

TNPSC GROUP I MAIN – 2021
TEST FOR THE MONTH OF OCTOBER 2021
PAPER I, II, III - CURRENT AFFAIRS
PAPER I – UNIT III APTITUDE AND MENTAL ABILITY

Time: 3 hours

Total marks: 250

SECTION A

10 x 10 = 100

Answer all the questions. Answer not exceeding 150 words each

1. Highlight the significance of Kigali amendment.

கிகாலி சட்டத்திருத்தத்தின் முக்கியத்துவத்தை குறிப்பிடுக

The Union Cabinet, chaired by the Prime Minister, Shri Narendra Modi, has given its approval for ratification of the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer for phase down of Hydrofluoro-carbons (HFCs) by India, adopted by the Parties to the Montreal Protocol on October, 2016 at 28th Meeting of the Parties to the Montreal Protocol held at Kigali, Rwanda.

Benefits:

- HFC phasedown is expected to prevent the greenhouse gas emissions, helping prevent climate change and would benefit the people.
- The industry producing and consuming Hydrofluorocarbons will be phasing out Hydrofluorocarbons as per the agreed schedule under and transition to non-HFC and low global warming potential technologies.

Implementation strategy and targets:

- National strategy for phase down of Hydrofluorocarbons as per the applicable phase down schedule for India will be developed after required consultation with all the industry stakeholders by 2023.
- Amendments to the existing legislation framework, the Ozone Depleting Substances (Regulation and Control) Rules to allow appropriate control of the production and consumption of Hydrofluorocarbons to ensure compliance with the Kigali Amendment will be done by mid-2024

Major Impact, including employment generation potential:

- Hydrofluorocarbons. phasedown is expected to prevent the emission of up to 105 million tonne of carbon dioxide equivalent of greenhouse gases, helping to avoid up to 0.5 degree Celsius of global temperature rise by 2100, while continuing to protect the ozone layer.
- Implementation of HFC phase down under the Kigali Amendment through the adoption of low-global warming potential and energy-efficient technologies will

achieve energy efficiency gains[^] and carbon dioxide emissions reduction - a "climate co-benefit,"

- iii. HFCs phase down implementation will involve synergies with on-going government programmes and schemes of the Government of India with the objective to maximize the economic and social co-benefits, besides environmental gains.
- iv. There would be scope for domestic manufacturing of equipment as well as alternative non-HFC and low-global warming potential chemicals to enable the industry to transition to the low global warming potential alternatives as per the agreed HFC phase down schedule. In addition, there would be opportunities to promote domestic innovation for new generation alternative refrigerants and related technologies.

Details:

- i. Under the Kigali Amendment; Parties to the Montreal Protocol will phase down production and consumption of Hydrofluorocarbons, commonly known as HFCs.
- ii. Hydrofluorocarbons were introduced as non-ozone depleting alternative to Hydrofluorocarbons (HFCs). While HFCs do not deplete the stratospheric ozone layer, they have high global warming potential ranging from 12 to 14,000, which have adverse impact on climate.
- iii. Recognizing the growth in use of HFCs, especially in Refrigeration and Air-conditioning sector the Parties to the Montreal Protocol, reached agreement at their 28th Meeting of the Parties (MOP) held in October 2016 in Kigali, Rwanda to add HFCs to the list of controlled substances and approved a timeline for their gradual reduction by 80-85 per cent by the late 2040s.
- iv. India will complete its phase down of HFCs in 4 steps from 2032 onwards with cumulative reduction of 10% in 2032, 20% in 2037, 30% in 2042 and 85% in 2047.
- v. All amendments and adjustments of the Montreal Protocol, prior to the Kigali Amendment have Universal support.

Background:

- i. The Montreal Protocol on Substances that Deplete the Ozone Layer, is an international environmental treaty for protection of the Ozone Layer by phasing out the production and consumption of man-made chemicals referred to as ozone depleting substances (ODS). The stratospheric ozone layer protects humans and the environment from harmful levels of ultraviolet radiation from the sun.
- ii. India became a Party to the Montreal Protocol on Substances that Deplete the Ozone Layer on 19 June 1992 and since then has ratified the amendments to the Montreal Protocol. Through the present approval of the Cabinet, India will be ratifying the Kigali Amendment to the Montreal Protocol for phase down of Hydrofluorocarbons.
- iii. India has successfully met the phase out targets of all the Ozone Depleting Substances as per the Montreal Protocol Schedule

2. **What is meant by Net Zero emission? Explain India's position regarding the same.**

நிகர பூஜ்ய உமிழ்வு என்றால் என்ன? அதில் இந்தியாவின் நிலைப்பற்றி விளக்குக

In many sectors of the economy, technologies exist that can bring emissions to zero. In electricity, it can be done using renewable and nuclear generation. A transport system that runs on electricity or hydrogen, well-insulated homes and industrial processes based on electricity rather than gas can all help to bring sectoral emissions to absolute zero.

However, in industries such as aviation the technological options are limited; in agriculture too, it is highly unlikely that emissions will be brought to zero. Therefore some emissions from these sectors will likely remain; and in order to offset these, an equivalent amount of CO₂ will need to be taken out of the atmosphere - negative emissions. Thus the target becomes 'net zero' for the economy as a whole. The term 'carbon neutrality' is also used.

India's Case

Implementation of the Paris Agreement has begun only this year. Most of the countries have submitted targets for the 2025 or 2030 period. India has been arguing that instead of opening up a parallel discussion on net-zero targets outside of the Paris Agreement framework, countries must focus on delivering on what 5 they have already promised. New Delhi is hoping to lead by example. It is well on its way to achieving its three targets under the Paris Agreement, and looks likely to overachieve them.

3. **Describe the salient features of Digital Communication policy- 2018.**

எண்ம தகவல் தொடர்பு கொள்கை 2018இன் சிறப்பம்சங்களை விவரிக்க

The Union Cabinet chaired by Prime Minister Shri Narendra Modi has approved the National Digital Communications Policy-2018 (NDCP-2018) and re-designation of the Telecom Commission as the "Digital Communications Commission".

Impact:

The NDCP-2018 envisions supporting India's transition to a digitally empowered economy and society by fulfilling the information and communications needs of citizens and enterprises by establishment of a ubiquitous, resilient and affordable digital communications infrastructure and services.

The 'Customer focused' and 'application driven' NDCP-2018 shall lead to new ideas and innovations, after the launch of advanced technology such as 5G, IOT, M2M, etc. which shall govern the telecom sector of India.

Objectives:

The key objectives of the policy are:

- i. Broadband for all;
- ii. Creating four million additional jobs in the Digital Communications sector;
- iii. Enhancing the contribution of the Digital Communications sector to 8% of India's GDP from ~ 6% in 2017;

- iv. Propelling India to the Top 50 Nations in the ICT Development Index of ITU from 134 in 2017;
- v. Enhancing India's contribution to Global Value Chains; and
- vi. Ensuring Digital Sovereignty.

These objectives are to be achieved by 2022.

Features:

The policy aims to

- i. Provide universal broadband connectivity at 50 Mbps to every citizen;
- ii. Provide 1 Gbps connectivity to all Gram Panchayats by 2020 and 10 Gbps by 2022;
- iii. Ensure connectivity to all uncovered areas;
- iv. Attract investments of USD 100 billion in the Digital Communications Sector;
- v. Train one million manpower for building New Age Skill;
- vi. Expand IoT ecosystem to 5 billion connected devices;
- vii. Establish a comprehensive data protection regime for digital communications that safeguards the privacy, autonomy and choice of individuals
- viii. Facilitate India's effective participation in the global digital economy;
- ix. Enforce accountability through appropriate institutional mechanisms to assure citizens of safe and
- x. Secure digital communications infrastructure and services.

Strategy:

The policy advocates:-

- i. Establishment of a National Digital Grid by creating a National Fibre Authority;
- ii. Establishing Common Service Ducts and utility corridors in all new city and highway road projects;
- iii. Creating a collaborative institutional mechanism between Centre, States and Local Bodies for Common Rights of Way, standardization of costs and timelines;
- iv. Removal of barriers to approvals; and
- v. Facilitating development of Open Access Next Generation Networks.

