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GENERAL STUDIES (TEST CODE : 759)

Name of Candidate	Amol Jain	Registration Number	82534
Medium Hindi/Eng.	English	Date	16/11/16
Center	Bhopal.		

INDEX TABLE

Q. No.	Maximum Marks	Marks Obtained
1	12.5	
2	12.5	
3	12.5	
4	12.5	
5	12.5	
6	12.5	
7	12.5	
8	12.5	
9	12.5	
10	12.5	
11	12.5	
12	12.5	
13	12.5	
14	12.5	
15	12.5	
16	12.5	
17	12.5	
18	12.5	
19	12.5	
20	12.5	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

- Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
- There are TWENTY questions printed in HINDI and ENGLISH.
इसमें बीस प्रश्न हैं तथा हिन्दी और अंग्रेजी दोनों में छपे हैं।
- All questions are compulsory.
सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other than the authorized one.
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
- Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

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EVALUATION INDICATORS

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

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

Answer all the questions in NOT MORE THAN 200 WORDS each. Content of the answers is more important than its length. All questions carry equal marks.

12.5X20=250

1. India has the lowest tax-to-GDP ratio among countries with a similar per capita income on a purchasing power parity basis. Explain the reasons for the low tax-to-GDP ratio in India. What measures can be taken to correct this situation?

भारत का कर-GDP अनुपात वस्तुतः क्रय-शक्ति समता के आधार पर भारत जैसे प्रति व्यक्ति आय वाले देशों के बीच न्यूनतम है। भारत में न्यून कर-GDP अनुपात के कारणों की व्याख्या कीजिए। इस स्थिति को सही करने के लिए क्या उपाय किए जा सकते हैं?

Tax to GDP ratio represents the amount of tax collected as a percentage of a country's GDP. For India it stands at around 16% which is far lower than OECD average of around 30%. Following are the reasons for low tax to GDP ratio :-

- 1) Government's tax policy
 - Govt take populist measures and increases the ceiling on exemptions.
 - various tax exemptions.
 - loopholes in policy like DTAA with Mauritius.
- 2) ~~Failure~~ Failure to implement laws.
 - Govt is unable to check tax evasion, black money and hawala

- and benami transactions.
- 3) Corruption, ~~to~~ has become a major reason behind black money generation. Further, ~~politicisation~~ criminalisation of politics, lack of transparency in election funding is also behind corruption.
- 4) Administrative failures and lack of capacity of tax administration.

Measures to improve tax to GDP ratio

- ① Avoid populist measures to raise exemption ceiling.
- ② Taxing of rich farmers should be started.
- ③ GST reform will reduce tax evasion and avoidance.
- ④ Amendment of DTAA to check round tripping.
- ⑤ Implementation of base erosion and profit sharing norms.
- ⑥ Strengthening PMLA, PCA and institutional mechanism to stop tax evasion.

- ⑦ ~~Involves~~ International collaboration and information sharing
→ Collaborating with G20 in automatic exchange of information (AEOI)

2. In spite of various initiatives, the condition of the power sector still remains one of the core challenges for India. Comment.

विभिन्न पहलों के बावजूद, विद्युत क्षेत्र की स्थिति भारत के लिए अभी भी एक प्रमुख चुनौती बनी हुई है। टिप्पणी कीजिए।

India power sector is underperforming because of following reasons:-

- 1) Supply side constraints have lead led to underutilisation of capacity.
Inadequate supply of coal and gas doesn't allow adequate production.
- 2) Huge financial debts of Discoms.
This leads to under procurement by discoms and by states
- 3) Absence of a national power market with uniform pricing to improve competition and avoid populist policies by state govt.
Since electricity is a state subject this reform has not been possible.
- 4) Differential pricing and cross-subsidisation reduces the financial viability of power sector.

5) Populist schemes like free electricity.

6) Lack of credit from Banks.

Reforms that govt has taken to solve these problems:-

① UDAY scheme to resolve the debt crisis of discoms.

② Development of dedicated freight corridor to ensure speedy transport of goods.

③ Solving the NPA crisis of banks to improve credit availability.

Further ~~govt~~ improvement in bond market are made.

④ FRBM act for fiscal consolidation to avoid populist schemes.

