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B. GS2 Related

Category: HEALTH

1. India short of 6 lakh doctors, 2 million nurses: U.S. study

Context:

A report published by the U.S.-based Center for Disease Dynamics, Economics & Policy (CDDEP) says that India has a shortage of an estimated 600,000 doctors and 2 million nurses.

Details:

- The scientists found that the lack of staff who are properly trained in administering antibiotics is preventing patients from accessing life-saving drugs.
- High out-of-pocket medical costs to the patient are compounded by limited government spending for health services.
- In India, 65% of health expenditure is out-of-pocket, and such expenditures push some 57 million people into poverty each year.
- The majority of the world's annual 5.7 million antibiotic-treatable deaths occur in low- and middle-income countries, where the mortality burden from treatable bacterial infections far exceeds the estimated annual 700,000 deaths from antibiotic-resistant infections.
- Researchers at CDDEP in the U.S. conducted stakeholder interviews in Uganda, India, and Germany, and literature reviews to identify key access barriers to antibiotics in low-, middle-, and high-income countries. Health facilities in many of these countries are substandard.
- The findings of the report show that even after the discovery of new antibiotic, regulatory hurdles and substandard health facilities delay or altogether prevent widespread market entry and drug availability.
- The report states that, worldwide, the irrational use of antibiotics and poor antimicrobial stewardship lead to treatment failure and propagate the spread of drug resistance which, in turn, further narrows the available array of effective antibiotics.

India:

- In India, there is one government doctor for every 10,189 people (the World Health Organisation (WHO) recommends a ratio of 1:1,000).
- There is a deficit of 600,000 doctors, and the nurse: patient ratio is 1:483, implying a shortage of two million nurses.
- Lack of access to antibiotics kills more people currently than does antibiotic resistance.

Category: POLITY AND GOVERNANCE

1. Miraj MBBS students join PG quota protest

Context:

- The MBBS students from the Government Medical College (GMC) in Miraj are gearing up to protest against the reservation in postgraduate courses.

- Students from medical colleges in Mumbai, Pune, Nagpur, and Aurangabad have organised similar protests in the past week.

Details:

- The students opined that after studying for MBBS for 5.5 years, all the doctors are at par socially, economically and academically as well. “We study under the same teachers; we live in the same hostels and draw the same stipend. There is absolutely no logic behind having reservations at the PG level”, they said.
- The medical students say that their main demand is scrapping off all caste and category-based reservations in PG and introduction of a merit-based admission process just like in the case of super-specialisation courses.
- A press statement issued by the aggrieved students said that reservation in the State have reached 78% after the introduction of 16% Socially and Economically Backward Class (SEBC) quota provided by the current state government and 10% Economically Weaker Section (EWS) quota being granted by the Central government, over and above the pre-existing 52% in the State.
- It added that a government MBBS doctor earns a minimum of ₹60,000 a month which translates to about ₹ 7,20,000 a year and thus the question of economic backwardness does not arise at the level of postgraduate examinations.
- After passing out of medical school with a graduate degree, the only identity is that of a doctor, the meritocracy of which depends upon the utilisation of equal educational opportunities provided to him/her at the level of undergraduate studies, and thus the question of backwardness does not arise, the students opined.

C. GS3 Related

Category: INDIAN ECONOMY

1. UPI sets searing pace while e-wallets wobble

Context:

- Payments made on the UPI platform saw a remarkable growth of over 400% in the April to March period, from a little more than ₹27,000 crore in April 2018 to ₹35 lakh crore in March 2019.
- An analysis by The Hindu of data from the Reserve Bank of India (RBI), the National Payments Corporation of India (NPCI) and some industry players from April 2018 to March 2019 shows that not only is the UPI platform outperforming e-wallets in terms of the value of transactions done, but it is also eating away at e-wallets’ market share in specific areas such as person-to-merchant (P2M) transactions.