4. Write about India's first centralized database for unorganized workers.

அமைப்புசாரா தொழிலாளர்களுக்கான இந்தியாவின் முதல் ஒருங்கிணைந்த தரவுதளம் பற்றி எழுதுக

The e-Shram portal (<https://eshram.gov.in/>) was inaugurated on 26th August 2021 by the Union Labour and Employment Minister, Shri Bhupender Yadav in presence of Minister of State (Labour and Employment) Shri Rameswar Teli. The portal is the first-ever national database of unorganised workers including migrant workers, construction workers, gig and platform workers. It facilitates extending benefits of social sector schemes to the workers in the unorganized sector.

Speaking on the occasion, Shri Yadav explained that the Labour Ministry is entrusted with the responsibility of addressing the problems faced by workers in the unorganized sector as well as implementing government schemes intended for their welfare. At the same time,

the Ministry is also engaged in ensuring fair working conditions for the workers, by shaping the evolution of labour laws at the international level.

Speaking about the evolution of labour laws in the country, the Minister said that multiplicity of laws has led to a situation where the workers are not aware where exactly applications for matters such as uniform wages, payment of wages and industrial disputes are to be submitted. "Multiple labour laws have different safety standards for workers in different sectors. Considering the demands of the workers for many years, Govt. of India transformed the multiple labour laws into four Labour Codes."

The Minister informed that the government brought in gender justice into the Labour Code, with the provision of similar wages for similar work for both man and woman.

Shri Yadav added that three Acts of Industrial Disputes Act, Trade Unions Act and Industrial Employment (Standing Orders) Act have now been replaced by Industrial Relations Code, 2020. Occupational Safety Code has been brought in for safety of workers, he added. "Besides this, workers need social protection, this is the responsibility of government and society. Hence, we brought in a Social Security Code, in line with the Prime Minister's vision."

The Union Minister informed that ESIC COVID-19 Relief Scheme is one of the most significant steps taken to provide social security for workers in the unorganized sector. Under this scheme, periodic payment @ 90% of average wages of deceased insured worker is paid to the eligible dependents of the insured worker who died due to COVID-19.

The Social Security Code has been implemented in ESIC institutions in more than 500 districts of the country, the Minister said, stating that pan India implementation of the Code will bring huge benefits to the sector. "The Code has been linked with Ayushman Yojana and automatic referral system too has been introduced in ESIC hospitals. I am regularly monitoring the implementation of these schemes, so that we are able to take care of the welfare of our workers."

Speaking on the e-Shram portal, the Minister expressed the desire that every worker in unorganized sector should get registered on the portal. "Registration is necessary, so that we know how many workers are there in each trade. More than 400 trades have already been represented on the portal. We want everyone to register so that every worker including those who perform very small work is able to avail the benefits of government schemes. Moreover, those who register on the portal now are eligible to get insurance up to Rs. 2 lakh."

Shri Yadav informed that the portal envisages that data is collected and available on even the very last person on the street. "Government has asked the Labour Department to conduct surveys on migrant labourers and another one on domestic workers. A new and third quarterly institution-based survey is slated to be out soon, which will give us a picture of workforce trends in major sectors of the nation. This will thus enable us to evolve our labour policy accordingly, based on sound data."

5. Explain the schemes launched by SIDBI during Covid-19

கோவிட் - 19 பெருந்தொற்றின்போது இந்திய சிறுதொழில்கள் வளர்ச்சி வங்கி தோற்றுவித்த திட்டங்கள் பற்றி விளக்குக

Stepping up the fight against Coronavirus and helping Micro and Small Enterprises (MSEs) combat the prevailing situation, Small Industries Development Bank of India (SIDBI) has launched financial schemes for those involved in manufacturing medical products or services related to Covid-19.

Doling out loans of upto Rs 50 lakh, The Sidbi Assistance to Facilitate Emergency (SAFE) response against coronavirus scheme aims to offer assistance to such MSEs thereby making it easier for them to Covid 19

Doling out loans of upto Rs 50 lakh, The Sidbi Assistance to Facilitate Emergency (SAFE) response against coronavirus scheme aims to offer assistance to such MSEs thereby making it easier for them to facilitate tasks that can help tackle the pandemic. It can also help them buy equipment for manufacturing or purchase raw material and consumables for production.

Target customers and objective of the SAFE scheme:

MSEs who manufacture any product with a direct link to Covid-19 such as hand sanitisers, gloves, mask, head gear, protective gowns, aprons, bodysuits, ventilators, goggles, labs etc can seek a loan of upto Rs 50 lakh.

Interest rate of 5% per annum will accrue for a maximum loan repayment term of 5 years.

The loans are collateral free and will be approved within 48 hours of applying and submitting the necessary documents.

Open to SIDBI and non SIDBI customers

No processing fee or prepayment charges exist.

Another scheme, SAFE Plus, has also been introduced which intends to meet additional working capital requirements against government orders related to fighting the virus.

Some of the salient features of the SAFE Plus scheme include:

Open to all MSMEs, whether SIDBI's existing customers or new ones with specific orders from Central / State government or government agencies nominated for the purpose.

Loan amount is Rs 100 lakh and interest rate is 5% per annum.

The cost of credit guarantee is borne by SIDBI.

For non SIDBI customers, the eligibility criteria is to have cash profit in last year's balance

Higher loan amount of Rs 200 lakh in SAFE:

Target customers are all existing MSMES eligible to be covered under the Special Policy Package announced by the respective state government relating to Covid-19.

The eligible list includes all medical and allied products in the supply chain.

The loan can be availed as term loan (for equipment) or working capital term loan (for material).

Rate of interest, eligibility and operational aspect will remain the same as under SAFE / SAFE Plus.

There's a lot to cheer about SIDBI's Smile scheme SIDBI's Make in India Soft Loan Fund for Micro Small and Medium Enterprises (SMILE) is a flagship scheme of the Small Industries Development Bank of India (SIDBI).

6. Describe the goals and objectives of NIPUN Bharat mission.

நிபுண் பாரத் திட்டத்தின் இலக்குகள் மற்றும் நோக்கங்கள் பற்றி விளக்குக

Union Minister for Education, Shri Ramesh Pokhriyal 'Nishank' today virtually launched a National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat), for ensuring that every child in the country necessarily attains foundational literacy and numeracy by the end of Grade 3, by 2026-27.

Addressing the participants Shri Pokhriyal said that NIPUN Bharat aims to cover the learning needs of children in the age group of 3 to 9 years. He said that teachers need to focus on every child for developing basic language; literacy and numeracy skills which will help them develop into better readers and writers. Thus, NIPUN Bharat envisages making the experience of learning at the foundational stage Holistic, Integrated, Inclusive, Enjoyable, and Engaging, he added.

The Minister underlined that the National Education Policy 2020 has laid down that attaining foundational literacy and numeracy for all children must become an immediate national mission. In keeping with this, the Department has developed a comprehensive guideline under NIPUN Bharat, through a series of intensive consultations with implementing partners, experts to make it flexible and collaborative, he added. Shri Pokhriyal said that it covers key technical aspects of foundational literacy and numeracy as well as the administrative aspects for effectively setting up an implementation mechanism at the National, State, District, Block and School level. He also informed that an approval of Rs 2688.18 crore has already been given under Samagra Shiksha scheme to the States and UTs for implementation of the various interventions for Foundational Stage in 2021-22.

The success of NIPUN Bharat will primarily depend on teachers, so, there will be a special emphasis on capacity building of teachers. A special package for foundational literacy and Numeracy under NISHTHA is being developed by NCERT and around 25 lakh teachers teaching at pre-primary to primary grade will be trained this year on FLN.

