1. How does digital divide act as an impediment to e-governance initiatives? Illustrate with the help of suitable examples. What measures can be adopted to address the digital divide? Suggest.

Introduction

The Digital Divide, or the digital split, is a social issue referring to the differing amount of information between those who have access to the Internet (especially broadband access) and those who do not have access.

According to a 2017 global survey by the Pew Research Centre, only one in four Indian adults report using Internet or owning a smartphone.

About 70 per cent of over one billion Indians lives in rural areas, and only about 400 million have Internet access.

Body

Digital divide as an impediment to e-governance initiatives:

- Infrastructure accessibility: without the infrastructure like internet connectivity, broadband connections, the e-governance projects wouldn't reach the entire population. E.g. CSC, DBT schemes would be successful only with internet penetration to every parts of the country.
- Digital literacy: low digital literacy would hamper the effective use of e-governance initiatives. E.g. Inability to use the banking applications, Jan Dhan initiative suffer due to subsequent zero balance in opened accounts.
- Perception level: Without proper knowledge about technology, there is a scepticism shown by the users making the e-governance initiatives less efficient. E.g. the perception of risk in using internet banking/ATM make many people still preferring withdraw or transfer of funds by visiting a bank branch.
- Unequal utilisation: The use of e-governance initiatives is more in Urban areas and hence it further creates a divide in utility of government schemes.
- Digital divide results in high dependency of beneficiaries on middlemen and thereby vulnerable to misuse. E.g. theft of login credentials, proxy booking in schemes like PM Ujwala yojana and so on.
- Misuse: Digital divide would further the malicious use of technology tarnishing the e-governance initiatives. E.g. Without digital literacy, fake news being circulated in social media platforms couldn't be curbed. The genuine information dissemination through e-governance initiatives suffers.
- Digital divide would take away any incentive for improvisation of e-governance initiatives which can happen only when the citizens are aware of the technology and suggest for reforms through feedback. E.g. In spite of citizen charter being introduced 2 decades back, there is hardly any improvement in service delivery as per 2nd ARC report.

- Lack of digital literacy will lead to corruption, conning of the vulnerable and without proper knowledge, the grievance redressal suffers thereby further eroding the trust of public in e-governance initiatives.
- digital divide is detrimental to trade, people to people contact E.g. the benefit of e commerce cannot be realised without internet penetration

To give some examples, cVigil app of election commission would be successful only if there is active participation of public; Soil health card scheme or PM Fasal Bhima Yojana etc., would be more effective only if the farmers are more aware of the technology involved; Citizen charter would be successful only if the clients are aware of how to effectively use it. Thus, without bridging digital divide, e-governance initiatives will only be handicapped.

Measure to address Digital divide:

- Accessibility: Digital Infrastructure penetration through initiatives like NOFN, Bharatnet, affordable internet plans, smartphone penetration initiatives etc.,
- Affordability: by building comprehensive communication infrastructure, promoting greater market competition in Internet provision and encouraging public-private partnerships in building ICT infrastructure.
- Digital literacy programmes like PMGDISHA, Vittiya saksharata yojana and so on making the beneficiaries effective recipients of e-governance initiatives.
- library and information centres: designed and delivered in a way that is understandable to the underprivileged users at different phases.
- Training – Making rural population familiar with the use of computer and basic functions. Example – National Science Digital Library: provides cheaper access to science and technology books.
- Behavioral economics: Nudge and motivate citizenry to make use of the information and communication technology (ICT) mechanisms. Awareness campaigns, workshops regarding the advantages, benefits of e-governance to overturn the negative perception. E.g. offering discounts on cashless transactions.
- Cooperative federalism: working with state governments to bridge the digital divide. E.g. states like UP, Bihar has low digital literacy, states like Odisha, Jharkhand, Chattisgarh has low digital infrastructure. Thus, an area-specific approach is needed.
- Private sector collaboration: ppp projects and so on. E.g. community technology skills programme, Youth spark programme of Microsoft; Unnati project of HPCL etc.,
- Overcoming language barrier: by integrating multilingual knowledge resources through schemes like Technology Development for Indian Languages.