⑤ Revamping of PPP model

⑥ HELP policy to tackle supply side constraints.

3. Examine the reasons for poor performance of public sector banks in India. Give an account of the steps taken by the government and RBI to improve their performance. Also analyse whether the risks arising from the consolidation of the Indian banking sector outweigh the potential longer-term benefits.

भारत में सार्वजनिक क्षेत्र के बैंकों के दयनीय प्रदर्शन के कारणों का परीक्षण कीजिए। सरकार और RBI द्वारा इनके प्रदर्शन में सुधार करने के लिए उठाए गए कदमों का विवरण दीजिए। साथ ही विश्लेषण कीजिए कि क्या भारतीय बैंकिंग क्षेत्र के समेकन से उत्पन्न जोखिम दीर्घावधि में प्राप्त होने वाले संभावित लाभों पर भारी पड़ेंगे?

PSB in India are suffering from huge NPA problem which affects their viability and credit mechanism. Reasons for poor performance are :-

- ① Lack of autonomy :- Since govt is the major stakeholder of PSBs, it dictates the policy of PSB. Thus PSB ~~has~~ also have a social function which reduces its profitability.
- ② Double repression on balance sheet of PSB.
 - high SLR requirement
 - PSL targets.

These reduces the credit availability of banks.
- ③ Absence of ^{or poor performance of} legal in institutional mechanism
 - InB bill
 - SARFAESI act and DRT are not sufficient to tackle NPA. ARC are not able to solve NPA crisis.

Steps taken by govt to revive PSB.

- ① Implementation of recommendation of P.J. Nayak committee and setting up of Bank board bureau and Banking investment company.

- ② Differentiation and diversification of Banks.
— Establishing Payment & small banks.

- ③ Allowing for disinter.
— Insolvency & bankruptcy code bill
— ARC, DRT and SARFAESI Act.

- ④ Deregulation by reducing SLR and including more categories in PSL.

- ⑤ Recapitalisation and consolidation of banks.

Consolidation of Indian banking sector has many risks but its benefit outweigh the risk as:-

- 1) It will allow use of advance technology of larger banks — Technological and geographical feasibility
- 2) It will reduce duplication of work.
- 3) Big banks have more capacity to tackle NPA problem.

But consolidation will reduce competition which is necessary for ~~the~~ better consumer facility.

4. Tax treaties intended to avoid double taxation have in many cases become instruments for double non-taxation. Elaborate. List the major amendments in the India-Mauritius DTAA and the advantages that are expected to accrue due to it.
- दोहरे कराधान से बचाव के प्रयोजन से की गई कर संधियाँ कई मामलों में दोहरे गैर-कराधान का साधन बन गयी हैं। विस्तारपूर्वक बताइए। भारत-मॉरीशस DTAA में हुए प्रमुख संशोधनों और इनके कारण प्राप्त होने वाले अपेक्षित लाभों की सूची प्रस्तुत कीजिए।

Loopholes in tax treaties make them prone to exploitation and tax evasion, money laundering and roundtripping of domestic funds as FDI.

They also become a source of terror financing.

Since tax havens utilise these treaties to create a low taxing regime to invest business — companies route their investment from tax havens. Further companies also relocate themselves to these tax havens.

This is seen in following cases: -

- 1) Transfer pricing case of Vodafone & Hutch India.
- 2) Flipkart shifting its origin outside India.
- 3) Huge FDI into India from Mauritius $\approx 38\%$ of total FDI.

Amendments in DTAA with Mauritius :-

- ① Only companies that have expenditure above 27 lakh are exempted from taking advantages of DTAA.
- ② These amendments will check evasion and tax avoidance from 2 investment routes — Mauritius and Singapore.

Advantages of these amendments.

- ① This will prevent practice of setting up companies abroad to avoid tax.
- ② It will improve tax collection (capital gains tax).
- ③ It will reduce ~~of~~ speculation in Indian bond market.
- ④ It will ensure only genuine ~~of~~ investment comes to India by checking moneylaundering and round tripping.

But, India needs to plug loopholes in DTAA with other countries as well to. Otherwise these amendments won't have the desired effect.

5. Emerging ICT and their appropriation by society constitutes a threat that demands new competencies and practices to be developed and integrated in the existing police work. Discuss with examples.