Read about [Unified Payment Interface](#)

Details:

- While digital payments overall have been growing strongly, people are changing the way they transact, choosing bank-to-bank methods such as the Unified Payments Interface (UPI) over other instruments such as e-wallets.
- This is because UPI is completely interoperable and as such, it is unique in the world, where you have an interoperable system on the ‘send’ and ‘receive’ side.

- The rapid growth of UPI is accompanied by a reasonably strong growth in the value of transactions done using e-wallets, but the latter's growth has not taken off much following the fillip it received in the aftermath of demonetisation in November 2016.
- E-wallets saw total transaction value grow 210% in the November 2016 to March 2017 period, but this has since slowed to 123% in the April 2018 to February 2019 period.

UPI v/s E-wallets:

- Some opine that there is definitely competition coming from UPI, because UPI is something even the government is backing and so the convenience factor is much more.
- Others argued that the size of the digital payments market in India was such that various instruments could exist without really eating into each other's market share.
- Despite most people preferring transactions from their bank accounts itself, rather than going on topping up a wallet, there are some people who are uncomfortable with the idea of money directly going from the account.

Category: SCIENCE AND TECHNOLOGY

1. World's largest plane makes first test flight

Context:

The world's largest aircraft took off over the Mojave Desert in California, the first flight for the carbon-composite plane built by Stratolaunch Systems Corp, started by late Microsoft co-founder Paul Allen, as the company entered the lucrative private space market.

Details:

- The white airplane is called Roc.
- It has a wingspan the length of an American football field and is powered by six engines on a twin fuselage.
- The plane stayed aloft for more than two hours before landing safely back at the Mojave Air and Space Port as a crowd of hundreds of people cheered.
- The plane is designed to drop rockets and other space vehicles weighing up to 500,000 pounds at an altitude of 35,000 feet and has been billed by the company as making satellite deployment as "easy as booking an airline flight."
- Stratolaunch has said that it intends to launch its first rockets from the Roc in 2020 at the earliest.

Category: ENVIRONMENT AND ECOLOGY

1. Oil consuming bacteria found below ocean

Context:

Scientists have discovered a unique oil eating bacteria in the Mariana Trench, the deepest part of the earth's oceans.

Mariana Trench:

- Mariana Trench is the deepest part of the world's oceans.

- It is located in the western Pacific Ocean.
- The trench is not the part of the seafloor closest to the center of the Earth. This is because the Earth is not a perfect sphere; its radius is about 25 kilometres (16 mi) less at the poles than at the equator.
- The Mariana Trench is part of the Izu-Bonin-Mariana subduction system that forms the boundary between two tectonic plates.
- In this system, the western edge of one plate, the Pacific Plate, is subducted (i.e., thrust) beneath the smaller Mariana Plate that lies to the west.
- Crustal material at the western edge of the Pacific Plate is some of the oldest oceanic crust on earth (up to 170 million years old), and is therefore cooler and more dense; hence its great height difference relative to the higher-riding (and younger) Mariana Plate.

Details:

- In an expedition, organised by marine explorer and film director James Cameron, researchers collected samples from the trench.
- When researchers analyzed the microbial samples collected during the expedition, they found a new group of hydrocarbon degrading bacteria.
- The microorganisms eat compounds similar to those in oil and then use it for fuel.
- The researchers found that nowhere else on Earth are oil-eating bacteria so proportionally dominant.
- Scientists found the oil-eating microbes as deep as 4 miles beneath the ocean surface, and researchers suspect the microbes live at even greater depths.
- The bacteria are likely deriving a significant portion of their food from pollution that sinks from the ocean surface. But scientists also found evidence that some of the hydrocarbons are sourced from below.
- The researchers said that biologically produced hydrocarbons were also found in the ocean sediment at the bottom of the trench which suggests that a unique microbial population is producing hydrocarbons in this environment.
- In addition to providing sustenance, researchers suspect the hydrocarbons help microbes survive the crushing pressures of extreme ocean depths.

