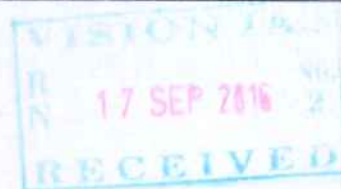




VISION IAS

www.visionias.in



GENERAL STUDIES (TEST CODE : 759)

Name of Candidate	ANUJ MALIK		
Medium Hindi/Eng.	ENGLISH	Registration Number	26968
Center	ORN	Date	17-09-16

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

1. Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
2. There are TWENTY questions printed in ENGLISH.
3. All questions are compulsory.
4. The number of marks carried by a question/part is indicated against it.
5. 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.
6. Word limit in questions, if specified, should be adhered to.
7. Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.

75, 3rd Floor, Old Rajinder Nagar Market, Near Axis Bank, New Delhi – 110060

103, 1st Floor, B/1-2, Ansal Building, Behind UCO Bank, Dr. Mukherjee Nagar, Delhi – 110009

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?

India has a tax-to-GDP ratio of around 16.6%. It is the lowest amongst the other emerging economies. The reasons for such a low ratio are :-

- 1) As highlighted by Tax Administration Reform Committee (TARC), there is lack of prudent estimation of cause and effect of any tax initiative. i.e. how would be the estimated addition to fiscal resources post new tax imposition is not calculated objectively and rationally.
- 2) Narrow Base :- Only 4% of the total population above 18 years of age fall within the taxation structure. Various tax exemptions given by the

gout. add to this. Thus the total taxable income is not taxed to the fullest available tax rate.

3) Poverty and employment

Large section of population belongs to low income groups, around 50% of population is engaged in agriculture, informal sector etc. Thus due to higher informalisation and casualisation of work force, the income is much below the taxable threshold.

4) Tax Evasion - Due to various loopholes present in tax collection and administration mechanism, the incentive to evade tax is much higher than to pay it. The problem is further aggravated by corporate base and tax erosion.

As fiscal resources are key to the development of any country, thus following measures could be taken to improve the ratio:-

① Efficient Tax Administration & collection mechanism.

a) ~~Initiatives~~ Initiatives like e-sahyog could help in increasing the taxation base.

b) Acceptance of recommendation of TARC.

② Taxation of the property or real estate sector, as it is most vulnerable to black money flow.

③ Providing incentives for tax payers for eg high quality roads, concessions at loan payment etc could add to the confidence in paying the taxes.

④ Implementation of Base erosion and profit shifting (BEPS) project of OECD.

⑤ Effective implementation and evaluation of GST.
Thus higher taxation (direct) and not indirect could add to fiscal resources.

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

During the year 2014-15, power availability exceeded the power consumption/requirement during peak hours for most of the states according to Central Electricity Commission. Despite of such a progress, power availability remains low and shows wide inter-regional variations. This is due to a mix of various reasons which haunts the power sector, they are:-

① Open Access :- In spite of allowing open access by amending Electricity Act, 2003 the idea remains a far cry. The condition of 1 MW requirement to take benefit from open access restricts the household section and is biased towards industry requirements. Further cross subsidisation charges,

additional costs hamper the complete functioning of power exchanges in the country.

② Resource Requirement :- Around 90% of power production takes place from combustion of coal. Thus power sector is heavily dependent on coal. But availability of coal at a competitive price is a big shortfall for the sector. Imported coal adds to higher production cost. The idea of captive mining lacks in transparency of allocation, moreover the power generation companies (gencos) do not have sufficient technology to harness the maximum output from mining.

③ Political Influence - For distribution of electricity in states, the nodal authority is state electricity regulation companies (SERCs), but their functioning is

highly influenced by political interests. Thus tariffs are complex and do not reflect the cost of production.

