

GENERAL STUDIES III (2013-2022)
Economy, Agri, Disaster Management, Environment, Science, Internal Security

Slot 1 - Economy

1) Indian Economy (issues relating to : planning, mobilisation of resources, growth, development, employment)

2) Inclusive growth and issues therein

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	With a consideration towards the strategy of inclusive growth, the new companies bill, 2013 has indirectly made CSR a mandatory obligation. Discuss the challenges expected in its implementation in right earnest. Also discuss other provisions in the bill and their implications.	Inclusive Growth	10
2	2014	Capitalism has guided the world economy to unprecedented prosperity. However, it often encourages shortsightedness and contributes to wide disparities between the rich and the poor. In this light, would it be correct to believe and adopt capitalism driving inclusive growth in India? Discuss.	Inclusive Growth	12.5
3	2014	While we found India's demographic dividend, we ignore the dropping rates of employability. What are we missing while doing so? Where will the jobs that India desperately needs come from? Explain.	Employment	12.5
4	2015	The nature of economic growth in India is described as jobless growth. Do you agree with this view? Give arguments in favour of your answer.	Growth	12.5
5	2015	Craze for gold in Indians have led to a surge in import of gold in recent years and put pressure on balance of payments and external value of rupee. In view of this, examine the merits of Gold Monetization Scheme.	Development	12.5
6	2015	"Success of 'Make in India' programme depends on the success of 'Skill India' programme and radical labour reforms." Discuss with logical arguments.	Employment	12.5
7	2016	Pradhan Mantri Jan-Dhan Yojana (PMJDY) is necessary for bringing unbanked to the institutional finance fold. Do you agree with this for financial inclusion of the poorer section of the Indian society? Give arguments to justify your opinion.	Inclusive Growth	12.5
8	2016	Comment on the challenges for inclusive growth which include careless and useless manpower in the Indian context. Suggest measures to be taken for facing these challenges.	Inclusive Growth	12.5
9	2017	Among several factors for India's potential growth, savings rate is the most effective one. Do you agree? What are the other factors available for growth potential?	Growth	10
10	2017	Account for the failure of manufacturing sector in achieving the goal of labour-intensive exports rather than capital-intensive exports. Suggest measures for more labour-intensive rather than capital-intensive exports.	Development	10
11	2017	What are the salient features of 'inclusive growth'? Has India been experiencing such a growth process? Analyze and suggest measures for inclusive growth.	Inclusive Growth	15
12	2018	How are the principles followed by the NITI Aayog different from those followed by the erstwhile Planning Commission in India?	Planning	15
13	2019	Do you agree with the view that steady GDP growth and low inflation have left the Indian economy in good shape? Give reasons in support of your arguments.	Growth	10
14	2019	It is argued that the strategy of inclusive growth is intended to meet the objectives of inclusiveness and sustainability together. Comment on this statement.	Inclusive Growth	15
15	2020	Define potential GDP and explain its determinants. What are the factors that have been inhibiting India from realizing its potential GDP?	Growth	10
16	2020	Explain intra-generational and inter-generational issues of equity from the perspective of inclusive growth and sustainable development.	Inclusive Growth	10
17	2021	Explain the difference between computing methodology of India's Gross Domestic Product (GDP) before the year 2015 and after the year 2015.	Growth	10
18	2021	Do you agree that the Indian economy has recently experienced V- shapes recovery? Give reasons in support of your answer.	Growth	15
19	2022	Is inclusive growth possible under market economy? State the significance of financial inclusion in achieving economic growth in India.	Inclusive Growth	10
20	2022	"Economic growth in the recent past has been led by increase in labour productivity." Explain this statement. Suggest the growth pattern that will lead to creation of more jobs without compromising labour productivity.	Employment	15

Government Budgeting

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	Discussion the rationale for introducing Good and services tax in India. Bring out critically the reasons for delay in roll out for its regime.	GST	10
2	2013	What is meaning of the term tax-expenditure? Taking housing sector as an example, discuss how it influences budgetary policies of the government.	Policies	10
3	2013	What are the reasons for introduction of Fiscal responsibility and Budget Management (FRBM) act, 2003? Discuss critically its salient features and their effectiveness.	FRBM	10
4	2016	Women empowerment in India needs gender budgeting. What are the requirements and status of gender budgeting in the Indian context?	Gender Budgeting	12.5
5	2017	One of the intended objectives of Union Budget 2017-18 is to 'transform, energize and clean India'. Analyse the measures proposed in the Budget 2017-18 to achieve the objective.	Budget	15
6	2018	Comment on the important changes introduced in respect of the Long-term Capital Gains Tax (LCT) and Dividend Distribution Tax (DDT) in the Union Budget for 2018-2019. Enumerate the indirect taxes which have been subsumed in the Goods and Services Tax (GST) in India. Also, comment on the revenue implications of the GST introduced in India since July 2017.	Tax	10
7	2019	The public expenditure management is a challenge to the government of India in the context of budget-making during the post-liberalization period. Clarify it.	GST	10
8	2019	Explain the rationale behind the Goods and Services Tax (Compensation to States) Act of 2017.	Budget	15
9	2020	How has COVID-19 impacted the GST compensation fund and created new federal tensions?	GST	15
10	2021	Distinguish between Capital Budget and Revenue Budget. Explain the components of both these Budgets.	Budget	10

