### INNOVATION AND ENTREPRENEURSHIP

#### IN INDIA :

#### OPPORTUNITIES AND CHALLENGES

India is a young and developing society in the 21st century world. It is among the fastest growing economies and poised to be the most populous committy, soon taking over thina. India presents massive opportunities for investments due to large consumption market, while also hosts a diverse population united across caste, language, religion and topography.

But we face our own set of challenges of abhorseent Inequalities,

Abject poverty, poor productivities, etc which any society in transition generally faces.

In this socio icovernico background, il is only Innovation & Entreprenourchy, that offer possible way net for our people.

While Innovation concerns usely with new Ideas, new approaches towards solving \$90blems or enhancing convenience; Entrepreneurship denotes citilising establish remunerative set ups le putting Ideas înte. This essay seeks to analyse the position of Innovation and Entrepreneurship in India; what role can they play in India's development strategy. Taking rote of the constraints which they face, solutions, success stories and approaches of Government and civil society are also recognised.

In the 21st century Age of Dissuftion, seemony is about the resources between the fair' white human capital is seen diving the growth story, INNOVATION is a common currency Its a very broad tism covering nearly all aspects of hurrantly

Scientific Invivation coupled with Technological aspects is the try to master natural processes. New technology like Machine learning, Artificial interligence, Big data analytics, has the polintial to enhance productively and fuel growth MSMES in India can enhance their outputs using robots like BRABO (By TATA) and other COBOTS which ensure precision and effectincy 3D Printing production also promises in design aspect activities. Our Institutes of Incorporation

to address our requirements for growth India's demographic dividend which will make it youngest country by 2020 with ing age of 29 yes is an oppositivity in itself This Youth Bulge can be charrelised Innovation direction by adequate Education, training and skilling Initiatives Recently exhibited political well in this direction can bring tangible sesuits. From Sawa Shiksha dohiyan to PM Research fellouship from Institutions of Eminence & autonomy to uncireration to programmes like GIAN and VAJRA to attract our scientific talent back to India are all steps to harness t better equip Indian fesearch set up.

Some early results are seen in Pharma sector where Indian generic medicines are sought after everywhere & Indian Software industry which has highly

Akilled and global oriented workforce. These grunshoots must be taken forward just as the Space Sector Is being nurtured. Innovation in space technology. Mission to Mars at low cost, tuals with GSLV, Aditya prospects has shown how India can prove its Innovation provess.

But besides these advanced sectors, India faces some core developmental challenges like sanitation, farm distress, food wastage, resource / energy constraints, water crisis, health sector loopholes and many more. These are holding back our growth prospects. But we must recognize that it is in these sectors that Innovation is most required and where entrepreneurship can become tools of impoursment to better the lives of common people. Many technocrats from around are turning back to villages to use innovations in data analytics,

weather based stechnology, satellite data ete for predictive & scientific farming methods.
These "farmtechs"-street ups provide warnings of impending blood or droughts, provide doorstep delivery of feetelizers & quality seeds to take up Aquaponics themselves

Edutechs" are bridging gaps in education system by app based learning, video lectures and connecting classrooms to remote places Goves' SWAYAM, MOOCS are such platforms in Teleeducation.

The Start Up India, Stand up India

Scheme were also meant to support new

people to take up new businesses, curb

unemployment and provide credit support

using MUDRA yojoma. Start up village Entrepreneurship programme, Preevika Grammen Express

Jojoma J NRLM are also similar Steps.

The Suf Hup Group initiative in India drove

the idea of Enteepreneurship to every home

much specially to interestible stars ast indulged in presence of local presence, and managers to death or their and managers to death or their and to be entered the content to the functionally incorporated to the content to the con

En today, twining, Englat technologies

effer growth prospects and Governance

Growalisms Torn Johan Andhar and epolule are

restrating ties between cities and chales

Better transperting of beneficiary, ensures

transparency and accountability while also

enhancing public service delivery effecting of

e-delivery of services of through Common

Service Centres to providing Entrepreneurshys

opportunities to rural youth.