④ AT & C losses - The transmission of electricity over power grids result in a loss of around 20% of input. Moreover, the discoms are highly debted, and are not ~~available~~ able to elicit this max. profits. Various initiatives which could increase profitability are:-

- ① Implementation of UDAY scheme
- ② De-politicisation of SERC and providing them autonomy
- ③ Intra-category subsidisation for power tariffs
- ④ Simplification of tariff structures i.e. not more than 2-3 power rates per unit.
- ⑤ Development of grids which could integrate renewable resources
- ⑥ Use of HVDC transmission lines.

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.

The Banking sector is suffering from rising NPAs, especially the public sector banks. The reason for it are:-

- ① Corporate balancesheet problem and low ~~slow~~ growth is industrial sector. Due to this the credit off take in the economy is reduced and firms are working below production capacity for eg power sector, infrastructure, steel, mining etc.
- ② Banks use average cost of lending rather than marginal cost of lending, which results in higher borrowing cost and to some extent restricts the monetary transmission by RBI.
- ③ PSB, often face stiff competition from small saving instruments such as EPF, PPF etc thus saving rates are higher which in turn makes credit costlier.
- ④ PSB also lack autonomy and

find it difficult to make tricky debt write offs, which often results in evergreening of loans even though they are no longer profitable.

⑤ Lack of competition - Majority of banking sector is dominated by public sector banks, thus minimal fraction of private or foreign banks leads to less competitive loan rates.

Due to worsening situation of PSBs in general govt and RBI have taken following steps:-

- 1) Indradhanush Plan, which seeks to add autonomy, loan restructuring, efficiency etc to PSBs.
- 2) 5/20 Scheme i.e. to refinance loans every 5 years which extend over a long period of time, especially for infrastructure sector.
- 3) Corporate Debt Restructuring.
- 4) Implementation of Bankruptcy & Insolvency

code to enhance the recover of NPAs by banks.

5) Joint lender forums etc.

6) Merger of subsidiary bank branches with parent bank i.e. Consolidation of banks for eg SBI was recently merged with Bharatiya Mahila Bank, Bank of Patiala etc. This move is intended to increase the bargaining power of a larger banks as compared to smaller ones. It is said that it could tackle the problems of NPA by taking stricter and disciplined decisions such as asset recovery, collateral sale, management control etc. But such a move often faces resistance from employees which could result in strikes thus adding to the difficulty of banking sector. Thus a balance needs to be maintained b/w the two.

7) Amendment to SARFAESI Act.

8) Setting up of Asset recovery companies by GOI.

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.

India has signed numerous Double Taxation Avoidance Treaties (DTAA) with various countries for eg Mauritius, UK, Singapore etc. Such treaties come in place to prevent the investor from cost of double taxation both in home country and the investing country. But often this clause is misused in the following ways:-

1) Round Tripping of funds
Funds are just merely shown to be sourced from a tax haven country to escape taxation in India. Thus loss of fiscal resources for both countries.

2) Money laundering - often DTAA are used to place illegal money in tax havens, fraudulent companies are set up within 24 hours

to escape the cost of taxation in India.

3) Base erosion and Profit Shifting -
Major corporate houses transfer their profits to their subsidiary companies in tax haven countries, thus escape from paying tax and also leads to erosion of taxation base.

In such circumstances amendments to DTAA is a huge necessity.

Thus, following amendments were made in India - Mauritius DTAA

1) From 2017-18, taxation ^(27%) on capital gains which be ~~be~~ done on foreign companies which do not have a base in India.

2) Those countries which do not fall within a given exemption threshold will not be exempt from taxation i.e. substantial economic ~~act~~ activity is required to ~~be~~ avoid capital gains tax.

3) Amendments will also be

applicable to DTAA with Singapore.

These amendments would result in following advantages:-

① Quality of FDI in the country will improve, thus only those companies will be investing in India that have motives for economic development.

② Volatility in market will reduce due to certainty in taxation policy.

③ It will add to taxation base of the country and will improve the tax to GDP ratio.

