

Prelims cleared

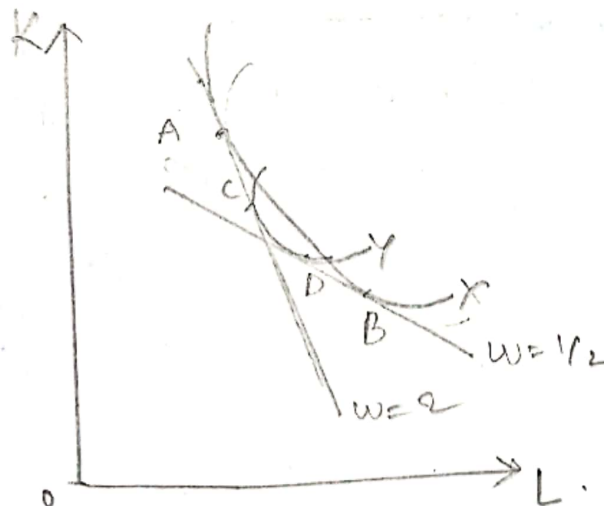
Section A:

1.

(a)

Factor intensity reversal occurs when a particular commodity Labour intensive in one nation and the same commodity is Capital intensive in other nation.

It happens due to the presence of a higher elasticity of substitution between K and L in good 'X' than in good 'Y'.



From the diagram, Nation 1 with less wage rate (w/r) produces good 'x' at B. (i.e) L -intensive. whereas, Nation 2 with $w/r = 2$ produces the same good 'x' at 'A' - K -intensive.

Direction of income distribution:

▷ if wages in nation 1 rises faster than nation 2, then the gap in wages between two nations falls.

▷ if wages in nation 1 rises at a slower rate than nation 2, then the wage gap widens.

▷ with the presence of factor intensity reversal trade increases the income of the factor intensively used in production. $w/r \uparrow$ in nation 1

$w/r \downarrow$ in nation 2.

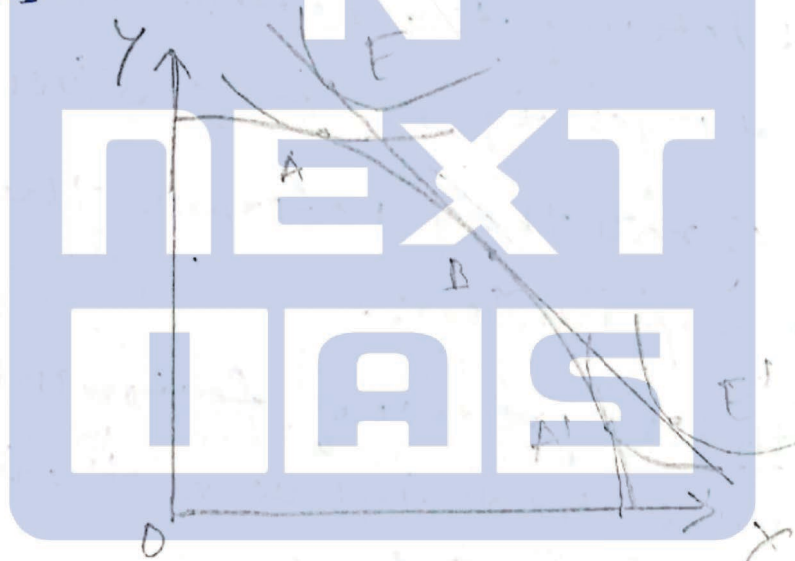
but a slower rate.

Hence, the direction of income distribution is ambiguous.

(b)

When two nations are identical in every aspect their production possibility curves are identical.

Identical PPFs represents same technology, same combination of inputs and similar cost structures.



△ Convex PPF reflects the assumption of increasing costs.

Trade is possible even when both nations are identical. The basis of trade is 'difference in tastes'.

Difference in tastes influence the demand and preference of a commodity. If a commodity 'X' is less preferred in a nation, its price is also less.

In figure, Good 'X' is highly priced in nation 2. (the slope of line tangent to point A')

The difference in relative prices acts as basis for trade.

Nation 1 exports 'X' and reaches 'B', Nation 2 exports 'Y' and reaches B. Post trade they both exchange the goods and are at higher indifference curves respectively at points E and E'.

Hence, when both nations are identical, difference in tastes acts as basis for trade.

(C)

(ERP)
Effective rate of protection is different from tariff rate. It includes the value added to the inputs imported. It reflects the 'Actual rate (level of protection) conferred to an industry.

$$ERP = \frac{t - a_i t_i}{1 - a_i}$$

$t \rightarrow$ actual tariff on final commodity

$a_i \rightarrow$ value added = $\frac{\text{Cost of (inputs)}}{\text{price of final commodity}}$

$t_i \rightarrow$ tariff on inputs

Example: Suppose the world price is 100 Rs.