These innovations can be a learning experience that he other developing and sometimes of office. As a l'age et and better touch south Corporation

the development medical Energy is ulso drewing timeralism, specially at national level by Weternaturnal bolen Allinoise Youth tapents occurred and contropreniers can come together for climate financing. developing law cost tochnology solutions for harnessing solar perver. Even waste management, fræde sludge systems in urban areas, ewante management, using renewable pourers 29 temperature defference of oceans for desalination of water are the right directions of innovations. I flast ups But Though these challenges offer Innovation opportunities, Invalion & business

itself faces challenges in India on many

fronts.

Funding of Research remains a bottleneck as our GERD (Gross Expendential on RLD) remains poor in comparison to China, Israel South Korea, USA etc. Also, its mostly concentrated in public sector, where private sector is found wanting in its research contribution

While Research/Journal publications are rising year on year, Patents are being biled but our <u>Patent</u> office is too sluggish, facing backlogs and inadequate stuff. This can be a roadblock for solid innovation.

India has to shell out huge revenue for imports of <u>Medical Equipment</u>, Spare parts in automobiles or even in <u>Defence Sector</u> for crucial equipments.

Universities and Labs lack a crucial cyncreatic linkage and professors are no longer innovators / researches unlike in china, US (Oxford, MIT etc)

This prevents students from joining the innovation barriwagen right after stidies and along with it Feilowship, and behaviouships, and behaviouships, secured tab quality along peace challinger

Con Enterpreneurship funt, the significant person of the significant persons as sequenced Credit Availabely on the situation is sufficient to NFA cours and such that the NFA cours and such that all the sequence of the sequ

dack of IPR oursers. 2008 for description delays else out as hallenge for inscriber the formation and love for sold to the course the sold fully characters too death out of the sold fully

The burden of youth bulge, with 30% of Indian youth as NEFT (Neither in Education, Employment nor Training) is a challenge in chalf. Ensuring entrepreneurs hip would require adequate quality education and Encouraging gout policy ecosystem.

Initialines like Stal Innovation Mission, Women Entrepreneurship platform Cey NITI AYOG can help nurture innovation. New IPR policy for awareness, GI tago to local special goods can boost employment, tourism etc. Greater fellowship opportunitis, coupled with increasing Ease of Doing business can boost investments. Innovations must not be limited to technology but also in political & governance set up. GST Council is seen as innovation in itself as a consensus based body at apex level. These and other Intellectual Innovation like ospirational dist programme, promoting Corporate Social Responsibiles and Cwil Donety Confination can boost overall administrature delivery of services.

In the field of Entrepreneurshyp, "Social Enterprises" are the future of Business in 21th century such lousineses that incorporate social, economic moods of society and account for birt environmental practices will be Sustainable and benefit entire society

With regard to <u>Innovation</u> and Enburrenewskip, NITI AYOG suggests developing and existing <u>3</u> "SHAKTI" for success—

1) ICCHA SHAKTI- Motivation & Encouragement by policy support to people for innovation.

1) GYAN SHAKTI- Knowledge & Ecosyptim dupt by education training & experience building.

1) KARMA SHAKTI- Hands on experience for start up and operational support in lifecycle.

These approaches can step by step enhance our competitive ness to harness the power of innovation & entrepreneurship to tackle our developmental challenges and transition India to a "Knowledge SociETY."

# CITICS IN 21st CENTURY

on a warm summer, morning, workers set out with their tools straight to the factories the smoke from burning (cal sma rising high. Few whiches and leendy cars making their way through roads shops on streets lining up for customers. The Cinema too getting ready to put up a black & white show. There are also some poor tide selling neuropapers while some labourers laying bricks.

This portrayl of an EARLY CITY, today seems to be taken over by a new identity. What brings to our mind today when we talk of a city? Ikyscrapers of shanghai, Bushing streets of Kalkata, official lanes of Delhi, High rise software park of Bengaluru, busy buyani bazars of Hyderatad and even Oharavi slums of Mumbai.

Alder han been render going changes in the 11th century These changing edentities speak weiterness about the history of past, altered currents of today and the attractions of future; which lend a unique IDENTITY to a city, its own floreur of speciality!

The growing interconnectedness and inherges due to Gubalisation, constant updation in lechnology, growing urbanisation Industrial development and modernisation is causing transformation in every aspect of human life. And hence, not just demographically or morphologically, the Identities of our cities are changing structurally in the 21th century.

