



Chhatrapati Shahu Ji Maharaj  
University, Kanpur

**Answer Script Details**  
**Barcode** 11310272

**Roll No.** 24023000043  
**Total Mark** 57/75.00

**Exam** MA-III\_ODD\_EXAM\_NOV\_2025  
**Subject** A080902T - Economics of Growth

**Question wise Mark Summary**

**Q.No Mark Q.No Mark Q.No Mark Q.No Mark**

1A 4/5

1B 4/5

1C 4/5

1D 4/5

1E 3/5

1F 4/5

1G 4/5

1H 3/5

1I 3/5

2 0/15

3 0/15

4 0/15

5 12/15

6 12/15

7 0/15

8 0/15

9 0/15

# Chhatrapati Shahu Ji Maharaj University Kanpur, Uttar Pradesh

## PART-II

### MARKS OBTAINED

| Q.                     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10         |
|------------------------|---|---|---|---|---|---|---|---|---|------------|
| (a)                    |   |   |   |   |   |   |   |   |   |            |
| (b)                    |   |   |   |   |   |   |   |   |   |            |
| (c)                    |   |   |   |   |   |   |   |   |   |            |
| (d)                    |   |   |   |   |   |   |   |   |   |            |
| (e)                    |   |   |   |   |   |   |   |   |   |            |
| (f)                    |   |   |   |   |   |   |   |   |   |            |
| (g)                    |   |   |   |   |   |   |   |   |   |            |
| (h)                    |   |   |   |   |   |   |   |   |   |            |
| (i)                    |   |   |   |   |   |   |   |   |   |            |
| (j)                    |   |   |   |   |   |   |   |   |   |            |
| Total                  |   |   |   |   |   |   |   |   |   |            |
| Total Marks in Figures |   |   |   |   |   |   |   |   |   | Max. Marks |
| Total Marks in Words   |   |   |   |   |   |   |   |   |   |            |



A080902T

Paper Code

A080902T

Paper Code

Signature of Evaluator

Date of Exam : 17/11/25 (Shift) : 3rd Room No. : 206  
 Paper Code A080902T Subject: Economics Year-Sem: 3rd  
 Name of Candidate: Shreya Yadav

24023000043

Roll No.

Shreya

Signature of Candidate

K. S. J.

Signature of Invigilator

Shreya

COE Facsimile

Course: Master of Arts (Economics)  
 Session: 2025-26 Year/Semester: 3rd  
 Subject: Economics of Growth

परीक्षक के कोड  
College Code

परीक्षा केंद्र के कोड  
Exam Centre Code

परीक्षा का प्रकार  
Type of Exam

E W 0 0 4

|   |   |   |   |   |
|---|---|---|---|---|
| A | A | ● | ● | 0 |
| ● | B | 1 | 1 | 1 |
| F | D | 2 | 2 | 2 |
| H | J | 3 | 3 | 3 |
| K | K | 4 | 4 | ● |
| L | L | 5 | 5 | 5 |
| R | M | 6 | 6 | 6 |
| S | N | 7 | 7 | 7 |
| U | T | 8 | 8 | 8 |
| U | 9 | 9 | 9 | 9 |

E W 0 0 4

|   |   |   |   |   |
|---|---|---|---|---|
| A | A | ● | ● | 0 |
| ● | B | 1 | 1 | 1 |
| F | D | 2 | 2 | 2 |
| H | J | 3 | 3 | 3 |
| K | K | 4 | 4 | ● |
| L | L | 5 | 5 | 5 |
| R | M | 6 | 6 | 6 |
| S | N | 7 | 7 | 7 |
| U | T | 8 | 8 | 8 |
| U | 9 | 9 | 9 | 9 |

Regular  Ex-Student  
 Private  Back paper Exam

ANSWER BOOKLET NO

11310272

A080902T

Paper Code



Paper Code

A 0 8 0 9 0 2 T

Exam Date

1 7 1 1 2 0 2 5

Name of Candidate

S H R E Y A Y A D A V

Father's Name

F A T E H B A H A D U R  
S I N G H Y A D A V

समावेश संख्या  
Enrollment Number C S J M A 2 4 0 0 0 0 6 3 5 5 3

परीक्षार्थी अभ्यर्थक संख्या  
Candidate's Roll Number 2 4 0 2 3 0 0 0 0 4 3

पेपर कोड  
Paper Code A D 8 0 9 0 2 T



|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | ● | 0 | 0 | ● | ● | ● | ● | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ● | 2 | 2 | ● | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | ● | 3 | 3 | 3 | 3 | 3 | ● |
| 4 | ● | 4 | 4 | 4 | 4 | 4 | 4 | 4 | ● | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |

A D 8 0 9 0 2 T

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| ● | ● | 0 | ● | 0 | ● | 0 | N |
| B | 1 | 1 | 1 | 1 | 1 | 1 | P |
| C | 2 | 2 | 2 | 2 | 2 | ● | R |
| E | 3 | 3 | 3 | 3 | 3 | 3 | ● |
| F | 4 | 4 | 4 | 4 | 4 | 4 |   |
| G | 5 | 5 | 5 | 5 | 5 | 5 |   |
| 2 | 6 | 6 | 6 | 6 | 6 | 6 |   |
| 4 | 7 | 7 | 7 | 7 | 7 | 7 |   |
| 6 | 8 | ● | 8 | 8 | 8 | 8 |   |
| 9 | 9 | 9 | ● | 9 | 9 | 9 |   |

Shreya

Signature of Candidate

K. S. J.

Signature of Invigilator

Shreya

C S Facsimile

Shreya

COE Facsimile

नोट : 1. परीक्षार्थी को निर्दिष्ट किया जाता है कि आवरण करने के पृष्ठ पर पर उचित सभी निर्देशों को सावधानी पूर्वक पढ़ें।  
 2. बीजक में गलती करने वाली उम्मीदवारों को सही उत्तर से शुरु की जावे। 3. पोलों को कानने या गीने बीजकने से भर जावे।

### INSTRUCTIONS TO THE CANDIDATE FOR FILLING PART-I

1. Read the instructions carefully given on the answer script and admit card.
2. Write Date of Exam, Shift, Paper Code & Name of Subject Correctly.
3. Write Name & Roll No. Correctly.
4. Write Semester & Branch Correctly.

### INSTRUCTIONS TO THE CANDIDATE FOR FILLING PART-III

1. Use blue or black ball point pen for writing alphabets & numerals in  Boxes.
2. Carefully study the example before you start marking.
3. As shown in the example below blacken the circles completely.



4. Make no Stray marks on this sheet.
5. DO NOT WRITE OR MARK ON THE BAR CODE.

### IN ORDER TO AVOID UFM (UNFAIR MEANS):

1. The Roll No. and Answer Book no. found elsewhere or any other symbol found in the answer book will be treated as unfair means.
2. Any tempering of Bar Code and Booklet no shall be treated as Unfair Means.
3. Do Not bring the materials like slip of paper/mobile/digital diaries/ study material/ revision notes in examination hall. Possession of the mobiles/ digital diaries/ electronic watch and any other electronic gadget except memory less scientific calculator shall be considered as UFM case.
4. Do not keep or paste currency note in answer script it shall be consider as UFM.

### अनुचित साधन से बचने हेतु:

1. उत्तर पुस्तिका के निर्देशित स्थान को छोड़कर अनुक्रमांक एवं उत्तरपुस्तिका या क्रमांक कहीं और न लिखें तथा कोई भी चिह्न न बनायें क्योंकि यह अनुचित साधन प्रयोग की परिधि में आता है।
2. उत्तर पुस्तिका के बारकोड अथवा उत्तर पुस्तिका संख्या पर छेद करने पर अनुचित साधन प्रयोग माना जायेगा।
3. परीक्षा कक्ष में निम्न वस्तुएं साथ न लायें, जैसे लिखे हुए कागज के टुकड़े, मोबाइल, डिजिटल डायरी, फोपी, पुस्तक यह सभी वस्तुएं जो अनुचित साधन के अन्तर्गत आती हैं। केवल संबंधित प्रश्नपत्र में ही मेमोरी लैस साइटफिक कंप्यूलेटर ले जाने की अनुमति होती।
4. उत्तर पुस्तिकाओं में रूबरे न रखें न ही उत्तर पुस्तिका में चिपकार्य। ऐसा करना अनुचित साधन प्रयोग की परिधि में आता है।