Cost of inputs

import = 80

tariff on final good = 10%

Value added = 20

$$ERP = \frac{10 - \frac{80}{100} \times 0}{1 - \frac{80}{100}}$$

$$= \frac{100 \times 10}{20} = 50\%$$

Effective rate of protection is 50%
whereas the tariff rate is only
10%.

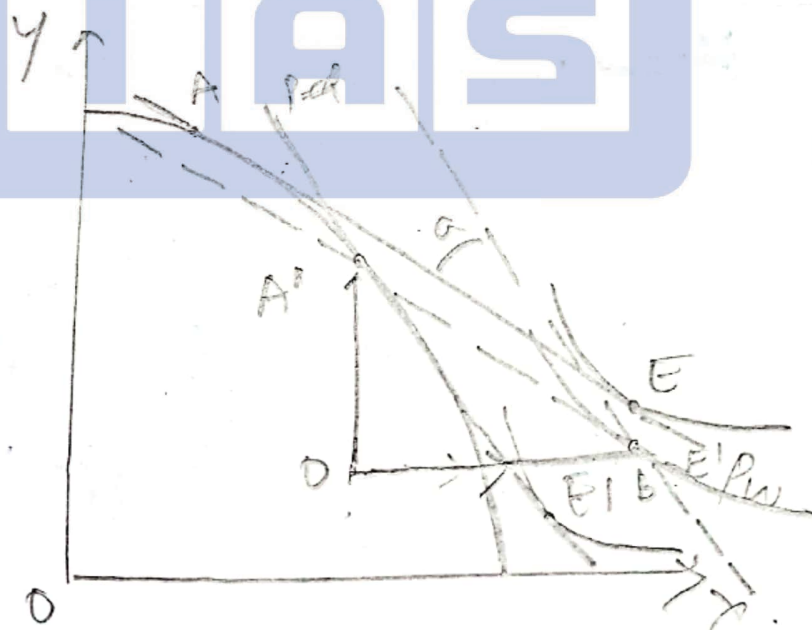
properties of ERP:

- ⇒ ERP is ↑ when it is ↑
- ⇒ when it is ↓, ERP is also
High.

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Why a small country imposes a tariff on its imports, the domestic price of the commodity rises, but the world price doesn't change.

All the benefits of TOT from tariff are enjoyed the small country. (i.e.) it is worse off as there are no gains from TOT.



- ⇒ A is the initial level of production.
E is the initial level of consumption.
Post tariff, the production of
good X will. The small country
move from A to A', the price
of good X domestically rises.
⇒ The nation consumes at E'.
⇒ If we move E' further, it can
be assumed that E' also lies on the
PW line. As the price in world
is still constant.
⇒ The A'D is the exports of Y.
O E' is the imports of X.
LO is the rate of tariff.
E'B is the tariff
revenue of the government.

5

Ans

In Keynesian open economy
framework:

$$Y = C + I + G + NX$$

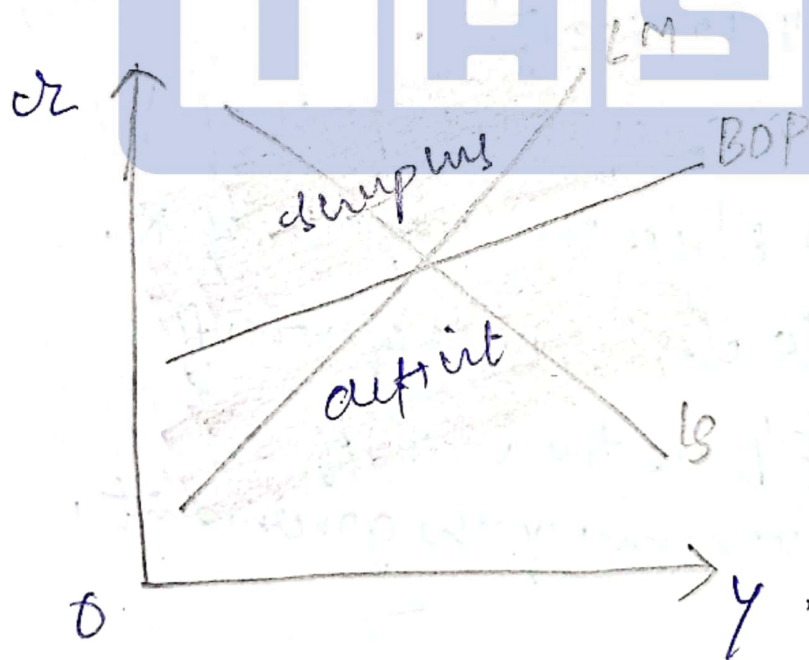
$$NX = Y - C - I - G$$

$$CA = Y - [C + I + G]$$

which $\Rightarrow S = I$

$$S + M = I + X$$

↓ ↓
changes injections



Issue in a Keynesian open economy problem is to ensure both internal and external balance simultaneously.

