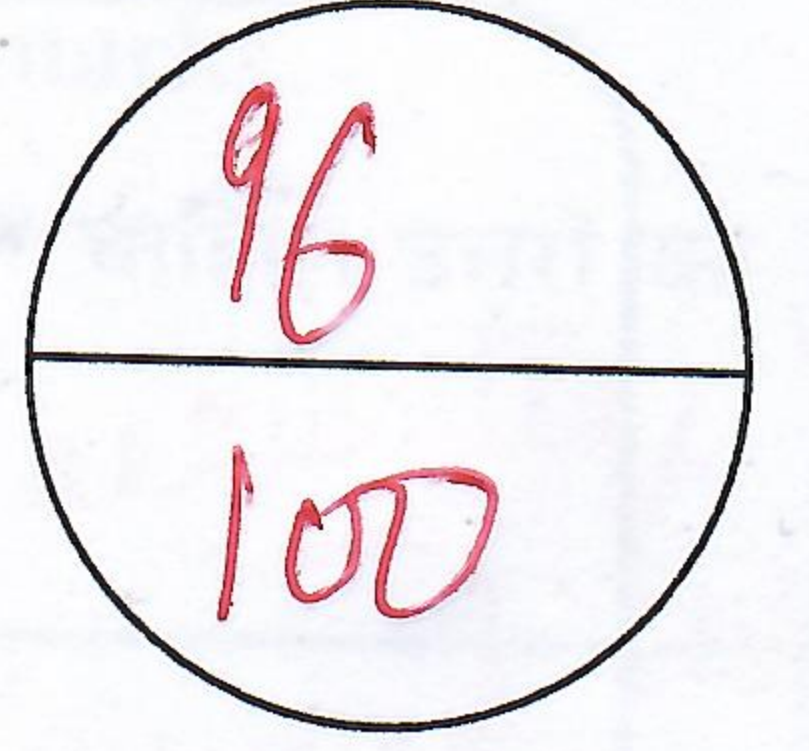




JOKTA Academy

SCQ-78-79, 2ND FLOOR | 0172-4044475, 9779464475

IAS/HAS



HAS MEGA MAINS TEST

General Studies (Paper -III)

Name Neha Negi Roll No. _____

Test GS-3 Date 7 Dec 2023

Time Allowed : 3 Hours

निर्धारित समय : 3 घंटे

Maximum Marks : 200

अधिकतम अंक : 200

INSTRUCTIONS

अनुदेश

Please read each of the following instructions carefully before attempting questions.

कृपया प्रश्नों के उत्तर देने से पूर्व निम्नलिखित प्रत्येक अनुदेश को ध्यानपूर्वक पढ़ें।

1. There are **TWENTY EIGHT** questions printed both in English and in Hindi.
कुल अठ्ठाइस प्रश्न दिए गए हैं जो अंग्रेजी और हिंदी दोनों में छपे हुए हैं।
2. All questions are compulsory.
सभी प्रश्न अनिवार्य हैं।
3. Write answers in legible handwriting.
सुपाठ्य लिखावट में उत्तर लिखें।
4. Answer must be written in **ENGLISH** or **HINDI**.
उत्तर अंग्रेजी या हिंदी में ही लिखे जाने चाहिये।
5. Keep the word limit indicated in the questions in mind.
प्रश्नों में इंगित शब्द सीमा को ध्यान में रखिये।
6. Any page or portion of the page left blank in the Question-cum-answer booklet must be clearly struck off.
प्रश्न-सह-उत्तर पुस्तिका का कोई भी पृष्ठ अथवा पृष्ठ का भाग, जो खाली छोड़ा गया हो, उसे स्पष्ट रूप से काट दीजिये।
7. Re-evaluation/Re-checking of Question-cum-answer booklet of the candidate is not allowed.
अभ्यर्थी की प्रश्न-सह-उत्तर पुस्तिका के पुनर्मूल्यांकन/पुनः जाँच की अनुमति नहीं है।

Answer to Question Nos.1 to 15 should not exceed 60 words in each case. Contents of the answers are more important than their length. Each question carries 04 marks.

प्रश्न संख्या 1 से 15 तक का उत्तर प्रत्येक मामले में 60 शब्दों से अधिक नहीं होना चाहिए। उत्तरों की विषयवस्तु शब्द सीमा से अधिक महत्वपूर्ण है। प्रत्येक प्रश्न में 04 अंक होते हैं।

Q 1 Discuss the challenges of Manufacturing sector of India.

भारत के विनिर्माण क्षेत्र की चुनौतियों पर चर्चा करें।

Manufacturing sector contributes approx 16% of country's GDP and employ nearly 13% of people.

Challenges ① lack of infrastructure & technology: e.g. obsolete technology for production in textile industry.

② unskilled labour - nearly 80% of India's population is unskilled.

③ low credit to MSME - lack & poor access to MSME since they are 80% informal.

④ complex tax system - e.g. GST hampers growth.

⑤ lack of investments due to strict laws.

Govt. Initiatives ① Make in India (2015)

② Start up India

③ MUDRA scheme - for credit access

⑤ PM-GATI Shakti - for transportation.

Q 2 Write a short note of Regional Rural Banks?

क्षेत्रीय ग्रामीण बैंकों (RRB) पर संक्षेप में एक नोट लिखें।

RRBs was formed to make the rural sector available with Banking system.

— during 1970s e.g. of RRB

— first RRB was formed in Maharashtra

→ Aim - priority sector lending in Agriculture for rural development.
 This was not only

Significance - (1) financial inclusion of rural people
 (2) More banks in rural area!
 (3) upliftment of rural economy.

Q 3 Identify the difference between monetary and fiscal policy.

मौद्रिक और वित्तीय नीति के बीच अंतर को पहचानें।

Monetary policy

- formed by Monetary Policy Committee (MPC) of RBI
- bi-monthly revision
- Instruments of Monetary policy:
 - Quantitative
 - (1) LRR, SLR
 - (2) Repo rate, Bank Rate, Reverse Repo rate
 - (3) Marginal Standing facility
 - Qualitative
 - (1) Credit rationing
 - (2) Moral suasion
- fiscal stability & growth.

