

EVALUATION INDICATORS

1. Alignment Competence
2. Context Competence
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4. Language Competence
5. Introduction Competence
6. Structure - Presentation Competence
7. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

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All the Best

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 country, soon taking over China. 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 abhorrent inequalities, abject poverty, poor productivities etc which any society in transition generally faces.

In this socio-economic background, it is only Innovation & Entrepreneurship that offer possible way out for our people.

While Innovation concerns itself with new Ideas, new approaches towards solving problems or enhancing convenience; Entrepreneurship denotes utilising these ideas to establish remunerative business set ups i.e putting Ideas into practice. This essay seeks to analyse the position of Innovation and Entrepreneurship in India; what role can they play in India's development strategy. Taking note 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 Disruption, economy is about the resources between 'Our Ears'. While human capital is seen driving the growth story, INNOVATION is a common currency. It's a very broad term covering nearly all aspects of human life.

Scientific Innovation coupled with Technological aspects is the key to master natural processes. New technology like Machine learning, Artificial intelligence, Big data analytics, has the potential to enhance productivity and fuel growth.

MSMEs in India can enhance their outputs using robots like BRABO (By TATA) and other COBOTS which ensure precision and efficiency. 3D Printing production also promises in design aspect activities. Our Institutes of Technology must be made Temples of Innovation

to address our requirements for growth.
India's demographic dividend which will make it youngest country by 2020 with avg age of 29 yrs is an opportunity in itself. This Youth Bulge can be channelised to Innovation direction by adequate Education, training and skilling Initiatives. Recently exhibited political will in this direction can bring tangible results. From Sarva Shiksha Abhiyan to PM Research fellowship, from Institutions of Eminence & autonomy to universities to programmes like GIAN and VAJRA to attract our scientific talent back to India are all steps to harness & better equip Indian research set up.

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

skilled and global oriented workforce.
These green shoots must be taken forward
^{just} as the Space Sector is being nurtured.
Innovation in space technology, Mission to
Mars at low cost, trials with GSLV, Aditya
prospects has shown how India can prove
its Innovation prowess.

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 recognise
that it is in these sectors that Innovation
is most required and where entrepreneurship
can become tools of empowerment to better
the lives of common people. Many technocrats
from around are turning back to villages to
use innovations in data analytics,

weather based technology, satellite data etc for predictive & scientific farming methods. These "Farmtechs" - start ups provide warnings of impending flood or droughts, provide doorstep delivery of fertilizers & quality seeds or take up Aquaponics themselves.

"Edu-techs" are bridging gaps in education system by app based learning, video lectures and connecting classrooms to remote places. Govts' 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 Yojana. Start Up Village Entrepreneurship programme, Aajeevika Gramin Express Yojana of NRLM are also similar steps.

The Self Help Group initiative in India drove the idea of Entrepreneurship to every home

and specially to womenfolk. SHGs are indulged in processing of local products, Eg. Chhattisgarh SHGs sell mangoes to Mother Dairy and tamarind to businesses. All women Dairy cooperatives/SHGs recorded 10% yearly growth (NDDP report). This shows that entrepreneurship can grant opportunities for women to get financially independent & hence socially empowered.

In today's times, Digital technologies offer growth prospects and Governance Innovations. Jan ghan - Aadhar and Mobile are reshaping ties between citizen and states. Better targetting of beneficiary, ensures transparency and accountability while also enhancing public service delivery efficiency. E-delivery of services eg through Common Service Centres is providing Entrepreneurship opportunities to rural youth.

These innovations can be a learning experience even for other developing and small countries of Africa, Asia-Pacific etc and bolster South-South Cooperation.

The development needs of Energy is also driving innovation; specially at national level by International Solar Alliance.

Youth, experts, scientists and entrepreneurs can come together for climate financing, developing low cost technology solutions for harnessing solar power. Even waste management, faecal sludge systems in urban areas, e-waste management, using renewable powers eg temperature difference of oceans for desalination of water are the right directions of innovations & start ups.

~~But~~ Though these challenges offer Innovation opportunities, Innovation & business itself faces challenges in India on many fronts.

Funding of Research remains a bottleneck as our GERD (Gross Expenditure on R & D) remains poor in comparison to China, 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 filed but our Patent office is too sluggish, facing backlogs and inadequate staff. This can be a roadblock for solid innovation. India has to shell out huge revenue for imports of Medical Equipment, Spare parts in automobiles or even in Defence sector for crucial equipments.

Universities and Labs lack a crucial syncretic linkage and professors are no longer innovators / researchers unlike in China, US (Oxford, MIT etc)

This prevents students from joining the innovation bandwagon right after studies and along with it Fellowships and scholarships, research lab quality also pose challenges.

On Entrepreneurship front, the regulatory burden, multiple clearances are required. Credit Availability in tier II/III cities is suffering due to NPA crisis and Micro, Medium sector faces resource crunch.

Labour law multiplicity, rigidity also hinder expansion. Women face special challenges due to lack of support, confidence, capital etc. Even SCs, STs, OBCs, PWD face difficulties due to poor networks of business which prevent realization of full potential.

Lack of IPR awareness and procedural delays also act as challenges for innovation. Brain Drain has been persistent issue coupled with economic policies like Invested duty structure handicap innovation potential.

The burden of youth bulge, with 30% of Indian youth as NEET (Neither in Education, Employment nor Training) is a challenge in itself. Ensuring entrepreneurship would require adequate quality education and encouraging govt policy ecosystem.