### परीक्षार्थी के लिए निर्देश

1. प्रवेश पत्र एवं उत्तर पुस्तिका पर दिये गये निर्देशों को ध्यान से पढ़ें।
2. कवर पृष्ठ के दूसरी तरफ कुछ न लिखें।
3. उत्तर पुस्तिका के पृष्ठों पर दोनों तरफ लिखें।
4. प्रश्न पत्र पर अपने अनुक्रमांक के अतिरिक्त कुछ न लिखें।
5. प्रश्न पत्र कोड एवं प्रश्न पत्र कोड सावधानी पूर्वक लिखें।
6. अपनी स्थिति स्पष्ट लिखें।
7. उत्तर पुस्तिका के पृष्ठों की संख्या देखें। अगर उत्तर पुस्तिका में पृष्ठ (1-24) से कम है या फटे हुए है, तो परीक्षा शुरू होने के पूर्व दूसरी उत्तर पुस्तिका ले लें।
8. प्रश्नपत्र को देख, यदि प्रश्नपत्र के विषय कोड, विषय का नाम तथा प्रश्न में कोई त्रुटि है तो उसके परीक्षा शुरू होने के 30 मिनट के अन्दर का निरीक्षक को तत्काल सूचित करें, उसके बाद विश्वविद्यालय द्वारा कोई कार्यवाही नहीं की जायेगी।
9. प्रश्नों के उत्तर लिखने के लिये पैसिल का प्रयोग न करें।
10. B कोपी या अतिरिक्त ग्राफ नहीं दिया जायेगा।

### INSTRUCTIONS TO THE CANDIDATE

1. Read the instructions carefully given on the Question Paper, Admit Card & Answer Script.
2. Do not write anything on back side of the cover page.
3. Write on both sides of pages of answer book.
4. Do not write anything on question paper except Roll Number.
5. Write Paper Code & Question Paper Id carefully.
6. CHECK the number of pages (1-32) or any other kind of damage in your answer script, if found than change the answer script immediately before the commencement of examination.
7. CHECK the Question Paper for any kind of discrepancy e.g. Subject Code, Subject Name and Question of the Question Paper during first THIRTY MINUTES of the commencement of the exam, so that it can be corrected in TIME. After that no corrections shall be entertained by the university.
8. Do not use pencil for answering the question.
9. Write status correctly e.g. those appearing in carry over paper should fill in status as Carry Over. Those appearing as Ex. Students should fill in status as ex.
10. No supplementary answer book & graph paper will be provided.

### INSTRUCTIONS TO THE CANDIDATE FOR FILLING PART-IV

1. Use blue or black ball point pen for writing alphabets & numerals in  Boxes.
2. Use blue or black ball point pen for filling the circles.

|                          |                                     |                                     |                                     |                                     |                                     |                                     |                          |                                     |                                     |
|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|
| 1                        | 8                                   | 1                                   | 5                                   | 4                                   | 3                                   | 2                                   | 1                        | 6                                   | 9                                   |
| <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Note - If your Roll No. is of 10 digits. Please leave first three columns



Paper Code

A 0 8 0 9 0 2 T



01

## Section - A

### Question 1 (A)

There's various difference b/w Economic Growth & economic development on many frontiers, as follows -

#### 1) Conceptual difference

##### Economic Growth →

It refers to a quantitative increase in a country's output of goods and services over time. It is measured by the rise in real Gross Domestic Product (GDP) or real GDP per capita. Growth captures the capacity of an economy to produce more, but it does not inherently indicate improvements in the equality of life or structural changes within society.

##### Economic Development →

It is a broader & more qualitative concept. It encompasses not only increases in income & output but also improvements in indicators such as health, education, living standards, income distribution, environmental sustainability, and institutional quality. Development reflects how economic progress translates into human well being.



Paper Code

A 0 8 0 9 0 2 T




02

## 2) Measurement Indicators

### Economic Growth Indicators →


- Real GDP
- Real GDP per capita
- Rate of capital formation
- Productivity growth

### Economic Development Indicators →

- Human Development 
- Multidimensional Poverty Index
- Gini coefficient
- Access to education & healthcare
- Quality of institutions & governance

## 3) Inclusiveness and Distribution

Economic growth can occur alongside significant inequalities.