Fiscal policy

- formed by Government
- one in a year
- through ^{Tax, Non-tax} budget e.g.
 - Surplus budget
 - Deficit budget
- formed to ^{Revenue, Capital} regulate the inflation, fiscal stability etc.

Q 4 Critically Analyse the performance of India in recent Human Development Index.

भारत के हाल के मानव विकास सूचकांक में प्रदर्शन का आलोचनात्मक विश्लेषण करें।

The UNDP + Oxford release the HDI of 2023 in which India ranked 132

→ the three indicator of the index.

↓
Infant. Mortality. rate

↓
Standard of living

↓
Education
Data check

→ India scored 10.6 score in it.

→ the infant mortality rate has decreased, the access to education & the standard of living has increased.

—ve — (1) lagging behind the some asian countries eg Sri Lanka, Bangladesh etc.

(2) still people suffer from poverty (16.6%), unemployment (7.1%) etc.

Q 5 Write a short note on Gaganyaan.

गगनयान पर संक्षेप में एक नोट लिखें।

Gaganyaan is India's first mission to place humans in space. by the end of 2023. ISRO is the nodal agency.

Launch vehicle — GSLV MK III

The spacecraft contain 2 parts

Crew Module

Service Module

→ ISRO has formed Vyommitra, a half humanoid robot which will first be launched to space.

Significance — (1) India will become 4th nation to achieve this feat.

(2) a front runner in space technology.

(3) boost future space exploration

(4) New investment in space tech.

Q 6 Write a short note on services offered by GAGAN (GPS aided Geo-augmented Navigation).

GAGAN (GPS एडेड जियो-ऑगमेंटेड नेविगेशन) द्वारा प्रदान की जाने वाली सेवाओं पर संक्षेप में एक नोट लिखें।

GAGAN (GPS aided Geo-augmented Navigation) has following Advantages Aviation / Maritime

(1) Precise agriculture — help in mapping of water sources, minerals, crop pattern e.g. AGRISET by ISRO.

- ② Management of natural resources eg WRIS (Water Resources Information System) of GRCO
- ③ Disaster management via early warning systems.
- ④ Maritime navigation thus boost security, defence etc.
- ⑤ Urban planning eg use of GIS in city planning eg Odisha has done this.
- ⑥

Q 7 Discuss the impacts of climate change on Himalayan ecology.

हिमालय की पारिस्थितिकी पर जलवायु परिवर्तन के प्रभावों पर चर्चा करें।

Climate change has resulted in change in Himalayan ecology.

- ① Increase in no. of forest fires eg 2783 forest fires in April-May 2022 in Shivaliks.
- ② Melting of glaciers resulting in GLOF eg Kangotri is the fastest melting glacier.
- ③ Loss of biodiversity - both floral & faunal eg Snow leopard (vulnerable IUCN), Monal (endangered) etc.
- ④ Soil erosion & degradation due to the growing exposure.
- ⑤ Inc. in no. of natural disasters eg frequent cloudburst (in Kullu, Kinnaur), landslides (eg 2023 Shimla)
- ⑥ Change in weather pattern eg prolonged rainfall, delayed rainfall eg 2023 HP disaster.

Various steps ① SECURE Himalayas initiative.

② National Mission on Sustainable Himalayan Ecology

Q 8 Write a short note on Wildlife Protection Act 1972.

वन्यजीव संरक्षण अधिनियम 1972 पर संक्षेप में एक नोट लिखें।

wildlife protection Act, 1972 was est to protect wildlife

(1) establishment — (1) National wildlife Board.
— headed by PM.

(2) National zoo authority headed by Minister of MAF

(2) National Tiger Authority (2005)

(2) Aim — (1) protection of conservation of wild flora & fauna

(2) formed 5 schedules which is reduced to 3 by the recent act

Achievement — (1) the no. of tigers increase to 3167 are to NTCA.

Q 9 Discuss the steps taken by the Government of India to harness medicinal and herbal resources in the country.

भारत सरकार द्वारा देश में औषधीय और जड़ी-बूटी संसाधनों को उपयोग करने के लिए उठाए गए कदमों पर चर्चा करें।

India has vast variety of medicinal & herbal plants e.g. Ashw, Ashoka, Brahmi etc.

(1) Charak vatika scheme — to develop the medicinal plants in and around the areas.

(2) Mission AYUSH — grow medicinal plants in schools etc. by Ministry of AYUSH.

(3) Agrotourism promotion — which will promote growth of Medical & Herbal Resources.

(4) Global Traditional Medical Centre — WHO's centre in Jamnagar

(5) Medical Plant Policy of HP (2006) — to conserve the plants.

(6) Organic farming — to promote cultivation of MAP

(7) Sensing fair pricing system for medicinal & Herbal plants.

Q 10 Enlist the stages under Environment Impact Assessment?

पर्यावरण प्रभाव आकलन (EIA) के तहत चरणों को सूचीबद्ध करें।

Environmental Impact Assessment started in 1970s. EIA is prepared under Environment Protection Act, 1986. Impact Mitigation Alternatives

(Aim) - to assess the impact of project on environment, suggest mitigation & then provide alternatives.

Steps 1 Screening & Scoping - whether a project need EIA report & what are the impact of its

2 Baseline data collection - collecting data of impact

3 Preparation of detailed report - via consultation of various stakeholders.

4 Public proceeding - involvement of public in projects

5 Implementation of report & suggestive measures.

Significance 1 Protection of environment
2 achieving desired economic growth along with environment conservation.
3 build trust & public hearing

Q 11 Write a note on the H.P. Tourism Development Corporation (HPTDC).

हिमाचल प्रदेश पर्यटन विकास निगम (एचपीटीडीसी) पर एक नोट लिखें।

H.P. Tourism Development Corporation is the apex body for promoting tourism in Himachal.