④ It will help to tackle issues related to money laundering, black money, terror financing etc.

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.

With the recent developments in ICT, new ideas, applications and devices are available in the market.

The recent advances in ICT are internet of things, video calling, messaging applications, surge of out of the box applications like zomato, ~~st~~ uker etc.

As technology advances the threats associated with it also multiply at a rapid rate in the form of cyber terrorism, cyber attack, cyber espionage etc.

To tackle these threats effectively certain changes in police work are required.

For example the recent FLASHER app, which can change the IMEI no of a mobile phone once it is stolen requires new tracking skills on the part of cyber cell in police station.

Recent cases of adultery ~~of~~ ^{on} online

websites, demand higher sensitivity on the side of police force to tackle such cases.

The use of internet for calling and face timing adds to more substance to daily lives but at the same time pose threat like viral of private pictures, MMS, video recording etc. In such cases police station have to deal with complicated networks.

The use of encryption in messaging softwares by whatsapp etc, pose challenge to security of a nation as they could easily be used by terrorist outfits. It is was evident in recent struggle b/w US govt and Apple Inc over the use of encryption in its phone mobile phones.

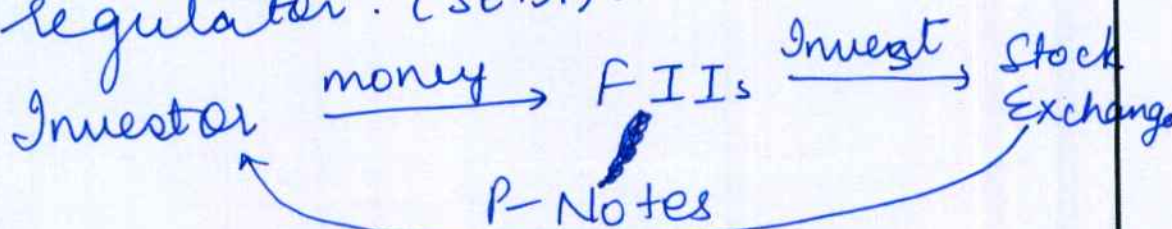
Such demanding situation require high technical skills on part of police forces. for eg use of ethical hackers to solve cases of such types.

The Chinese telecom components are often suspected to be fitted with spyware. In such a case of spying by a neighbour country, high level of international engagement is demanded on the side of police forces. Thus it is required to upgrade the existing technical and ~~to~~ man power capacities of police forces to deal with such situations effectively.

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.

P-Notes refers to a financial instrument which is considered as a valid proof of investment in a foreign stock market. It thus stands for a participatory acknowledgement of a financial activity.

But P-notes inherently suffer from certain flaws which have the potential to destabilise the financial market. As the desired participant in a stock exchange can take part in financial transactions even though not registered with a regulator (SEBI).



~~the~~ Thus the money invested could be black money or used for money laundering too.

Such a money could be brought into India via illegal sources like hawala transactions.

Thus due to these dubious characteristics of P-Notes they are often regulated strictly by SEBI.

The recent measures taken by SEBI to deal with them are:-

1) Application of KYC norms

To remove the issue of anonymity in such transactions, know your customer norms will now be applicable to them.

2) Registration with SEBI

Such investors would now be required to register with SEBI, to engage in P-Notes transactions.

With these steps it is believed that ambiguity in such transaction

will be reduced.

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?

E-waste generation has increased many folds in India since 2000. and moreover the generation is exceeding at a much faster rate in metro cities.

The underlying causes for such a scenario are:-

① Higher penetration of electronic goods in the market for eg now almost 100s of mobile companies are present in India market.

② Consumers ~~to~~ indulge into conspicuous consumption, as it can be seen that there are 2 TVs present in each houses, 2 or 3 mobile phones are owned by an single individual.

③ Electronic devices come with a fixed lifespan after which they stop functioning effectively and thus are forced to be discarded.