Economic Development focuses on inclusive and equitable improvement in welfare. 

Economic growth is a quantitative expansion in output, whereas economic development is a qualitative development i.e. enhancement in the standards of living.

Do Not Write anything in this Portion



### Question 1(B)

#### Harrod - Domar Model

The Harrod Domar model is one of the earliest formal growth models emphasizing the roles of savings and capital accumulation in driving economic growth. The model's analytical structure is built upon a set of simplifying assumptions that create a rigid relationship b/w investment, output, & growth.

#### Key Assumptions →

1) Constant Returns to Capital (Fixed Capital-output Ratio)

The model assumes a fixed and constant capital-output ratio ( $v = K/Y$ )

This implies that:

a) A specific amount of capital is needed to produce one unit of output.

b) Production technology is rigid, and capital cannot be substituted with labor.

This is derived from a Leontief-type production function.



## 2) Constant Marginal Propensity to Save (MPS)

The model assumes that households save a fixed proportion ( $s$ ) of national income & savings behaviour does not change with income distribution or economic development.

Thus, total saving  $S = sY$

Since investment equals saving ( $S = I$ ), investment becomes a fraction of national income.



## 3) Constant Capital Depreciation Rate

Depreciation is ignored or a constant depreciation rate is assumed. This keeps capital accumulation straightforward & linear.

## 4) Savings always equals Investment

Following classical macro identity:

$S = I$ ; there are no financial friction or delays. All savings are automatically & instantly transformed into investment.

## 5) The model assumes constant price level and no inflation.

6) Investment is the only source of growth i.e. through capital accumulation & financed by savings.



### Question 1 (c)

The Circle of Poverty, also known as vicious circle of poverty describes a situation where low income leads to low savings, low investment, & low productivity, which again leads to low income.

It is a self-perpetuating trap, meaning that poverty sustains and reproduces itself without deliberate intervention.

Nurkse famously described it as: "a set of interlocking factors that keep a country in a state of poverty."

The concept can be explained through both the supply side (productive capacity) and the demand side (market size)

#### Supply side Vicious Circle (Nurkse)

This focuses on productivity & capital formation

low income → low savings → low investment

↓  
low capital formation

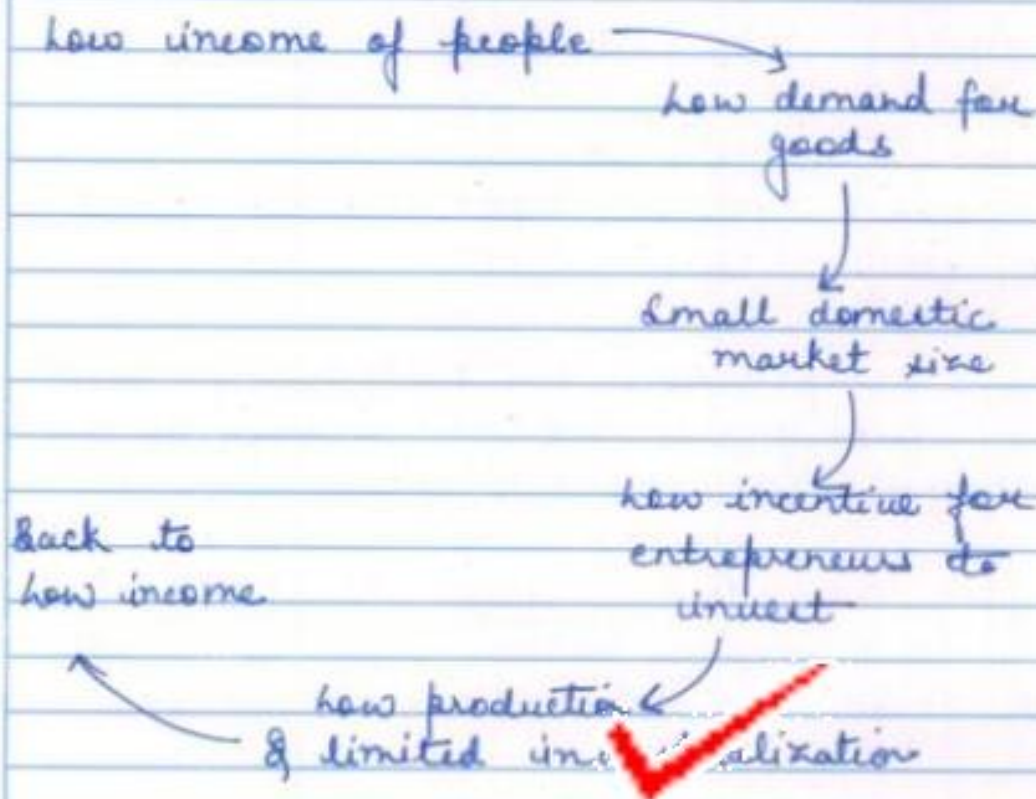
↓  
low productivity  
← low income again