उभरती ICT एवं समाज द्वारा उसके प्रयोग में एक ऐसा खतरा समाहित है जो पुलिस के वर्तमान कार्य में नई क्षमताओं और प्रथाओं के विकास और समेकन की मांग करता है। उदाहरण सहित चर्चा कीजिए।

Development ~~of~~ and appropriation of ICT by society creates new challenges for police. These challenges demands new competencies and practices to be developed by police: -

- ① Potential spread of false information on social media could lead to disastrous consequences — this is evident from Muzaffar nagar riots. Similar case was observed when people from NE ~~to~~ started to flee from Bangalore.

Thus police should ~~be~~ develop cyber capacity to check false information.

~~IT~~ Section 69 of IT act 2000 should be implemented by proper training.

- ② ~~Police~~ Police should develop the practice of using ICT to disseminate information ~~at~~ for public safety.

2 - Traffic police could use ICT to manage traffic.

3) ICT should be used by police to improve transparency in policing. Registering complaints online could change public attitude towards police. This will make police more accountable and citizen centric.

4) Complaints against police should be allowed to be made using ICT. Thus a check ~~to~~ can ~~police~~ be provided to misuse of power.

5) Use of ICT by police to combat law and order situation.

Use of GPS, CCTV cameras etc.

Training in this sphere is necessary for Indian police.

Again ICT should be used to ^{gather and} share intelligence between police.

6. What are P-Notes and how do they impact the financial system in India? In this context, also highlight the recent regulatory measures taken by SEBI to deal with them.

पी-नोट्स क्या हैं और वे भारत में वित्तीय प्रणाली को किस प्रकार प्रभावित करते हैं? इस संदर्भ में, सेबी द्वारा हाल ही में इनसे निपटने के लिए किए गए विनियामक उपायों पर प्रकाश डालिए।

P-notes are offshore ~~for~~ derivative instruments that allow foreign investors to use foreign portfolio investors to investment in Indian stock markets without revealing their identity. They have drastic impact on Indian financial system:-

- ① They provide a source of foreign investment to India.
- ② Since they ~~no~~ do not have to disclose their identity, P-notes are used for money laundering, roundtripping and terror financing. This is done to evade tax and roundtrip black money as foreign investment.
- ③ P-notes ~~are~~ ^{adds to} volatility in Indian stock markets. This makes India more ~~vol~~ vulnerable to external shocks.

Measures taken by SEBI to improve the quality of P-notes :-

- ① It has tightened KYC norms for p-notes.
This reduces the chance of round tripping.
- ② It mandates report of suspicious transaction to Financial intelligence unit.
- ③ It also limits ~~to~~ the size of p-notes.
Thus it checks volatility in markets.

SEBI's measures are to check money laundering and market volatility. These measures also require institutional capacity and legal framework to tackle money laundering and black money.

7. The rising levels of e-waste generation in India have been a matter of concern in recent years. Examine the underlying causes of this scenario and the challenges associated with it. How can the new E-Waste Management Rules, 2016 help in meeting these concerns?

भारत में ई-अपशिष्ट उत्पादन का बढ़ता स्तर हाल के वर्षों में चिंता का विषय रहा है। इस परिदृश्य के अंतर्निहित कारणों एवं इससे संबद्ध चुनौतियों का परीक्षण कीजिए। ई-अपशिष्ट प्रबंधन नियम, 2016 इन चिंताओं का समाधान करने में किस प्रकार सहायता कर सकता है?

E-waste or electronic waste comprises of discarded electronic devices, which contain lead, cadmium, mercury, arsenic, etc.

E-waste generation has risen in India because of its high population and penetration of ICT in India. The causes and challenges associated with e-waste are:-

Causes

- ① Population and penetration of ICT.
- ② Lack of waste collection and segregation.
- ③ Lack of awareness of difference b/w ~~solid~~ e-wastes and other wastes. This leads to similar treatment by public.
- ④ Absence of e-waste recycling capacity.

Challenges

- ① E-waste leads to degradation of land, air and water. It increases mercury content which leads to bio-accumulation of mercury.
- ② e-waste recycling is a costly process.

which requires latest technology and funding.
 (c) — lack of credit, end and failures of PPP model are challenging pre-waste recycling.