The idea of impossible trinity makes it difficult for any economy to have effective monetary policy, ~~flexible~~ ^{fixed} exchange rates and ~~import~~ ^{capital} mobility at same time.

To ensure external balance the country has to sacrifice its internal autonomy. The Keynesian open economy issues can be solved with appropriate policy mix strategies.

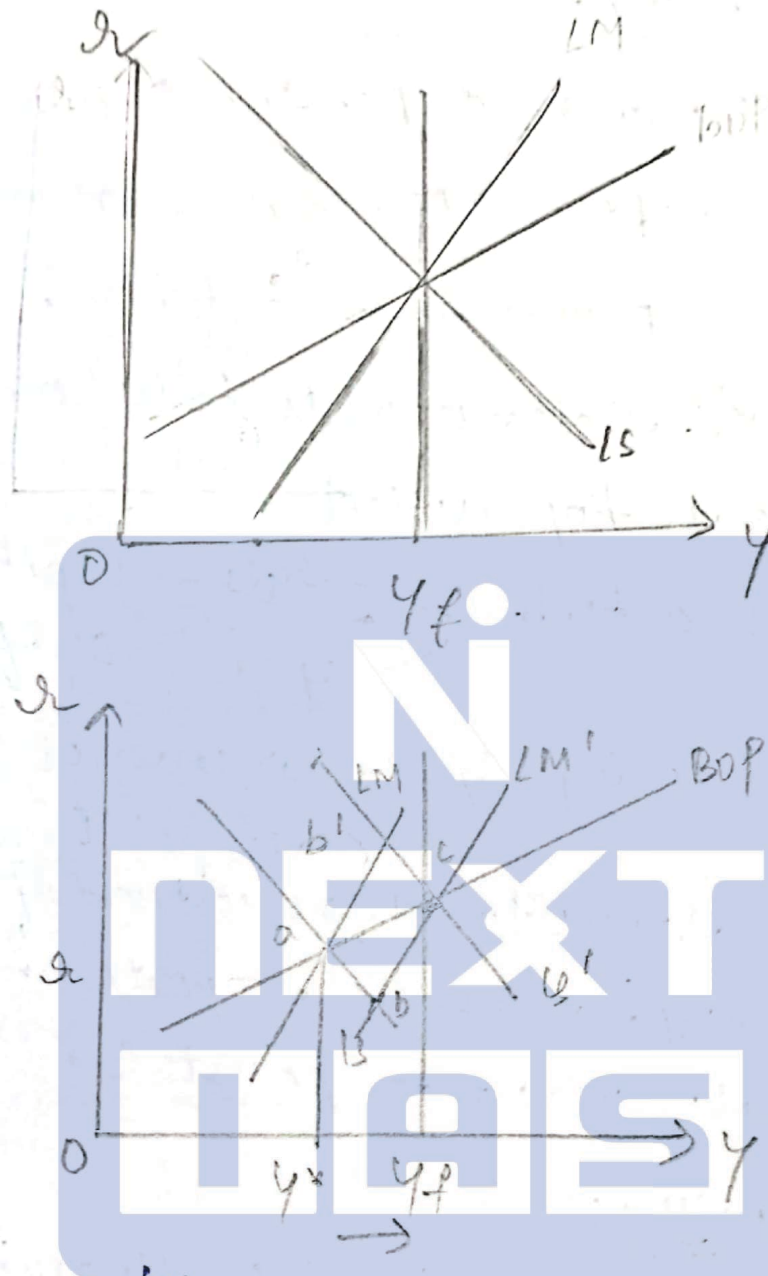
Q

Ans

(a)

An Economy with a flexible exchange rate system and imperfect capital mobility has control over its monetary policy.

Central bank can use monetary policy to influence Aggregate demand. When the central govt can also increase aggregate demand (AD) by a expansionary fiscal policy if an economy is facing unemployment, then it is producing output at a rate lesser than the full employment level output.



for example:

y_f — full employment

y^* — unemployment.

to reach y_f ← monetary policy
fiscal policy.

Monetary policy:

⇒ Central bank $\uparrow$ M_s to $\uparrow$ AD.

LM shift right, equilibrium

moves from a to b.