1 It makes policies for tourism promotion & diversification

2 cooperate with various community tourist e.g. Naggar community tourism for tourism promotion

3 It has developed 4 tourist circuits

→ Beas tourist circuit

→ Shivalik tourist circuit

→ Satluj tourist circuit

→ Jhelum tourist circuit

(4) open up tourist information centre for facilitation of tourists.

Drawbacks

- (1) failed to promote responsible tourism
- (2) the degeneration of tourist place still not happening.

Q 12 Discuss about the major objectives of the Aryabhata Geo-Informatic and Space Application Centre.

आर्यभट्ट भू-सूचना विज्ञान एवं अंतरिक्ष अनुप्रयोग केंद्र के प्रमुख उद्देश्यों के बारे में चर्चा करें।

AGISAC provides various services e.g. GPS, GIS, cartography, etc. for efficient & effective public delivery services.

Major objectives

- (1) decentralisation of planning & decision-making process.
- (2) use of GIS technology to tackle the climate changes & disaster.
- (3) helping farmers in getting quick & updated information of govt. policies.
- (4) promoting e-governance via digitisation e.g. land records etc.
- (5) mapping of various natural resources to augment the growth of the state.
- (6) promoting sustainable development through effective use of GIS technology.

Achievements

- (1) HIMRIS, HIMBHUMI successfully launched
- (2) farmers are practising smart agriculture.

Q 13 Write a short note on Nako Lake.

नाको झील पर संक्षेप में एक नोट लिखें।

Nako lake is situated in dist. Kinnaur of HP having cultural & religious significance.

→ situated at a height of approx 4000 mt

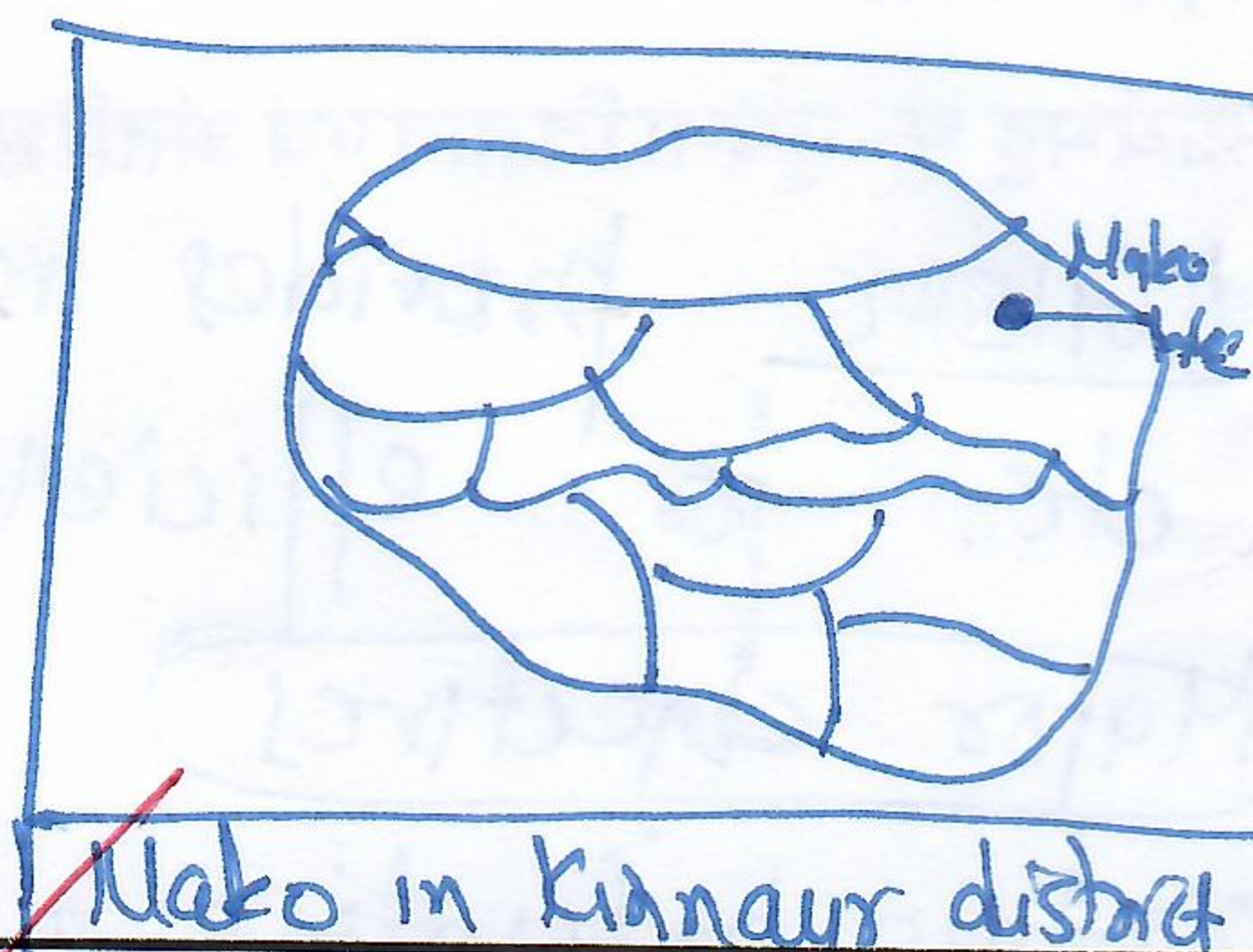
→ frozen during winters

→ have religious importance

(footprints of Padmasambhava)

Theyavin Nako Monastery

- used for recreational activities by the tribal people of the district.
- in winters used for ice-skating.
- now boating is also allowed by the extent is low



Q 14 Give a detail about the demographic profile of Himachal Pradesh.

हिमाचल प्रदेश की जनसांख्यिकीय प्रोफाइल के बारे में विस्तार से बताएं।

Himachal Pradesh has a population of 68.65 lakh people (2011 census).