∴ Higher availability and consumption go hand in hand. But least steps are taken for effective disposal of such e-waste. ∴ It adds to various challenges for sustainable environment, collection, processing etc.

① E-waste often consists of various hazardous substances like Be, Cd, Ni, Pb etc which are not biodegradable thus persist in environment for very long periods.

② E-waste when percolated to ground water sources, contaminate water and soil and render it unfit for human consumption for Arsenic poisoning of ground water in West Bengal and Bihar.

③ E-waste such as Biphenyls, fluorinated bromides

etc cause various health problems such as lung infection.

④ Due to dumping of e-waste with normal waste, segregation and re-cycling of e-waste becomes a great challenge.

⑤ Lack of e-waste collectors and processors in metro cities, further add to degradation of environment.

The new E-waste Management Rules, 2016 provide a principle of Bulk Producer Responsibility, thus it places onus on producers to process the e-waste generated from their products. The new rules cover electrical components also thus new electrical producers come under the ambit of e-waste management. The clauses such as registration of e-retailers, collectors with local governments help to streamline the process of e-waste collection & its segregation.

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.

With increasing globalisation, the world has become a "global village", interconnected to the highest possible level. Thus the benefits of such connectivity are also being harnessed by terror groups. ~~Terror financing~~ financing the terrorist's activities is the most important need of terror groups and this has become very easy with increased globalisation as,

① wide network of NGOs which are affiliated to such radical Islamic ideologies help to collect money from all over the world.

② The increased connectivity amongst nations helps in smuggling arms, drugs, human trafficking

which add to financial resources of terror groups. For eg India provides a great channel to ~~Globo~~ Golden triangle and golden crescent.

③ Due to ^{foreign} globalisation, currency flow has increased amongst various nations. In such a scenario counterfeiting of currency adds to terror financing. For eg issue of fake currency along Indo-Nepal and Pakistan borders. As the world has become a single unit, communication channels have also multiplied. New social media and other digital initiatives add to interaction amongst people. Thus cyber propaganda by terror groups provide them the much needed anonymity as well as publicity at the same time.

Various social networking sites are being used by such groups to spread the coverage of sleeper cells, which could be activated as and when required.

The attack on big metro cities around the world, give ~~the~~ terror groups around the world great platform to spread their so called "Jehadi" messages. For eg terror attacks on cities of Paris, Brussels have a world over felt impact, which could be used to inspire other terror organisations.

Social media is nowadays also ~~big~~ being used to hire recruits for ISIS as seen in various cases in Kerala, Maharashtra etc.

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

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?

Monsoon plays a very important role on Indian main land. Most of the agriculture in India (around 65%) is rainfed, plus summer season's heat is counteracted by Monsoon rains. Thus prediction of Monsoon at correct time and in precise terms is necessary for our country. But the challenges associated with such prediction are:-

① Weather uncertainties
Monsoon intensity depends on monsoon trough over northern India and also on oceanic conditions in Indian and Pacific Ocean eg El-nino, La-nina etc. Thus timely prediction of monsoon requires prediction of complex causal factors etc.

② Available Technology

The technology used by IMD, suffers from certain drawbacks in the form of obsolete technology, errors in prediction which does not predict monsoon conditions accurately.

∴ In these circumstances, shifting to a completely dynamical model ~~is~~ may help in better predictions, as this would provide information in real-time basis, thus promising clarity in prediction process.

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.

The broad aim of both Compensatory Afforestation Bill and Forest Rights Act is to protect environment and ensure its sustainability. The objectives of both the bills are complementary to each other. As it can be seen Compensatory Afforestation Fund Bill provides for monetary compensation for the area deforested plus reforestation of an equivalent area. Thus it seeks to challenge the harmful effects of deforestation towards a productive output of afforestation.

On the other hand, the Forest Rights Act, gives recognition to forest rights of scheduled tribes and traditional forest-dwellers. Going further it

also acknowledges the traditional inputs of tribal communities in the protection of forests.