New E-waste management rules have following provisions:-

- ① It includes CFL which are ~~major~~ source of Mercury. Thus it checks bioaccumulation of mercury.
- ② It introduces producer pay principle and makes provision for recollection and exchange of electronic devices.

These e-waste management are still not sufficient to tackle e-waste in india because of sheer size of ewaste generated ~~and~~ compared to recycling capacity.

~~India should~~ These rules also donot create awareness in public. Further capacity of local bodies to tackle e-waste is not sufficient.

8. Terror groups, much like corporate bodies have well and truly embraced and exploited the benefits of globalisation. Discuss the statement with reference to terror financing and propaganda activities.

कॉर्पोरेट निकायों की ही भाँति आतंकवादी समूहों ने भी सही मायने में काफी हद तक वैश्वीकरण के लाभों को आत्मसात और उनका दोहन किया है। आतंकी वित्तपोषण एवं प्रचार गतिविधियों के संदर्भ में इस कथन पर चर्चा कीजिए।

globalisation is the process in which an business entity or organisation start operating internationally. Terror groups have also used this phenomenon to spread their reach and also create mechanism to finance their activities. This can be elaborated by following.

Use of globalisation for terror financing:-

- ① Terror group have used development in ICT to fund their activities by developing online platforms in deep net or dark net. Thus activities like trafficking of drugs and humans are operating online ie globally.
- ② Terrorist in middle east are able to sell their oil and purchase guns via agents and money laundering.
- ③ Terrorist ~~to~~ are able to invest in stock

markets of countries using P-notes and other derivative instruments.

4) Countries willing to fund these groups are able to route their finances using global network.

Use of globalisation for propoganda

- ① Conservatism and fundamentalism is advocated as a response to westernisation or liberal thought. Thus negative impact of globalisation is used by terrorist.
- ② Use of ICT and social media by ISIS is evidence of ~~use~~ propoganda tactics by terrorists.
- ③ Terrorists use media attention to glorify themselves and attract recruits and funders.

Thus there is a need for a global mechanism like FATF to tackle money laundering and terror financing. International cooperation is needed ~~is~~ to tackle global threat of terrorism.

9. What is net-metering? Critically analyse its potential in incentivising distributed generation in India.

नेट-मीटरिंग क्या है? भारत में वितरित उत्पादन को प्रोत्साहित करने में इसकी क्षमता का आलोचनात्मक विश्लेषण कीजिए।

Net-metering is a credit mechanism that allows ~~g~~ ~~the~~ users who generate electricity by using solar or wind or other renewable energy to use ~~g~~ grid connected electricity at reduced rates and at times of need.

Net metering has various advantages like:-

- ① It promotes use of solar and wind power — ~~A~~ helps in INDC target and target of 175 GW ~~energy from renewable~~
- ② It also ensures grid connectivity of renewable energy. Thus it solves the problem of storing ^{energy} for longer use.
- ③ This will ensure sustainable development and ~~will~~ provide electricity to un-electrified indian villages.
- ④ It will give boost to renewable energy industry thus will improve employment

Despite its advantages, there are various challenges as well:-

- ① India lacks grid capacity which makes net metering formidable.
- ② Initial cost of using renewable energy is too high.
- ③ Electricity is a state subject. Thus a uniform policy for net metering is difficult to achieve.
- ④ Huge debt of discom companies doesn't incentivise use of net metering.

Thus India needs to overcome these challenges to take advantages of net-metering.

10. Explain the challenges associated with predicting the monsoon accurately. Can shifting to a completely dynamical model from the one used by the IMD presently help in improving the accuracy of predicting the monsoon?

मानसून के सटीक पूर्वानुमान से संबद्ध चुनौतियों की व्याख्या कीजिए। क्या IMD द्वारा वर्तमान में प्रयोग किए जा रहे मॉडल के स्थान पर पूर्णतः गतिशील मॉडल का उपयोग मानसून के पूर्वानुमान की सटीकता को बढ़ा सकता है।

Indian ~~monsoon~~ monsoon is a complex weather phenomenon ~~what~~ with a large number of variables, like sea surface temperature of Indian and Pacific ocean, location and intensity of ITCZ, upper atmospheric circulation etc, affecting it.

Further there is a challenge of information gathering, and relating information.