Significance:

The findings may pave way for sustainable ways to clean up oils spills. As similar microorganisms play a role in degrading oil spills in natural disasters.

D. GS4 Related

Nothing here for today!!!

E. Editorials

Category: POLITY AND GOVERNANCE

1. Highway hurdle – verdict on the Chennai-Salem corridor

Context:

- The Madras High Court recently quashed the land acquisition proceedings initiated by the Centre as well as the State Government for the ambitious ₹10,000 crore Chennai-Salem eight-lane greenfield expressway project proposed on a stretch of 277 km passing through agricultural as well as reserve forest land.
- A Division Bench quashed the proceedings after holding that environmental clearance was mandatory since the project would have an adverse impact on the environment, including waterbodies, and that a project report submitted by a consultant was not satisfactory.
- This verdict on the Chennai-Salem corridor reveals the perils of fast-tracking projects

Details:

- The High court ruling is an indictment of the arbitrary decision-making process behind the project.
- This is a political setback to its leading proponent, Chief Minister Edappadi K. Palaniswami, given the extent to which he went to aggressively stifle all criticism and protests against it.
- The court has referred to how “peaceful protests were stifled, unwritten gag orders were promulgated, [and] police force was used to handle the peaceful protesters who were making a request to spare them and their lands”.
- It was only after the court intervened that “these high-handed actions subsided”.
- It invalidated the notification for intent to acquire land for the project on the ground that the National Highways Authority of India cannot acquire land without complying with the requirement of preparing an environment impact assessment report.
- The project was pushed by the Centre and the State even though it was set to pass through wetlands, fertile farmlands, reserve forests and waterbodies.
- Farmers who stood to lose their land and environmentalists had questioned the claim that by reducing the transit time, there would be saving of fuel, thereby cutting the carbon footprint.

Other revelations:

- What has been exposed in the verdict is that the eight-lane corridor was never really cleared as a project under the Centre’s Bharatmala Pariyojana.
- It did not figure in the list of road projects approved under Bharatmala-I.
- The NHAI did not explain in its counter-affidavit how the Chennai-Madurai highway, an approved project, was dropped and the Chennai-Salem project included in its place.
- The court examined the record and found that there was nothing to show that it was approved by either the Cabinet Committee on Economic Affairs or the Public-Private Partnership Appraisal Committee; the Chennai-Tiruchi-Madurai corridor had much higher vehicular traffic to justify its inclusion in Bharatmala.

Significance of the decision:

- The decision is important for affirming the principle that environmental clearance ought to be obtained before any project is allowed to advance to a stage where measures become irreversible.

- It underscores that sufficient data on the possible harm to the environment is needed before resources are committed to a project.
- In this case, not only would land titles be transferred to the state; heavy compensation amounts would also have been paid by the time the environmental impact is known.

Way forward:

-
- The court's conclusion that labelling its replacement by the Salem project as a 'policy decision' was not a sufficient explanation is unexceptionable.
- The Centre must now make a comprehensive study of its impact on the environment and on farming and rural livelihoods before moving ahead.

2. Necessary steps to ending poverty

Issue:

The political parties have announced schemes guaranteeing income to the poor through budgetary transfers, as a part of their election manifesto. According to the author, the provision of health, education and public services matters more than income support schemes

Background:

It is by now close to 50 years since Indira Gandhi brought the idea of eradicating poverty into the electoral arena in India. 'Garibi Hatao' had been her slogan. She actually took the country some distance in the promised direction. Though it had not come close to being eradicated in her time, it was under her leadership that the reduction in poverty commenced, in the late 1960s. And it was under her leadership again that the reduction accelerated, in the early 1980s. This is not surprising for she was a pragmatic politician and took pride in being Indian. While the last attribute motivated her to improve the condition of her people, the first left her aware of the centrality of income generation in poverty eradication.