On the Economic front, the changes in Economies of production and sictors are bringing changes Much of value and wealth now less in testiary sector or the service

industry, quarternary and quinary activities. These have religated the Industries of manufacturing and factories to the periphery of a city. In nearly all pasts of world, Middle Class has seen a huge expansion with the coming of new & ample job opportunities in various fields The consumerist culture is spreading for and wide. This has caused the spree shopping complexes and malls where people line up each day. This has intuin created new john for guards, front disk workers, salespersons, delivery locys and many more.

The Technological Revolution along with 4th Industrial Revolution is driving the fad for 'SMART CITIES'. Even in India, the flagship gout programme seeks to create intelligent usban spaces, using modern technology, infrastructure along with

ensuring basic facilities like sanitation, electricity, public mobility, health and education services and affordable housing Recently Naya. Raipur and Bhopal got an Integrated Command & Control Centre to manage traffic congestion, water supply, electricity monitoring, police control etc. Cities are testing sand boxes for new technology and innovation. Nagpur got its fleet of buses and taxis running on e-power while CNG, biogas buses in Kolkata are coming soon. Proposals for High speed rail, hyperloop system, pod taxis legond metros are being promoted: Even the governance structures of public service delivery are changing with digital connectively e-services, e-gout, Aadhar, biometric identity Beyond the material aspect and what meets the eye, The cultural Identity cities are undergoing changes too.

The influx of migrants from both sural areas and measly lesser durlofed regions to causing a change in the demography. Cosmopolitarism to becoming the hallmark of cities where people from different cultures, ethnicities, languages, religion and caste share common work and lunguages. They eat together, to and together and enjoy sunday novies in some theatre. These portraits of growing linkages are breaking estable barriers.

aspirations where people come from far & wide to fulfill their dreams of better life and identity. This is becoming more of a norm, as also a need. Due to existing infrastructure, cities host best quality education and health centres that act like magnets for growing youth population & those in distress.

She consument mindset has also fushed up Recreational spaces in cilies. The areas of leisure are a boom in themselves. City hosts music concerts, luxury space, holiday resorts, artist gallies and iconic tourist places. Joining the Creative Cities Network of UN, Chinnai followed league of Jaipur & Varanasi by making a mark in Global Creative landscape.

is inevitable without a comparison with Rusal setting. As rural villages continue to be sinks of localism and dens of ignorance and communalism? Probably they have surbanised too. As much as cities change, they carry an imprint on rural spaces also. We must also recognise, that the changing identity has also some dark underlayers to it. "Change" is not always for the good!

The 'MAL-IDENTITY' of a city is also highlighted in the grosteque incidents of crime that often hit the headlines. In its deep underteelly, the changing identity of city, hosts underworld retworks of teafficking, drug abuse, kidnapping, sexual harassment/exploitation, cyber bullying, sexual suicides, murders and robbery.

Aue to stressed such schickules and increasing depression, crime rates of cities have also shot up in recent times as NCRB reports. Families are undergoing changes, live in relationships, less commitment to marriages, social medias' attractiveness; is driving the 'TOGETHERWESS' out of family. Rather a strange Individualism backed by selfish desires is seen dominating. The social structures have deeply harmed the women facing dual burdens, the children forced in creches' and the

elderly in 'day care or 'elder shellins'! The changing identity of also speaks volumes. about the socio-economic transformation

Byond that, the cities' are today facing massive challenges on the Environment front. Eilies are energy guzzlers and in doing so, they contribute to burning fessil fuels, ozone depletion and global warning. Urban heat islands are becoming new challenges for city planners. Congestion mounted due to vehicles and Concrete Jungles are driving up the air follution levels and NOx, SOx, PM 2.5/10 make air unbreathable.

The waste management systems have not kept up with the pace of changes in city. Consequently. Bellandur lake flare up, darkening yamuna and mounds of waste in Ghaziabad are evident

They not only but up a bad spectacle but also threaten health of inhabitants and quality of their life in longer run. Poor environment, deforestation and deteriorating natural landscapes can undermine all material & cultural gains that cities have made.

So, the brief analysis shows that cities' identities are undergoing massive changes both fositively & negatively. And Even in this backdrap, some identifiable attitudes of cities continue to be their hallmarks even today.

The political centres like Deelie, continue to attract distressed farmers from around India, The economic centre to spaces like "gantar Mantar." The economic centre of Mumbai, continue to harbour and attract Bollywood dreams' even in 21th century.