This explains why developing countries struggle to accumulate sufficient capital to boost output.

### Demand side Vicious Circle (Nurkse)

This focuses on market size and investment incentives.



Thus, even if capital is available, firms face insufficient demand, preventing industrialization.



### Question 1 (D)

#### Human Development in India

Human development in India refers to the process of expanding people's capabilities, improving their well being and enhancing their opportunities to lead productive, healthy, and dignified life.

Human development as defined by the UNDP and rooted in Amartya Sen's capability approach emphasises →

- a) Expanding human choices
- b) Enhancing capabilities (education, health, skills)
- c) Ensuring access to resources & opportunities
- d) Promoting dignity, equity and freedom

In India, this involves enabling people to convert economic gains into improved well being.

The Human Development Index (HDI) in India tracks Health (life expectancy), Education (mean & expected years of schooling), Income (GNI per capita)

India's HDI has steadily improved since 1990,



reflecting progress in social institutions. However, India still ranks among the medium human development countries, specifying the need for further improvements in quality rather than only access.

One of the defining features of human development in India is uneven progress across states:

→ High human development states:  
Kerala, Tamil Nadu, Himachal Pradesh

→ Medium:  
Maharashtra, Karnataka, Punjab

→ Low:  
Bihar, Jharkhand, UP, Odisha

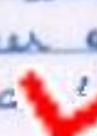
These differences reflect variation in governance, literacy, ~~and~~ women's empowerment, healthcare systems.

Therefore a sustained focus on inclusive growth, human capital investment, good governance, & social equity is essential for achieving high & holistic human development in India.



## Question 1 (E)

### Role of Technology in Economic Development

Technology plays a central and transformative role in the process of economic development. In both classical and modern growth theories, technological progress is considered the most important long-run driver of economic development. The following are  answers —

#### 1) Increase productivity and Output

Technological advancements such as improved machinery, automation, and digital tools raise the productivity of labor and capital.

- Higher productivity → Higher output
- Lower production cost
- Enhanced competitiveness.

#### 2) Encourages Innovation & Entrepreneurship

Technology promotes innovation through new products, processes and services.

- Startups & new firms emerge in tech-enabled sectors.
- Firms can scale faster.



→ R & D investment creates spillovers that benefit the wider economy.

3.) Facilitates Structural Transformation

→ Mechanization boosts agricultural productivity

→ Manufacturing adopts automation & advanced machinery.

→ Services expand via ICT, digital platforms & financial tech.

4.) Enhances Human Capital

→ Online ~~to~~ learning, Edtech, AI-driven content.

→ Telemedicine and digital health platforms

→ Better disease detection and health-care management.

5.) Expands markets and improves connectivity.

Technology reduces transaction costs and expands market access.

Digital payments, E-commerce, online marketplace integrates economies into global value chains.



### Question 1 (A)

#### Actual Growth Rate ( $G_a$ )

The actual growth rate refers to the realised rate at which an economy's output (GDP) increases over a given period. It reflects what is happening actually in the economy.

It is determined by actual increases in investment, output, employment, and technological use in the economy at a point in time.

Symbolically,  $G_a = \frac{\Delta Y}{Y}$

It is driven by:-

- Current levels of investment
- Existing productive capacity
- Business conditions & expectations.
- Aggregate demand
- Utilisation of capital and labor.