Prediction fails because of lack of understanding of associated weather phenomenon, like El-nino and Indian ocean dipole, which are associated with ~~monsoon~~ monsoon.

Institutional challenges like lack of international cooperation in info. sharing, lack of human resource and technological capabilities also makes prediction inaccurate & so.

Shifting completely to dynamic model will not solve the problem. It might improve the ~~short-term~~ accuracy of immediate events but accuracy of long term ~~of~~ prediction is difficult to achieve because of complexity of monsoon.

IMO cannot completely shift to dynamic model, but it has to use both the existing model and dynamic model to improve prediction.

Further it requires investment in RnD, satellite technology etc and improvement in human resource and international collaboration with countries of Indian & Pacific ocean region.

11. The Compensatory Afforestation Fund Bill would require to work along with the Forest Rights Act in order to achieve the aims of environment protection while also ensuring rights of the tribal people. Comment.

जनजातीय लोगों के अधिकारों को सुनिश्चित करते हुए, पर्यावरण संरक्षण के लक्ष्यों को प्राप्त करने के लिए प्रतिपूरक वनीकरण कोष विधेयक को वन अधिकार अधिनियम के साथ समन्वय की आवश्यकता होगी। टिप्पणी कीजिए।

CAMPA fund bills & creates national and state afforestation fund authority to use collected CAMPA funds for afforestation program. CAMPA bill ~~take~~ considers Net present value of forests which includes ecological value of forest as well. This bill aims to restore ecological value and wildlife of forests. Yet, this bill fails to acknowledge the loss of forest inhabitants and tribal people. There is a need ~~to~~ for CAMPA bill to work along the forest rights act because:-

- ① The forest rights act guarantees community right of ownership to forests. Thus CAMPA - ~~a sba~~ should serve as a rehabilitative mechanism for displaced tribals and forest community.

② CAI reports highlight the incapacity of state to undertake afforestation. Thus it becomes imperative to use the tribal community for rejuvenation and reforestation. This also improves social accountability of authorities.

③ Forest rights act empowers gram sabha over forest resources, while CAMPA bill ~~makes~~ ^{empowers} forest bureaucracy. This is against the policy of minimum govt and maximum governance. It also ~~is~~ restricts decentralisation and participatory democracy.

These arguments highlights the importance of involving forest community, gram sabha etc for proper implementation of CAMPA funds.

12. It has been argued that India's strained patent protection and IP administration has failed to keep pace with growing technological advances. In this context, examine the provisions of the new Intellectual Property Rights (IPR) Policy, 2016. Also explain how the new policy can help boost innovation and entrepreneurship in the country.

यह तर्क दिया जाता है कि भारत का विकृत पेटेंट संरक्षण एवं बौद्धिक संपदा अधिकार प्रशासन वस्तुतः विकसित होती तकनीकी प्रगतियों से तालमेल बैठाने में असफल रहा है। इस संदर्भ में, नई बौद्धिक संपदा अधिकार (IPR) नीति, 2016 के प्रावधानों का परीक्षण कीजिए। साथ ही व्याख्या कीजिए कि नई नीति देश में नवोन्मेष और उद्यमिता को बढ़ावा देने में किस प्रकार सहयोग कर सकती है।

Indian ^{IPR law} has ~~also~~ remained compliant with WTO negotiations — Trade related aspects of IPR (TRIPS). Yet lack of capacity, poor implementation of laws, lack of awareness among people has strained India's patent protection and IP administration. Further development of technology as outpaced an administration and laws. New IPR policy makes following provisions to address this problem:-

- ① It creates provision for generating awareness of ~~the~~ IPR laws in the country.
- ② It ensures that India laws are compliant with TRIPS agreement. Thus it allows for India's sovereign

ought to use section 3-d in case of
evergreening of patents and use compulsory
licensing.

③ Policy ensures speedy grants of patents for
innovation — Thus it promotes innovation
& entrepreneurship.

④ Policy mandates international collaboration
to address the issue of technology transfer
in case of climate change and other negotiations.

Thus this policy ensures a stable and predictable
IPR mechanism that will attract global
investment in India. It will also
promote domestic innovation. IPR policy
combined with start up and stand up India,
Make in India, Atal innovation mission
will boost India's growth and ~~emp~~
create new employment facilities.

