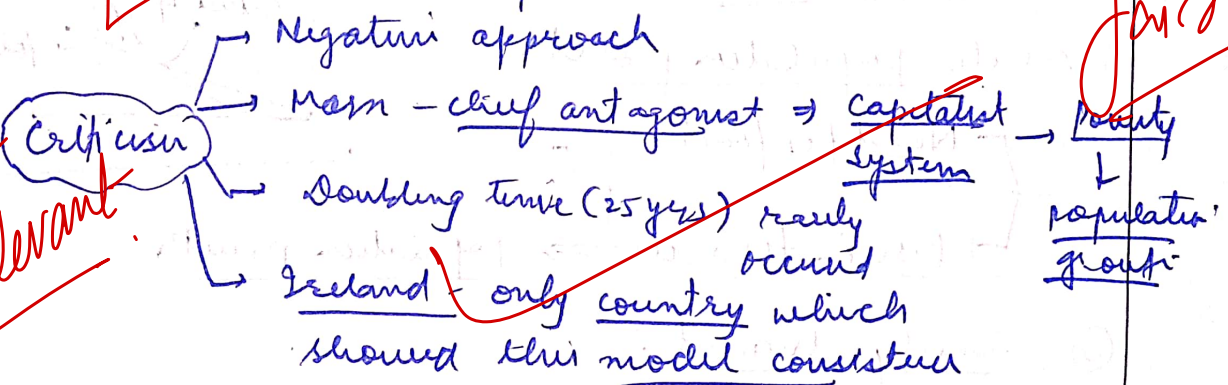


④ Malthus was a defender of capitalistic setup was against providing means of investment to poor (would waste it)

⑤ Eventually, Preventive & Positive checks are bound to occur



⑥ He disregarded positive checks and claimed preventive since population doubled after every 25 years would lead to positive checks and society is bound to collapse.



Thus, his theory though negative in outlook was

Remarks

bound by technology & hence his seminal work was considered paramount.

4.5

Avoid writing beyond Margins.

1. (d) Discuss the concept of social well-being and its importance in assessing the quality of life.  
(150 Words) (10)

⇒ Social well being as pointed out by HDI of UNDP is a multiperspective requirement which not only encompasses the material aspect but also assesses UNSDSN's spiritual indices via Happiness calculation.

### Material aspects

- ① Life expectancy at Birth
- ② Health prospects of infant & elderly
- ③ Quality of Life via timesible.
- ④ Education prospects
- ⑤ Mean years of schooling
- ⑥ Educational outcomes
- ⑦ In capita income
- ⑧ Basic minimum requirements

Mahboob ul Haq's Criteria's

- Basic Minimum approach.

### Spiritual aspects

- ① Happiness prospects
- ② Satisfaction with work life
- ③ Environmental purification
- ④ Role of Spirituality
- ⑤ Yoga & Mental fortitude
- ⑥ Bodily autonomy
- ⑦ Decision making norms
- ⑧ Global threat perception

Amartya Sen's Criteria's

- Capability approach

Remarks

*fine start*

*Could Add*

*D.M. Smith's theory*

*discuss in detail*

*Basic needs*

*Social Wellbeing*

*Reconstruct / Refugees night*



## Importance in assessing quality of life

Human Development Index

Global Happiness Index

Human poverty Index

Measurement of Quality of Life

Human welfare and development prospects.

These indicators help in assessing via:

- Measuring satisfaction level
- Highlights importance of different perspectives
- Role of impact of changing climate
- Measurement of material & social well being

Thus importance of social well being can be gauged by the quote of Melbourn in May - Noble winner ⇒ "You see the things and ask why they are, I see the things and ask why they are not".

\* Could Add Case study in Questions

Remarks

on social well beings or Quality of life etc

3.5

1. (e) Analyse the concept of the "industrial triangle" in Weber's model.

(150 Words) (10)

Weber in his industrial location theory (also called Least Cost Theory), in order to find optimum location of industry considered 3 important determinants.

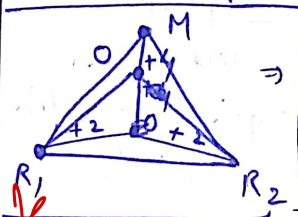
- (a) Transport cost
- (b) Labour cost
- (c) Agglomeration economies

#### Assumptions

- ① Uniform demand
- ② Rational & economic man
- ③ Isotropic surface
- ④ Labour - static
- ⑤ Raw materials location is fixed & known

In order to find the optimum location in a system consisting 2 raw material & 1 Market he used the concept of Industrial Triangle.

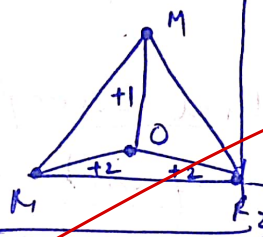
Wt. losing industries



signifying this theory, he said,

the optimum location of industry will be close to raw materials due to wt. of industries

Wt. gaining industries



whereas, industries when raw materials result in losing of weight in final product, industries get located along source of raw material

Remarks

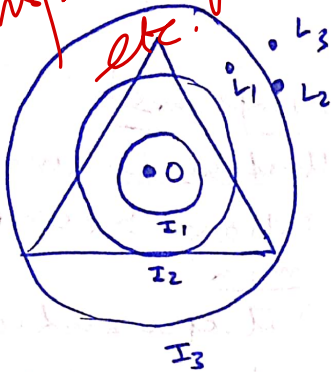


Try to Analyse all 3 components

Impact on Industrial Triangle of Labour cost and isodapane along with shift in location

of industry

Raw materials  
Markets  
Transport infra. etc.

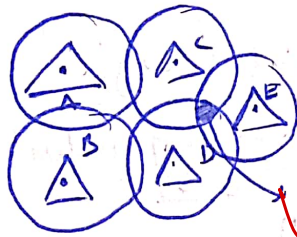


Thus, optimum location will be where savings from labour cost will be greater than transport cost.

Thus optimum location may get out of Industrial Triangle.

Applicability  
a fine.

self, while assessing agglomeration economies



Industrial A, B, C, D, E will locate themselves here if savings after shifting is more than original production cost.

Thus, Industrial Triangle proved a significant instrument

for Weber in his ideal location using the Quantitative Revolution Tool in his positivist

theory: Some criticism due to assumption was also

Remarks

highlighted by geographers

4

2. (a) Discuss the concept of population as social capital. Analyse how population, when properly harnessed, can contribute to the social and economic development of a region. (200 Words) (15)

The Aristotilian idea of Man being a social animal was adequately discussed and elaborated by K. Putnam in 1993 when he elaborated the concept of Social Capital.