⇒ at ib^{*}, interest rate falls and

there is Bop deficit

as a to b $\swarrow$ $\downarrow$ = capital outflows.

increase in Y $\uparrow$ = increases imports

⇒ need to depreciation of currency. It boosts exports and
LS shifts right to point C.

Fiscal policy:

⇒ Expansionary FP. LS shifts right
a to b' $\swarrow$ $\downarrow$ = capital inflows
 $\searrow$ $Y \uparrow$ = imports $\uparrow$

⇒ $\downarrow$ $\uparrow$ need to appreciation.

⇒ LS shifts back to a

Thus monetary policy can
be effectively used to achieve
full employment.

(b)

Swartes
Sway diagram represents how a
country can pursue policies to
ensure internal and external
balance.

⇓ (IB)

⇓ (EB)

super to
full employment
and stable prices

Balance of
payments
equilibrium

Assumptions:

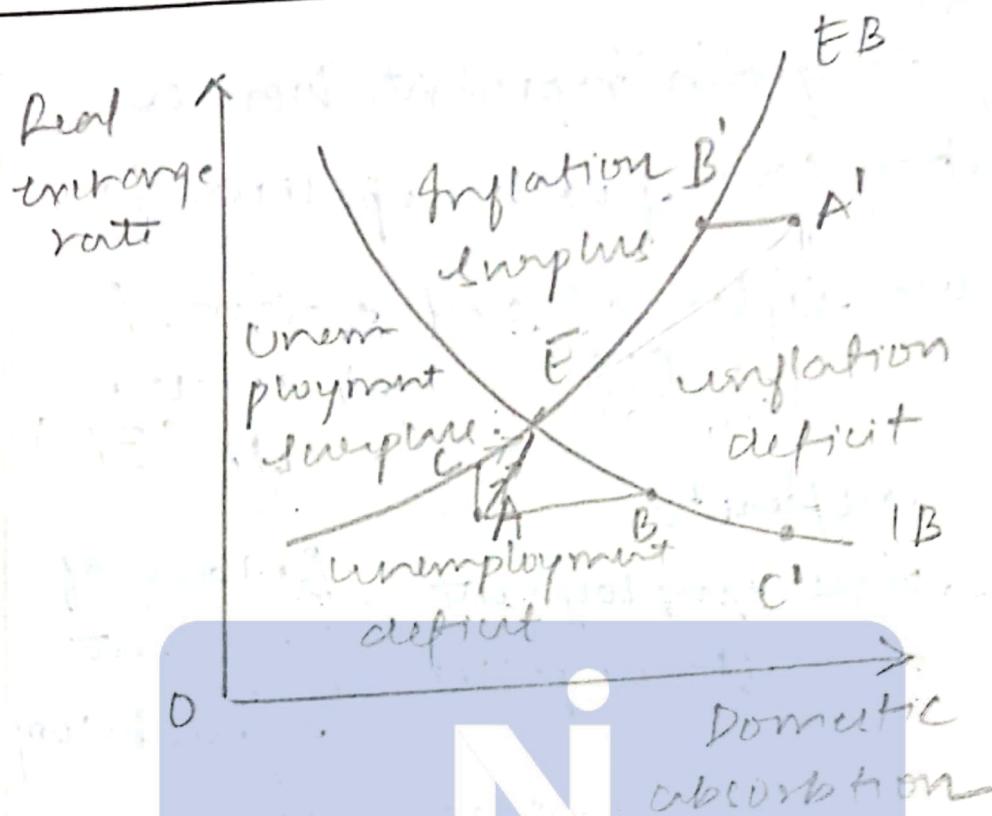
→ Swartes assumes zero capital
flows

→ prevalence of free trade

→ constant prices.

The EB curve is positively sloped
because depreciation of currency
increases domestic absorption.
by increasing exports

The IB curve is negatively sloped
because appreciation of currency
increases domestic absorption



due to increasing imports.

⇒ X axis represents domestic expenditure changing policies (fiscal & monetary policies)

⇒ Y axis represents expenditure switching policies. (Devaluation and revaluation).

⇒ "E" represents equilibrium where EB & IB were intersect

⇒ right to IB curve is zone of inflation. points left to

IB curve represent Zone of unemployment.

⇒ all the points of IB = equilibrium internal balance.

⇒ Similarly, points right to EB curve represent BOP deficit. The points left to EB curve represent BOP surplus.

Unemployment and BOP deficit:

⇒ point 'A' lies in the zone of unemployment and deficit.

⇒ Expansionary policies can move the economy to point 'B'. It ensures IB but deficit stays.

⇒ Devaluation of currency moves the economy to point 'C'.

EB is achieved, but unemployment stays.