Initiatives like Atal Innovation Mission, Women Entrepreneurship platform by NITI AYOJ can help nurture innovation. New IPR policy for awareness, GI tags to local special goods can boost employment, tourism etc. Greater fellowship opportunities, 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 Aspirational dist programme, promoting Corporate Social Responsibility,

and Civil Society Cooperation can boost overall administrative delivery of services.

In the field of Entrepreneurship, "Social Enterprises" are the future of Business in 21st century. Such businesses that incorporate social, economic needs of society and account for best environmental practices will be Sustainable and benefit entire society.

With regard to Innovation and Entrepreneurship, NITI AYOQ suggests developing and boosting 3 "SHAKTI" for success -

- 1) ICCHA SHAKTI - Motivation & Encouragement by policy support to people for innovation
- 2) GYAN SHAKTI - Knowledge & Ecosystem deupt by education, training & experience building
- 3) KARMA SHAKTI - Hands on experience for start up and operational support in lifecycle.

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

THE CHANGING IDENTITIES OF CITIES IN 21ST CENTURY

“ On a warm summer morning, workers set out with their tools straight to the factories. The smoke from burning coal ~~smo~~ rising high. Few vehicles and trendy 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 kids selling newspapers while some labourers laying bricks. ”

This portrayal 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? Skyscrapers of Shanghai, Bustling streets of Kolkata, Official lanes of Delhi, High rise software park of Bengaluru, busy banyani bazars of Hyderabad and even Dharavi slums of Mumbai.

Cities have been undergoing changes in the 21st century. These changing identities speak volumes about the history of past, cultural currents of today and the attractions of future; which lend a unique IDENTITY to a city, its own flavour of speciality!

The growing interconnectedness and linkages due to Globalisation, constant updation in technology, 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 21st century.

On the economic front, the changes in Economics of production and sectors are bringing changes. Much of value and wealth now lies in tertiary sector or the service

Industry, quaternary and quinary activities. These have relegated the industries of manufacturing and factories to the periphery of a city. In nearly all parts 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 far and wide. This has caused the spree of shopping complexes and malls where people line up each day. This has inturn created new jobs for guards, front desk workers, salespersons, delivery boys and many more.

The Technological Revolution along with 4th Industrial Revolution is driving the fad for 'SMART CITIES'. Even in India, the flagship govt programme seeks to create intelligent urban 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 beyond metros are being promoted. Even the governance structures of public service delivery are changing with digital connectivity, e-services, e-govt, Aashar, biometric identity etc.

Beyond the material aspect and what meets the eye, the Cultural Identity of cities are undergoing changes too.

The influx of migrants from both rural areas and nearby lesser developed regions is causing a change in the demography. Cosmopolitanism is becoming the hallmark of cities where people from different cultures, ethnicities, languages, religion and caste share common work and living spaces. They eat together, travel together and enjoy Sunday movies in some theatre. These portraits of growing linkages are breaking erstwhile barriers.

Cities have long been hubs of 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.

The consumerist mindset has also pushed up Recreational spaces in cities. The areas of leisure are a boom in themselves. City hosts music concerts, luxury spa, holiday resorts, artist galleries and iconic tourist places. Joining the Creative Cities Network of UN, Chennai followed league of Jaipur & Varanasi by making a mark in Global Creative landscape.

An assessment of cities' identity, is inevitable without a comparison with Rural setting. Do rural villages continue to be 'sinks of localism and dens of ignorance and communalism'? Probably they have suburbanised 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 Inequalities that a city hosts are quelling in themselves. The people who occupy posh lanes in suburbs living contrasting lives to those who tolerate the stench of open drains, dilapidated houses, no electricity and poor water availability.

This points to the 'OTHER' side of the changing identity of a city. The bleak discrimination faced by African Americans in New York still continues while the slum and class divide in city deepens everyday.

India ranked a poor 98th in WEF's Inclusive development Index showing that all the wealth generated in expanding cities and agglomerations has not been paying equitable benefits to city dwellers. Those who succumb to biting chills on streets in Delhi are worse off than those who stay back with their paternals in villages.

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

Due to stressed ~~se~~ schedules 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 'TOGETHERNESS' 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 shelters'. The changing identity of cities speaks volumes about the socio-economic transformation.

Beyond that, the cities' are today facing massive challenges on the Environment front. Cities are energy guzzlers and in doing so, they contribute to burning fossil fuels, ozone depletion and global warming. Urban heat islands are becoming new challenges for city planners. Congestion mounted due to vehicles and Concrete jungles are driving up the air pollution levels and NO_x , SO_x , $\text{PM}_{2.5/10}$ 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 put 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 positively & negatively. ~~and~~ Even in this backdrop, some identifiable attitudes of cities continue to be their hallmarks even today.

The political centres like Delhi, continue to attract distressed farmers from around India, ~~The economic centre~~ to spaces like "Jantar Mantar." The economic centre of Mumbai, continue to harbour and attract 'Bollywood dreams' even in 21st 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 identities cities continue to have their uniqueness and taste of special attitudes.

As more and more of the World gets urbanised, "Change is going to be the only constant." Hence, the communities, govt and nations need to gear 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 priorities for development.

Civil society and citizens must be taken as stakeholders to allow smooth transition of spaces into "urbane spaces"

Sustainable consumption and production patterns must be embedded in our lifestyle that accounts for a near global impact of daily activities. Modern technology can then be used to create shared identities and common spaces for the growing population. It's our responsibility to make the cities of 21st century more Resilient, Adaptive, Inclusive & Sustainable!