Social Capital <sup>is</sup> ~~was~~ the mutually interdependent and supportive role of fellow population in creating social well being in society according to Putnam.

### Importance of Social Capital :

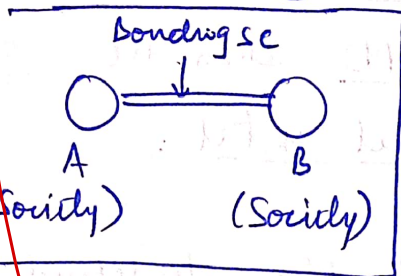
- ① Feel Human is worth something.
  - ② Helps in social caplarity - rising up the social ladder.
  - ③ Helps in difficult situations.
  - ④ Improve the mental and social construct of an individual.
- (Stalls on roads for water and food for migrant workers)
- ⑤ COVID-19 pandemic

Remarks



Putnam highlighted two types of bonding acting between social members

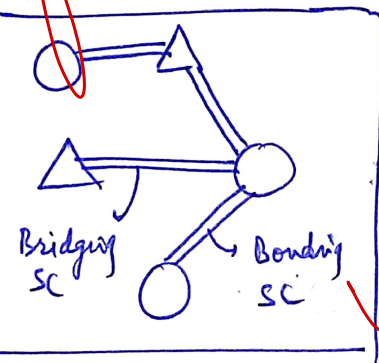
① Bonding social capital : Acting between



two homogenous socially interacting bodies

② Helps in furthering relationships which already exists

② Bridging Social Capital : Acts between two



heterogenous socially interacting bodies

Helps in creating long chains of indestructible bond

This long chain helps in diffusion of culture and creates integration of ideas and norms of different groups.

Social capital thus permeates the role of exclusionary forces and motivates social integration

Remarks

Social Capital's role in social development;

1) Urbanisation is leading to social seclusion and thus rise in crimes.

Putnam's concept applied in Europe promotes social policing & bonding rather than policing to break the chain of rising urban crimes.

2) Creates respect & tolerance in society

3) Homogenous thoughts are enriched using social capital

4) Social capital also happens (French society) - Pierre Durmont's population growth theory

Economic development → Social Bonds released by Municipalities for urban development.

→ Better functioning economic society in rural areas (agri cooperatives)

→ Role of support at tough times.

Thus social capital as per SC is a recent case is significantly more important than cultural capital to maintain peace & tolerance in society

Remarks

Conclude with significance

6



2. (b) Analyse the concept of dependency ratio and its significance in understanding demographic trends. (200 Words) (15)

Dependency Ratio can be defined as the ratio of sum of non-working age population to the working population of a country.

Non-working age population

Children < 15 years of age

Adults (Senior Citizens) of more than 65 years of age

Thus, Dependency Ratio =

$$\frac{\text{Children (<15) + Adults (>65)}}{\text{Total Population}}$$

Dependency Ratio reveals:

- 1) State of Burden on the working age groups to support non-working, dependent population.
- 2) Role of Family Planning measures are also revealed.

Remarks

3) State of Healthcare in the economy

(eg) By population of elderly

4) Economic development & stage of Foster's growth model is also revealed.

(eg)  $\Rightarrow$  High dependency  $\Rightarrow$  Pre-condition to take off

Low dependency  $\Rightarrow$  Take-off or mature stage

Significance in understanding demographic trends

① Developed country:

② Economic significance

a.1  $\Rightarrow$  Stagnancy is observed in GDP growth

Japan, Russia  $\Rightarrow$  (eg) - Population growth is constant and high level of elderly (High dependency ratio)

a.2  $\Rightarrow$  Per capita income available for investible purposes is low

(eg) 30% PCI available for investment

Remarks



(b) Social significance :

- ① Healthcare burden
- ② Insufficient population growth & family planning measures :
- ③ Social frustration

Developing world :

	India	China
% of elderly	(7%) ↑	(14%) ↑
% of working age	(68%)	(69%)

UNFPA - 2023 report

Economic significance

- ① High part of Demographic dividend goes in managing elder needs
- ② Role of economic involvement of elderly is negligible

Social consequences

- Frustration
- Isolation
- Rising old age homes
- Neglect & Violence

World must learn from India's initiative of economising elderly through "SILVER REVOLUTION"  
initiative in order to maintain human ethical values & economic needs

Remarks

5.5

2. (c) Discuss the importance of considering environmental issues in regional planning. Analyse the impacts of human activities on the environment and the role of regional planning in promoting sustainable development. (250 Words) (20)

*Decent Answer*  
 Lack of efficient use of resources which themselves are unevenly distributed causes regional imbalances highlighting a need for regional planning in various spheres.

*Also discuss environment issues in regional planning*  
Environment issues in regional planning

① Urban & Unplanned Urbanisation:

- (a) Rising AQI in cities to intolerable limits (Gas chamber effect)
- (b) Urban Heat Dome → causing heatwaves
- (c) Urban Floods (Mumbai, Delhi 2023)
- (d) Noise pollution - increasing NCD's

② Unplanned Mining in backward regions:

- (a) Soil erosion
- (b) Release of toxic gases (e.g) Methane, NO<sub>2</sub>
- (c) Soil crumble & landslides
- (d) Eutrophication due to leaching.

Remarks



### ③ Unsustainable Unplanned Agriculture:

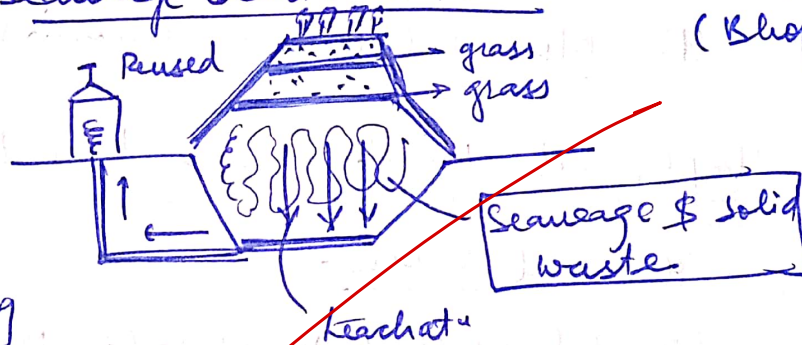
- ① Deforestation - degrading Carbon Sink
- ② Surface Run off → Eutrophication - Algal Bloom
- ③ Groundwater depletion
- ④ Salinization of Land
- ⑤ Increasing patches of Barren land  
(permanent fallow)

Seeing so many issues, need is felt to incorporate regional planning in environmental issues

Some examples of Regional planned initiatives on a same scale are:

#### ① Urban Sewage Treatment Plant - Khanti purwa (Bhopal)

- ⇒ Biomining
- ⇒ Biocapping
- ⇒ Bioventing
- ⇒ Biosparging

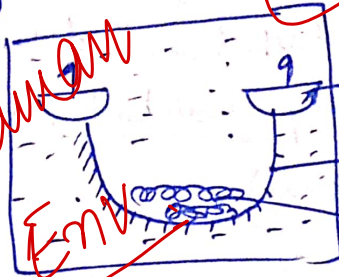


(Local area regional planning)

#### ② Urban city initiative of Arkadag (Turkmenistan's Smart city)

Remarks

- ③ Regionally planned - cleaning up of large oceanic patch in N-W Pacific ocean by Ocean Cleanup ⇒ i.e. Great Pacific garbage patch (2000)



Boats

Nets (U-shaped)

Captured plastic &  
renewed & reused  
at their hull.