The New York's Times Square continues to be the protest space for activists, some against companies while some for LGBTQI rights. This illustrates that despite changing identites cities continue to have their uniqueness and laste of special attitudes.

gets urbanised, "Change is going to bee the only constant?" Hence, the communities, gout and nations need to grar up to adopt and adapt to these changing faces. The local governance needs to be strengthened by providing accountable administrative structures with citizen participation in deciding priorites for development.

Cuil society and citizens much be token as statcholders to allow smooth

transition of spaces into "urbane spaces"

Sudainable consumption and production fattisms must be embedded in our lifestyle that accounts for a near global empact of daily activities. Modern technology can then be used to create shared identities and common spaces for the growing population. Its our sesponsibility to make the cities of 21st century more Resilient, dalaptive, Inclusive & Sustainable

## CHILD LABOUR: A NECESSARY EVIL

### OR JUST PLAÎN EVÎL?

Working with tools and teacups, The little hands move everyday For need and for survival, They are ready to walk everyway Some have an ailing sister While some have a mother To get home a penny They get beatin by the 'other'.

Do these kids know, they are losing their childhood??

According to reports of United Nations, there are accound 30 million Child lobowers in India in 5-18 yrs age group. This striking figure represent a gloomy pictive of the State of Childhood' in India.

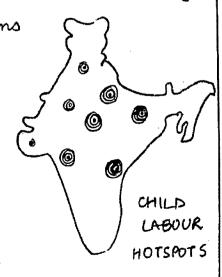
Being an agriculturally dominant country, it is natural that more than 50% of Child labour is concentrated in the farm sector. Besides this, children work in hazardous places like firecracker making, bangle making, zari work and in carpet weaving of sizeable population in the central belt is busy rolling loidis with their hands.

In urban areas, roadside 'Dhabas' and other Rotels employ children largely. Families, with both borents working, often employ girls to do daily chores and care for their children at home. These girls rarely

get proper food and rest while are often abused or beater. What worth a child would feel, if breated this way?

of child labour shows that just 5 states in India contribute to around 50% of incidence. These states are rutter Pradesh, Maharashtra, Madhya Pradesh, Bihar and Indhea Pradesh. depicts
This oxplains the skewed reality today.

But what explains this reality? Why do these children work, is a question we (must pondur upon. This is the only way to address this evil.



The child labouk map finds a close resemblance to areas where cheonic poverty presists. Indeed, poor households are the first to send their kids to work. Rarely are the incomes from marginal farms enough for the big family. Children work in the fields, specially in harvest season; while their mother works as agricultized labourer elsewhere. The pongs of poverty are Economic Campulsions that force these kids to leave their home easly with 'tools' rather than 'pencils'.

Another reason, is the absence or poor quality of schools in weal and tribal areas. Either backers are absent or the beaching is unindulging. This makes many

children to drop out. These out of school excitation are a potential pool of thild laboraters. But this perpetualis as a vicious rycle. Illitrate parents are unable to help their kids at home and more often do not bother about the 'Long' term Education benefit.

common in marginalised households, like that of <u>Dalits or Tribes</u>. Even so, the girl child faces more risk. India still accounts for 30% child moveriages worldwide (World bank). Due to early marriage, girls have to give up school even if they wish to continue.

State of Indian Economy, offices a

grim reason for child labour. Most feedle in India are "self employed? Meaning they have their own farms, or petty shops and businesses. Asking kieds to extend a helping hand is seen as almost natural. It somehow adds to the meagte income of Informal households. Due to poor nutrition and lack of healthcare, members are often pushed into diseases and injections. This adds burden to overall family.

But all is not out of own compulsive will. Many children today are trafficked into factories and Informal workplaces. Middlemen get hefty sums for each 'lost shild? Unfortunately, sometimes its the father himself who sells off the shild.

Nobel laurente how a poor girl rescued from a granual endustry explained his plight "Baba, they sold me off for \$10,000, that is less than the price of a buffalo...."

This heart wrenching reality has consequences on various walks of cife. The psychological and physical trauma, the child themselves face is indescribable. They are often abused and girls are serually assaulted. The child labour deprives them of equal opportunity to a better life. This is no less than a human right abuse.

It also negatively impacts child's health when hazardous smake from bangle making or tobacco laced

on hands is inhaled/ingested. This leads to lung diseases, TB, heart problems and disabilities.