13. Though the frequency of both droughts and floods has increased in many states of the country, the preparedness level for mitigating their impacts still has significant gaps. Discuss in the context of India.

वद्यपि सूखे और बाढ़, दोनों की आवृत्ति देश के कई राज्यों में बढ़ी है किंतु उनके प्रभावों को कम करने हेतु तैयारियों के स्तर में अभी भी एक बड़ा अंतराल विद्यमान है। भारत के संदर्भ में चर्चा कीजिए।

India is witnessing both droughts and floods ~~at the~~ simultaneously in different geographic regions. Yet the preparedness levels for mitigation are insufficient.

This because of:-

- ① Lack of Inter-state and Center state collaboration and information sharing.
This is evident from lack of funds by center to mitigate droughts of 2016.
- ② Lack of planning and faulty govt policy:
 - promotion of sugar cane farming in maharashtra has led to overexploitation of water.
 - provision of free water and electricity promotes exploitation and over use of groundwater.
- ③ Absence of water management systems and rain water harvesting:

This leads to wastage of rain water and doesn't allow replenishment of groundwater

- ④ Construction of dams has ~~was~~ increased the chances of flood. Further construction in ~~so~~ floodplains and ~~so~~ over low lying water bodies has led to urban flooding.
- ⑤ Lack of coordination between National, state and local disaster management authorities ~~this~~
- ⑥ Spreading awareness to check misuse of water is not there.
- ⑦ Collaboration between forecasting ^{agencies} and rescue operation is absent in case of floods. This leads to delayed responses.
- ⑧ Drought mitigation strategy of drought proofing, rain water harvesting and provision for alternate source of employment are not adequate.

Thus India needs an overhaul of existing mitigation mechanism. India should ~~focus~~ also focus on mitigation aspect of

climate change in future UNFCCC negotiation

14. In view of the high levels of inequality in India, it is imperative to not only broaden access to education and health but also financial services. Discuss. Also highlight the efforts made by the government in recent times to address inequality by promoting financial inclusion.
- भारत में असमानता के उच्च स्तरों को देखते हुए न केवल शिक्षा और स्वास्थ्य बल्कि वित्तीय सेवाओं तक पहुँच को भी विस्तृत करने की आवश्यकता है। चर्चा कीजिए। साथ ही सरकार द्वारा हाल ही में वित्तीय समावेशन को बढ़ावा देकर असमानता को कम करने के लिए किए गए प्रयासों पर भी प्रकाश डालिए।

Financial inclusion can be defined as providing financial facilities like credit, saving, insurance, payment, etc. to the entire population. It is as important as providing education and health facilities to tackle inequality. India needs to broaden access to education and health, to achieve this endeavour financial inclusion has a role to play.

Financial inclusion will provide basic financial services by the govt to people — like MGNREGA payment, DBT of subsidy etc. This will ensure financial stability and therefore ~~stop~~ tackle child labour etc. Financial services will improve savings and credit facility which could

them be used in agriculture as investment.
This will ensure food security and
improve productivity and farm income.
It will also allow entrepreneurship in
rural areas — that will generate
employment. Financial inclusion will rescue
villagers from exorbitant rates of credit
and perpetual indebtedness. This will prevent
them from ~~the~~ distress migration and
bonded labour.

Efforts made by govt for financial
inclusion :-

- ① PM Jan Dhan yojana: opening bank a/c
- ② DBT cash transfer by using JAM trinity
ie bank a/c, Aadhaar and Mobile.
- ③ Diversification of banks — payment and
small banks.
- ④ Use of technology — Unified payment
interface, RuCard,
- ⑤ Insurance scheme — a fasal Bima yojana
and other life and accident insurance scheme
- ⑥ MUDRA bank

15. Examine the need for indigenization of the defence industry in India. While highlighting its challenges, analyse how the new Defence Procurement Policy (DPP) and relaxations in FDI norms can address these challenges.
- भारत में रक्षा उद्योगों के स्वदेशीकरण की आवश्यकता का परीक्षण कीजिए। इसकी चुनौतियों पर प्रकाश डालते हुए विश्लेषण कीजिए कि नई रक्षा खरीद नीति (डिफेंस प्रोक्योरमेंट पॉलिसी-DPP) एवं FDI मानदंडों में दी गयी छूटें इन चुनौतियों को किस प्रकार संबोधित कर सकती हैं।

Indigenisation of defence industry is important for self-reliance. Further it is needed for:-

- ① Political reasons.
 - to have independent foreign policy
 - reduce dependence on other nations
- ② Economic reasons.
 - importing defence equipment leads to trade deficit and current account deficits. It leads to depletion of forex reserves thus could result in another BOP crisis.
- ③ ~~social~~ social reasons.
 - costly imports reduces the fiscal capacity of govt to spend in social security schemes.