The role that income generation actually played in lowering poverty in India may be gauged from the facts that economic growth had surged in the 1980s, and the late 1960s was when agricultural production quickened as the Green Revolution progressed.

- Despite there being a focus on poverty since the last 50 years, we haven't seen it end because the approach of public policy to the problem has been to initiate schemes which could serve as no more than a palliative (a solution that has not addressed the root cause), as suggested by the very term 'poverty alleviation' commonly used in the discourse of this time.
- These schemes failed to go to the root of poverty, which is capability deprivation that leaves an individual unable to earn sufficient income through work or entrepreneurship.
- Income poverty is a manifestation of the deprivation, and focussing exclusively on the income shortfall can address only the symptom.

Parties and schemes:

- In the run-up to the elections now, schemes guaranteeing income to the poor through budgetary transfers have been announced by both the Bharatiya Janata Party (BJP) and the Congress.
- Actually, the BJP's Pradhan Mantri Kisan Samman Nidhi (PM-Kisan), paying farm households below a threshold ₹6,000 a year, is already in place.

- An income-support scheme for any one section of the population is grossly inequitable.
- We can think of agricultural labourers and urban pavement dwellers as equally deserving of support as poor farmers. While it is the case that at present agricultural subsidies go to farmers alone, these are intended as production subsidies and so channelled due to the criticality of food production to all.
- On the other hand, a welfare programme cannot, ethically, exclude those equally placed.
- The hurried introduction of PM Kisan also came with an overshooting of the fiscal deficit target, suggesting that it involves borrowing to consume, a fiscally imprudent practice.
- The PM-Kisan has, however, been dwarfed by the promise of the Nyuntam Aay Yojana (NYAY) of the Congress, which envisages an annual transfer 12 times greater to the poorest 20% households.
- While this scheme is not discriminatory, it is severely challenged by the issue of beneficiary identification in real time.
- Both the schemes on display, but NYAY in particular, have been criticised as running into the absence of fiscal space.
- This is really neither the case nor of the essence, the latter being the role of income transfers in eradicating as opposed to alleviating poverty in India.

NYAY:

- For NYAY, the cost is estimated at ₹3.6 lakh crore per annum at current prices.
- This comes to approximately 13% of the central budgetary outlay for 2019-20.
- This expenditure can be incurred without any consequence for the fiscal deficit if all Centrally Sponsored Schemes are taken off and subsidies trimmed just a bit.
- But the point is that at 13% of outlay, NYAY would amount to more than twice the combined expenditure on health and education and more than capital expenditure in the same budget, they being the items of public expenditure that most impact poverty in the long run.
- There is an opportunity cost to be acknowledged of an income-support scheme of this magnitude being implemented while there exists a severe deficit of social and physical infrastructure in the country.

What is needed?

- Health, education and physical infrastructure are central to the capabilities of individuals, and the extent of their presence in a society determine whether the poor will remain so or exit poverty permanently.
- The scale at which these inputs would be required to endow all Indians with the requisite capabilities makes it more than likely that we would have to rely on public provision.
- In light of a pitch that has been made for the implementation in India of a publicly-funded universal basic income (UBI) scheme, we can say that from the perspective of eliminating poverty, universal basic services (UBS) from public sources are needed, though not necessarily financed through the budget.