Following outcomes have been envisaged from implementation of the goals and objectives of NIPUN Bharat Mission:

- ❖ Foundational skills enable to keep children in class thereby reducing the dropouts and improve transition rate from primary to upper primary and secondary stages.
- ❖ Activity based learning and conducive learning environment will improve quality of education.
- ❖ Innovative pedagogies such as toy-based and experiential learning will be used in classroom transaction thereby making learning a joyful and engaging activity.
- ❖ Intensive capacity building of teachers will make them empowered and provide greater autonomy for choosing the pedagogy.
- ❖ Holistic development of the child by focusing on different domains of development like physical and motor development, socio-emotional development, literacy and numeracy development, cognitive development, life skills etc. which are interrelated and interdependent, which will be reflected in a Holistic Progress Card.
- ❖ Children to achieve steeper learning trajectory which may have positive impacts on later life outcomes and employment.
- ❖ Since almost every child attends early grades, therefore, focus at that stage will also benefit the socio-economic disadvantageous group thus ensuring access to equitable and inclusive quality education.
- ❖ Thus, NIPUN Bharat is envisaged to support and encourage students, along with their schools, teachers, parents, and communities, in every way possible, to helprealise the true potential of our children and propel the country to new heights.

7. Mention the Plastic waste Management Amendment rules, 2021

நெகிழி கழிவு மேலாண்மை திருத்த விதிகள் 2021 பற்றி எழுதுக

In line with the clarion call given by Prime Minister Shri Narendra Modi to phase out single use plastic by 2022, keeping in view the adverse impacts of littered plastic on both terrestrial and aquatic ecosystems, the Ministry of Environment, Forest and Climate Change, Government of

India, has notified the Plastic Waste Management Amendment Rules, 2021, which prohibit identified single use plastic items which have low utility and high littering potential by 2022.

Key Facts:

- Pollution due to single use plastic items has become an important environmental challenge confronting all countries. India is committed to take action for mitigation of pollution caused by littered Single Use Plastics.
- In the 4th United Nations Environment Assembly held in 2019, India had piloted a resolution on addressing single-use plastic products pollution, recognizing the urgent need for the global community to focus on this very important issue. The adoption of this resolution at UNEA 4 was a significant step.

- The manufacture, import, stocking, distribution, sale and use of following single-use plastic, - including polystyrene and expanded polystyrene, commodities shall be prohibited with effect from the 1st July, 2022 :
 - ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, icecream sticks, polystyrene [Thermocol] for decoration;
 - plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films around sweet boxes, invitation cards, and cigarette packets, plastic or PVC banners less than 100 micron, stirrers.
- In order to stop littering due to light weight plastic carry bags, with effect from 30th September, 2021, the thickness of plastic carry bags has been increased from fifty microns to seventy five microns and to one hundred and twenty microns with effect from the 31st December, 2022. This will also allow reuse of plastic carry bags due to increase in thickness.
- The plastic packaging waste, which is not covered under the phase out of identified single use plastic items, shall be collected and managed in an environ - mentally sustainable way through the Extended Producer Responsibility of the Producer, importer and Brand owner (PIBO), as per Plastic Waste Management Rules, 2016. For effective implementation of Extended Producer Responsibility the Guidelines for Extended Producer Responsibility being brought out have been given legal force through Plastic Waste Management Amendment ' Rules, 2021.
- The waste management infra-structure in the States/UTs is being strengthened through the, Swachh Bharat Mission. The following steps have also been taken to strengthen implementation of Plastic Waste Management Rules, 2016 and also to reduce the use of identified single use plastic items : (i) the States/UTs have been requested to constitute a Special Task Force for elimination of single use plastics and effective implementation of Plastic Waste Management Rules, 2016.
- A National Level Taskforce has also been constituted by the Ministry for taking coordinated efforts to eliminate identified single use plastic items and effective implementation of Plastic Waste Management Rules, 2016.
- The State /UT Governments and concerned Central Ministries/ Departments have also been requested to develop a comprehensive action plan for elimination of single use plastics and effective implementation of Plastic Waste Management Rules, 2016, and its implementation in a time bound manner. Directions under Section 5 of Environment (Protection) Act, 1986, have been issued to all States/Union Territories inter alia for setting up institutional mechanism for strengthening enforcement of Plastic Waste Management (PWM) Rules, 2016.
- The Government has also been taking measures for awareness generation towards elimination of single use plastics and effective implementation of Plastic Waste Management Rules, 2016. A two month long Awareness Campaign of Single Use Plastic 2021 has been organized. The Ministry has also organized pan India essay writ-

ing competition on the theme for spreading awareness amongst school students in the country.

- To avoid the worst climate impacts, global greenhouse gas (Grit) emissions will need to drop by half by 2030 and reach net-zero around mid-century.

8. Describe the role and objectives of NALSA

தேசிய சட்ட சேவை ஆணையத்தின் பங்கு மற்றும் நோக்கங்கள் பற்றி விவரிக்க

Towards fulfilling the Preamble promise of securing to all the citizens, Justice – social, economic and political, Article 39 A of the Constitution of India provides for free legal aid to the poor and weaker sections of the society, to promote justice on the basis of equal opportunity. Articles 14 and 22(1) of the Constitution also make it obligatory for the State to ensure equality before law. In 1987, the Legal Services Authorities Act was enacted by the Parliament, which came into force on 9th November, 1995 to establish a nationwide uniform network for providing free and competent legal services to the weaker sections of the society.

The National Legal Services Authority (NALSA) has been constituted under the Legal Services Authorities Act, 1987 to provide free Legal Services to the weaker sections of the society. The Chief Justice of India is the Patron-in-Chief and the Senior most Hon'ble Judge, Supreme Court of India is the Executive Chairman of the Authority. Presently, NALSA is housed at 12/11, Jam Nagar House, New Delhi-110011.

Public awareness, equal opportunity and deliverable justice are the cornerstones on which the edifice of NALSA is based. The principal objective of NALSA is to provide free and competent legal services to the weaker sections of the society and to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities, and to organize Lok Adalats for amicable settlement of disputes. Apart from the abovementioned, functions of NALSA include spreading legal literacy and awareness, undertaking social justice litigations etc.

With the aim of reaching out to the diverse milieu of people belonging to different socio-economic, cultural and political backgrounds, NALSA identifies specific categories of the marginalized and excluded groups from the diverse populace of the country and formulates various schemes for the implementation of preventive and strategic legal service programmes to be undertaken and implemented by the Legal Services Authorities at the various levels. In carrying out all these responsibilities, NALSA works in close coordination with the various State Legal Services Authorities, District Legal Services Authorities and other agencies for a regular exchange of relevant information, monitoring and updating on the implementation and progress of the various schemes in vogue and fostering a strategic and coordinated approach to ensure smooth and streamlined functioning of the various agencies and stakeholders.

PAPER I UNIT III - APTITUDE AND MENTAL ABILITY

9. The ratio of boys and girls in a class is 5 : 3. If 16% of boys and 8% of girls failed in an examination, then find the percentage of passed students.

ஒரு வகுப்பில் மாணவர்கள் மற்றும் மாணவிகளின் விகிதம் 5 : 3 ஆகும். ஒரு தேர்வில் 16% மாணவர்களும் 8% மாணவிகளும் தேர்ச்சி பெறவில்லை எனில், தேர்ச்சி பெற்ற மொத்த மாணவ, மாணவிகளின் சதவீதத்தைக் காண்க

Let number of boys be 'B' and number of girls be 'G'

Ratio of boys and girls is given as 5:3

$$B : G = 5 : 3$$

$$\frac{B}{G} = \frac{5}{3} \dots\dots(1)$$

$$\text{Failure in boys} = 16\% = \frac{16}{100} \times B = \frac{16B}{100}$$

$$\text{Failure in girls} = 8\% = \frac{8}{100} \times G = \frac{8G}{100}$$

$$\text{Pass in boys} = 100\% - 16\% = 84\% = \frac{84}{100} B \dots\dots(2)$$

$$\text{Pass in girls} = 100\% - 8\% = 92\% = \frac{92}{100} G \dots\dots(3)$$

From (1), we have $\frac{B}{G} = \frac{5}{3}$, adding 1 on both sides, we get

$$\frac{B}{G} + 1 = \frac{5}{3} + 1$$

$$\frac{B+G}{G} = \frac{5+3}{3} = \frac{8}{3}$$

$$\therefore G = \frac{3}{8} (B+G) \dots\dots(4)$$

$$\text{Similarly } B = \frac{5}{8} (B+G) \dots\dots(5)$$

Total Pass = Pass in Girls + Pass in Boys

Equation: (2) + (3)

$$= \frac{84}{100}B + \frac{92}{100}G$$

$$\text{Total pass percentage} = \frac{\text{Total pass}}{\text{Total students}} \times 100$$