Conclusion

ICT can benefit only to the extent that people having access to the technology also have the requisite skills and incentive for making optimal use of it. Thus, there is an urgent need to address the issue holistically from digital literacy to the availability of infrastructure which would help in efficient, effective governance and development as well as achieve sustainable development goals.

2. Tax governance in India has taken giant strides in the area of technology assimilation. Do you agree? Substantiate.

Introduction

In the last few years, governance in India across sectors has been redefined through business process reengineering, technology and data analytics. Technology is reshaping the way government is designing and implementing programmes. The use of technology has brought in better systems, greater efficiency and is beginning to have a profound impact on governance. Over the last few years, there has been an increased use of technology by the tax authorities and taxpayers alike.

Body

- The global tax landscape is changing dramatically, with tax authorities and taxpayers looking for more and more innovation in tax management. They have realised that tax laws of early 20th century, are not good enough to enable effective tax management in the 21st century. These new models of working run on high-end technology and facilitate transactions in virtual marketplaces.
- India has come a long way in its endeavour to automate tax administration and data processing. The Tax Administration Reform Commission (TARC), under the chairmanship of Dr. Parthasarathi Shome, has recommended extensive use of information and communication technology in administration and governance of tax.
- The Commission emphasised that technology is a critical enabler for the country in its quest to move to modern tax administration. It highlighted areas where technology could play an important role in facilitating and easing tax authorities' interaction with taxpayers and improving compliance. It also elaborates on the use of technology in forecasting revenue.
- Among the Government's revenue departments, the Central Board of Direct Taxes (CBDT) and the Central Board of Excise and Customs (CBEC) have been early adopters of technology. They have recognised the value of data available in electronic form, the CBDT and CBEC have initiated Data Warehousing and Business Intelligence projects to identify intelligible patterns and plug leakages.
- The systems implemented so far facilitate e-Filing and e-Processing of tax returns by the Centralised Processing Centre (CPC) of the Income Tax Department. Digitisation has led to lower costs in the collection of direct taxes. Almost 98.5% of all income-tax (I-T) returns have been filed online. The

I-T Department received 6.84 crore income-tax returns in 2017-18, a growth of 26%, and additionally, more than one crore new tax returns.

- The Pro-Active Governance and Timely Implementation (PRAGATI) programme has used technology to cut across departmental silos and geographical boundaries to ensure speedy project implementation. Real-time updates are being sent by the Income Tax Department through emails and SMS have facilitated its interaction with taxpayers.
- The rollout of the goods and services tax (GST) and the GST Network(GSTN) has resulted in a 50% increase in unique indirect taxpayers compared with the pre-GST system. This translates to a substantial 3.4 million new indirect taxpayers leading to a radical formalisation of the economy.
- Data-linkages between different arms of the government and the institutions in the financial system are enabling the Tax Authorities to capture better information about a taxpayer. Data-linkages are expected to increase the tax compliance base, identify defaulters and make enquiries more specific and 'to-the-point'.
- Recently, it was decided that every communication to be issued by the Income-Tax Department will now have a Document Identification Number (DIN). This intends to insure proper audit trail of such communication.

At the same time, these are the key challenges facing any tax authority today:

- aInconsistency in information used in various tax filings for diverse tax laws in multiple jurisdictions.
- Lack of effective control over compliance that needs to be undertaken and confidence that the required data will be available to complete compliance.
- Optimisation and achievement of efficiency in the tax function to provide quick but accurate tax input with high assurance for decision-making.

The future also holds great scope for tax governance in terms of technology assimilation where -

- In the 'Operation Clean Money' to deal with cash deposits during the demonetisation period, the government had expressly discussed the use of data analytics to identify potential tax evaders.
- The electronic form of data submission throws up significant possibilities for automation and reducing human effort to improve the efficiency of tax compliance and reporting functions.
- Even simplistic technology solutions can significantly aid an in-house tax function. An in-house tax team can develop a web-based portal to document the tax positions being taken in the past.