The actual growth rate shows short run realised performance of the economy. It may fluctuate due to business cycles, policy changes, or external shocks.





Paper Code

A 0 8 0 9 0 2 T



13

### Question 1 (6)

Harmful effects of MNCs on economy →

- 1) Profit repatriation by MNCs drains foreign exchange reserves from the host country.
- 2) MNCs can outcompete & displace local industries due to superior technology & capital.
- 3) They often exploit cheap labour, offering low wages and poor working conditions.
- 4) MNCs may influence political decisions & policies in their favour through lobbying.
- 5) They can create regional imbalances by concentrating activities in urban or developed areas.
- 6) Excessive reliance on MNCs can weaken domestic technological and industrial capabilities.
- 7) MNCs operations may lead to environmental degradation through resource overuse & pollution.



### Question 1 (H)

#### Globalization

Globalisation is the widening, deepening and speeding up of worldwide interconnectedness across economic, cultural, technological, and political dimensions. It reduces national barriers and creates unified global market place.

Economically, globalization involves:

- Rapid expansion of international trade.
- Growth of foreign direct investment
- Emergence of global value chains.
- Cross-border movement of capital & labor.

This leads to greater economic integration among nations.

Advances in communication, internet, transportation, digital technologies have accelerated globalization by enabling instant data transfer, e-commerce, global connectivity.



Globalisation promotes the exchange of ideas, values, food, fashion, media, and lifestyles, leading to cultural diffusion. It results in both cultural enrichment and concerns of cultural homogenisation.

Globalisation encourages cooperation through international organisations (WTO, UN, IMF) & influences policy convergence on issues like trade, environment, and human rights.

### Benefits of Globalisation →

- Access to larger markets
- Increased investment
- Transfer of technology
- Employment opportunities
- Improved productivity & competitiveness.

### Challenges of Globalisation →

- Unequal distribution of benefits
- Threats to domestic industries
- Cultural erosion
- Environmental concerns
- Economic vulnerability to global stocks.

Thus, globalisation creates both winners & losers.

Question 1 (I)Main assumptions of Solow Model

- 1.) The economy uses a neo classical production function of the form  $Y = F(K, L)$  with constant returns to scale.
- 2.) Labor grows at a constant exogenous rate  $(n)$
- 3.) Savings is a fixed proportion of output, with a constant savings rate  $(s)$
- 4.) Capital depreciates at a constant exogenous rate  $(\delta)$
- 5.) Technological progress occurs at a constant exogenous rate  $(g)$ .
- 6.) Markets are perfectly competitive in both factor and product markets.
- 7.) Households save all income not consumed; investment equals savings  $(I = sY)$ .
- 8.) Capital accumulation follows the law:  
 $\Delta K = sY - \delta K$
- 9.) Steady state is reached when capital per worker stops changing  $(\Delta K = 0)$



## Section B

### Question 5

#### The Big Push theory

The Big Push Theory, developed by Paul Rosenstein-Rodan (1943), explains that underdeveloped economies require a large, co-ordinated and simultaneous investment effort across multiple sectors to break out of the vicious circle of poverty.

The big push theory argues that a developing country cannot industrialise through piecemeal efforts. It needs a massive, co-ordinated investment program in several sectors simultaneously so that each sector generates demand for others. The main concept is complementarity among industries i.e. one firm's output is another firm's input or market. So co-ordinated investment multiplies benefits.

The big push theory was proposed to explain:

- Why poor countries remain trapped in low income equilibrium.
- Why private markets alone fail to start the industrialisation process.



c) Why government planning and large scale public investments are required in early development stages.

Assumptions of the Big Push Theory:-

- 1) Underdeveloped countries face low productivity and small markets.
- 2) Industries exhibit external economies of scale, - benefits extend beyond the firm.
- 3) Individual firms lack incentive to invest alone because demand is too small.
- 4) Multiple complementary industries must develop together to generate mutual demand.
- 5) Private sector may lack capital, information or capacity to co-ordinate investments.
- 6) Large scale investment raises incomes, which expands markets.

It's real world implications:-

- 1) Post war development planning in Europe.
- 2) India's second Five-Year Plan.
- 3) Modern Industrial Disputes debates
- 4) South Korean & Asian Industrial strategies.