Total pass = Boys passed + Girls passed

$$= \left(\frac{\frac{84}{100}B + \frac{92}{100}G}{B + G} \right) \times 100$$

Substituting (4) and (5) in the above, we get

$$= \left[\frac{\frac{84}{100} \times \frac{5}{8} (B + G)}{B + G} + \frac{\frac{92}{100} \times \frac{3}{8} (B + G)}{B + G} \right] \times 100$$

$$= \left[\frac{84}{100} \times \frac{5}{8} + \frac{92}{100} \times \frac{3}{8} \right] \times 100$$

$$= \left[\frac{420}{800} + \frac{276}{800} \right] \times 100$$

$$= \frac{696}{800} \times 100$$

$$= 87\%$$

10. Answer the following questions

பின்வரும் வினாக்களுக்கு விடையளி

- a. One year ago, a man was 10 times as old as his son. Now his age is equal to the square of his son's age. Find their present ages.

ஒரு வருடத்திற்கு முன்பு, ஒருவரின் வயது அவருடைய மகனின் வயதைப்போல் 10 மடங்கு. தற்போது அவருடைய வயது, மகனின் வயதின் வர்க்கத்திற்கு சமம் எனில், அவர்களுடைய தற்போதைய வயதைக் காண்க

We have been given that one year ago; a man was 10 times as old as his son. So, we let the present age of man = x years.

The present age of son = y years.

Now, according to the question we have

$$(x-1) = 10(y-1) \dots \dots \dots (1)$$

Also, it has been given that now the age of man is the square of his son. Therefore, we have,

$$x = y^2 \dots \dots \dots (2)$$

Now, we will solve (1) and (2) to find the value of x and y from (1) we have the value of x in terms of y as

$$x = 10y - 10 + 1$$

$$x = 10y - 9$$

So, we will substitute this in (2). So, we have,

$$10y - 9 = y^2$$

$$y^2 - 10y + 9 = 0$$

Now, we will use the method of factorization to solve the quadratic equation. So, we have,

$$y^2 - 9y - y + 9 = 0$$

$$y(y - 9) - 1(y - 9) = 0$$

$$(y - 1)(y - 9) = 0$$

Either $y - 1 = 0$ or $y - 9 = 0$

So, we have either $y = 1$ or $y = 9$.

Now, for $y = 1$ we have $x = (1)^2 = 1$, which is practically not possible as the age of both man and his son can't be the same.

Therefore,

The age of his son = 9 years.

The age of man = $(9)^2 = 81$ years.

- b. A verandah of width 3 m is constructed along the outside of a room of length 9 m and width 7 m. Find the area of the verandah.

9 மீ நீளமும், 7 மீ அகலமும் கொண்ட ஓர் அறைக்கு வெளியே, 3 மீ சீரான அகலமுள்ள ஒரு தாழ்வாரம் (verandah) உள்ளது. தாழ்வாரத்தின் பரப்பளவு காண்க

Given:

Length of room = 9 m,

Width of room = 7 m,

Width of verandah which is constructed all along outside of room = 3 m

Area of the Room = $l \times b$

$$= 9 \times 7$$

$$= 63 \text{ m}^2$$

$$L = l + 2w = 9 + 2(3) = 9 + 6 = 15 \text{ m}$$

$$B = b + 2w = 7 + 2(3) = 7 + 6 = 13 \text{ m}$$

Area of the room including verandah = $L \times B$

$$= 15 \times 13$$

$$= 195 \text{ m}^2$$

The area of the verandah = Area of the room including verandah - Area of the room

$$= 195 - 63$$

$$= 132 \text{ m}^2$$

SECTION - B
UNIT- I: Geography of India with special reference to Tamil Nadu

10 x 15 = 150

Answer all the questions. Answer not exceeding 250 words each

11. Malnutrition free India by 2022- Discuss

2022க்குள் ஊட்டச்சத்து குறைபாடு இல்லாத இந்தியா – விவாதி

The Prime Minister's Overarching Scheme for Holistic Nourishment (POSHAN Abhiyaan), or the National Nutrition Mission, is the Government of India's flagship programme to improve nutritional outcomes for children, pregnant women and lactating mothers. Launched by Hon'ble Prime Minister Shri Narendra Modi on the occasion of International Women's Day 2018, the POSHAN Abhiyaan directs the attention of the country towards the problem of malnutrition and addresses it in a mission-mode.

NITI Aayog has played a critical role in shaping the POSHAN Abhiyaan. The National Nutrition Strategy, released by NITI Aayog in September 2017, presented a micro-analysis of the problems persisting in the nutrition domain and chalked out an in-depth strategy for course correction. Most of the recommendations presented in the Strategy document were subsumed within the design of POSHAN Abhiyaan.

Government is implementing POSHAN Abhiyaan (earlier known as National Nutrition Mission) since 18th December 2017 to address the problem of malnutrition in the country. To ensure a holistic approach, all districts of States/UTs have been covered in the Abhiyaan. The goals of POSHAN Abhiyaan are to achieve improvement in nutritional status of Children from 0-6 years, Adolescent Girls, Pregnant Women and Lactating Mothers, in a time bound manner during the three years with fixed targets as under:

S.No	Objective	Target
1.	Prevent and reduce Stunting in children (0- 6 years)	By 6% @ 2% p.a.
2.	Prevent and reduce under-nutrition (underweight prevalence) in children (0-6 years)	By 6% @ 2% p.a.
3.	Reduce the prevalence of anaemia among young Children(6-59 months)	By 9% @ 3% p.a.
4.	Reduce the prevalence of anaemia among Women and Adolescent Girls in the age group of 15-49 years.	By 9% @ 3% p.a.
5.	Reduce Low Birth Weight (LBW).	By 6% @ 2% p.a.

The Abhiyaan aims to reduce malnutrition in the country in a phased manner, through a life cycle approach, by adopting a synergised and result oriented approach. There is no separate target for different cities and metros.

The results of the POSHAN Abhiyaan can be known after the programme has completed its approved period. However, in the meantime, as per the report of Comprehensive National

Nutrition Survey (CNNS) conducted by UNICEF, prevalence of stunting and underweight among children is 34.7% and 33.4% respectively, which is an improvement and reduction from the levels reported in National Family Health Survey-4, which were 38.4% and 35.7% respectively.

The flagship midday meal programme at government and aided schools will be expanded into the PM-POSHAN (POshan SHAkti Nirman) scheme, additionally covering students of pre-primary classes, the government announced on Wednesday and said that over 1.1 million schools will benefit from the initiative.

The centrally funded scheme, with an outlay of ₹1.31 lakh crore, was approved by the Cabinet Committee on Economic Affairs (CCEA), which was chaired by Prime Minister Narendra Modi on Wednesday. It will provide one cooked nutritional meal to students.

“We are committed to doing everything possible to fight the menace of malnutrition. Today’s Cabinet decision on PM-POSHAN is a crucial one, benefitting the youth of India,” the Prime Minister said in a tweet.

About 118 million students enrolled in classes 1-8 across 1.1 million schools will benefit under the scheme, the government said.

In addition, around 2.4 million students in pre-primary sections or Balvatikas – started in several government schools last year with an aim to include children younger than six years in formal education – will also be covered under the scheme.