These global initiatives highlights the importance of environment restoration via regional planning.

Role of regional planning in Sustainable Development

Sustainable development as per Brundtland report is the judicious use of resources today so that our future generation's needs are not impacted in future: Regional planning forms an important component of Sustainable Development via:

Remarks



① Creating a holistic regional plan for environmental restoration.

② Khanit Purnea of Bhopal Model

✓ (helps Bhopal & Indore to be perpetually ranked 1 in Swachh Survekshan).

③ Planning judicious use by assessing need and availability.

④ Attraction of coal hauled (European Mine)

focus on gas reserves

⑤ Role of every individual is adequately highlighted

⑥ Individual cooperation is also promoted by PPP models

Thus Regional planning is very necessary to eliminate the human caused disruption to the environment. To stop breaching the 1.5°C Paris limits, the globe must come together & address the issue holistically

Remarks

Include activities of sustainable development

7.5

3. (a) Analyse the factors influencing population growth at a global scale.

(200 Words) (15)

Population growth theories by various scholars inadequately highlight the reason of population growth in various countries.

Factors influencing population growth:

① Malthus ⇒ Termed stagnating food supply as a reason for population growth leading to poverty & vicious cycle.

② Thomas Michael Sadler ⇒ highlighted the population density of a place promote population growth. As pop. density increases, pop. growth seases. - He related it to happiness in region.

③ Kerala & West Bengal

④ Castro's thesis and Thomas Malthus:  
Population growth is a result of increased food supply which increases fecundity (Castro).

⑤ India, Ethiopia, Egypt & Pakistan

Remarks



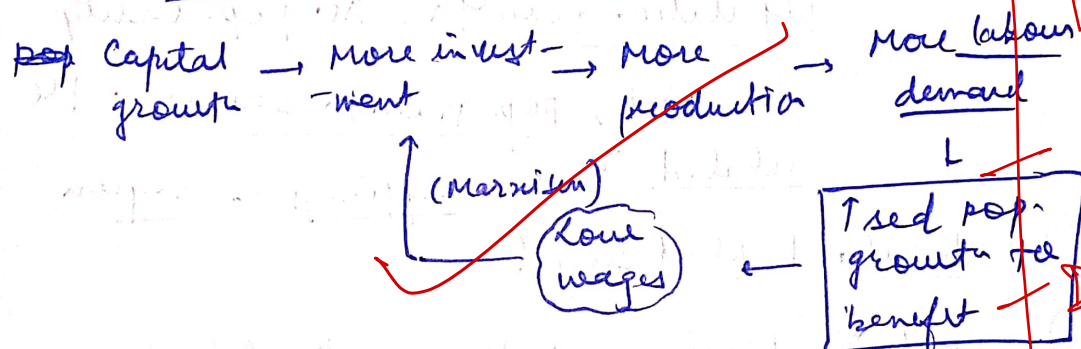
④ Herbert Spencer  $\Rightarrow$  Population growth is controlled  
 by nature which impacts human involvement  
Japan & interest in reproducing

⑤ Arsene Dumont  $\Rightarrow$  Social Capitalism is a reason

⑥ France As people move up the ladder (due to democracy & no obstacles), their responsibility increases leading to decreased growth

⑦ David Ricardo  $\Rightarrow$  capitalist system initiates population growth

⑧ Developing Nation



Thus, to sum up, various factors influence population growth :

- ① unplanned pregnancy - low women's rights
- ② Lack of family planning measures

Remarks

- 3) Rising maternal mortality and infant mortality due to COVID-19 (UNFPA)
- 4) social bias towards son (son-meta preference)
- 5) Role of unemployment & poverty (low per capita income)
- 6) Theory of more hands at work - 9) African Nations (Tanzania)
- 7) social expectations

Although, the global pop. growth of developed & developing nations are antagonistic yet the global population ~~rate~~ reached 8bn in 2022 (Nov)

Contribution of developing world remains 81% & developed world is 19%. UNFPA predicts by 2050, developing world would cause net reduction, although 50% global population would occur from 8 countries  $\Rightarrow$  Tanzania, Egypt, Egypt, DRC, Nigeria, India, Pak, Philippines. Thus adequate measures need to be taken to stabilise the rate towards replacement level.

Remarks

4.0



3. (b) Discuss the role of fertility rates mortality rates, in shaping population growth trends in different regions of the world. (200 Words) (15)

*Start with concept of population growth*  
Fertility (CBR) and Mortality (CDR) was sighted by Thompson & Notestein as an important characteristic in 1945 while developing their demographic transition model.

*growth trends*  
Demographic transition in different regions has evolved from High Birth Rate & Death Rate towards Low BR & DR when the society advances from being illiterate, rural and agriculturally dependent towards literate, urban and secondary & tertiary sector led growth.