→ suggestion: Policy mix with appropriate devaluation

and expansionary monetary and
fiscal policies

Inflation and BOP deficit

- ⇒ point A' lie in this zone
- ⇒ economy can move to point B' but inflation stays (contractionary policy)
- ⇒ economy can move to point C' through revaluation but deficit stays.

Suggestion: Policy mix:
revaluation and
contractionary policies

Hence, appropriate policy mix
strategies can be used to ensure
EB and IB are achieved.

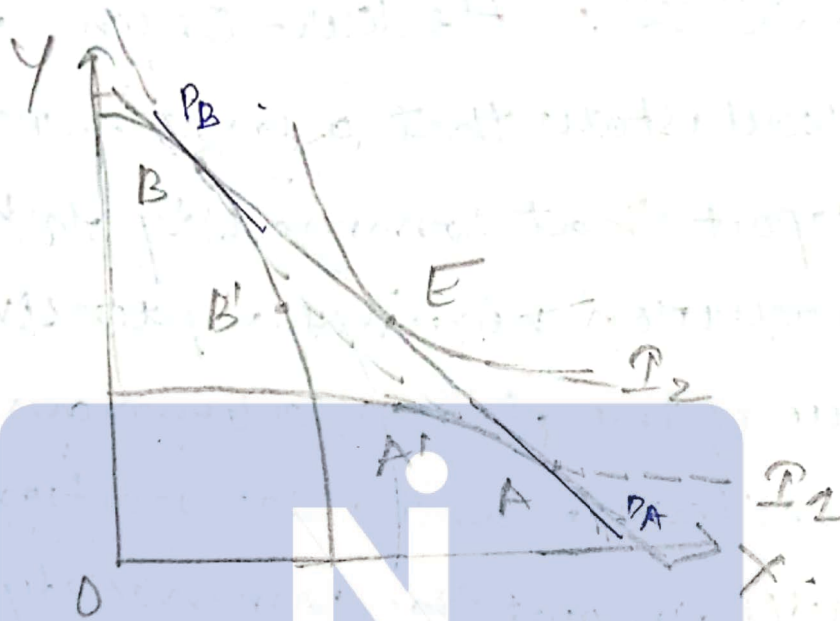
Q

Ans

Statement: Heckscher-Ohlin (H-O) model states that a nation will export that commodity whose production requires intensive use of the factor abundantly available and the nation will import the commodity whose production requires intensive use of the nation's scarce factor.

Assumptions of H-O Model:

- ⇒ Good X labour intensive, Good Y is capital intensive
- ⇒ initial existence of full employment
- ⇒ Constant returns to scale
- ⇒ Presence of perfect competition.
- ⇒ No transportation costs and No trade barriers.



- ⇒ The relative price before trade is higher in Nation A than Nation B.
- ⇒ post trade Nation A produces at point A' and Nation B produces at point B'.
- ⇒ After exchange both the nations reach point 'E'.
- ⇒ point 'E' lies on a higher indifference curve, which would be out for both the nations.

Production possibility curve.

Criticisms :-

⇒ The assumptions of perfect competition and Zero transportation costs are unrealistic.

⇒ Trade in present times characterised by "Intra industry".

⇒ H-O Model fails to explain trade in the presence of imperfect competition.

⇒ Leontief paradox in US also act as a short coming to H-O Model.

However H-O Model still act as the Basis for other international trade theories.

Section-B

5

a

Myrdal theory of circular causation postulates that developing economies: Growth leads to increasing regional inequalities.

Myrdal states that in developing countries "centripetal effects" or "Balkanisation effects" dominate "centrifugal or spread effects".

This has been true for India especially in rural areas.

⇒ Growth has led to migration of young and active people from rural areas to urban areas in search of better economic incentives.

⇒ resources and raw materials from rural areas are being consumed up by industries in cities.

⇒ The income of rural population has decreased because of the development of informal sector in urban areas.

⇒ There has been no spread or diffusion of technology to the extent as expected.

Growth in India has

led to regional inequalities.

Few cities and urban areas have grown at the cost of rural population.

6

Ans

Environmental degradation is the serious problem considering the pace. Countries across the world are on toes to adopt environment friendly policies.

Economists highlight two basic reasons for environmental degradation. The "unavailability" of market for pollutants, improper property rights and less incentive to producers.

If the countries are able to trade their "Environment performance" in the market, then the degradation will be reduced as costs and benefits of every activities will be

Internalised in business decisions.

Another reason is low level of development. This specially applies to underdeveloped and developing countries where there is no enough infrastructure to ensure consumptions. Lack of institutions in less developed countries to enforce environmental law. Lack of funds and R&D facilities to innovate or adopt Environmental friendly technologies.

Hence, low level of development and non-availability of markets cause environmental degradation.