Infrastructure (energy, ports, roads, airports, railways); Investment models

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	Adaptation of PPP model for infrastructure development of the country has not been free from criticism. Critically discuss the pros and cons of the model.	PPP	10
3	2014	National urban transport policy emphasizes on moving people instead of moving vehicles. Discuss critically the success of various strategies of the government in this regard.	Transport	12.5
4	2014	Explain how private public partnership agreements, in longer gestation infrastructure projects, can transfer unsuitable liabilities to the future. What arrangements need to be put in place to ensure that successive generations' capacities are not compromised?	PPP	12.5
5	2015	There is a clear acknowledgement that Special Economic Zones (SEZs) are a tool of industrial development, manufacturing and exports. Recognizing this potential, the whole instrumentality of SEZs requires augmentation. Discuss the issues plaguing the success of SEZs with respect to taxation, governing laws and administration.	SEZ	12.5
6	2016	What are 'Smart Cities'? Examine their relevance for urban development in India. Will it increase rural-urban differences? Give arguments for Smart Villages' in the light of PURA and RURBAN Mission.	Development	12.5
7	2016	Justify the need for FDI for the development of the Indian economy. Why there is gap between MOUs signed and actual FDI's? Suggest remedial steps to be taken for increasing actual FDI in India.	FDI	12.5
8	2017	Examine the developments of Airports in India through Joint Ventures under Public-Private Partnership(PPP) model. What are the challenges faced by the authorities in this regard.	Airport	10
9	2018	With growing energy needs should India keep on expanding its nuclear energy programme? Discuss the facts and fears associated with nuclear energy.	Energy	15
10	2018	Access to affordable, reliable, sustainable and modern energy is the sine qua non to achieve Sustainable Development Goals (SDGs). Comment on the progress made in India in this regard.	SDG	10
11	2020	Explain the meaning of investment in an economy in terms of capital formation. Discuss the factors to be considered while designing a concession agreement between a public entity and a private entity.	Investment	15
12	2021	"Investment in infrastructure is essential for more rapid and inclusive economic growth. " Discuss in the light of India's experience	Investment	15
13	2022	Why is Public Private Partnership (PPP) required in infrastructural projects? Examine the role of PPP model in the redevelopment of Railway Stations in India	Railway	10
14	2022	Do you think India will meet 50 percent of its energy needs from renewable energy by 2030 ? Justify your answer. How will the shift of subsidies from fossil fuels to renewables help achieve the above objective? Explain.	Energy	15

Effects of Liberalisation on the economy; Changes in Industrial policy & their effects on industrial growth

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	Examine the impact of liberalization on companies owned by Indian. Are the competing with the MNCs satisfactorily?	MNC	10
2	2013	Discuss the impact of FDI entry into multi-trade retail sector on supply chain management in commodity trade pattern of the economy.	FDI	5
3	2013	Though India allowed foreign direct investment (FDI) in what is called multi brand retail through joint venture route in September 2012, the FDI even after a year, has not picket up. Discuss the reasons.	FDI	5
4	2014	Normally countries shift from agriculture to industry and then later to services, but India shifted directly from agriculture to services. What are the reasons for the huge growth of services vis-a-vis industry in the country? Can India become a developed country without a strong industrial base?	CORE	12.5
5	2014	Foreign direct investment in the defence sector is now said to be liberalised. What influence this is expected to have on Indian defence and economy in the short and long run?	FDI	12.5
6	2016	How globalization has led to the reduction of employment in the formal sector of the Indian economy? Is increased informalization detrimental to the development of the country?	Globalisation	12.5
7	2017	"Industrial growth rate has lagged behind in the overall growth of Gross-Domestic-Product(GDP) in the post-reform period" Give reasons. How far the recent changes in Industrial Policy are capable of increasing the industrial growth rate?	Industrial	15
8	2018	How would the recent phenomena of protectionism and currency manipulations in world trade affect macroeconomic stability of India?	CORE	15

Slot 2 - Agriculture

Major crops, cropping patterns in various parts of the country, different types of irrigation and irrigation systems.