#### Current trends in different Regions

	CBR	CDR	Life expectancy	MMR	IMR
Developed world	15/1000	12/1000	79 yrs	30/1lakh	42/1lakh
Developing world	60/1000	33/1000	72 yrs	72/1lakh	89/1lakh

Remarks

UNFPA - State of World Population - 2023

Avoid writing beyond Marginal

## Fertility & Mortality hotspots of the world

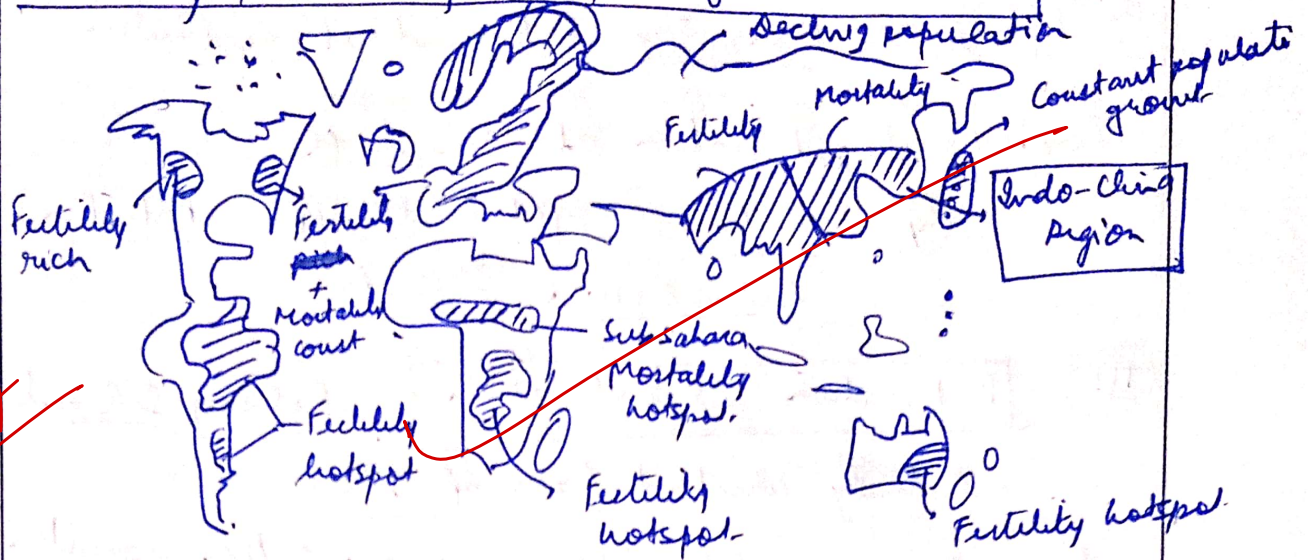
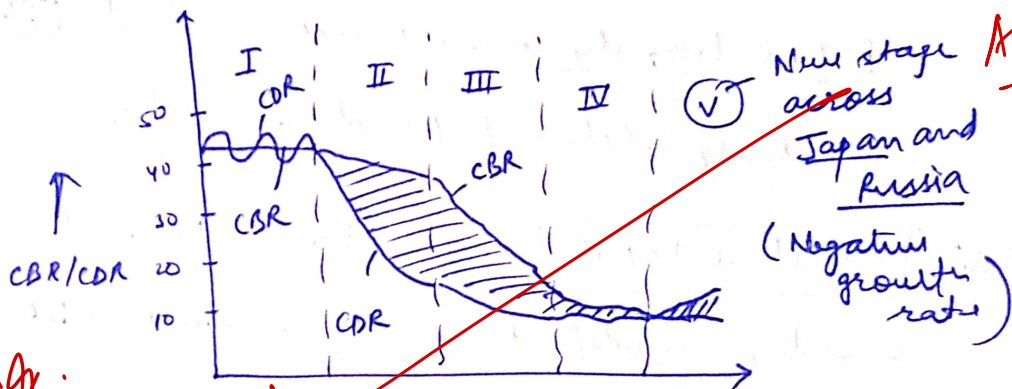


Fig:

## Demographic population history & growth:



New stage across Japan and Russia  
(Negative growth rate)

Global Avg. of TFR  $\Rightarrow$  2.3

Period  $\Rightarrow$  (Stages)

200 yrs from today

before industrial & technological revolution

High B.R. & fluctuating D.R. (above 40/1000)

No country as whole in this stage  $\Rightarrow$  patches of

tribes (from Amazon, Africa)

Remarks

Developed  $\downarrow$   
low as 2.0 or less

Developing  $\downarrow$   
could be high as 5.0



II Population Explosion - High BR and falling DR

due to technological & medical revolution

least developed nations at this stage

(eg) Zambia, Egypt, Ethiopia, Pakistan, Latin America, Bangladesh

III Population Stabilisation : Falling BR and

relatively constant fall of DR

Population growth occurs via population momentum

(eg) India, Indonesia, Turkey, China

IV Stable population :

Population dynamics have reached TPR = Replacement level

Relatively stable population growth.

V Negative population growth - New stage

recently modified by UN. There CBR = -ve

and CDR is higher than CBR  $\Rightarrow$  leads to declining population  $\Rightarrow$  Japan, Russia

Thus population dynamics needs to be adequately studied for growth prospects of a nation as seen

in Japan which portrays low growth rate since 1995

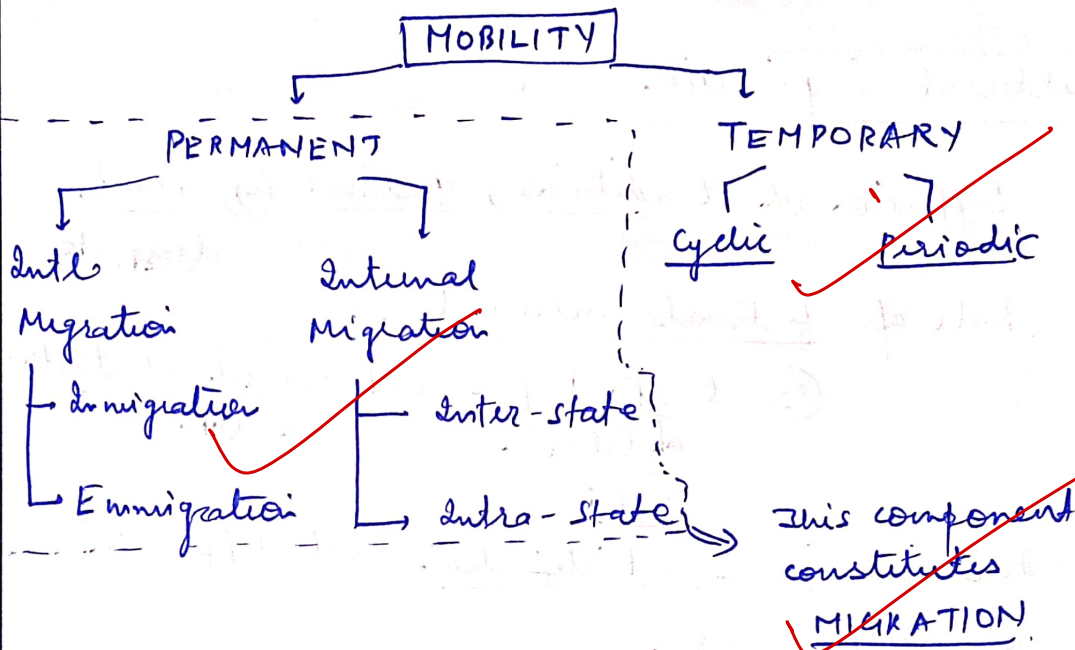
Remarks

\* Answer needs contextual analysis

5

3. (c) Discuss the social and cultural implications of migration. Analyse how migration influences cultural diversity, social cohesion, identity formation, and the dynamics of multicultural societies. (250 Words) (20)

Migration is that part of Mobility which is permanent and involves significant shift in demographic attributes of a nation.