- ① Population density — 123 — Highest — Hamirpur (⁴⁰⁰/~~1000~~)
lowest — Lahaul (50)
- ② Annual decadal population growth → 12.5% — Highest Una
- ③ Literacy rate — 82.50% — male — 90% — lowest Lahaul
female — 72% — Spiti (-5%)
- ④ Demographic dividend
→ 35% → out of which 95% are literate
- ⑤ Sex ratio — 972/1000 — Highest — Hamirpur (1096)
lowest — Kinnaur (818)
- ⑥ Rural population — 90%
Urban population — 10%

— HP has a positive demographic dividend, which it can harness for economic development.

Q 15 What are hybrid disasters, & provide examples from the context of Himachal Pradesh?

हाइब्रिड आपदाएं क्या हैं, और हिमाचल प्रदेश के संदर्भ में उदाहरण दें।

Hybrid disasters refers to those disasters which are induced due to anthropogenic activities & lead to natural disasters. Means mixture of man-made & natural disasters.

Examples

- ① cloudbursts in HP (2023) — Kullu, Manali, Mandi.
- ② landslides in Shimla — ① due to steep slope
② unplanned construction.
- ③ forest fires — ① due to changing weather
② man-made.
— 2763 forest fires in Shiwaliks.

Thus, hybrid disasters cause damage to life & property causing a huge burden on state's exchequer.

Answer to Question Nos.16 to 25 should not exceed 120 words in each case. Contents of the answers are more important than their length. Each question carries 08 marks.

प्रश्न संख्या 16 से 25 तक का उत्तर प्रत्येक मामले में 120 शब्दों से अधिक नहीं होना चाहिए। उत्तरों की विषयवस्तु शब्द सीमा से अधिक महत्वपूर्ण है। प्रत्येक प्रश्न में 08 अंक होते हैं।

Q 16 India is now the most populous country in the World. What changes would you suggest in existing Population Policy.

भारत अब दुनिया का सबसे अधिक आबादी वाला देश है। मौजूदा जनसंख्या नीति में आप क्या बदलाव सुझाएंगे?

India has a population of 140 crores according to the census of 2011. The latest report of UNFPA mentioned that India will surpass China by the mid of 2024 & become most populous nation of the world.

3

The National population policy (2000) had three goals
→ long term - population stabilisation by 2045.

→ ~~short~~ medium term - reaching Total fertility rate of 2, that is replacement level.

→ short term - providing contraception etc. to citizens.

→ But though we have reached the replacement rate of 1.7 but following changes are needed.

① Removing regional disparity - some states still have high population growth e.g. Bihar, UP etc & states of south have fertility rate of less than 1.

② Rising awareness among masses specially the vulnerable section of society.

③ Focus on education & poverty alleviation - acc. to NIPES, India is 16.2% poor, thus more children more income mentality.

④ role of social media in adopting contraceptives to prevent unwanted pregnancies.

⑤ better job opportunities for people - acc. to CML 7% is the unemployment rate thus progressive society.

⑥ better health services to prevent GMR, MMR & thus prevent over-population. *Focus in this Part*

Thus, in order to make India strong a change in social approach & govt's actions is needed to harness its population potential.

Q 17 Despite huge growth in past two decades India is still suffering from inequality and unemployment. Comment.

पिछले दो दशकों में जबरदस्त वृद्धि के बावजूद भारत अभी भी असमानता और बेरोजगारी से जूझ रहा है। टिप्पणी करें।

The country has witnessed huge economic growth during the past 2 decades near about 6-8%. Yet it is suffering from inequality & unemployment.

- Less focus on manufact map and new sectors
- ① Jobless growth - slow growth of tertiary sector which only contribute to 14.1% of employment. ✓ Good
 - ② regional disparity - e.g Bihar less developed coastal states more developed.
 - ③ poverty - 116.6% MOP - which prohibits good education, low skill & thus unemployment.
 - ④ Inflation - high inflation particularly food & oil inflation (25.8%) ✓ Agriculture
 - ⑤ Unskilled labour - more than 90% unskilled. ✓ Disguised - thus low wages - inequality
 - ⑥ Stagnation of manufacturing sector - only 16.1% growth, which provide max. employment
 - ⑦ inequality in income e.g top 10% hold 90% income.
 - ⑧ LPG policy - though economic growth but stagnated agriculture & jobless growth.

Progn.

Therefore, country is still facing unemployment (7.7%) acc-to CMIE but we can surpass it by focusing on sectoral growth of economy.

Q 18 What are the features newly announced Foreign Trade Policy 2023. Critically analyse the its role in Economic Growth and International Trade.

नव घोषित विदेश व्यापार नीति 2023 की विशेषताएं क्या हैं? आर्थिक विकास और अंतर्राष्ट्रीय व्यापार में इसकी भूमिका का आलोचनात्मक विश्लेषण करें।

4

GOI introduced the new Foreign Trade Policy of 2023 to make India an exporter rather than importer. Currently, the total exports of India is \$770 billion & the import is \$895 billion.

Features (1) reaching India's export [USD 2 trillion by 2030]

(2) to provide an enabling ecosystem i.e. Atmanirbhar for the Indian industries.

(3) support MSME through credit accessibility.

(4) increase export & make India the export hub & decrease import.

(5) technological enhancement & promote investments

Four pillars

Ease of doing business

Interest Remission

Focus on emerging areas e.g. E-commerce

Export promotion

It will boost the country's growth & international trade

+ves
(1) lead to boost to MSME
- MSME 40% country's export
- employ ~ 11 crore

(2) provide employment - as focus of production & manufacturing thus emp. opp.

(3) bring investments e.g. FDI etc.

(4) more revenue due to increase in export.

(5) increase in Forex (currently \$640 billion)

-ves
(1) hampers the traditional industries e.g. cottage, handicraft.

(2) FDI, FII & opening of new industries may hamper environment.

(3) still tax system, compliance system in India is weak.

(4) primarily a agriculture dominated country (~ 51%).

The new foreign policy will make India self-sufficient & Atmanirbhar in the field of production.

Q 19 Discuss the significance of ISRO's Chandrayaan-3 mission and its objectives. How does it contribute to our understanding of the Moon?

ISRO के चंद्रयान-3 मिशन के महत्व और उसके उद्देश्यों पर चर्चा करें। यह चंद्रमा के बारे में हमारी समझ में कैसे योगदान देता है?