- The original case for a UBI came from European economists. This is not entirely surprising. Europe is perhaps saturated with publicly provided UBS. Also the state in some of its countries is immensely wealthy. So if a part of the public revenues is paid out as basic income, the project of providing public services there will not be affected.
- This is not the case in India, where the task of creating the wherewithal for providing public services has not even been seriously initiated.
- There is indirect evidence that the provision of health, education and public services matters more for poverty than the Central government's poverty alleviation schemes in place for almost half a century.
- Per capita income levels and poverty vary across India's States. A discernible pattern is that the southern and western regions of India have lower poverty than the northern, central and eastern ones.
- This, very likely, is related to higher human development attainment in the former. This indicator is based on the health and education status of a population apart from per capita income, bringing us back to the relevance of income generation to poverty.
- As the Central government is common across regions, differences in the human development index must arise from policies implemented at the State level.
- This further implies that a nationwide income support scheme that channels funds from a common pool to households in the poorer States would be tantamount to rewarding lower effort by their governments.
- There is a crucial role for services, of both producer and consumer variety, in eliminating the capability deprivation that is poverty.
- As these services cannot always be purchased in the market, income support alone cannot be sufficient to eliminate poverty. It is in recognition of the role of services in enabling people to lead a productive and dignified life that the idea of multi-dimensionality has taken hold in the thinking on poverty globally.
- At a minimum these services would involve the supply of water, sanitation and housing apart from health and education.
- It has been estimated that if the absence of such services is accounted for, poverty in India would be found to be far higher than recorded at present.
- The budgetary implication of the scale at which public services would have to be provided if we are to eliminate multi-dimensional poverty may now be imagined. This allows us to appraise the challenge of ending effective poverty and to assess the potential of the income-support schemes proposed by the main political parties.
- There are no short cuts to ending poverty, but ending it soon is not insurmountable either.

Category: INTERNATIONAL RELATIONS

1. Secrets and agents – on the Arrest of Julian Assange, WikiLeaks founder

Issue:

The arrest of Julian Assange raises fears about suppression of the right to information.

Background:

- Julian Paul Assange is an Australian computer programmer and the founder and director of WikiLeaks.

- He had been under the protection of Ecuador as an asylum seeker, and had been living in the Ecuadorian Embassy in London since 2012.
- Assange founded Wiki Leaks in 2006 and came to international attention in 2010 when WikiLeaks published a series of leaks.
- These leaks included the Collateral Murdervideo (April 2010), the Afghanistan war logs (July 2010), the Iraq war logs (October 2010), and Cable Gate (November 2010).
- Following the 2010 leaks, the federal government of the United States launched a criminal investigation into WikiLeaks and asked allied nations for assistance.
- In November 2010, Sweden issued an international arrest warrant for Assange. He had been questioned three months earlier over allegations of sexual assault and rape.
- Assange denied the allegations, and said that he would be extradited from Sweden to the United States because of his role in publishing secret American documents.
- Assange surrendered to UK police on 7 December 2010 but was released on bail within 10 days.
- Having been unsuccessful in his challenge to the extradition proceedings, he breached his bail in June 2012 and absconded.
- He was granted asylum by Ecuador in August 2012 and remained in the Embassy of Ecuador in London until his arrest in April 2019.
- Assange has held Ecuadorian citizenship since 12 December 2017.
- Swedish prosecutors later dropped their investigation into the rape accusation against Assange; they applied to revoke the European arrest warrant in May 2017.
- The London Metropolitan Police indicated that an arrest warrant was in force for Assange's failure to surrender himself to his bail.
- During the 2016 Democratic Party presidential primaries, WikiLeaks hosted emails sent or received by candidate Hillary Clinton from her private email server when she was Secretary of State.
- The Democratic Party, along with cybersecurity experts, claimed that Russian intelligence had hacked the emails and leaked them to WikiLeaks; Assange consistently denied any connection to or cooperation with Russia in relation to the leaks.
- Ecuadorian president Lenín Moreno said on 27 July 2018 that he had begun talks with British authorities to withdraw the asylum for Assange.
- UK police entered the London embassy at the invitation of the Ecuadorian ambassador and arrested Assange on 11 April 2019.

Details:

- The arrest of Julian Assange has renewed a global debate on balancing freedom of expression (or the right to information) with considerations towards the national security of a country.
- Ecuador had earlier limited Mr. Assange's Internet access. As he sits in jail for up to a year on bail-jumping charges from 2012 in a now-closed case relating to sexual assault allegations by a complainant from Sweden, he will find out whether he will ultimately face the prospect of extradition to the U.S.