12. Indian athletes have scripted history at the Olympic and Paralympic games in Tokyo - comment

டோக்கியோவில் நடைபெற்ற ஒலிம்பிக் மற்றும் மாற்றுத்திறனாளிகள் ஒலிம்பிக் போட்டிகளில் இந்திய தடகள விளையாட்டு வீரர்கள் வரலாற்று சாதனை நிகழ்த்தியுள்ளனர் - விவாதி

32nd Tokyo Olympic Games 2020 Conclude Successfully

Indian contingent performed the athletes parade in Tokyo Olympics opening ceremony with Mary Kom and Manpreet Singh as the flagbearers.

Wrestler Bajrang Punia led the Indian contingent as the flag bearer during the parade of athletes during the closing ceremony of Tokyo Olympics 2020.

- ❖ Miraitowa, a type of robot was the mascot of the Tokyo Summer Olympic Games 2020.

Mirabai Chanu won India's first medal at Tokyo Olympics with a silver in women's 49 kg weightlifting on July 24.

Brisbane Officially Announced as Host of the Olympic and Paralympic Games in 2032

India's medal winners in tokyo olympics
Gold Medal:

- ❖ Neeraj Chopra : Men's Javelin Throw

Silver Medal:

- ❖ Mirabai Chanu : Women's 49 kg Weightlifting
- ❖ Ravi Kumar Dahiya : Men's 57 kg Wrestling

Bronze Medal:

- ❖ Lovlina Borgohain : Women's Welterweight Boxing
- ❖ PV Sindhu : Women's Singles Badminton
- ❖ Indian Hockey Team : Men's Hockey
- ❖ Bajrang Punia : Men's 65 kg Wrestling

India was represented by a 54 member contingent across 9 sports, their biggest-ever at the Paralympic Games.

Javelin thrower Tek Chand was India's flag bearer at the opening ceremony.

Tokyo Paralympics Medals

Rank	Country/Team	G	S	B	Total
1	China	96	60	51	207
24	India	5	8	6	19

24- India

Avani Lekhara was India's flag bearer during the athletes parade in the closing ceremony of the Games

Indian Medalists At Tokyo Paralympics 2020

Name	Sport	Event
Gold		
Strrnit Antil	Athletics	Men's Javelin Throw (F64)
Pramod Bhagat	Badminton	Men's Singles (SL3)
Krishna Nagar	Badminton	Men's Singles (SH6)
Manish Narwal	Shooting	P4-Mixed 50 m Pistol (SHI)
Avani Lekhara	Shooting	R2-Women's 10 m Air Rifle Standing
Silver		
Yogesh Kathuniya	Athletics	Men's Discus Throw (F56)
Nishad Kumar	Athletics	Men's High Jump (T47)
Mariyappan Thangavelu	Athletics	Men's High Jump (T63)
Praveen Kumar	Athletics	Men's High Jump (T64)
Devendra Jhajharia	Athletics	Men's Javelin Throw (F46)
Suhas Yathiraj	Badminton	Men's Single (SL4)
Singhraj Adhana	Shooting	P4-Mixed 50 m Pistol (SHI)

Bhavina Patel	Table Tennis	Women's Singles (Class 4)
Bronze		
Harvinder Singh	Archery	Men's Individual Recurve (Open ST)
Sharad Kumar	Athletics	Men's High Jump (T63)
Sunder Singh Gurjar	Athletics	Men's Javelin Throw (F46)
Manoj Sarkar	Badminton	Men's Singles (SL3)
Singhraj Adhana	Shooting	Pi-Men's 10 m Air Pistol (SHI)
Avani Lekhara	Shooting	R8-Women's 50 m Rifle 3 Positions (SHI)

13. Discuss the importance of NMEO-OP.

NMEO-OP இன் முக்கியத்துவம் பற்றி விவாதி

Cabinet Approves Implementation of National Mission on Edible Oils – Oil Palm

- ❖ The Union Cabinet on August 18, 2021, chaired by the Prime Minister Shri Narendra Modi gave its approval to launch a new Mission on Oil palm to be known as the National Mission on Edible Oils–Oil Palm (NMEO-OP) as a new Centrally Sponsored Scheme with a special focus on the North East region and the Andaman and Nicobar Islands. Due to the heavy dependence on imports for edible oils, it is important to make efforts for increasing the domestic production of edible oils in which increasing area and productivity of oil palm plays an important part. Key features of the NMEO-OP are the following:
- ❖ A financial outlay of the NMEO-OP is ₹11,040 crore, out of which ₹8,844 crore is the Government of India share and ₹ 2,196 crore is State share and this includes the viability gap funding also.
- ❖ Under this scheme, it is proposed to cover an additional area of 6-5 lakh hectare for oil palm till the year 2025-26 and thereby reaching the target of 10 lakh hectares ultimately.
- ❖ The production of Crude Palm Oil (CPO) is expected to go upto 11.20 lakh tonnes by 2025 - 26 and upto 28 lakh tonnes by 2029 - 30.
- ❖ The scheme will immensely benefit the oil palm farmers, increase capital investment, create employment generation, shall reduce the import dependence and also increase the income of the farmers.
- ❖ Since 1991 - 92, many efforts have been made by the Government of India to increase the production of oilseeds and oil palm. The oilseeds production has increased from 275 lakh tonns in 2014 - 15 to 365.65 lakh tonns in 2020 - 21.
- ❖ For harnessing the potential of palm oil production, in the year 2020, an assessment has been made by the Indian institute of Oil Palm Research (IIOPR) for cultivation of oil palm which has given an assessment of around 28 lakh hectares. Thus, there is huge potential in oil palm plantation and subsequently production of Crude Palm

Oil (CPO). At present only 3.70 lakh hectares is under Oil Palm cultivation. Oil palm produces 10 to 46 times more oil per hectare compared to other oilseed crops and has yield of around 4 tonnes oil per hectares. Thus, it has enormous potential for cultivation.

- ❖ Keeping the above in view, and also the fact that even today around 98% of CPO is being imported, it is proposed to launch the Scheme to further increase the area and production of CPO in the country. The proposed scheme will subsume the current National Food Security Mission-Oil Palm programme.
- ❖ There are two major focus areas of the Scheme.
- ❖ The oil palm farmers produce Fresh Fruit Bunches (FFBs) from which oil is extracted by the industry. Presently the prices of these FFBs are linked to the international CPO prices fluctuations. For the first time, the Government of India will give a price assurance to the oil palm farmers for the FFBs. This will be known as the Viability Price (VP). This will protect the farmers from the fluctuations of the international CPO prices and protect them from the volatility. This VP shall be the annual average CPO price of the last 5 years adjusted with the wholesale price index to be multiplied by 14.3%. This will be fixed yearly for the oil palm year from 1st November to 31st October. A Formula price (FP) will also be fixed which will be 14.3% of CPO and will be fixed on a monthly basis. The viability gap funding will be the VP-FP and if the need arises, it would be paid directly to the farmers accounts in the form of DBT. The assurance to the farmers will be in the form of the viability gap funding and the industry will be mandated to pay 14.3% of the CPO price which will eventually go up to 153%. There is a sunset clause for the scheme which is 1st November, 2037. To give impetus to the North-East and Andaman, the Government will bear additionally bear a cost of 2% of the CPO price to ensure that the farmers are paid at par with the rest of India.
- ❖ The second major focus of the scheme is to substantially increase the assistance of inputs/interventions. A substantial increase has been made for planting material for oil palm and this has increased from ₹ 12,000 per hectare to ₹ 29000 per hectare. Further substantial increase has been made for maintenance and intercropping interventions. A special assistance @ ₹ 250 per plant is being given to replant old gardens for rejuvenation of old gardens.
- ❖ To address the issue of shortage of planting material in the country, seed gardens will be provided assistance up to ₹ 80 lakh for 15 hectares in Rest of India and ₹ 100 lakh for 15 hectares in North-East and Andaman regions. Further, assistance for seed gardens @ ₹ 40 lakh and ₹ 50 lakh for Rest of India and North-East & Andaman regions respectively.
- ❖ Special assistance will be provided for the North-East and the Andaman regions in which special provisions are being made for half moon terrace cultivation, bio fencing and land clearance along with integrated farming. For capital assistance to the industry, for the North East states and Andamans, a provision of ₹ 5 core of 5 mt/hr unit with pro rata increase for higher capacity. This will attract the industry to these regions.