ISRO launched Chandrayaan-3 Mission on July 2023 after two previous missions which successfully landed on moon (Chir) (Shakti) on 123 July 2023, now celebrated as National Space Day

Objectives of Mission ① Soft & successful landing on South pole of Moon.

② in-situ scientific exploration of Moon.

③ Moving around the Moon's orbit.

④ to study composition of Moon's surface, seismicity on Moon surface.

Significance ① Paved way for future lunar explorations e.g.

Rubik with JAXA

② scientific exploration of Moon - in CHASTE, APXS, etc probes

③ increased private investment e.g. VIKRAM-S, Agni-Kul Satellite.

④ establishment of new startups in space technology.

⑤ Job creation - more scientist in space technology

⑥ More revenues e.g. launch of other countries satellite e.g. OneWeb satellite launched by ISRO.

⑦ India's prestige in global world - as India became 4th country to have soft landing on Moon.

The Chandrayaan-3 along with earlier two missions revealed

① presence of Hydroxyl group on Moon.

② conducts in-situ scientific exploration on Moon

③ it has probes like CHASTE for studying chemical composition, to study seismicity on Moon.

④ the images of Moon surfaces passed to ISRO.

Chandrayaan-3 proved India's worth & also paved way for future exploration e.g. Gaganyaan, Artemis which

will act as a soft-power for India in upcoming future.

Q
20

What are the prospects and challenges of non-conventional sources of energy in India?

भारत में गैर-पारंपरिक ऊर्जा स्रोतों की संभावनाएं और चुनौतियां क्या हैं?

Non-conventional sources of energy refers to the use of renewable energies e.g. solar (68.94W installed), wind (40.14W), Hydropower (51.4W), wind energy (10.14W) & nuclear energy (6.74W) etc. India has committed to net-zero by 2070 for which non-conventional energy plays an important role.

Prospects of non-conventional energy

- ① Solar energy — potential (7484W), installed (68.94W)
- ② Hydropower — potential (1484W), installed (51.14W)
- ③ Wind power — potential (1204W - 6384W), installed (40.1W)
- ④ Nuclear energy — 6.074W (installed)

Advantages ① cleaner source of energy.

- ② environment friendly — release of CO_2 is very low thus no harmful effects.
- ③ renewable in nature thus long term sustainability.
- ④ abundant supply e.g. tropical climate (India), Thorium available.
- ⑤ Reduces import bill by US\$ 100 billion

Disadvantages ① Seasonal nature e.g. solar energy only in sunny days

- ② degrade aesthetic value of land e.g. coastal region wind turbines
- ③ problem of land acquisition e.g. Kundankulam project (Tamil Nadu)
- ④ unavailability of technology e.g. solar panels, nuclear power plant
- ⑤ problem of waste disposal e.g. nuclear waste
- ⑥ Safety concerns e.g. nuclear leak like Fukushima

Though, India is moving towards non-conventional sources & has promised of producing 500GW by 2030 from non-renewable source, there is a need for capacity building

Q
21

What do you understand by Geographic Information System (GIS). How its applications benefiting common man?

भौगोलिक सूचना प्रणाली (GIS) से क्या समझते हैं? इसके अनुप्रयोग आम आदमी को कैसे लाभान्वित कर रहे हैं?

The term GIS refers to the use of satellites etc. for getting the geographic information of the area e.g. land, water, vegetation. It includes GPS + remote sensing technologies. India has its own NAVIC satellite for the GPS & GIS technology.

Applications of GIS

- ① In Agriculture → for mapping of the land e.g. Bhurga → for precision agriculture — cropping pattern, water use etc.
- ② Urban planning — to prevent flooding, decongestion of the cities e.g. GIS technologies for slum area (Sharan).
- ③ geo-tagging of vehicles e.g. HP post state to use GIS technology for vehicle tracking
- ④ natural resource management e.g. WRIS — water resource information system by SERO.
- ⑤ for disaster management e.g. early warning system can be developed e.g. earthquake monitoring can (Kanpur)
- ⑥ to curb corruption e.g. geo-tagging of MARNET assets
- ⑦ for defense & security purpose e.g. use of GIS technology to map terrorist areas e.g. recent use of GIS by Israel.

Thus, GIS technology has wide application & can be used for effective & efficient governance so that country can achieve desired economic growth.

Q 22 What is Micro Irrigation and what are the benefits of Micro Irrigation? Discuss the governments efforts with reference to Micro Irrigation.

माइक्रो इरिगेशन क्या है और माइक्रो इरिगेशन के क्या लाभ हैं? माइक्रो इरिगेशन के संदर्भ में सरकार के प्रयासों पर चर्चा करें।

Microirrigation refers to the use of water efficient methods for irrigation of crops.

- Drip irrigation — 2-20 litre/hour near root.
— Most efficient.
- Sprinkler irrigation — Suitable for all terrain.
- Sub-surface irrigation technique.

- Benefits
- (1) it increases water efficiency
 - (2) helps in saving water as it minimises water loss.
 - (3) prevents decrease of soil fertility & erosion
 - (4) prevents ocean & land acidification
 - (5) saves fertilizers as it prevents leaching.
 - (6) reuse the non potable water
 - (7) helps in maintaining the ground water table

Various govt. initiatives

- (1) PM Krishi Sinchayee Yojana — under which the objective is "Per drop more crop"

- ② PM-KUSUM scheme - extra income to farmers so that they can sell extra electricity.
- ③ NABARD - loans for adoption of Microirrigation.
- ④ Watershed development programme - by WB to promote micro-irrigation.

Drawbacks ① the cost for installation is very high thus till now people use traditional irrigation.

② depends on electricity thus unfavourable.

③ Acc. to NITI Aayog, only 5% cultivated land irrigated
 Acc. to WB only 85% land is irrigated, thus India needs to increase effort in micro-irrigation.

Q 23 What are the various initiatives started by H.P. govt to promote sustainable tourism?

हिमाचल प्रदेश सरकार द्वारा सतत पर्यटन को बढ़ावा देने के लिए कौन-कौन सी पहल शुरू की गई हैं?