Importance in the process of economic growth:-

1) Helps break the vicious circle of poverty

The theory shows that only a large, co-ordinated investment effort can raise productivity, income, and demand enough to escape poverty traps that keep economies stagnant.

2) Creates complementarities across industries

Big Push emphasizes that industries depend on each other, inputs of one are outputs of another, so simultaneous investment expands markets and increases efficiency.

3) Enables Economies of Scale

Large scale investment allows firms to operate at efficient production levels, reducing average costs, improving competitiveness & accelerating industrial growth.

4) Expands market size and aggregate demand

Coordinated investment increases employment and income which expands domestic demand and makes industrial production viable in developing economies.



### 5.) Promotes rapid industrialization

The theory supports the idea that widespread industrial investment leads to the emergence of multiple sectors i.e. textiles, steel, machinery, chemicals, spurring structural transformation.

### 6.) Overcomes coordination failures

In a poor economy, no firm wants to invest alone due to uncertain markets. A big push co-ordinates decisions, reducing uncertainty and enabling joint investment.

### 7.) Stimulates Infrastructure Development

Large scale investment justifies major infrastructure projects; roads, power, ports, that are essential for long term economic growth but are unaffordable through isolated projects.

### 8.) Attracts Private Investments

Once the initial push increases markets and incomes, private investors find it profitable to enter, creating a multiplier effect that boosts growth further.



### Section-C

#### Question 6

Education, research, & knowledge lie at the core of modern economic development. While classical growth theories stressed capital accumulation & labor, contemporary development thinking recognises that long-term progress depends far more on a society's ability to learn, innovate, adapt. In this sense, education, research, & knowledge operate not as auxiliary factors but as the main drivers that determine productivity, competitiveness and the overall quality of growth.

#### 1.) Education as the Foundation of Human Capital

Education contributes to human development by building the human capital necessary for productive activity. At the most basic level, literacy and numeracy raise workers' ability to participate in the labour market and adopt new technologies. As economies diversify from agriculture to manufacturing and services the demand for semi skilled and skilled labor rises sharply. Without an educated workforce, economies are unable to absorb



modern technologies are move up the value chain.

## 2) Higher education and skilled Human Capital

Higher education supports innovation by training researchers and providing an environment for critical thinking. In a global economy, where competitive knowledge advantage increasingly depends on technology and adaptability, the availability of high skilled talent is often more important than natural resources or physical capital.

## 3) Research as a driver of innovation

Research expands the frontiers of knowledge. Whether conducted in universities, public research labs, or private firms, research opens the doors to new technologies, improved production process and entirely new industries.

In modern growth theory research feeds into Total Factor Productivity (TFP) the component of output unexplained by capital & labor. Countries that allocate a substantial share of GDP to R&D tend to experience faster growth. The reason being research generates ideas & ideas are non-rival & cumulative.



#### 4.) Knowledge as a driver of Productivity

Knowledge, both technical and managerial helps firms use resources more efficiently and raise output levels.

#### 5.) Role in Structural Transformation

Education and research enable workers and firms to shift from low productivity sectors into manufacturing and modern services.

#### 6.) Institutional and Policy support

Strong institutions, good policies, and public investment in education and R&D creates an eco system that encourages innovation and growth.

#### 7.) Socioeconomic Externalities

Education and knowledge generates spillovers like better health, informed citizens, and reduced inequality, all of which support development.

#### 8.) Importance in the Modern knowledge economy

In today's economy, innovation, skills, and technology determine competitiveness more than




physical capital &  natural resources.

9) Education strengthens social cohesion & lowers conflict.

A more educated population tends to have higher social trust, better conflict resolution skills, and lower susceptibility to extremism. All of this creates a stable environment necessary for investment & long-run economic growth.

10) Research accelerates technological diffusion to firms.

Research institutions often act as intermediaries that help firms adopt global technologies faster, reducing time lag b/w invention & application and allowing developing economies to close productivity gaps.

11) Knowledge, especially  digital literacy, opens access to global markets.

In the modern economy, knowledge, especially digital skills allows firms & individuals to participate in global value chains, access larger markets, & compete internationally, which significantly boosts income & productivity.