Conclusion

For years, India has been a complex nation, making it difficult for the common man to access government services. The rapid adoption of digital technology across sectors is making things easy and eliminating all forms of human intervention.

Technology will further play a significant role in bringing in more transparency in the Indian tax environment and will be a strong deterrent to unfair practices on the part of any stakeholder in the tax environment. It will also encourage voluntary compliance by making tax compliance and reporting an easy activity.

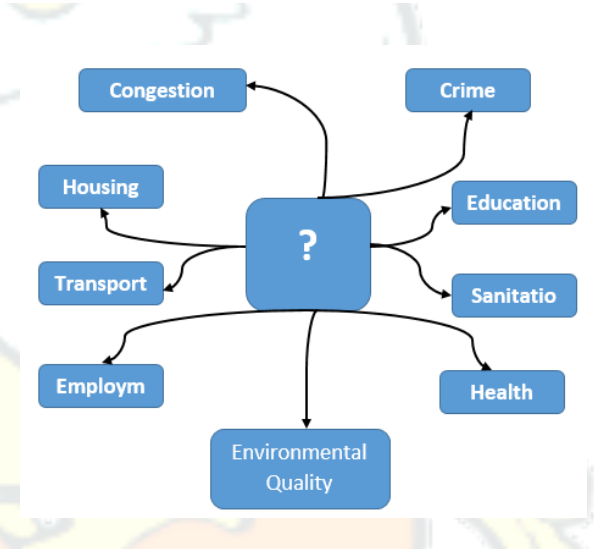
3. What potential applications can urban e-governance have as a measure to address the current socio-economic challenges in India's cities. Discuss.

Introduction

ICT is vital for the economic growth and development of our cities. Electronic governance or e-governance is the application of information and communication technology (ICT) for delivering government services at the doorstep of customers, business and other stakeholders. The primary role of e-governance is to simplify the process of governance, by making it more transparent and accountable using information and communication technology.

Body

- There are four pillars of E-Governance:-
  1. CONNECTIVITY
  2. KNOWLEDGE
  3. DATA CONTENT
  4. CAPITAL
- In context of today's cities, the diagram shown depicts the challenges for urban governance where e-governance can play a vital role in overcoming them.



The potential of e-governance for cities can be seen from the following points :

1. Alternative approaches to e-governance, with trends towards bottoms up approach while balancing it with top down minimal approach. This can help in tackling transportation issues in cities.
2. Adoption of technologies by governments to have effective and interactive relationships with citizens and businesses (focus on communication). For example, Sanitation issues can be tackled through the use of interactive mediums and bulletin board approach.
3. Significant efforts to be made towards developing common policy frameworks, through ad hoc legislation, in the domain of e-governance. A number of e-governance/ICT solutions like water quality monitoring, leakage identification, public information and grievance redressal can be integrated.

4. Existence of a digital divide between people, cities and regions in terms of ability and capacity to exploit information and communication technologies to achieve policy goals should be tackled through exploring innovative funding methods like crowdfunding.
5. The earlier e-municipality project, which was a part of the National e-Governance Plan, envisaged implementation of 11 modules including birth and death registration, property and water tax billing, accrual based accounting, grievance redress and others. In most cities, these modules have been developed by different vendors as stand-alone systems and do not form part of one integrated system with single point data entry. This can be overcome by adopting the european model i.e EU Platform for Intelligent Cities (EPIC) initiative which was first operationalised in 2010.
6. A promising recent policy initiative is the Electronic Services Delivery (EDS) Bill which is with the Parliament at present. This proposed legislation makes it compulsory for all government agencies to begin delivering their services in an electronic mode. All services that can be provided electronically must be so provided. There is a provision for independent EDS Commissions at the central and state level that will monitor provision of electronic delivery of services.
7. Urbanisation is also ushering in traffic congestion and dust, leading to air pollution in Delhi. Each Indian city is heavily polluted and no wonder, 22 out of the world's 30 most polluted cities happen to be in India. E-governance can provide paradigm change with decentralised approach which will necessitate less travel and optimum route planning.