14. Enlist the major announcements of PM during his 75th Independence Day speech

பிரதமரின் 75வது சுதந்திர தின உரையில் அறிவிக்கப்பட்ட முக்கிய அறிவிப்புகளை பட்டியலிடுக

Pradhan Mantri 'Gati Shakti' National Master Plan Infrastructure—Gati Shakti will act as the 'National Infrastructure Master Plan' and will help in setting a holistic and integrated approach in infrastructure construction.

- ❖ Rs. 100 lakh crore will be allotted for the Gati Shakti programme. It will generate lakhs of employment I opportunities for the youth and help local manufacturers to become competitive globally.

75 Vande Bharat Trains

75 Vande Bharat trains to be rolled out in 75 weeks of Amrit Mahotsav of Independence to connect every corner of India.

Fortified Rice by 2024

To fight malnutrition, the government has a target to r provide fortified rice to the poor through the Public 'Distribution System, Mid-Day meals scheme and others by 2024.

- ❖ Food fortification one of the strategies used by live World Health Organisation (WHO) and the Food and Agriculture Organisation (FAO) to tackle nutrient deficiencies.
- ❖ It is a cost effective, culturally appropriate strategy to 9 address micro nutrient deficiency.
- ❖ Rice is the 5th item to get the government's fortification push after salt, edible oil, milk and wheat

Sainik Schools for Girls

PM Modi announced For the first time Ever Girls will be allowed to enroll in the Sainik Schools across the country.

- ❖ After a two and half year Pilot project in Mizoram, the Government has decided to open the Sainik Schools for Girls.
- ❖ Sainik Schools were established in 1961 on the recommendation of K Krishna Menon, the then Defence Minister of India.
- ❖ There are 33 Sainik Schools in India; they are run by the Sainik Schools Society under the Union Ministry of Defence (MoD).

Union Finance Minister Nirmala Sitharaman announced during Budget 2021 that 100 new Sainik schools will be set up across country in partnership with private schools and NGOs.

National Hydrogen Mission

PM Modi announced the launch of the National Hydrogen Mission to make India the global production hub for clean hydrogen fuel production and exports. It aims to make India self-reliant in clean energy and create new jobs. It may be mentioned that during the Union Budget 2021-22, Union Finance Minister had announced the launch of National Hydrogen Energy Mission (NHEM), for generating hydrogen from green power source and an amount of Rs. 1500 crore was set aside to achieve India's target of 175 GW by 2022 and also for NHEM.X

E-Commerce Platform for Self Help Groups

The PM announced that the Government will launch an E-Commerce platform for Self Help Groups (SHGs) to promote their products. The digital platform will ensure a huge market for marketing Women SHG Products throughout India and in foreign countries.

Other Key Points of the Address

- ❖ The PM set a target to make India energy independent before 2047.
- ❖ Indus Central University to be established in Ladakh, to make it a centre of higher education.
- ❖ He stated that India has achieved 100 GW out of its target of achieving 450 GW Renewable Energy by 2030.
- ❖ He also highlighted Indian Railways' target of attaining net zero emissions by 2030.

Every Indian dreams to have his own house, therefore we bring in "Housing for All.". He wants to get his house electrified, therefore there is Electrification for all Villages. Every Indian wants to get rid of smoke in the kitchen. To achieve this there is cooking gas for all. Every Indian requires safe drinking water. Therefore our aim is to get water for all. Every Indian requires a toilet, hence our objective is to ensure sanitation for all. Every Indian requires skill development. Hence we have brought in skill development for all. Every Indian needs quality health service. So, our endeavour is health for all. Every Indian requires security for which he needs a health insurance coverage. To meet this need, we bring insurance for all. Every Indian requires internet facility. Therefore we are making efforts to get connectivity for all. We want to lead our country towards the path of development by following the mantra of connectivity.

15. What are the recommendations of the fifteenth Finance Commission with respect to the grant to local governments, health, disaster risk management and fiscal consolidation?

உள்ளாட்சி அரசாங்கங்கள், சுகாதாரம், பேரிடர் இடர் மேலாண்மை மற்றும் நிதி ஒருங்கிணைப்பு குறித்து 15வது நிதி ஆணையத்தின் பரிந்துரைகள் யாவை?

- ❖ The Fifteenth Finance Commission (XVFC)'s ToR was unique and wide ranging in many ways. The Commission was asked to recommend performance incentives for States in many areas like power sector, adoption of DBT, solid waste management etc.

Local Governments:

- ❖ The total size of the grant to local governments should be Rs. 4,36,361 crore for the period 2021-26.
- ❖ Of these total grants, Rs. 8,000 crore is performance-based grants for incubation of new cities and Rs. 450 crore is for shared municipal services. A sum of Rs. 2,36,805 crore is earmarked for rural local bodies, Rs.1,21,055 crore for urban local bodies and Rs. 70,051 crore for health grants through local governments.
- ❖ Urban local bodies have been categorised into two groups, based on population, and different norms have been used for flow of grants to each, based on their specific needs and aspirations. Basic grants are proposed only for cities/towns having a population of less than a million. For Million-Plus cities, 100 per cent of the grants are performance-linked through the Million-Plus Cities Challenge Fund (MCF).

Health:

- ❖ XVFC has recommend that health spending by States should be increased to more than 8 per cent of their budget by 2022.
- ❖ Given the inter-State disparity in the availability of medical doctors, it is essential to constitute an All India Medical and Health Service as is envisaged under Section 2A of the All-India Services Act, 1951.
- ❖ The total grants-in-aid support to the health sector over the award period works out to Rs. 1,06,606 crore, which is 10.3 per cent of the total grants-in-aid recommended by XVFC. The grants for the health sector will be unconditional.
- ❖ XVFC has recommend health grants aggregating to Rs. 70,051 crore for urban health and wellness centres (HWCs), building-less sub centre, PHCs, CHCs, block level public health units, support for diagnostic infrastructure for the primary healthcare activities and conversion of rural sub centres and PHCs to HWCs. These grants will be released to the local governments.
- ❖ Out of the remaining grant of Rs. 31,755 crore for the health sector (total of Rs. 1,06,606 crore minus Rs. 70, 051 crore through local bodies and Rs.4800 crore state-specific grants), XVFC has recommended Rs. 15,265 crore for critical care hospitals. This includes Rs. 13,367 crore for general States and Rs 1,898 crore for NEH States.
- ❖ XVFC has recommended Rs. 13,296 crore for training of the allied healthcare workforce. Out of this, Rs. 1,986 crore will be for NEH States and Rs. 11,310 crore for general States.

Disaster Risk Management:

- ❖ Mitigation Funds should be set up at both the national and State levels, in line with the provisions of the Disaster Management Act. The Mitigation Fund should be used for those local level and community-based interventions which reduce risks and promote environment-friendly settlements and livelihood practices.
- ❖ For SDRMF, XVFC has recommended the total corpus of Rs.1,60,153 crore for States for disaster management for the duration of 2021-26, of which the Union's share is Rs. 1,22,601 crore and States' share is Rs. 37,552 crore.
- ❖ XVFC has recommended six earmarked allocations for a total amount of Rs. 11,950 crore for certain priority areas, namely, two under the NDRF (Expansion and Modernisation of Fire Services and Resettlement of Displaced People affected by Erosion) and four under the NDMF (Catalytic Assistance to Twelve Most Drought-

prone States, Managing Seismic and Landslide Risks in Ten Hill States, Reducing the Risk of Urban Flooding in Seven Most Populous Cities and Mitigation Measures to Prevent Erosion).