Social implications :

- ① Shift in quantitative characteristics ⇒ Working age population, Total Fertility Rate, Demographic attributes, Sex ratio, Population figures
- ② Gender inequality ⇒ Females entolled for increased pressure at rural homes

Remarks



- ③ Social isolation & rise in crimes in urban areas
- ④ Rise in slums, squatter settlement and shanty colonies
- ⑤ Basic minimum amenities are denied at source region & destination.

### Cultural implications :

- ① Diffusion of traditions, culture (eg) food, dress, etc
- ② Role of festivals enhanced  
(eg) Chhath Puja and Carhach Chaturthi of Bihar in Delhi
- ③ Increase in Sanskritisation and diffusion of caste norms
- ④ Role of land-use changes due to migration  
(eg) ⇒ Rising hill architecture in farm houses of Rural-urban fringe.
- ⑤ Institution of new norms
  - Westernisation
  - Modernisation
  - McDonaldization

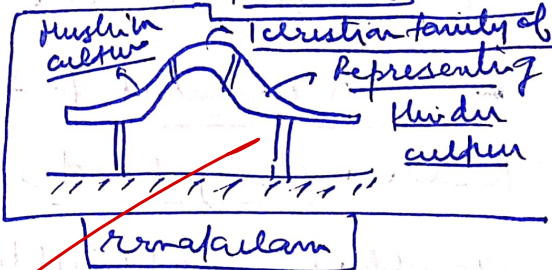
easy spread of globalisation

Remarks

## Influences on Cultural Diversity

- 1) Cultural homogenisation  $\Rightarrow$  "Urban culture" & "Rural culture" shift towards
  - 2) Cosmopolitan character due to destination of migrants
  - 3) Emergence of New culture (eg) American Culture
- Relevant:* America is a land of migrants.
- 4) Food & Dress get diffused & globalised
  - 5) Increasing festival diffusion (eg) Christmas celebrated everywhere

## Influencing Social Cohesion

- 1) Migration building Social Capital  $\Rightarrow$  Cohesion
  - 2) Increased friendliness due to same workplace
  - 3) Barriers of caste & social ends are hardly percolated
  - 4) Increasing tolerance (eg) 
Kerala's village signboard  

- due to increased population of females due to outmigration of males

Remarks



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Migration → Identity formation

1) class identities getting formed - More divide of rich & poor  
(Increasing Inequality)

15% pop ⇒ 85% wealth (Conform)

2) Mixing of cultures ⇒ New identity created

3) Perpetuating Tribal "Sarna Dharma" in cities

4) Diluting Borders ⇒ (eg) East & West Germany  
(One German identity)

(eg) North-South Vietnam  
(One Vietnamese identity)

Increasing Mosaic model of multiculturalism has significantly altered the "Salad Bowl" theory of Europe to a "Melting Pot" construction of India for the entire globe. Increasing environmental & social tensions, if catered with a strong hand, will create an ideal Gandhian multicultural world.

Remarks

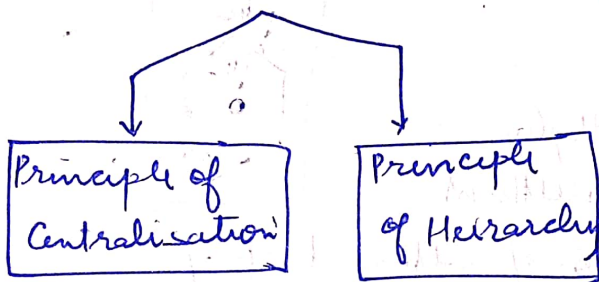
9

Good Attempt

4. (a) Discuss the concept of the threshold population in Christaller's central place theory.  
(150 Words) (10)

Christaller in his central place theory, while working in Bavaria, Germany tried to explain the spatial and functional arrangement of human settlements in a homogenous landscape.

His central place consisted of 5 nested hierarchies based on 2 important principles.



His one of the concepts include Threshold population.

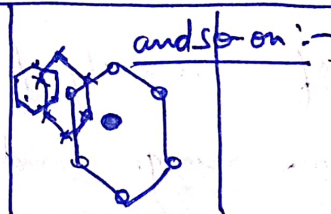
It means the minimum number of population required to run an ordered service.

#### Assumptions:

1. Rational & Economic Man
2. Hexagonal complementary area as circular area does not pack and
3. Hierarchical arrangement

#### Levels of Hierarchy

- (o) 1. Metro / Major City
- (o) 2. City
- (x) 3. Town
- (o) 4. Hamlet
5. Hamlet



Remarks



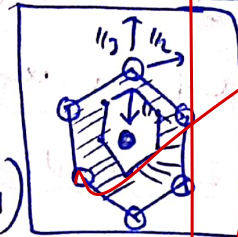
whether higher order or lower order, successfully

Threshold population in various K values

① -  $K = 3$  (Marketing principle)

Threshold population of lower order service is 2 whereas higher order service is 1, to minimise cost of buying & selling

[Relationship between 2 nested hierarchies at any level]

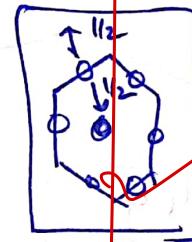


② -  $K = 4$  (Transport principle)

Threshold population

3 of Lower order settlement

1 of Higher order settlement



(aim) Maximise the no. of settlement lying on straight line

Similarly for Administration system ( $K=7$ )

Thus Threshold population forms a key determinant of hierarchy of an urban/rural settlement based on range and centrality of function performed.