New defence procurement policy^(NDPP) and FDI policy ~~can~~ addresses the challenges ~~face~~ of low investment in RnD, obsolete technology, failure of PPP model and over-reliance on other countries. These two policies boost domestic production by:-

- ① NDPP has ^{preference for} IDDM ~~eq~~ is indigenously designed, developed and manufactured category under Buy India.
- ② NDPP also has a offset clause for purchase of foreign equipment. This will ensure investment in India.
- ③ NDPP gives weightage to technological improvement.
- ④ India has increased FDI limits to 100%. Thus allowing foreign investment will result in setting up of ~~xxx~~ defence industry and investment in RnD. It will utilise the make in India platform to make ~~xxx~~ India self reliant.

16. Digital technologies have the potential to dramatically transform higher education. Giving a special emphasis to MOOCs, analyse the statement in the context of India.

डिजिटल प्रौद्योगिकियों में उच्च शिक्षा को नाटकीय ढंग से रूपांतरित करने की क्षमता है। MOOCs पर विशेष बल देते हुए, भारत के संदर्भ में इस कथन का विश्लेषण कीजिए।

Digital technology in education has a profound impact. It will help in creation of an environment where quality education is delivered at a very low cost. Thus it improves the fiscal cost of education for govt. Massive open online courses could transform education, this can be understood by following:-

- ① Firstly it is scalable for a large population. It will provide similar quality education to all section of society. Thus it would transcend economic and social barriers.
- ② MOOC will be open for all. It will be affordable.
- ③ Online courses will allow for

discussion, expert opinion etc.

- ④ It will offer a wide range of courses from teachers training to college courses.

But there are certain challenges to use MOOCs.

- 1) Digital illiteracy and digital divide is high in the country.
- 2) Digital infrastructure is lacking.
poor infrastructure leads to inaccessibility.
- 3) Lack of awareness.

Govt scheme of Bharat net, digital india mission are to address these challenges and exploit the potential of ICT in education

17. The Civil Aviation Policy 2016 would help in building a more modern, safe, secure and sustainable aviation industry while also boosting regional connectivity and tourism. Discuss.

नागरिक उड्डयन नीति, 2016 अधिक आधुनिक, सुरक्षित, सुदृढ़ और संधारणीय विमानन उद्योग को विकसित करने में सहयोग करेगी और साथ ही क्षेत्रीय कनेक्टिविटी और पर्यटन को भी बढ़ावा देगी। चर्चा कीजिए।

Civil aviation policy 2016 is to revive the aviation industry. It has following provisions:-

- ① It caps the cost of certain type of journeys.
- ② It promotes regional connectivity by stressing on no-fill airports and revival of PPP arrangement.
- ③ It abolishes 5/20 rule to create a level playing field for new players. It allows for competition in industry.
- ④ It tries to address the problem of high, ~~non~~ maintenance cost of carriers by incentivising development of repair facilities in India. This reduces the cost paid to outside India.

⑤ It stresses on regional connectivity by focusing on regional cooperation in open sky..

This policy ensures tourism by improving connectivity in north east and in the Indian subcontinent. This can be interlinked with Swadesh darshan, Prasad and HRIDAY scheme.

It ensures safe, secure and sustainable aviation by allowing private players to enter and by reviving PPP. This will lead to competition. Further GAGAN project uses satellite information for navigation.

Regional connectivity is boosted by low cost of ticket and opening of no-fill airports.

18. What is the significance of start-ups for Indian economy? Critically analyse the provisions of "Start-up India" program and the challenges that lie ahead in its effective implementation.