Fiscal consolidation

- ❖ Provided range for fiscal deficit and debt path of both the Union and States.
- ❖ Additional borrowing room to States based on performance in power sector reforms.
- ❖ A threshold amount of annual appropriation should be fixed below which the funding for a CSS may be stopped. Below the stipulated threshold, the administering department should justify the need for the continuation of the scheme. As the life cycle of ongoing schemes has been made co-terminus with the cycle of Finance Commissions, the third-party evaluation of all CSSs should be completed within a stipulated timeframe. The flow of monitoring information should be regular and should include credible information on output and outcome indicators.
- ❖ In view of the uncertainty that prevails at the stage that XVFC have done its analysis, as well as the contemporary realities and challenges, we recognise that the FRBM Act needs a major restructuring and recommend that the time-table for defining and achieving debt sustainability may be examined by a High-powered Inter-governmental Group. This High-powered Group can craft the new FRBM framework and oversee its implementation. It is important that the Union and State Governments amend their FRBM Acts, based on the recommendations of the Group, so as to ensure that their legislations are consistent with the fiscal sustainability framework put in place. This High-powered Inter-Governmental Group could also be tasked to oversee the implementation of the 15th Finance Commission's diverse recommendations.
- ❖ State Governments may explore formation of independent public debt management cells which will chart their borrowing programme efficiently.

16. Explain the National Monetization Pipeline scheme

தேசிய பணமாக்கல் திட்டம் பற்றி விளக்குக

Why in News : Union Minister for finance and Corporate Affairs, Smt Nirmala Sitharaman, on August 23, 2021 launched the asset monetisation pipeline of Central ministries and public sector entities : 'National Monetisation Pipeline.

Highlights :

- The pipeline has been developed by NITI Aayog, in consultation with infrastructure line ministries, based on the mandate for 'Asset Monetisation' under Union Budget 2021-22.
- NMP estimates aggregate monetisation potential of ? 6-0 lakh crore through core assets of the Central Government, over a four-year period, from FY 2022 to FY 2025.
- Union Budget 2021-22 has identified monetisation of operating public infrastructure assets as a key means for sustainable infrastructure financing.

- Towards this, the Budget provided for preparation of a 'National Monetisation Pipeline (NMP)' of potential brownfield infrastructure assets. NITI Aayog in consultation with infra line ministries has prepared the report on NMP.
- NMP aims to provide a medium term roadmap of the programme for public asset owners; along with visibility on potential assets to private sector.
- Report on NMP has been organised into two volumes. Volume I is structured as a guidance book, detailing the conceptual approaches and potential models for asset monetisation. Volume II is the actual roadmap for monetisation, including the pipeline of core infrastructure assets under Central Govt.
- The pipeline has been prepared based on inputs and consultations from respective line ministries and departments, along with the assessment of total asset base available therein. Monetization through disinvestment and monetization of non-core assets have not been included in the NMP.
- Further, currently, only assets of central government line ministries and CPSEs in infrastructure sectors have been included. Process of coordination and collation of asset pipeline from states is currently ongoing and the same is envisaged to be included in due course.
- This includes selection of de-risked and brownfield assets with stable revenue generation profile with the overall transaction structured around revenue rights. The primary ownership of the assets under these structures, hence, continues to be with the Government with the framework envisaging hand back of assets to the public authority at the end of transaction life.
- The top 5 sectors (by estimated value) capture 83% of the aggregate pipeline value. These top 5 sectors include : Roads (27%) followed by Railways (25%), Power (15%), oil & gas pipelines (8%) and Telecom (6%).
- In terms of annual phasing by value, 15% of assets with an indicative value of ₹0-88 lakh crore are envisaged to be rolled out in the current financial year (FY 2021-22). However, the aggregate as well as year on year value under NMP is only an indicative value with the actual realization for public assets depending on the timing, transaction structuring, investor interest etc.
- The end objective of this initiative is to enable 'Infrastructure Creation through Monetisation' wherein the public and private sector collaborate, each excelling in their core areas of competence, so as to deliver socio-economic growth and quality of life to the country's citizens.

17. Bring out the significance of IPCC's AR6 climate change 2021 report.

IPCC இன் AR6 காலநிலை மாற்றம் 2021 அறிக்கையின் முக்கியத்துவத்தை வெளிக்கொணர்

The Intergovernmental Panel on Climate Change's (IPCC) Sixth Assessment Report (AR6) Climate Change 2021: The Physical Science Basis by the Working Group was released early

in August 2021. It addresses the most up-to-date physical understanding of the climate system, climate science etc.

- United Nations (UN) Secretary General Antonio Guterres called the report a code red for humanity.
- Even if the emissions decline slowly, the long-term goal set in the Paris Agreement i.e. holding the global average temperature to below 2°C above pre-industrial levels would be breached by 2060.

Key Points of the Report:

1. The report gave 5 scenarios for the future based on carbon emissions, as per it, the world will cross the 1.5°C warming mark in the 2030s, earlier than past predictions.
2. As per the report, the Global surface temperature was 1.09°C higher in the decade between 2011-2020 than between 1850 - 1900 and the past five years (prior to 2021) have been the hottest on record since 1850.
3. The report predicted warmer forecasts for the 21st century (near-term (2021-2040) mid-term (2041-2060) and long term (2081-2100) than the earlier predictions.
4. Under the very high emission scenario with little action, temperatures are likely to rise by upto 57°C by the year 2100.
5. The land will continue to warm 1-5 times more than the surface of the water and that the Arctic will warm twice the rate of global temperature rise.
6. The kind of heat wave that used to happen only once every 50 years now happens once a decade and if the world warms another degree Celsius, it will happen twice every seven years.
7. The world could be around 3.3°C hotter than now by the end of the 21st century.
8. The report also stated worsening cases of sea-level rise, shrinking ice, heat waves; droughts, floods, stronger Tropical cyclones, etc.
9. Land and ocean have taken up near constant proportion (globally about 56% per year) of CO₂ emissions from human activities over the past six decades.

About Intergovernmental Panel on Climate change

It is a group put together by the United Nations, comprising over 234 scientists from 66 nations.

The team of scientists worked together to evaluate over 14,000 research papers over the past five years, culminating AR6, which is the first of a three-part report.

It is headquartered at Geneva, Switzerland. It was established in 1988 by the World Meteorological Organisation (WMO) and the United Nations Environment Programme (UNEP)

18. Explain the role of Tribunals in delivering justice. Also discuss the recent developments related to tribunals

நீதி வழங்குவதில் தீர்ப்பாயங்களின் பங்கினை விளக்கவும். மேலும் தீர்ப்பாயங்கள் தொடர்பாக சமீபத்திய நிகழ்வுகள் குறித்து விவாதிக்கவும்.

Tribunals

- ❖ Tribunals were not part of the original constitution, it was incorporated in the Indian Constitution by 42nd Amendment Act, 1976.
 - Article 323-A deals with Administrative Tribunals.
 - Article 323-B deals with tribunals for other matters.
- ❖ Articles 323 A and 323 B differ in the following three aspects:
 - While Article 323 A contemplates the establishment of tribunals for public service matters only, Article 323 B contemplates the establishment of tribunals for certain other matters (mentioned above).
 - While tribunals under Article 323 A can be established only by Parliament, tribunals under Article 323 B can be established both by Parliament and state legislatures with respect to matters falling within their legislative competence.
 - Under Article 323 A, only one tribunal for the Centre and one for each state or two or more states may be established. There is no question of the hierarchy of tribunals, whereas under Article 323 B a hierarchy of tribunals may be created.