Remarks

Good Attempt

4.5

4. (b) Discuss the concept of system analysis in human geography. (150 Words) (10)

A system is an ordered, closed/open interrelated group containing various natural elements and interacting <sup>components</sup> ~~between systems~~ of each system

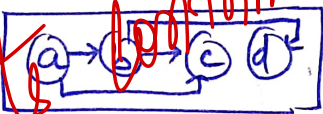
A classic example = earth's system



Earth

Closed system

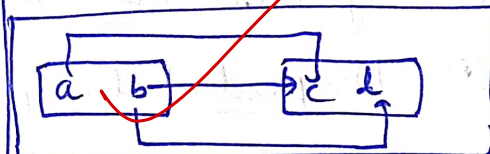
Interrelationship between a component with no exchange from outside



(a) → earth's matter remains constant and only changes form due to erosion & weathering & endogenic forces

Open system

Interrelationship with constant exchange between various systems and each other's component



(a) = energy from sun fuel various processes which constantly interact with each other

Remarks:

Chisholm  
Berry & Chorley



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Inception being :-Asteroids / Meteorites  
added to the system(1)  $\Rightarrow$  water system, air  
system, soil systemand re-radiated back  
to the atmosphere.(2)  $\Rightarrow$  water cycle influencing  
soil cycle (Biogeochemical  
process)Importance / Significance of System Analysis① Modelling techniques give precise information② system interaction③ helps in future predictions④ identifies typical components of systems⑤ Plays important role in academic studiesCritique of Systematic study :-① Ignores normative methods② Unpredictability of humans ignored③ Role of predictions based on specificity and  
accuracy of assumptionsSystems analysis forms a core component of Human  
geography and a tool for Quantitative geographers

Remarks

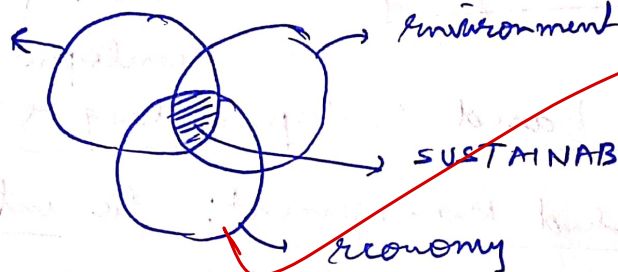
Conclude  
with importance

3

4. (c) Discuss the role of integrated planning approaches in promoting sustainable development. (150 Words) (10)

*Start directly with integrated approach*  
Sustainable development according to WCED's Brundtland report (1987) means meeting the needs of present generation without compromising the need and requirements of future generations

Inclusive growth



#### UN's Definition

Its role in integrated planning is immensely important because:

- ① Pin out Regional Imbalances (eg) economic backwardness
- ② ensure equitable growth which is inclusive (eg) vulnerable section uplift
- ③ environmental sustainability in planning to perpetuate human existence (6<sup>th</sup> mass extinction tackling)

Remarks

*Principles of planning*



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④ Designing purposeful institutions catering judicious use of resources.

②⑨ UNCTAD ⇒ International Seabed Authority  
(Marine Resources)

A/POT

Integrated Planning approaches may include

1> Gender Budgeting: - inclusive gender development

2> Outcome based development targets:

3> Watershed management: - to integrate community with basic needs

4> Backward regional planning - to pan out regional growth imbalances

5> Regional synthesis approach - holistic development of Region.

④④ UNEP's Global Climate Change Index refers to rising threat perception to human dominated regions which needs to be supported by sustainable development using region based Indian CDR I.

(Disaster Resilient Infra)

Remarks

3.5

4. (d) Discuss the concept of regional imbalances in human geography.

(150 Words) (10)

Regional imbalances occur due to unjustified & uneven distribution and non-judicious use of available resources leading to regional disparity.

### Reasons of Regional Imbalances

1) Unequal resource distribution

(eg) Rare earths are unequally distributed

2) Technological Backwardness

(eg) Developing & least developing nations

3) Political exclusion leading to regional disadvantages in resource utilisation

(eg) - Indian cash system

4) Development & growth backward approach

These imbalances need to be removed using

1) growth point theory of Perroux (1955) :

Remarks

also include some models & theories  
 Rostow's Model  
 Marxist

rather providing only reasons need to discuss concept in human geography



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Development of propulsive industries

2) Growth centre of Boudville - using analysis of region -

3) Growth foci of P.S. Mishra - to develop a nested pattern of hierarchy perpetuating a trickle down impact.

4) Restoring Vidal de la Blache's concept of "RAYS" as in development model of France

5) Role of social empowerment in region according to the needs - (e.g. Education & Health) (acc. to UNDP's HDI)

Sighting Zimmerman's principle of Resources is a function of technology ("Resources are not, they become") , it is the technological development which the country should focus to pan out regional imbalances by judicious resource utilisation.

Remarks

4. (e) Discuss the concept of growth centres and growth poles in human geography. (150 Words) (10)

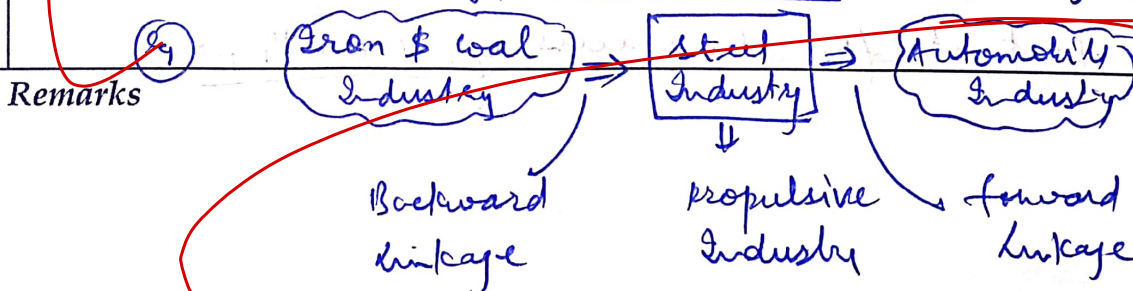
20<sup>th</sup> century world was marked with Regional imbalances due to uneven Trickling down of growth potential of Industrial Revolution & Technological development. It was in this concept & background that growth pole & growth centre theory developed.

growth pole	growth centre
Proposed by: <u>Perroux</u> in <u>1955</u>	<u>Boudeville</u> in <u>1966</u>
A <u>mental construct</u> of <u>how the growth should eventually spread</u>	An <u>actual implementation</u> of <u>ideals of growth point on ground</u>

growth point theory :

Based on the principles of propulsive industries and its characteristics :

- (i) - It creates forward & backward linkages.



Remarks

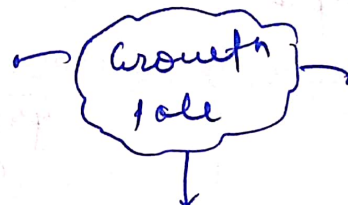


② Multiple Interconnectivity and development of auxiliary industries

③ Development of need based labour

④ Promote growth led by labour sector spending (Their salary gets transmitted to economy for further growth)

Development of Auxiliary Industry



creation of new growth poles

trickle down impact to economy

Based on Schumpeterian model, the growth pole & growth centre was dependent on highly uneven and equally distributed growth based on discrete development. Availability of entrepreneurship, investible capital and local efforts to boost next village economy is very important for the success of growth pole.