Thus the eventual goal of both these legislative acts is to conserve our precious nature. Both strive to attain a balance between the needs of human development and ecological productivity. Various cases of illegal encroachment by big corporate houses into tribal ~~co~~ regions add to destruction of the natural balance for eg forced displacement of people living in Narmada basin, mining in Niyamgiri hills, issues of people

living in Singur etc. In the
~~the~~ background of such events
these legislative steps are
in the right direction.

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.

The new Intellectual Property Rights Policy, 2016 aims to provide a dynamic ecosystem for IPRs in our country.

The features of the policy are

- 1) It considers IPR as a valuable resource which has the potential to benefit mankind.
- 2) It recognises traditional practices and considers them in par with IPRs.
- 3) It aims to promote marketisation of IPRs so that they could earn financial resources for the economy.
- 4) ~~It gives thrust to~~
It acknowledges the ~~pr~~ policy of compulsory

licensing and considers it in line with TRIPS and essential for addressing health challenges in the country.

In the backdrop of the new IPR policy, the level of innovation and entrepreneurship will be strengthened in the economy.

It is the first step to address IPR as valuable for the economy.

Provisions like speedy recognition of patents, trademarks etc will encourage innovation in social sectors of the country for eg innovation in water management, rural distress etc.

The new IPR policy adds to the Stand-Up India

programme and combines
innovation with business.
The combination of two
can address the pending
issues of IPR with
foreign MNCs as
self-sufficiency in
innovative medicines
and ideas can provide
new horizons of growth
to the economy.

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.

Signs of climate change can be seen in the occurrence of most extreme events in India in the form of droughts and floods. The widespread occurrence of droughts in southern and western India and occurrence of floods in eastern and north-eastern India point to significant gaps in our preparedness levels for handling such crisis.

The major gaps include:-

① Lack of central database

India lacks a comprehensive database which could compile the possible causes and rescue or preparedness steps to handle such crisis situations.

② Lack of efficient forecasting and warning systems

Extreme events such as droughts and floods can be

easily forecasted, but we lack it, which further adds to problem of developing an efficient strategy.

③ Low level of planning
Flood proofing, zoning etc are hardly done in flood-prone zones which makes people more vulnerable as they often inhabit such areas.

④ Lack of critical infrastructure
Once a crisis has occurred, efficient state machinery is required to handle it effectively, but we follow a "fire extinguishing" approach rather than a "fire prevention" approach. ~~as~~ highlighted by UNDP, after an initial burst of activities during floods & droughts, usual complacency

sets in -

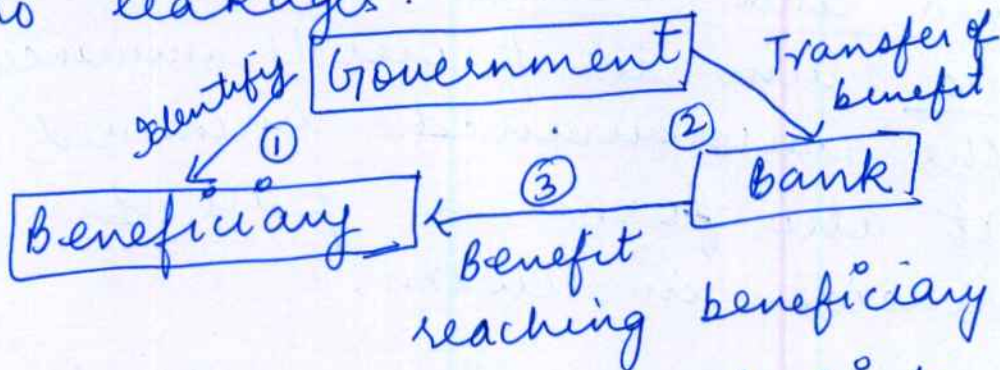
⑤ lack of comprehensive policy
Administrative depts and ministries often lack a comprehensive policy to deal with such situation. Nodal officers are not designated before hand to deal with such conditions.