Depriving children from proper collection and skill development makes them vulnerable to market forces. They continue to work in boorly baid jobs through adulthood. Is this the Demographic Dividend we talk about?

The deprived and ill nutritioned girls, when give birth, it feeds on the Infant mortality and maternal mortality. This continues the cycle of slunding, wasting and Hidden Hunger.

Jo account for the heavy cost see at politico-International level, a huge losses are incurred.

with increasing abhorrence for child lobour worldwide, European nations have included this clause in their Non-Tariff Barriers. Any product with ruch inclusion is rejected. Busides, our growing statute and economy its only shameful to employ child labour.

think, have we taken any steps to tackle shild labour? The shild labour? The shild labour law in India was recently amended to peoplifit all kinds of work for 5-14 yrs and hazardous work also. But exceptions for media entertainment and own family business were made. These are grey areas that can be exploited badly.

Besides, the new Anti Trafficking legislation establishes a stringent framework to not the perpetrators and rehabilitate the victims. Also, many NGOs and feet institutio like Bachpan Bachcio Andolan, Child Rights and You (CRY) work towards alleviating the conditions.

But these efforts might not be enough. For a problem that is deeply rooted in our socio-political milieu, a punitive or temporary provisions cannot be a long turn solution.

It is time we realize, that if the poor household is sending the shild to work out of sheur necessity; our duty is not only to brotect the shild but also to

alleviate the household from poverty. If illiterate mother cannot care about a hardworking daughter, its impossible that going to school is made much easier for her. Striking at childhood. labour should start from striking at poverty. Schemes like MGNREGIA, the goals of doubling farmer incomes de should be achieved soon.

In whom blums, gainful employment for women and men must be arranged. It the same time, awareness for family planning needs to be spread. Households with more kids are more prone to sending elder children for work

Besides, the factories which employ children nest be severely fined and punished

As for the tribals, education in local dialect, role model teachers from same area be appointed. This can keep away children from work Recent schemes like Vanbandhu Kalyan Yojana can better their incomes.

that in the Global scenario, countries of phia and Africa due to low incomes and weak governance account for the major share of child labour. In conflict zones like West daia, the disrupted households have taken a tall on shild's life. Many are now forced to work in petiful conditions. Hence, only a collaborated and a multi-dimensional effort

can help sein in the wil of shild

labour.

more than plain evil, depriving whildren of their best days. We need active participation at the level of family, community, provinces and nations to defeat the 'culture' of employing a child!

Their time is for playing And making merry in the woods, Let us join hands

To reclaim their Golden Childhood!

## ASEAN-INDIA: Emerging Challenges to Shared Values and Common Destiny

The Republic Day of 2018 for India on 26th January was a historic day in Elself. But what made it more special was the guests of that day. It felt as if our entire neighbourhood arrived when leaders from Myanmar, Malaysia, Indonesia, Singapore, Vietnam, Laos, Cambodia, Thailand, Brunei and Philippines made their fresence.

the different volours of their dresses represented the cultural diversity we share and the bonhomic reflected our friendship.

Indeed, a new chapter to the ASEAN- India Relations has already commenced. Our relations with our bouth East soian neighbours is built on strong historical foundation

Long back in 10-11th century, Imperial cholor made their mark in Malaya. The ancient trade route led to exchanges of spices, rice, etc. Many Indians also settled there, even before 'India' was formed. Such is the depth of our past ties.

In order to properly lay out the charter for our common destiny, one must evaluate the set of challenges our relations face. Not only between us, but also what both India-ASEAN have to tackle.

The political and straligic furposetive takes the first seal. In the backdeep of Spian Century, china has been in the tussle to rival US as the world power. This has led to acquisition of islands in the South China sea. Many of these fall in the Exclusive Evonomic zones of Indonesia, Vietnam and Philippines. It has harmed their sovereignty but also raised threats on free movement and rules based order.

But its not that China is just a "common challenge", rather its the white Elephant in our relations with ASEAN Countries. The Belt and Road Initialize will rejuvenale old trade sea links, which India is not

a part of. Also, the hefty investments which China makes, for eg in dass' rathway or Vietnams' Infrastructure creates a huge burden of reciprority on ASEAN countries. India's low investment capacity and poor record of project delivery has often soudblocked our projects

As EAN countries like Vielnam and Indonesia are emerging as our top sivals in export sector. The low-value space which China is withdrawing from, has opened up opportunities in leature, appasel, footiseare sector etc. Labour Intensive production and concession from seuropean-American markets, put our neighbours at an advantage.