- There, Mr. Assange is looking at a single count of conspiring, with former U.S. Army intelligence officer Chelsea Manning, to break into a secret government computer network.
- Conspiracy charges, rather than those under the Espionage Act, are what he will likely face, given concerns in the U.K. that he should not be extradited to any country where the death penalty is applicable in his case.
- At the heart of the drama is the question whether Mr. Assange is a “journalist” in the traditional sense of the word and whether, following that line of reasoning, freedom of expression is endangered or constrained by the action taken in this case.
- There is some irony in this debate given that the voices of liberal America are screaming the loudest for his interrogation for the alleged crime of conspiracy, not so much in the case of the U.S. diplomatic cables or the dissemination of related top-secret U.S. government information — but owing to WikiLeaks being linked to rogue actors in Russia who allegedly stole Democratic Party documents and handed them over to Mr. Assange for use on his website, thereby tipping the scales in Donald Trump’s favour in the 2016 election.

What message does Mr. Assange’s arrest send?

- The arrest of Julian Assange raises fears about suppression of the right to information.
- It highlights troubling facts, including that the indictment against Mr. Assange, revealed only this month, appears to be flimsy, for it relates to a conversation he is alleged to have had nine years ago with Ms. Manning on a computer break-in attempt that ultimately failed.
- At a time when strongmen-led governments and resurgent nationalism are at the forefront of domestic politics in many countries, the arrest of a prominent anti-secrecy advocate is likely to have a chilling effect on whistle-blowers everywhere.
- That could ultimately weaken democracy itself.

F. Tidbits

1. Voting in women’s health in Assam

- One of the responsibilities of a district electoral officer during the poll process is to ensure systematic voters’ education and electoral participation, or SVEEP.
- Keerthi Jalli, the first woman Deputy Commissioner of southern Assam’s Hailakandi district since its birth in 1989, has packed in other campaigns too – such as promoting menstrual hygiene.
- It has turned out to be a ‘SVEEPing’ success, especially among women in some Muslim localities in the district.
- Sanitary pads were branded in SVEEP material and were distributed to Muslim women who came out in the open breaking myths on menstrual hygiene besides deciding to cast their votes.
- According to the 2011 census, Muslims account for 60.13% of the total population in the Bengali-dominated Hailakandi, one of three districts comprising the Barak Valley. Though the district has a literacy rate of more than 75%, it is skewed against women, many of whom are caught in conservatism.
- The district authorities have so far distributed 250 packs of sanitary pads.

- The district administration hit upon other ideas too for inspiring people to vote. One of them was presenting shakhas to married Hindu Bengali women in the slums and some villages of the district.
- Made of conch-shell, a shakha is a traditional bangle married Bengali women wear along with pola made of red corals.
- At North Narainpur village, women received shitalpati sporting the Election Commission's logo.
- Made from the reeds of a marshy plant, shitalpati is a mat so named because it has a cooling effect on the user.
- The mats and gamosas (cloth-towel) were sourced from a Muslim self-help group in the district.
- The authorities also presented tea-plucking women in the district with jaapi or cane-bamboo sunshades branded with SVEEP material.

G. Prelims Facts

1. Rongali Bihu

- Bohag Bihu or Rongali Bihualso called Xaat Bihu is a festival celebrated in the state of Assam and northeastern India, and marks the beginning of the Assamese New Year.
- It usually falls on 2 April week, historically signifying the time of harvest.
- The three primary types of Bihu are Bohag Bihu or Rongali Bihu, Kati Bihu or Kongali Bihu, and Magh Bihu or Bhogali Bihu.
- Each festival historically recognizes a different agricultural cycle of the paddy crops.
- During Rangali Bihu there are 7 pinnacle phases: 'Chot', 'Raati', 'Goru', 'Manuh', 'Kutum', 'Mela' and 'Chera'.