(C)

Ans

Solow model predicts that savings Investment only increase growth temporarily. In long run the increase in investment is offset by higher capital to Output ratio.

Hence according to Solow, Growth in long run is because of technological progress.

To measure the effect of technological progress, the growth accounting method is used.

$Y = AK^\alpha L^{1-\alpha}$ production function.

$$\frac{\Delta Y}{Y} = \frac{\Delta A}{A} + \alpha \frac{\Delta K}{K} + (1-\alpha) \frac{\Delta L}{L}$$

$\frac{\Delta Y}{Y}$ - growth rate

$\frac{\Delta K}{K}$ & $\frac{\Delta L}{L}$ are contribution of capital and labor to output respectively.

$$\downarrow \frac{\Delta A}{A} = \frac{\Delta Y}{Y} - \alpha \frac{\Delta K}{K} - (1-\alpha) \frac{\Delta L}{L}$$

$\downarrow$
This amounts to residual growth.

$\frac{\Delta A}{A}$ is total residual which is mainly attributed to technological progress.

$\Rightarrow$ technological progress causes growth.
efforts

$\Rightarrow$ A positive residual means technological progress. //

(d)

Ans

Unbalanced growth theory is a strategy of development by sustaining a "chain of disequilibrium". It postulates investment in social overhead capital first by ignoring other sectors.

Unbalanced growth theory suggests to invest in those sectors first which are essential for development of other sectors.

The nature of imbalance created in the economy must have a "forward and backward linkage". Those sectors must be prioritise development of which will have extremely high

spread efforts.

Industries which have higher
linkages, like the assembly of
consumer goods must be prioritized.

Social sectors like education,
health, sanitation and infrastruc-
ture have higher linkages.
Prioritizing these sectors will
"induce" investment in other
sectors also.

(e)

Ans

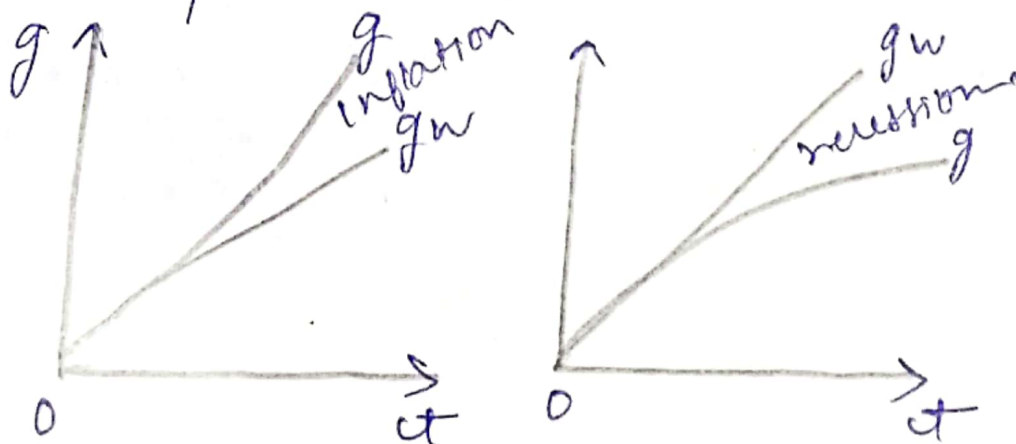
Harrod's equilibrium is rightly called as "knife edge" equilibrium, because of its instability.

Case 1: if $g > g_w$.

$C_y > C$, the required investment is greater than actual and this results in inflation and incentivizes investment.

Case 2: if $g < g_w$.

$C_y < C$, the required investment is very less than actual. Investment is dis-incentivized and growth falls.



Reasons for instability:

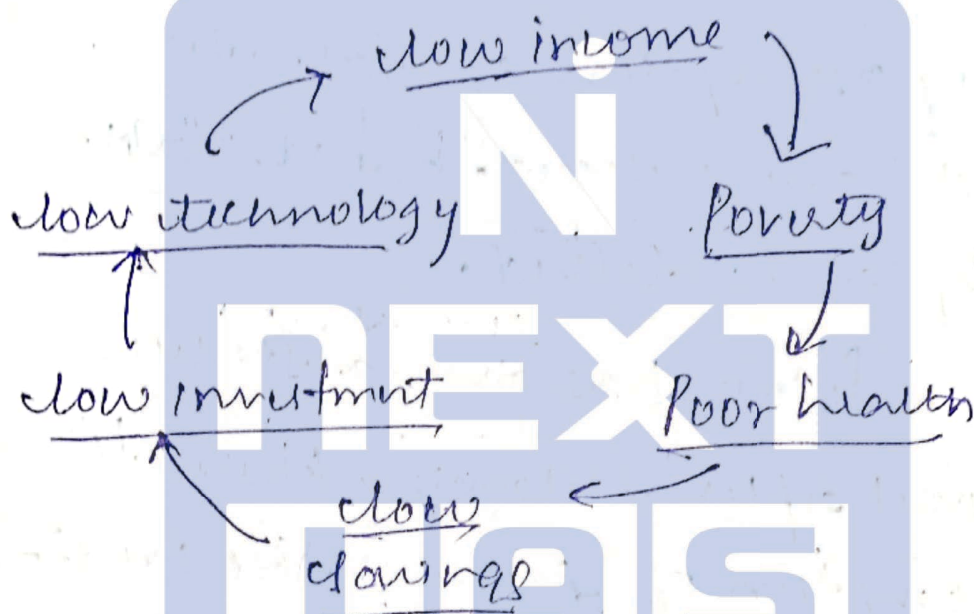
- ⇒ fixed savings ratio (s)
- ⇒ fixed growth rate of labor.
- ⇒ fixed $\frac{K}{Y}$ ratio (θ)
- ⇒ irreversibility of K and L .

Why assumptions of Harrod's model are relaxed the instability can be solved.

Solow has given a stable model after relaxing Harrod's assumption of fixed θ . He considered diminishing returns to capital against Harrod's "constant returns".

⑥
⑥

Underdeveloped and overpopulated countries are characterized by presence of vicious cycle of poverty.



For a country to break from this cycle according to "Leibenstein" a minimum amount of investment (critical minimum effort) based on relationship between factors, per capita income, population

growth and investment is required and which would raise the per capita income to a level at which sustained development could be maintained.

A developing economy experiences more shocks (that decrease PC) than stimulus, and the magnitude of stimulus in developing country is also smaller.

Vicious cycle of poverty can be broken and the economy can be moved from a "state of backwardness to sustained growth" when "income stimulating factors" are pushed to a degree higher than "income depressing factors".

so that the critical minimum effort is attained. Only then the economy will be on the path of development.

Developing countries are mostly engaged in zero sum activities. These activities do not increase PCP, but merely redistribute it. This is due to the political power, social prestige and monopolistic attitude of business. These activities are directed towards maintaining the current social structure at the cost of poverty.

Hence, a critical minimum effort is required to break the cycle.

⑥
⑥

Free ridership is the problem with goods that are non-rival and inexcludable by nature. Public goods are often associated with free ridership problem.

Similarly environmental degradation/pollution is a public bad. It is non-rival and inexcludable. Due to the presence of negative externalities, a producer is incentivised to not conform to environmentally sound practices. There is no incentive to the polluter to "not pollute" if the environment is already polluted.

Franchisement problem in environmental degradation can be solved by effective implementing environmental laws.

For example:

⇒ Passing pollutes, based on "polluter pays" principle may force the polluter to conform with sound practices as to avoid stop.

⇒ Absolute liability clause that lays the entire responsibility of a man made environmental disaster on the firm or producer can also be helpful to instill sense of conformity.

⇒ Policy such as extended producer responsibility with respect to packaging on products may also help solve the problem.

⇒ Assigning property rights to environment pollution, as in, converting the public good into private good eliminates the non-rival character.

⇒ Property rights force the producers to internalize the damage on environmental degradation in their policies.

Henry Fordship
problem related to the public
bad " Environmental degradation
can be eliminated "

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Rostow's stages of economic development are based on the western ideas of "Modernity and developed stage". They are basically based on Capitalism and a liberal democracy.

Rostow states that goal of economic development is industrialization.

Stages :

1. Traditional society. It is the primitive self-sustained society with low level of technology and agriculture dominated economy.

2. Preconditions for take off :

Traditional society assumes the

features of commerce. One due to exploitation of agriculture & Natural resources for trade.

3. Take off: This stage is characterised by development of manufacturing sector. The surplus labor from agriculture is absorbed by industries.