The secent slowdown in RCEP negotiation which includes ASEAN+6 countries is reflective in itself. Indian economy itself faces a challenge to establish a sustained manufacturing base. Premature De-industrialisation, in the face of Anti-globalisation headwinds is a shallenge for us. Over this, opening market for ASEAN can take a tall on our industries. Besides, entry to skilled latious from India has become a serious contention. These issues are keeping from exploiting our trade potential.

Besides the Economic and Commerce front, the <u>security and</u> <u>Social aspects</u> also pose challenges.

Recent seize of Island city in Phillippines, by ISIS supported factions

has raised alarm bells on Terrorism threat. With majority countries with poor low capita incomes, fighting turor can become a challenger. Being prone to radicalisation, it can cause destabilication of the entire region.

the dubious golden triangle of drugs and narcotics is situated in this region. Many insurgent violent groups in North Gast India find refuge in Myanmar and nearby. This offers poses sizeable threats to our Internal Security as well.

Moving forward, on the Environment front, the developing conomies face common challenges.

Due to global warning and rising sea levels, the najority island or sea opening nations of ASEAN face a huge challings. The biodiversity faces immense threat as also the fishing industry. The wide extremities of climate, pose Disaster threats like floods, trupamis etc. Even the geographical location is such that ASBAN countries border the pacific Ring of fire, vulnuable to volcanois. But what makes a desert beautiful

9s that somewhere it hides a well ...

Despite all these challenges that plague ASEAN-India relations and what we face in common, they offer Wide Windows of Opportunity also.

India must build on the deep roots of our shared values and cultural traditions. Thanks to the efforts of Mauryan Kings, the principles of Buddhism have spread far and wide. The recent ritual of furification by Buddhist monks for children rescued from Thailands' care, makes one patter proud of Indian culture. The Towist Buddhist circuit can open way for people to beople ties. More so, our Islamic connect with Indonesia can yield sich dipidends in diplomacy

pureloping on these strong foundations, trade ties can be depended A give and take altitude, as well as strategic imperative must pave way for free-trade tone.

Singapore already finds a flace in India's top 5 Investment source. This reflects the relations' potential upon greater ease of doing business in India. Many students are choosing the singapore university for education and internships. India has also opened doors for shared research in multiple fields.

with Atomic Energy Institute of India and new centre of International Rice Research Institute (Philippines) in Vacanasi are aft examples. These shared faths must be bolistered with adequate Physical & Digital Connectivity between the regions.

India-Myanmare are working on Imphal-Moseh soad and also IndiaMyanmar-Thailand (1M1) tribatival
can increase trade. This Asian
highway can help us reach the South
East daian Maskets. On the maritime
front, our proximity to Strait of
Malacca is of considerable Importance.
Our freight-container capacity of
ships must be enhanced for fully
utilising the offertunity.

inevitably shifts attention to the upholding of International rules based order. ASFAN countries today, see India as a shief player in Regional security Architecture. Maritime exercises and access to Chang's post of Singapore is a testimony to this.

AS GAN-India can and must collaborate on Indian ocean regions' security.

On the front of Renewable
Energy, Malayria recently signed an
MOU to replicate the success of
LED-UJALA scheme. International
Solar Alliance can become the
active site for such lithnology
development.

Andia must leverage its

Apace technology advancements to

monitor Monsoon movements and disaster

forecast, monitoring and Capacity

generation must supplement our

humanitarian efforts to deal with

Impending disasters.

Above analysis, has been a bird's eye view of immense opportunities that our relations hold.

Alexady, our geographical frommity and regional order binds us to a common destiny. In order to forge deeper under clanding and a brighter future, our countries must collaborate.

ASEAN is the keystone of India sepresents a democratic, peaceful and emerging economy. Our strongths and assets must be directed to exact overcome all the challenges that we face. On the sobust base of our shored values of peace and mutual coexistence, India-ASEAN must tread the path for a common destiny. This can heep realize our vision for Sustainable, Inclusive of Pan Asian Development

@upsc.risefinity

@upsc.risefinity