2. Endangered turtle dies; only 3 left in the world

- The only known female member of one of the world's rarest turtle species has died at a zoo in southern China.
- The animal was one of four Yangtze giant softshell turtles known to be remaining in the world.
- It is also known as the Red River giant softshell turtle, Shanghai softshell turtle, Swinhoe's softshell turtle or speckled softshell turtle.
- The Suzhou zoo, where the female turtle lived, also houses a male Yangtze giant softshell turtle. The other two live in Vietnam.
- It is listed as critically endangered in the IUCN Red List. It may be the largest living freshwater turtle in the world.
- The female of the last breeding pair has died at Suzhou Zoo in China, making the species functionally extinct unless a wild female is found.

H. UPSC Prelims Practice Questions

1) Consider the following statements with respect to International North South Transport Corridor (INSTC) project:

1. India is the founding member of the INSTC project
2. Pakistan is a member state of the INSTC

Which of the following statements/s is/are correct?

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Answer: a

Explanation:

The International North–South Transport Corridor (INSTC) is a 7,200-km-long multi-mode network of ship, rail, and road route for moving freight between India, Iran, Afghanistan, Armenia, Azerbaijan, Russia, Central Asia and Europe. Russia, Iran and India signed the agreement for the NSTC project on the in 2002. All three countries are founding member states on the project. Other important member states include Azerbaijan, Armenia, Kazakhstan and Belarus with other states having varying levels of involvement.

2) Consider the following statements about Sangam literature

1. Sangam literature is associated with the Pandya kingdom.
2. Silappadikaram and Manimekalai are the two epics of Sangam literature.

Which of the above statement/s is/are correct?

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Answer: c

Explanation:

- Tamil language is the oldest one among the South Indian languages. The earliest phase of Tamil literature is associated with the three Sangams.
- Sangams were the societies of learned men established in the Pandya kingdom. Each Sangam comprised of a number of distinguished poets and learned scholars.
- All literary works were submitted to these Sangams where learned scholars selected the best ones from different works and set their seal of approval.
- The Sangam literature was compiled between A.D. 300 and 600.
- Ettuttogai collection (the eight anthologies) is considered to be the earliest one belonging to 3rd century B.C. to 3rd century A.D.
- Tirukkural written by Thiruvalluvar is the best of the minor didactic poems. Its teachings are considered as an everlasting inspiration and guide to the Tamilians.

- Silappadikaram and Manimekalai are the two Tamil epics. These are important sources for the construction of the early history of south India.

3) Consider the following statements:

1. Chaitanya- Preached Bhakthism in Maharashtra
2. Jnaneshwara- Preached Bhaktism in Bengal

Which of the above statement/s is/are correct?

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Answer: d

Explanation:

- Chaitanya, the devotee of Krishna, was a religious teacher who preached in Bengal. He composed many hymns dedicated to Krishna.
- Chaitanya had travelled to different parts of the country and gathered a group of his followers. At the end of his life, he settled at Puri in Orissa.
- In Maharashtra, the Bhakti ideology was preached by Jnaneshwara. Jnaneshwara had translated Gita in Marathi.

4) Consider the following statements:

1. Small black holes have masses 5 to 20 times the mass of the sun.
2. There exists a super massive black hole at the centre of Milky Way galaxy.

Which of the above statement/s is/are correct?

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Answer: c

Explanation:

Small black holes are called stellar-mass black holes. They have masses similar to those of larger stars — about five to 20 times the mass of the sun. The other kind is supermassive black holes, which are millions to billions of times more massive than the sun. Supermassive black holes are found at the centre of most galaxies, including our own Milky Way. The one in Milky Way is called Sagittarius A.

I. UPSC Mains Practice Questions

1. “Economic reservations must exist only in instances of persistent, intergenerational poverty”. Critically examine the statement in the light of 103rd Constitutional Amendment Act. (10 Marks)

2. In India, 65% of health expenditure is out-of-pocket. Write a brief not on India's Health care challenges and solutions. What are the steps taken by the government to ensure "Health for All"? (15 Marks)