4. Drive to maturity: This stage is characterised by development of wider commercial and industrial base.

5. Max consumption: In this stage countries ~~take~~ exploit comparative advantage and benefit from International trade.

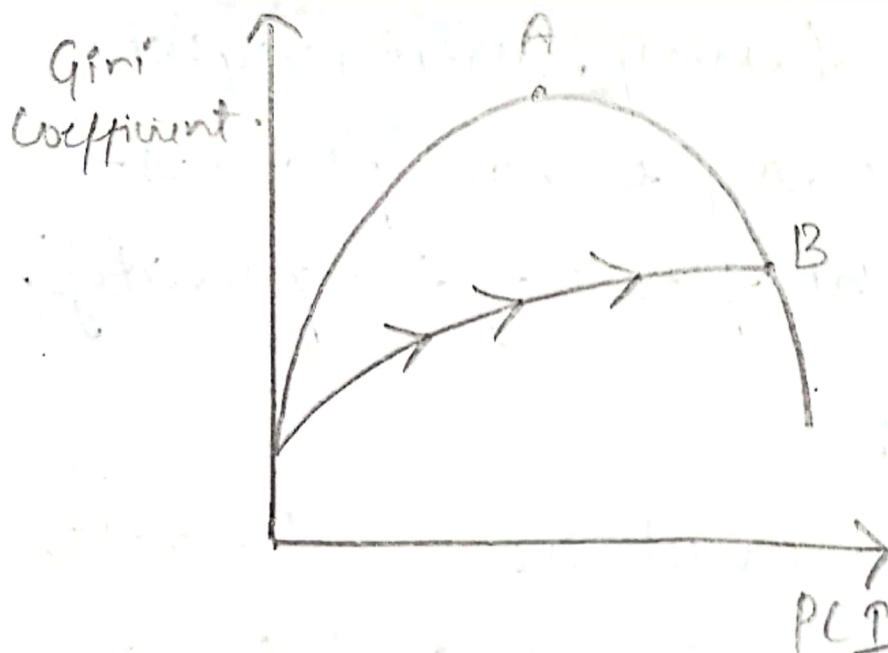
Hence, these are the five stages of Rodrik's theory of growth.

प्रश्न संख्या
(Question No.)

7
60

Kuznets curve represents the level of inequality for different level per capita income. Kuznets states that inequality in an economy increases initially with a rise in p.c.i. After reaching a maximum, the inequality falls as p.c.i. keeps increasing.

Kuznets is a 'U' shaped curve.



It is true that "Kuznets"
peak can be reduced. In other
words, the Economy can tunnel
a point left of peak to a point
right of peak (B) without
reaching the peak.

For this to happen, State
must assume the active role.

The policies must be aimed at
~~and~~ redistributing income
considering the interests of both
poor and rich. With right
policies any economy can es-
cape the peak of inequality.

Policies:

→ State must assume the role
of active planner and welfare
provider.

- ⇒ Taxation should be progressive as i.e. the rich must be taxed higher than the poor.
- ⇒ Investment must be made in social infrastructure, education and primary health services in social areas.
- ⇒ Agricultural reforms must be introduced that provide wide opportunities to farmers.
- ⇒ Concentration of wealth must be checked by appropriate money laundering and tax evasion laws.

Hence, with state's active role the peak of Kuznets Curve can be surpassed.

⑥
Ans

(HD)
Harrod Domar model assigns a very important role to savings. According to them, Growth is the outcome of capital accumulation.

To increase capital (K), savings must be increased by abstaining from current consumption.

⇒ HD model also states that the rate of savings must be sufficiently high to offset the depreciation of capital and ensure growth.

$$g = \frac{d}{O} - \delta$$

Solow model on the other hand
doesn't assign any "growth effect"
to savings. According to Solow,
savings only have level effect,
that is it changes the growth
path but doesn't change the
growth rate in long run.

According to Solow, In-
creased savings increases output
for temporary period. In long
run, the productivity of capital
falls ($\theta \uparrow$) and the impact
of savings is cancelled out.

In HD model θ is constant,
but in Solow's $\theta \uparrow$ due to
the presence of diminishing
returns to capital. Hence, savings
has no growth effect.

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Gne

According to balanced growth theory, developing countries are stuck in a vicious cycle of poverty to break this cycle simultaneous investment in all sectors is required.

Investment in wide range of industries leads to vertical & horizontal integration of industries, better division of labour, expansion of market size and ultimately leads to growth.

However, Balanced growth is very unrealistic to be practised in developing countries

as it is beyond thing capacities .

Limitations:

⇒ Balanced growth requires high
amount of resources

⇒ It requires good informational
infrastructure to design appropriate
policies that balance interest of
all sectors .

⇒ It is very difficult to implement
such policies in developing countries
due to lack of effective institutions .

On the basis of these limi-
tations, Hirschman's strategy
of unbalanced growth makes
more sense

⇒ Unbalanced growth theory is
more logical and realistic for
developing countries .

⇒ due to constrain of resources
it is easy and affordable for a
developing country to invest in
strategically selected sectors.

⇒ Investing in divergent projects
or "pressure relieving investment"
like forward and backward
linkages. Investment in social
owned capital, include private
investments.

However, Hirschman theory
advocates a policy similar to
mixed economy and proposes
largest role of state in devel-
opment. Hence, it is more
suitable for poor developing
countries than balanced growth
strategy.