With all its given potential, use of E-governance faces some significant challenges –

- Maintenance and upkeep of a complex system for all the services
- Privacy of the citizens
- Security of the system & authenticity of information
- Crossing the language barrier

However, upon addressing these issues, E-governance can bring about transformation by -

- Empowering citizens by bridging the knowledge gap
- Enabling data driven and evidence based planning
- By bringing about large scale impact with incremental small scale, and
- System reform, through transparency, efficiency and accountability.

Conclusion

All smart cities around the world have used e-governance as an effective tool to serve citizens efficiently, re-engineer internal business processes, increase transparency, accountability & citizen participation and use resources in an environmentally friendly manner. This becomes even more important for India in the context of the stated goal to have a $5 trillion economy by 2024 where cities will play the most prominent role.

4. How are e-governance initiatives changing the face of PRIs in India?

Introduction

E-Governance is the use of IT to improve the ability of the government to address the needs of society. It includes the publishing of policy and program-related information to transact with citizens. It extends beyond the provision of online services and covers the use of IT for strategic planning and reaching the development goals of the government.
Panchayati Raj Institution (PRI) is a system of rural local self-government in India. Local Self Government is the management of local affairs by such local bodies who have been elected by the local people.

Body

E-governance initiatives changing the face of PRIs in India

E-Governances play a major role in supporting the culture of democracy, democratic processes and civic values that uphold a democratic system. The aim is to: provide for citizens access to information and knowledge about political process, services and available choices, and facilitate transformation of passive information access to active citizen participation by informing, representing, encouraging to vote, consulting and involving citizens..

- **E-Panchayat** – This is a Mission Mode Projects which intends to improve quality of governance in PRIs which includes 0.235 million Gram Panchayats, 6094 Block Panchayats and 633 Zila Panchayats. Further, it also enhances the coordination between Ministry of Panchayati Raj, Government of India and PRIs. The central objective of this project is to ensure local area development and strengthen local self-governance by providing variety of services to its stakeholders.

- **PFMS, e-FMS & Geotagging** – has been stated for bringing transparency & accountability in management of finances available to Panchayat under Fourteenth Finance Commission award.

- **Digital Inclusiveness in Auditing A Success Story** – Good governance practices of e-initiative in the field of audit has revealed effectively the responsiveness and accountability to public money and its usage issues. This has aired the spirit of transparency and inclusiveness with the financial governance agenda. There has been success in e-auditing application by the state of Madhya Pradesh in MGNREGS fund monitoring.

- **KHETI** - The Knowledge Help Extension Technology Initiative – an Information Communication and Technology (ICT) design solution, has been developed under Rural e-Services Project in India (ReSPI). It was an action research project to bridge socio-economic divide digitally with uses of participatory interactive designing methodologies that resulted in a customised solution for so called 'less privileged groups' such as poor farmers.

- **Sevana** is a major software solution developed by Information Kerala Mission (IKM). The Sevana civil registration is utilized to register deaths and births in Panchayats and municipalities. Through these kiosks, deaths and births are registered instantly. Citizen can download birth/death certificates within 24 hours of registration at the kiosk.

- **Sulekha software** was developed to monitor the annual plans of local government institutions in the State3. Annual plans are prepared, evaluated and approved in a time bound manner through this software. Sulekha is installed in all local government institutions in the state. In the year 2009-10 Sulekha won the Gold Medal in National Awards for e-Governance by Government of India under the Category "Excellence in Government Process ReEngineering".

- Bellandur is a small Gram Panchayat of over 10000 inhabitants just outside Bangalore and four surrounding villages. The project exists in an organized way since 1999 and has speeded up processes, reduced the workload, and has set off other developments. Following the computerization of tax collection, the Panchayat has recovered huge outstanding by limiting corruption.

Conclusion

The real test of decentralization lies in its contribution towards people's empowerment by way of providing them a significant role in decision-making and in the entire process of governance. Therefore, effective application of Information & Communication Technology (ICT) has become the need of the time in Indian democracy.