Acc. to UN, sustainable tourism means responsible tourism, where you respect both the community, nature & tourist. In HP, tourism constitute 7% of GDP & 14% employment.

Various initiatives to promote sustainable tourism

① Eco-tourism - promoted eco-tourism so that nature does not have negative impact by tourism.

② Rural tourism - promoting rural tourism so that, rural economy grow.

③ HP Ecotourism Policy 2019 - to bring more tourist to untapped & unexplored part of state.

④ Mai Rahen Mai Manzilen (2018) - Rs. 50 crore to build untapped & unexplored sites e.g. Thangeli (Mandi), Nauradhar (Baramulla), Chanshal etc.

⑤ Community tourism - involvement of community for sustainable tourism e.g. Mager community built igloos, much house.

⑥ Model Eco village - to develop a village as model village in 11 dist. (except Lahaul)
⑦ Diversification of tourism e.g. snow tourism, Adventure tourism etc.

⑧ Har Gaon ki Kahani (2008) + Home Stay scheme (2008) - to prevent over burden on major tourist places.

The efforts of HP govt. is proving successful as the Chamba Home Stay received award for Best home stay in 2023 under sustainable development category.

Q 24. What is the Solar Power Generation Potential of the Himachal Pradesh? Also, right down the major provisions of the H.P. Solar Power Policy.

हिमाचल प्रदेश की सौर ऊर्जा उत्पादन क्षमता क्या है? साथ ही, एच.पी. सौर ऊर्जा नीति के प्रमुख प्रावधानों को लिखिए।

Solar power is the renewable source of energy. India has a potential of 748 GW out of which 68 GW is installed.

② Himachal too have solar power potential of approximately 98 GW ⁵³
→ recently a solar power is opened in Kot dam Bilaspur

To harness solar power, HP has formed HP. Solar Power Policy.

① make himachal self-reliant in terms of solar power

- ② promoting youth in developing solar energy plants.
- ③ loans, subsidies to private players for installation of solar panels.
- ④ easy procurement of solar panels so as to facilitate solar energy generation.

Recent initiatives ① 40% to youth for installing solar power upto 2MW.

- ② 2 solar powered gram panchayats in every district acc. to 2023 Budget.

HP has promised to turn green upto March 31, 2028 & thus harnessing solar energy will play a pivotal role in achieving this.

Q 25 What is the role of emerging technologies in the economic development of the state?

राज्य के आर्थिक विकास में उभरती प्रौद्योगिकियों की क्या भूमिका है?

The country is growing at a rate of 6-6.8% in 2022-23 & technology can play an important role.

- ① for inclusive development e.g. banking system, mobile banking, disbursement of loans
- ② solar technologies can be used to harness solar energy that will reduce import dependence.
- ③ role of technology in agriculture e.g. GIS in mapping, soones for aerial seeding etc.
- ④ skilling of workers e.g. use of online platforms for skill enhancement.

⑤ to diversify economic activities e.g. use of technology in agriculture can ~~increase~~ productivity. etc.

⑥ urban planning e.g. ~~floods~~ prevent by ~~rainwater~~ harvesting.

⑧ Cleaner source of energy — prevent environmental damage, ~~crisis~~ climate change etc.

⑨ to leverage investments e.g. in MSME sector.

⑩ boost productivity & ~~efficiency~~ → e.g. faster production, less consumption.

Therefore, emerging technology can make India self-sufficient & add to economic growth by ~~reducing~~ poverty, providing employment etc.

Answer to Question Nos. 16 to 25 should not exceed 120 words in each case. Contents of the answers are more important than their length. Each question carries 08 marks.

प्रश्न संख्या 26 से 28 तक का उत्तर प्रत्येक मामले में 400 शब्दों से अधिक नहीं होना चाहिए। उत्तरों की विषयवस्तु शब्द सीमा से अधिक महत्वपूर्ण है। प्रत्येक प्रश्न में 20 अंक होते हैं।

Q 26 Discuss the achievements of Digital India Programme. What are the challenges involved in its implementation? How can we overcome the same?

डिजिटल इंडिया प्रोग्राम की उपलब्धियों पर चर्चा करें। इसके कार्यान्वयन में क्या चुनौतियां हैं? हम उन पर कैसे काबू पा सकते हैं?

India is moving towards digitalisation since it is the need of the hour as this is the the era of 4th Industrial Revolution. Thus, India has launched Digital India programme to cater its demand for better internet, connectivity etc.

Achievements of Digital India's programme

① Bharatnet — under this the rural economy is to link with the broadband services.

— more than 30% of the villages are connected with internet connectivity.

② the no. of mobile phones has increased 2 times than the previous usage. ✓

③ digital economy — BHIM app, use of UPI in various transactions, etc. ✓

→ it is estimated that more than 40% transactions are carried with the help of UPI.

④ transforming education e.g. e-Pathshala Scheme.
— increased accessibility to education ✓

⑤ transforming healthcare e.g. telemedicine like e-Sanjeevani portal thus easy access to health care services. ✓

⑥

Do not leave space and break connect

Challenges of Digital India

- ① Rural-urban divide — this poses a serious challenge as 68% of India is rural, which lack digital connectivity.
- ② Digital illiteracy — it is estimated that ~38% Indian people are digital illiterate.
- ③ Data privacy issue — e.g leakage of data from HPSCBC in HP.
- ④ Reluctance of people — due to hesitation & security concerns.
- ⑤ Poor digital infrastructure e.g acc. to e-governance portal 56% villages do not have internet connection.
- ⑥ vast geography — difficult & rugged terrain so difficult to lay down the optical fibres.
- ⑦ lack of awareness among people — half of the people do not know about the programme.
- ⑧ Digital frauds — e.g cybercrimes, money extortion etc. discourage people from opting to digital ways.

- ⑨ lack of mobile phones — a large section of population is below poverty line (16.2% acc. to NSP), so they can't afford phones.