Remarks

3.5

5. (a) Discuss the relevance and criticisms of the Heartland and Rimland theories in contemporary geopolitics. (200 Words) (15)

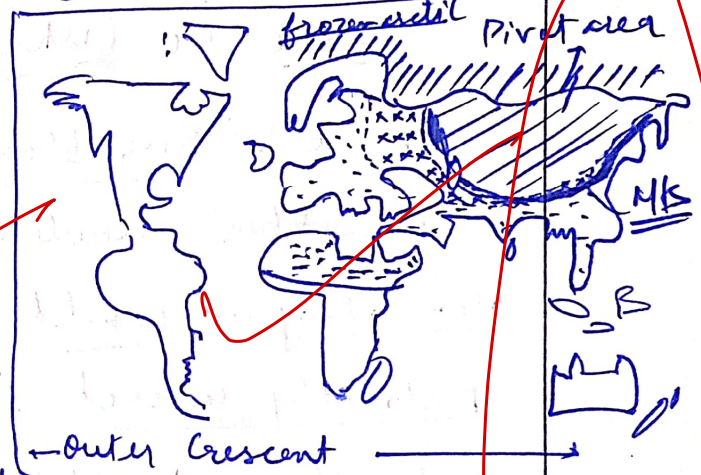
Heartland theory by Halford J. Mackinder & Rimland theory by Nicholas Spykman were constituted before the WW-II but their relevance still lies in the present world.

Heartland Theory: In 1904, 'Geographic Pivot of History', Mackinder paraded the importance of "pivot area" in controlling the world island.

"His dictum adequately explains the entire theory"

"He who rules east Europe, rules the Heartland,  
He who rules the Heartland, will rule the world island."

He who rules the world island rules the world."



[Diagonal lines] Pivot area (1904)  
 [x's] + [Diagonal lines] = Heartland  
 [Dotted lines] = Inner Crescent

Present Day Relevance:

His modified theory of 1943 - Midland Basin adequately highlights the present day scenario:

Remarks



Midland Basin =  $\frac{\text{N. America}}{(\text{USA})} + \frac{\text{Europe (West)}}{(\text{UE})}$

→ Western world - represented by USA, is one power bloc currently ⇒ (the Midland)

→ But the other bloc ⇒ is represented by a combination of Russia & China currently (the Pivot area + Inner crescent)

→ WW-II & Cold war rivalries ended up weakening Russia (erst USSR)

→ Control demanded by Russia over Eastern Europe i.e. Ukraine (Russia-Ukraine war)

Thus, the two blocs are still created but are rather reformed by rising influence of Non-aligned world. Thus his Heartland is partially correct & slightly emphasises the role of controlling Central Asia as well (by Russia, EU & China)

Rimland Theory

Relevance of Spykman considers

Hafford's Inner Crescent of 1919 as the Rimland

Remarks

\* Heartland ← Relevance  
 \* Rimland ← Criticism ← Relevance ← Criticism

Rimland currently constitutes - ~~to~~ Western Europe,  
Asia Minor, S-Asia, S-E Asia & China.

Thus, it has both landpower and seapower  
significantly shifting from fortress model of  
Mackinder's Heartland.

⇒ Relevance

1) role of China in global scenario is aptly  
explained in his prophecy.

2) "China if controls the S China Sea" - will control  
the world island.

3) USA's foreign policy of surrounding China  
by Triple Ring of Islands is motivated  
by this theory.

4) Creation of CENTO, SEATO, now NATO too  
find its relevance for understanding the role  
of rising solidarity of SE & S Asian powers.

Thus, it is the Rimland Theory which is more  
relevant in today's world as power dynamics have  
significantly changed & the states are no longer

Remarks

a "Lebensraum" - a living  
entity"

Avoid

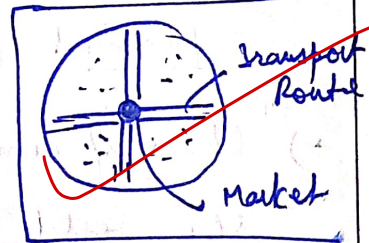


5. (b) Discuss the factors influencing the location of different agricultural activities in Von Thünen's model. (200 Words) (15)

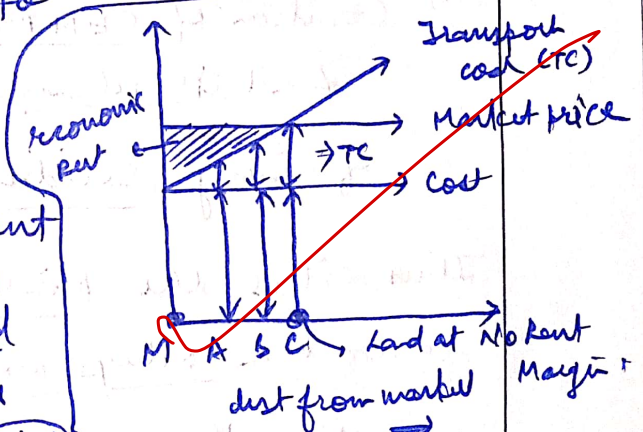
Von Thünen in his work the "Isolated state" strived to determine why & how the land use pattern of agriculture varies with changing distance from market.

In order to determine the factors, he kept certain assumption in his theories:

- ① Rational economic man
- ② Isotropic surface
- ③ Isolated state (market)
- ④ Transport conveyance at the market which is unique
- ⑤ Transport cost & distance



The fundamental basis was "Economic Rent" which was the net profit accrued to the land use at one and above the economic margin of profitability (No Rent Land.)  
 ∴ Economic Rent was based on the distance from the market, ∴ he named it Locational Rent.



Remarks

He gave the formula:

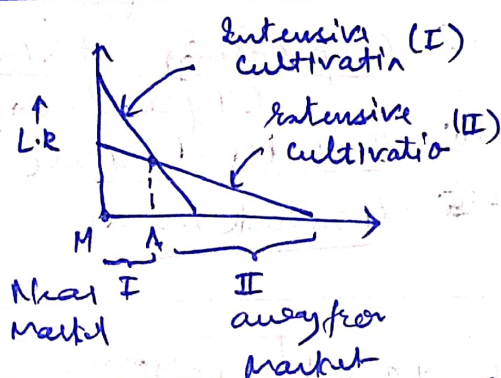
$$L.R. = Y(M - C) - Y D \cdot T$$

Yield
Market price
cost price
Distance from market

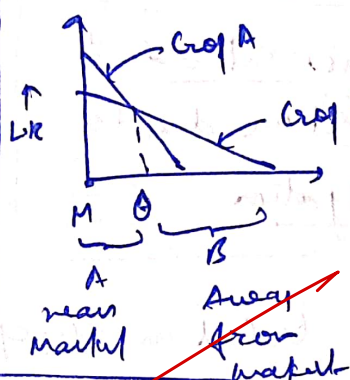
Transport cost

Thus his agricultural location depended upon locational rent which depended upon the above variables.