Tribunals in India

Administrative Tribunals

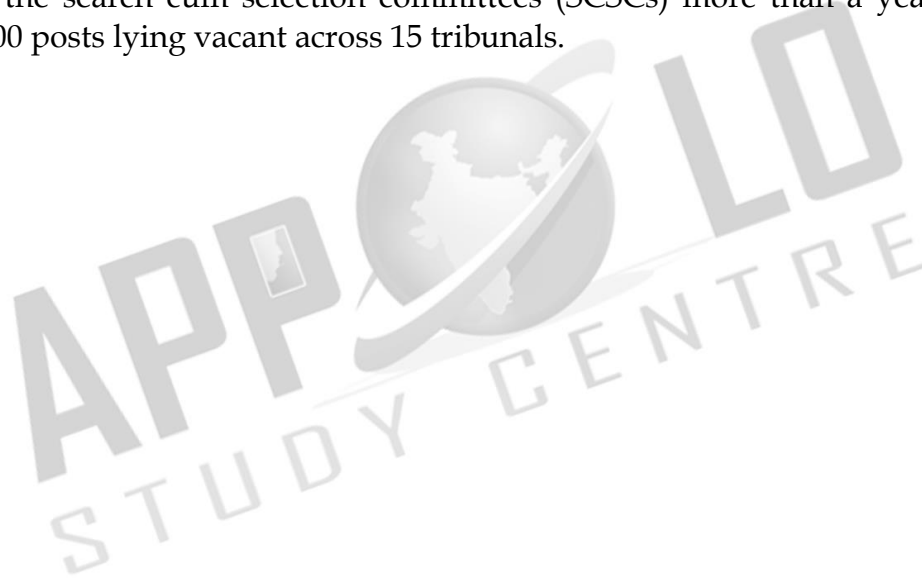
- ❖ Administrative Tribunals was set-up by an act of Parliament, Administrative Tribunals Act, 1985. It owes its origin to Article 323 A of the Constitution.
 - It adjudicates disputes and complaints with respect to recruitment and conditions of service of persons appointed to the public service and posts in connection with the affairs of the Union and the States.
- ❖ The Administrative Tribunals Act, 1985 provides for three types of tribunals:
 - The Central Government establishes an administrative tribunal called the Central Administrative Tribunal (CAT).
 - The Central Government may, upon receipt of a request in this behalf from any State Government, establish an administrative tribunal for such State employees.
 - Two or more States might ask for a joint tribunal, which is called the Joint Administrative Tribunal (JAT), which exercises powers of the administrative tribunals for such States.
- ❖ There are tribunals for settling various administrative and tax-related disputes, including Central Administrative Tribunal (CAT), Income Tax Appellate Tribunal

(ITAT), Customs, Excise and Service Tax Appellate Tribunal (CESTAT), National Green Tribunal (NGT), Competition Appellate Tribunal (COMPAT) and Securities Appellate Tribunal (SAT), among others.

Supreme court

Observing that it is “very, very unhappy”, the Supreme Court on Wednesday said that in a democratic country governed by the rule of law, the government cannot assert its authority to reject the names recommended by selection committees, headed by the judges of the top court, for appointments to various tribunals

Hours before this hearing on a clutch of petitions that have highlighted massive vacancies across all 15 tribunals in the country, the Centre filed an affidavit stating that it has appointed 84 members to various tribunals since 2020 and there are no recommendations pending with it anymore. Of them, 39 members were appointed in the current month after the court on September 6 lashed out at the government for sitting over recommendations made by the search cum selection committees (SCSCs) more than a year ago. There are around 200 posts lying vacant across 15 tribunals.



19. 3 men and 4 women working together for 7 days, earn Rs.3,780 while 11 men and 13 women working together for 8 days earn Rs.15,040. In how many days will 7 men and 9 women earn Rs.12,400?

3 ஆண்கள் 4 பெண்கள் 7 நாட்கள் வேலை பார்த்து ரூ.3,780ம் 11 ஆண்கள், 13 பெண்கள் 8 நாட்கள் வேலை பார்த்ததில் ரூ.15,040ம் ஈட்டினர் எனில், 7 ஆண்களும் 9 பெண்களும் ரூ.12,400 ஐ எத்தனை நாட்களில் ஈட்டி இருப்பர்?

$$1 \text{ man } 1 \text{ day work} = x$$

$$1 \text{ woman } 1 \text{ day work} = y$$

$$3x + 4y = \frac{3780}{7}$$

$$3x + 4y = 540 \dots (1)$$

$$11x + 13y = \frac{15040}{8}$$

$$11x + 13y = 1880 \dots (2)$$

Solve the equation (1) and (2)

$$11 \times (1) \Rightarrow 33x + 44y = 5940$$

$$3 \times (2) \Rightarrow 33x + 39y = 5640$$

$$5y = 300$$

$$y = 60$$

Substitute $y = 60$ in (1)

$$3x + 240 = 540$$

$$3x = 300$$

$$x = 100$$

For 7 men and 9 women

$$7x + 9y = 7 \times 100 + 9 \times 60$$

$$= 700 + 540$$

$$= 1240$$

7 men and 9 women earn Rs. 12400 in

$$= \frac{12400}{1240}$$

$$= 10 \text{ days}$$

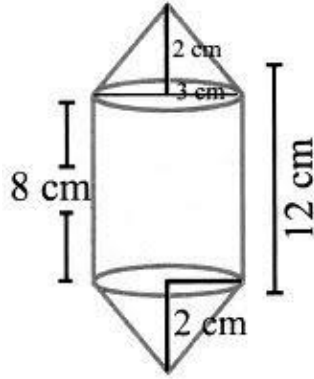
20. Answer the following questions

பின்வருவனவற்றிற்கு விடையளி

- a. Nathan, an engineering student was asked to make a model shaped like a cylinder with two cones attached at its two ends. The diameter of the model is 3 cm and its

length is 12 cm. if each cone has a height of 2 cm, find the volume of the model that Nathan made.

நாதன் என்ற பொறியியல் மாணவர் ஓர் உருளையின் இருபுறமும் கூம்புகள் உள்ளவாறு மாதிரி ஒன்றை உருவாக்கினார். மாதிரியின் நீளம் 12 செ.மீ மற்றும் விட்டம் 3 செ.மீ ஆகும். ஒவ்வொரு கூம்பின் உயரமும் 2 செ.மீ இருக்குமானால் நாதன் உருவாக்கிய மாதிரியின் கனஅளவைக் காண்க



volume of the model = volume of cylinder + volume of 2 cones

$$= \pi r^2 h + 2 \times \frac{1}{3} \pi r^2 h$$

volume of the cylinder part

$$= \frac{22}{7} \times \frac{3}{2} \times \frac{3}{2} \times 8$$

$$= \frac{396}{7} = 56.57 \text{ cm}^3$$

volume of the conical part

$$= 2 \times \frac{1}{3} \times \frac{22}{7} \times \frac{3}{2} \times \frac{3}{2} \times 2 = 9.43 \text{ cm}^3$$

$$\text{Total volume} = 56.57 + 9.43 = 66 \text{ cm}^3$$

The volume of the model that Nathan made = 66 cm³

- b. A fruit seller bought 8 boxes of grapes at ₹150 each. One box was damaged. He sold the remaining boxes at ₹190 each. Find the profit/loss percent.

ஒரு பழ வியாபாரி 8 பெட்டி திராட்சைகளை, ஒரு பெட்டி ₹150 என்ற விலைக்கு வாங்கினார். அதில் ஒரு பெட்டி திராட்சை அழுகிவிடுகிறது. மீதமுள்ள பெட்டிகளை ஒரு பெட்டி ₹190 என்ற விலைக்கு விற்கிறார். இலாப / நட்ட சதவீதத்தைக் காண்க

$$\text{Cost Price of 1 box of grapes} = ₹150$$

$$\begin{aligned}\text{Cost Price of 8 boxes of grapes} &= 150 \times 8 \\ &= ₹1200\end{aligned}$$

$$\text{Number of boxes damaged} = 1$$

$$\begin{aligned}\text{Number of boxes sold} &= 8 - 1 \\ &= 7\end{aligned}$$

$$\text{Selling Price of 1 box of grapes} = ₹190$$

$$\begin{aligned}\text{Selling Price of 7 boxes of grapes} &= 190 \times 7 \\ &= ₹1330\end{aligned}$$

S.P. > C.P, there is a Profit.

$$\begin{aligned}\text{Profit} &= \text{Selling Price} - \text{Cost Price} \\ &= 1330 - 1200 \\ &= 130\end{aligned}$$

$$\text{Profit} = ₹130$$

$$\begin{aligned}\text{Percentage of the profit} &= \frac{\text{Profit}}{\text{C.P}} \times 100 \\ &= \frac{130}{1200} \times 100 \\ &= 10.83\end{aligned}$$

$$\text{Profit} = 10.83 \%$$

STUDY