Ways to overcome the issues

- ① Government incentives to opt for digital methods ✓
- ② Digital India literacy programme — so that people can use digital media. ✓
- ③ Promote investment in digital infrastructure.
- ④ Proper establishment of digital infrastructure.
— can use PPP model for laying down of digital optical fibres ✓
- ⑤ Satellite broadband — in case of rugged terrain, where lines cannot reach. ✓
- ⑥ Role of local panchayat to improve the digital literacy of society. ✓
- ⑦ Awareness campaigns to make people aware of digital India.
- ⑧ Anti corruption — so that the funds, & programme can be implemented effectively. ✓

① proper monitoring & review of the programme.
— so that loopholes can be eradicated.

Digital India promotes e-governance which in turn promotes effective public service delivery which is the core of our democracy therefore a holistic & concerted effort is needed to bring each & every corner of our country under its ambit.

Q 27 ISRO's role has been impeccable in making India a global space power. Discuss. Also Highlight how the ISRO's mission have contributed to India's Socio economic Development.

भारत को वैश्विक अंतरिक्ष शक्ति बनाने में ISRO की भूमिका अविश्वसनीय रही है। चर्चा करें। साथ ही, इस बात पर प्रकाश डालें कि कैसे ISRO के मिशनों ने भारत के सामाजिक-आर्थिक विकास में योगदान दिया है।

ISRO is the nodal agency of space exploration in India, formed in 1969 under Vikram & Sarabhai, based in Bengaluru. It has played a pivotal role in developing India as a major space player.

- ⑨ lack of mobile phones — a large section of population is below poverty line (16.2% acc. to NSP), so they can't afford phones.

Ways to overcome the issues

- ① Government incentives to opt for digital methods ✓
- ② Digital India literacy programme — so that people can use digital media. ✓
- ③ Promote investment in digital infrastructure. ✓
- ④ Proper establishment of digital infrastructure. ✓
— can use PPP model for laying down of digital optical fibres
- ⑤ Satellite broadband — in case of rugged terrain, where lines cannot reach. ✓
- ⑥ Role of local panchayat to improve the digital literacy of society. ✓
- ⑦ Awareness campaigns to make people aware of digital India.
- ⑧ Anti corruption — so that the funds, & programme can be implemented effectively. ✓

Major achievements of ISRO!

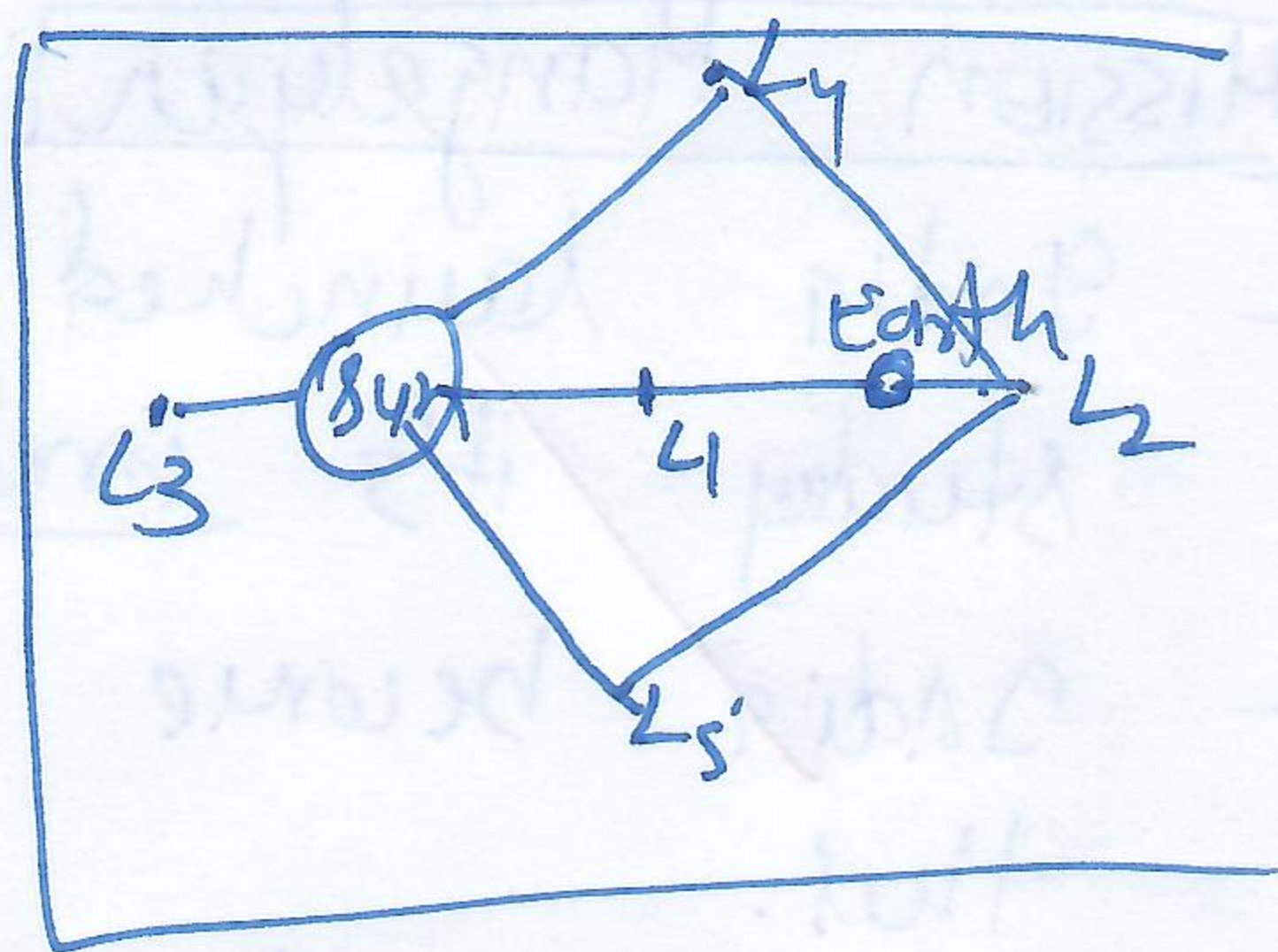
- ① 1975 — ISRO launched its first satellite "Aryabhata" with the help of Soviet Union.
- ② 1979 — ISRO launched space launch vehicle (SLV) to boost its capacity.
- ③ 1994 — it was successful in launching the augmented SLV + Polar satellite launch vehicle (PSLV)
- ④ Mission Mangalyan — launched in 2013.
 - India launched a spacecraft in Mars to study its composition & possibility of life on Mars
 - India become first Asian country to achieve this.
 - first country with minimum cost to have this.
- ⑤ Mission Chandrayaan-1 — 2008.
 - Lander + Rover
 - identified hydroxyl group in Moon
- ⑥ Chandrayaan-2 — 2019
 - failed due to loss of Lander.
 - but rose country's prestige.
- ⑦ Chandrayaan-3 — 2023
 - 4th country to land on moon.
 - soft landing on south pole of moon.
 - with an objective of conducting in-situ experiment on moon's surface.