5. What are the limitations of various e-governance models in India? Illustrate with the help of suitable examples.

Introduction

E-governance services can be shared between citizens, business house, government and employees. These four models of e-governance are as –

- Government to citizens
- Government to government
- Government to employees
- Government to businessman

Body

1. Government to citizens (G2C)

This model of e-governance refers to the government services which are shared by citizens. Here, citizens visit to the link of services that they want to use. Type of services which are provided by this model includes –

- Payment of online bills such as electricity, water, telephone bills etc.
- Online registration of applications.
- Copies of land-record.
- Online filling of complaints.
- Availability of any kind of online information.

Some successful initiatives are

- **Computerization of Land Records**
- **Bhoomi Project** in Karnataka for Online Delivery of Land Records
- **Gyandoot** of Madhya Pradesh with the twin objective of providing relevant information to the rural population and acting as an interface between the district administration and the people.
- **iFRIENDS** (Fast, Reliable, Instant, Efficient Network for the Disbursement of Services) is a Single Window Facility providing citizens the means to pay taxes and other financial dues to the State Government of Kerala.

Limitation

- **Lack of Literacy and Knowledge** – Literacy in India is a key for social-economic progress, and the literacy rate is currently 74.04%. This literacy rate is the reason that acts as a challenging task for the government to implement e-governance in the country.

- **Inequality of Income** – Inequality of Income plays an important role in proving as a challenge of e-governance. Out of the total population of India 21.9% are below poverty line and half of rural India is under poverty line.

- In general, senior citizens do not have much **computer education** and they would have to approach a customer service officer for assistance.

- The **vulnerability to cybercrimes** will raise the question of privacy issues in the mind of the public. There have been incidents in the past where the data collected got completely lost because of the unpredictable problems of the system.

- **Connectivity to backward areas** – A very large part of India is far away from the basic necessities of life. The connectivity of e-governance to these areas will be challenging task for the government.

2. **Government to government** – This model refers to the services which are shared between the governments. Eg: Khajane Project - a comprehensive online treasury computerization project of the Government of Karnataka.

Limitations

- **Resistance to Change** – It is the human psychology that they do not want to accept change easily. So, this may play a part as a hindrance while implementing e-governance.
- **Lack of matured technicians** – India is working hard towards creating better technicians day by day. But still, there is lack of matured technicians in the country who can advise the government on technical grounds.
- **Lack of qualified administrators** – India is not a very tech-savvy country and so is the administration. So, there is a lack of qualified administrators in the country, who are not very techno-friendly.

3. **Government to businessmen** – Through this model, bond between private sector and government increase and businessmen use to communicate. The general information shared through this model are Collection of taxes, rejection and approval of patent, payment of bills and penalty, sharing of all kind of information, rules and data etc. eg - MCA21 of Ministry of corporate Affairs for providing easy and secure online access to all registry related services; e-Procurement Project in Andhra Pradesh etc

Limitations

- **Frequent changes in technology** – The technology is the most dynamic field that keeps on changing every minute. The e-governance is all best on technology, so it will be a challenge for the government to keep pace with every changing technology.
- **Political affairs** – Politics have now turned to a blame game instead of making good decisions for the community. The opposition parties instead of supporting the decision of e-governance will always oppose it for the purpose of showing the negative side of the ruling party.

4. **Government to employees** – This model increases the transparency between government and its employee. Here, employee can keeps a check on the functioning and working of government and government can keeps on its employees.

Limitation

- **Resistance to Change** – It is the human psychology that they do not want to accept change easily. So, this may play a part as a hindrance while implementing e-governance.
- **Lack of matured technicians** – India is working hard towards creating better technicians day by day. But still, there is lack of matured technicians in the country who can advise the government on technical grounds.
- The **vulnerability to cybercrimes** will raise the question of privacy issues in the mind of the public. There have been incidents in the past where the data collected got completely lost because of the unpredictable problems of the system.

Conclusion

We have seen how the concept of e-governance and m-governance has evolved in Indian scenario and how much it is required for transparency and accountability on the part of government and at the same time it is also a toll to increase the participation of people in policy making by empowering them with the right information at right time.