भारतीय अर्थव्यवस्था के लिए स्टार्ट-अप्स का महत्व क्या है? 'स्टार्ट-अप इंडिया' कार्यक्रम के उपबंधों एवं इसके प्रभावी कार्यान्वयन में आने वाली चुनौतियों का आलोचनात्मक विश्लेषण कीजिए।

start-ups have a capacity to solve following problems face by Indian economy.

- ① Generate employment to tackle the job less growth of our economy.
- ② Create innovation, invest in RnD to boost India's technological modernisation.
- ③ Revive the manufacturing industry. Indian manufacturing policy wants it contribute 25% of GDP.
- ④ Innovation in agriculture are needed to improve production, provide backend and forward linkage to farmers, seed development etc.
- ⑤ India needs rural industrialisation and entrepreneurs to check distress migration.
- ⑥ India needs development of technology to

deliver low cost but quality education, healthcare and financial services.

start up India schemes tries to create an enabling environment by :-

- ① Improving ease of doing business.
- ② By providing credit and venture capital to start ups.
- ③ By giving tax exemption
- ④ By linking various govt schemes like Make in India, Skill India mission, Atal innovation mission with start-up India.

But there are certain challenges also:

- ① Indian start ups are extensively focused on urban population. This scheme has not been able to attract startups in rural areas and agriculture.
- ② Funding provided is not sufficient for Indian startup industry.
- ③ Regulatory environment is not good. High taxation forces companies to shift to abroad — as done by flipkart.

19. What do you understand by methanol economy? Discuss its environmental and economic advantages. How does methanol compare with other new generational fuels such as ethanol and hydrogen?

मेथनॉल अर्थव्यवस्था से आप क्या समझते हैं? इसके पर्यावरणीय और आर्थिक लाभों की चर्चा कीजिए। नई पीढ़ी के अन्य ईंधनों यथा इथेनॉल और हाइड्रोजन से मेथनॉल की तुलना कीजिए।

Methanol economy uses methanol as a means of energy storage, transportation as fuel and raw material. It replaces hydrogen, ethanol ~~or~~ and fossil fuels.

It has following advantages for environment and economy:-

- ① It is less polluting as compared to fossil fuels.
- ② It generates less GHG, thus checks climate change and global warming.
- ③ It reduces the reliance on oil and gas. Thus reduces the import bill, trade deficit and current ac deficit.
- ④ It leads to sound economic decision making in international trade by resolving the distortion created due to oil and gas.

Advantages over hydrogen and ethanol:

over hydrogen

- 1) It is easy to store, transport and use of methanol.
- 2) It reduces the cost to develop hydrogen storing system.

Over ethanol

- 1) It has more calorific value than ethanol.
- 2) It is easier to produce, store and transport ~~at~~ methanol.

Thus methanol economy could transform the human society by reducing our carbon footprint.

20. Differentiating between Augmented Reality and Virtual Reality, explain why it is argued by many that these technologies are not just about gaming but can change our lives.

आगमेन्टड रियलिटी और वर्चुअल रियलिटी (संवर्धित वास्तविकता और आभासी वास्तविकता) के बीच अन्तर स्पष्ट कीजिए। व्याख्या कीजिए कि अनेक व्यक्तियों द्वारा यह तर्क क्यों दिया जाता है कि ये प्रौद्योगिकियाँ केवल गेमिंग के लिए ही नहीं हैं बल्कि हमारे जीवन को परिवर्तित कर सकती हैं।

Augment reality is a feature where virtual interface uses the real world scenarios. Ex pokemon go.

Virtual reality is a feature where virtual interface encompasses reality, thus the virtual world is experienced as real.
eg:- VR by google.

These technologies are not just about gaming ~~to~~ but can have drastic impact on our lives. This can be understood by:-

- 1) Augmented reality could help in planning ~~and~~ of cities, hotels, houses, furniture etc. It presents a real like situation thus improves decision making.

- 2) Virtual reality could be used by doctors and students to better understand the functioning of human body.
- 3) ^{These} ~~It~~ could also be used in education by providing ~~to~~ simulations of various conditions. Thus it could help in better understanding of physics, biology, space, architecture, environment etc.
- 4) These platforms can help in training of police, counter terror forces etc.

Thus these technologies could be used for betterment of human life.

Governments could use technology to improve their services to citizen.