⑥ Imbalance in Environmental protection approaches often aggravate these disasters for eg building of embankments on natural flood levees often cause more disastrous floods. Farmers are not guided effectively to grow crops in environment suitable manner for eg growing of rice in Punjab, sugarcane in Maharashtra, add to distress due to droughts.

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.

India suffers from great inequality in the field of education, health, financial services etc. To harness the fullest potential of the country's demographic dividend, it is necessary to follow the path of inclusive growth. Such an approach would require providing equal access to health and education to all sections of society which would include women, SC, ST, marginalised groups etc. For benefits of social sector schemes to reach the common man, financial inclusion is a must. The various schemes implemented by govt for eg MGNREGA, PAHAL etc would

only give dividends if they are properly targetted and have zero leakages.



Thus the most important link is last mile ~~connection~~ financial connectivity of the poor. Only 14% of rural population has bank within 5 km range, thus it highlights the need for financial inclusion of the uninvolved section of rural population.

So to reduce this ~~ex~~clusion drive, government has taken many steps, which include:-

① Jan Dhan Yojana aims to provide a single saving account for every person, so that the benefits of various schemes reach directly to the

beneficiary

② Pradhan Mantri Teerun Tyoti Yojana and Beema Sukraksha Yojana aim to provide insurance to the ~~uninsured~~ uninsured, as it also forms a part of financial inclusion.

③ Atal Pension Yojana, provides pension benefit directly to customer's account thus adding to the social security net.

④ Scholarship money is directly transferred to the student's account, which serves two aims i.e. financial inclusion plus educational incentives.

⑤ Benefits of Rashtriya Swasthya Suraksha Yojana are also automatically transferred to the sick person's bank account.

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.

India is the largest importer of arms in India, which highlights our dependence on other countries to meet our security needs. Thus it requires indigenization of the defense industry in India because :-

- ① Around 2% of GDP is spent on defense, of which major portion is spent on foreign procurement of arms and weapons.
- ② Rising cases of defense procurement scams, high influence of middleman urges to develop self-sufficiency, as it would lead to lower cases of high level corruption at international scale.
- ③ India is surrounded by hostile, nuclear empowered states for eg Pakistan and

and China which ~~also~~ makes it necessary to invest in indigenization of our defense industry.

④ Rising level of fundamentalist ideologies, terror attacks around the world for eg rise of ISIS, Mumbai terror attacks make it essential that we design defense weapons according to our country's needs.

The new Defence Procurement policy supports the idea of indigenously designed, developed and manufactured weapons for defense sector.

It makes mandatory to procurement certain amount of devices which are indigenously developed. The recent move to allow 49% FDI in defense sector would add to

technology transfer to the defense sector.

Such policy changes would give boost to "Make in India" Initiative.

will add to stealth capacities of our defense sector. Moreover it will reduce dependence of foreign nations and undue political influence in such sale and purchase agreement.

Defense sector is the backbone of our nation's security, thus higher indigenisation would power add to the national security.

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.

Our higher education system suffers from many weaknesses, one of the most prominent is lack of qualified teachers and educational material of international standards. But digital technologies have the potential to address these issues. For eg GIAN initiative aims to connect students of Indian universities with global faculty. The online lectures would be made accessible to all students for free or at a very minimal fee. Such massive open online courses (MOOCs) have the potential to transform our demographic dividend into effective workforce.

SWAYAM initiative promotes self-learning, by making available quality educational material and research papers to the college going students. It covers all branches i.e. Science, Arts, Humanities ~~would~~ ~~as~~ which would add to ~~our~~ the student's knowledge base.