To illustrate, he drew two figures



Intensity of cropping decreases as one moves away from market



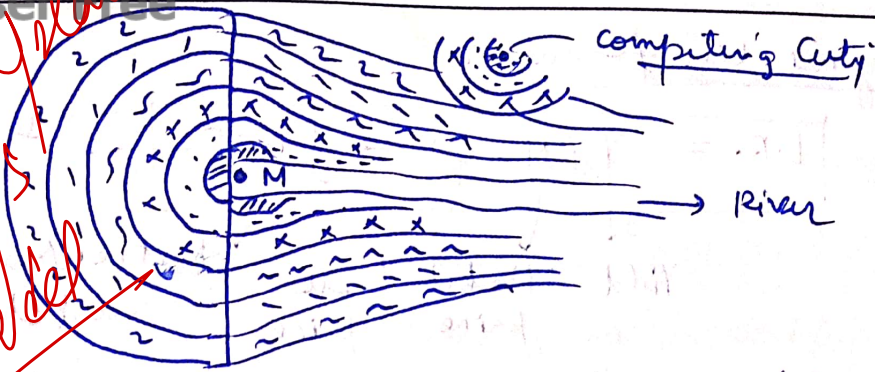
Land use changes as one moves away from market

Thus, according to these variables, he created a variation of land use pattern of agricultural activities

Remarks



(II)



Later he also incorporated the impact of a navigable river & competing city in his zonation.

The land use extended along the river due to easy navigation.

- I Dairy farming & Market gardening
- II Lumbering & Timber
- III Crop farming without fallow
- IV Crop farming with fallow (7 year farming)
- V 3-sector land use
- VI Livestock farming

His model tested in Europe gained good result. But in today's model new factors such as transporting variation, technological advancement & govt support have significantly extend the sphere of influence of Von Thunen's Model. Though it brought revolution in agricultural land use pattern.



Land use decreased away from N-W Europe

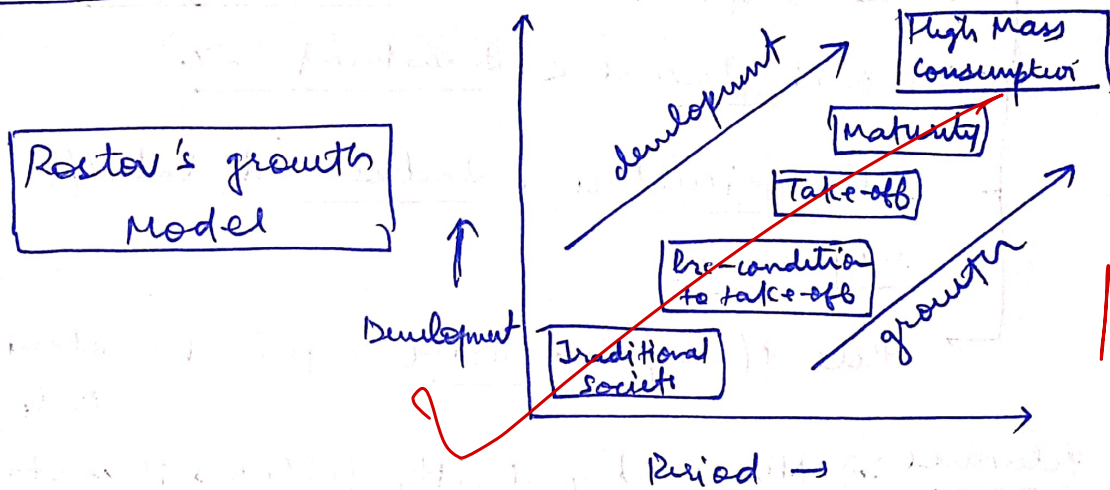
Remarks

5.5

5. (c) Analyse the relevance and applicability of Rostow's model in contemporary development contexts. Discuss how changes in technology, globalisation, and the dynamics of the global economy have influenced the development trajectories of countries. (250 Words) (20)

*Good start*

Rostow's growth model was based on the study of national economies where the society transformed from being a traditional society towards one of a high mass consumption.



Societal evolution :

- (I) Traditional Society ⇒
- agricultural based
  - 75% workforce in agriculture
  - Political control in few hands
  - Society = Traditional & Low Technology
- fine*

Remarks



Relevance: Present day villages of India are a serious example of this stage.

Other examples  $\Rightarrow$  Backward society of Tribal areas (PVTG's) and African tribes.

(II) Condition for Take off:

Shift in criteria determining growth

National Income < Investment (5%)

Both agriculture & Industrial take off may occur

Role of a push factor required (Colonial Rule)

Relevance  $\Rightarrow$  No country strictly follows this stage  
 $\rightarrow$  Colonial stages in 1900's were great causation of this stage

(eg) India, Vietnam, China, etc

(III) Take off:

$\rightarrow$  Growth occurs for the long period -

$\rightarrow$  extends for short period

$\rightarrow$  3 necessary conditions reqd.

Remarks

- ④ Investment > 10% of NI
- ⑤ There exists social, economic & political stimulus to exploit the conditions
- ⑥ New leading sectors emerge.

Relevance ⇒

currently emerging economies of China, India, SLA and Egypt can be categorised here.

Investment figures although an arbitrary but reflect true picture.

④ Mature:

- Long period of sustained growth
- New technologies & leading sector take own
- Role of workforce changes

① structure revolts

② Society needs new motivation as they are bored by notions of Industrial Revolution

③ entrepreneurship character changes too ⇒ mature & experienced

Remarks



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⑤

Stage of High Mass ConsumptionHigh standards of livingService sector takes over & industrial works are outsourced.New gadgets & technology take over the societyGlobalisation has totally cultured the society.Applicability :① Very Low in current scenarios as countries show differential characteristics② No country is currently conforming to any one structure of his stages③ There exists a mix of multiple stages④ New Zealand, Denmark  
Mix of agriculture & industry TourismThus Rostow's growth model is only relevant for academic purpose & it is an outdated model

Remarks

reflecting growth stages of past. Although, Avoid this may be fully utilised by developing nations of Africa to propel growth & wellbeing