(8) AstroSat — country's first astronomical satellite to study the celestial bodies in X-Ray & UV spectroscopy.

(9) Aditya-L1 — first sun observation mission — launched on Sept 2nd, 2023.
— at L₁ point of sun.
— study — coronal, mass ejection (CME) + photosphere + chromosphere.

(10) NISAR — NASA- ISRO Synthetic Aperture Radar

— revolve around earth for 16 days & then mapping.
— working in L & S band



(11) XpoSat — world's 2nd X-polarimetry mission launched by the ISRO.

Upcoming mission

(1) Gagan mission — to make humans reach in space upto 2024.

— Launch vehicle — GSLV-Mk III

— spacecraft < crew module
service module

— Vyommitra — a half-humanoïd by ISRO
— will be sent first.

(2) India has signed Artemis Accord with NASA
— for first manned crewed mission

All these missions have contributed to socio-economic development of country.

- (1) Bringing investments from foreign countries e.g. NASA & India's collaboration
- (2) providing job opportunities — in space-tech companies
- (3) Start-ups — opening of space-tech startups providing employment e.g. Agnikul (Chennai)
- (4) Revenue generation by launching private satellite e.g. OneWeb satellite of Singapore
- (5) fostered Research & development in space technology.
- (6) forward & backward linkages e.g. boost industry for various equipments of spacecrafts.
- (7) provided various information related to earth that has helped tackle problems like Eos gives information about climate etc.
- (8) disaster management — by use of GIS technology etc.
- (9) Defense & security sector — use of satellite images to counter terrorism & militancy.

⑩ Agricultural benefits - GIS in mapping, observing crop pattern e.g. AGRISMET

⑪ ISRO has established Defense Space Research Agency (DSRA) to help in combat with space weaponisation & militarisation.

→ Mission Shakti (anti satellite missiles)

→ Thus, ISRO has helped India grow as a global power by uplifting other sectors of the economy also.

Some suggestions ① increase investment in ISRO's programmes will boost the mission.

② private involvement is being catered by ISpace etc which should be given boost.

ISRO has lead to developing a strong soft power in terms of space mission, which can favour India's geo-political needs & place it at a forefront.

*In Discussion with Sans
Chaudhary*

Q
28

What are the various concerns regarding food security? Explore the strategies adopted to uphold food security in Himachal Pradesh.

खाद्य सुरक्षा से संबंधित विभिन्न चिंताएं क्या हैं? हिमाचल प्रदेश में खाद्य सुरक्षा को बनाए रखने के लिए अपनाई गई रणनीतियों पर चर्चा करें।

⑩ Good

Himachal is a predominantly agrarian economy with a share of approximately ~21% in state GDP and employs nearly 56% of the state's people. Yearly, it grows different type of food e.g. maize, wheat, apple, barley etc. Yet we see there is a growing concern over food security.

Reasons

- (1) More focus on monoculture - we observe that apple occupies more than 50% of state's share & other crops grow very less.
- (2) Land degradation - there is a concern of soil erosion in state that will decr. soil fertility thus productivity.
- (3) Small & marginal landholdings in the state. Acc. to ^{Annual} economic survey of 2021-23 more than 80% land holding are small.
— thus subsistence farming.
- (4) Declining productivity of the crops due to poor soil fertility & climate change.
- (5) Change in the weather patterns
— due to which there is change in cropping pattern, rainfall etc.

- ⑥ loss of arable land due to industrialization, hydropower & unplanned urbanisation
— acc. to HP forest depart. — 12000 hectares of land diverted to industries.
- ⑦ loss of biodiversity e.g. Honeybees act as pollinators but studies show Apis cerana, local honeybee declining. ✓ *Govt*
- ⑧ poor - post harvest management e.g. fruits, vegetables get rotten easily.
- ⑨ leakage in PDS system in the state
thus corruption is also a concern for food security.

Steps taken by Govt of HP

- ① Geo-tagging of vehicles in the states carrying PDS ration. ✓
- ② preference to vulnerable section of society in PDS system ✓
- ③ encouragement of crop diversification
e.g. HP - SHIVA scheme

(4) promotion of Agro-tourism e.g. cultivation of buckwheat, sea-buckthorn in Lahaul.

(5) PM-Gate Kalyan ojana — extended.

Various ways to tackle

(1) Crop diversification — focus to vegetables, fruits like Guava, citrus etc other than apple.

(2) Agro tourism — to promote local crops like buckwheat of Kinnaur.

(3) a proper infrastructure develop to prevent post-harvest losses

(4) use of biotechnology for preventing losses e.g. pest resistance plants, etc e.g. Bt-cotton

(5) focus should be on organic farming to prevent soil degradation.

(6) cultivate climate resistant crops e.g. Millet

(7) engagement with local people for the non-timber forest produce (NTFP) which can be eaten.

② encourage & develop low paying system to local vegetables & traditional fruits e.g. Chilli of Kinnaur etc.

Acc. to the Hunger Index, India ranks 111/125 countries & there is a dire need to look for better option & diversification of crop & cropping pattern. India is moving towards this a holistic approach