Online video streaming can help connect students in different geographical locations. Our National Education Policy, envisages education as a medium to reduce inequalities. Thus, the use of digital technologies adds further to it, while making resources available to everyone, it also makes it affordable. VSAT are being used massively

in distance - learning courses. The flow of digital data through these very small aperture satellites (VSAT), makes sure even the most remote area is connected to the lecture being delivered by the faculty in college premise.

Thus, harnessing digital technologies, in the form of learning apps eg e-Pathshala by CBSE,

bridging the education divide, making available quality education can help transform higher 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.

The Civil Aviation Policy 2016 adopts a holistic vision for our aviation sector. It aims to achieve higher standards in the civil aviation industry. The major features of the policy are

① More focus on MRO operations, which could have multiplier effects in the form of higher earnings by airlines and higher availability of jobs.

② Focus on Regional Connectivity by implementing regional connectivity scheme, no frills airports, cap on air travel to underserved locations, regional connectivity cess, viability gap funding etc.

③ The Policy places special

focus on security and safety of passengers by placing the onus on the airline operators for investing into insurance and compensating of losses incurred to its customers.

(4) It gives thrust to aviation sector by abolishing 5/20 rule and encouraging cargo ~~to~~ airlines as they are more cost effective.

(5) It also aims to enter into "Open Sky" agreements with SAARC nations and countries within 5000 km range.

Other areas of thrusts under the new policy are :-

a) Tax incentives of ATF, airport charges for

-setting up airpaths in remote locations.

b) Providing greater opportunity for international airflights by keeping only few air planes for domestic services.

Thus the new Civil aviation policy strives for a balance between growth and development of aviation sector and reducing inequality in air travel.

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.

India has around 64% of its population in working age group (15-59). Thus in such a scenario job creation is very important for the economy. Thus start ups provide the following opportunities for Indian economy:-

- ① Tapping the demographic dividend.
- ② Adding to economic growth as many startups belong to the "unicorn club" i.e. net worth above 1 billion.
- ③ Provide innovative solutions to social and technological problems.
- ④ Providing an global edge in

manufacturing and services.
Thus to promote startup,
ecosystem "start-up India"
program is launched.
The various initiatives under
it are:-

- ① start up India hub to
provide one stop shop for
all issues related to
setting up start ups in
India.
- ② faster clearance and
exit mechanism with
90 days.
- ③ self-certification promotion
- ④ Relaxation in government
procurement.
- ⑤ Tax holidays for income
tax and capital gains tax.
- ⑥ Credit guarantee fund
for credit given to start
up firms.

But inspite of such condemning initiatives certain challenges lie ahead in its effective implementation, they are:-

① Availability of credit

Due to higher risks associated with start up ideas, credit flow becomes a problem.

② Ease of doing Business

Obtaining ~~license~~ business clearances is a tedious task and involves high level of corruption.

③ Issue of tax on seed funding

Most of the startups are funded by foreign venture funds as domestic investment raises higher taxation.

∴ These issues need to be addressed for dynamic start-up atmosphere.

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?

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.

Augmented reality refers to value addition or refining of the data which is collected on real time basis. For eg ISRO's new initiative in the field of augmented reality provide much greater clarity in field view or geospatial data. On the other hand Virtual reality refers to simulation of real life events or environment by a smart machine or device. For virtual reality is used in various online ~~apps~~ games like GTA, ~~d~~ Pokemon Go etc. At present these technologies are being used only for

recreation purposes in gaming softwares. But in the future they can change our lives as:-

- ① These technologies could be used as a supplement to GPS, thus providing more accurate picture of our surrounding and borders-
- ② These could be used in surveillance missions by defense forces.
- ③ Use of these technologies in field of education can provide great model for study and experimentation
- ④ By just click on a button, a whole new world of animation could be present before our

eyes -
Thus the use of augmented
and virtual reality can provide
great comfort to human life.
But at the same time certain
precautions need to be
taken before their adoption
which include prone
to hacking or being
used by enemy forces to
target our security
architecture etc.