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2016	What is water-use efficiency? Describe the role of micro-irrigation in increasing the water-use efficiency.	Micro	12.5
2	2016	What is allelopathy? Discuss its role in major cropping systems of irrigated agriculture.	System	12.5
3	2016	Given the vulnerability of Indian agriculture to vagaries of nature, discuss the need for crop insurance and bring out the salient features of the Pradhan Mantri Fasal Bima Yojana (PMFBY)	Policy	12.5
4	2017	What are the major reasons for declining rice and wheat yield in the cropping system? How crop diversification is helpful to stabilize the yield of the crop in the system?	Yield	15
5	2018	Sikkim is the first 'Organic State' in India. What are the ecological and economical benefits of Organic State?	Concept	10
6	2018	Assess the role of National Horticulture Mission (NHM) in boosting the production, productivity and income of horticulture farms. How far has it succeeded in increasing the income of farmers?	Mission	15
7	2018	How has the emphasis on certain crops brought about changes in cropping patterns in recent past? Elaborate the emphasis on millets production and consumption.	Patterns	15
9	2019	How far is the Integrated Farming System (IFS) helpful in sustaining agricultural production?	System	10
10	2019	Elaborate on the impact of the National Watershed Project in increasing agricultural production from water-stressed areas.	Project	10
11	2019	How was India benefited from the contributions of Sir M.Visvesvaraya and Dr. M. S. Swaminathan in the fields of water engineering and agricultural science respectively?	Contributions	10
12	2020	Suggest measures to improve water storage and irrigation system to make its judicious use under depleting scenario.	Measures	15
13	2020	What are the major factors responsible for making rice-wheat system a success? In spite of this success how has this system become bane in India?	Factors	15
14	2021	How and to what extent would micro-irrigation help in solving India's water crisis?	Micro	10
15	2022	What is Integrated Farming System ? How is it helpful to small and marginal farmers in India ?	Concept	15

E-technology to aid farmers, Technology missions.

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2015	How can the 'Digital India' programme help farmers to improve farm productivity and income? What steps has the Government taken in this regards? Explain various types of revolutions, took place in Agriculture after Independence in	Programme	12.5
2	2017	India. How these revolutions have helped in poverty alleviation and food security in India?	Revolution	10
8	2019	How can biotechnology improve the living standards of farmers? What are the present challenges before crop diversification?	Technology	15
3	2021	How do emerging technologies provide an opportunity for crop diversification?	Technology	15

1) Food processing and related industries in India (scope & significance, location, upstream-downstream requirements, supply chain management)

2) Storage, transport & marketing of agro-produce and related issues & constraints

Slot 1 - Economy

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	India needs to strengthen measures to promote the pink revolution in food industry for better nutrition and health. Critically elucidate the statement.	Revolution	10
2	2014	There is also a point of view that agriculture produce market committees (APMCs) set up under the state acts have not only impeded the development of agriculture but also have been the cause of food inflation in India. Critically examine.	APMC	12.5
3	2015	Livestock rearing has a big potential for providing non-farm employment and income in rural areas. Discuss suggesting suitable measures to promote this sectors in India	Livestock	12.5
4	2015	In view of the declining average size of land holdings in India which has made agriculture non-viable for a majority of farmers, should contract farming and land leasing be promoted in agriculture? Critically evaluate the pros and cons.	Contract Farming	12.5
5	2015	What are the impediments in marketing and supply chain management in industry in India? Can e-commerce help in overcoming these bottlenecks?	Marketing, SCM etc	12.5
6	2017	What are the reasons for poor acceptance of cost effective small processing unit? How the food processing unit will be helpful to uplift the socio-economic status of poor farmers?	Small Farmers	10
7	2018	Examine the role of supermarkets in supply chain management of fruits, vegetables and food items. How do they eliminate number of intermediaries?	SCM	10
8	2019	Elaborate on the policy taken by the government of India to meet the challenges of the food processing sector.	Policy	15
9	2020	What are the main constraints in transport and marketing of agricultural produce in India?	Transport and Marketing	10
10	2020	What are the challenges and opportunities of food processing sector in the country? How can income of the farmers be substantially increased by encouraging food processing?	Food Processing	10
11	2021	What are the salient features of the National Food Security Act, 2013? How has the Food Security Bill helped in eliminating hunger and malnutrition in India?	Act	15
12	2022	Elaborate the scope and significance of the food processing industry in India	Food Processing	10
13	2022	What are the main bottlenecks in upstream and downstream process of marketing of agricultural products in India ?	Marketing	15

Land Reforms in India

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	Establish the relationship between land reform, agriculture productivity and elimination of poverty in Indian Economy. Discussion the difficulty in designing and implementation of the agriculture friendly land reforms in India.	Economy	10
2	2014	The right to fair compensation and transparency land acquisition, rehabilitation and resettlement act, 2013 has come into effect from 1 January 2014. What implication would it have on industrialisation and agriculture in India?	Act	12.5
3	2016	Discuss the role of land reforms in agricultural development. Identify the factors that were responsible for the success of land reforms in India.	Development	12.5
4	2021	How did land reforms in some parts of the country help to improve the socio-economic conditions of marginal and small farmers?	Conditions	10

1) Farm subsidies and MSP and issues therein (direct and indirect)

2) PDS (objectives, functioning, limitations, revamping, issues of buffer stocks & food security)

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	What are the different types of agriculture subsidies given to farmers at the national and state levels? Critically analyze the agriculture subsidy regime with the reference to the distortions created by it.	Subsidies	10
2	2013	Food security bill is expected to eliminate hunger and malnutrition in India. Critically discuss various apprehensions in its effective implementation along with the concerns it has generated in WTO	Bill	10
3	2014	"In the villages itself no form of credit organisation will be suitable except the cooperative society." - All Indian rural credit survey. Discuss this statement in the background of agriculture finance in India. What constrain and challenges do financial institutions supplying agricultural finances? How can technology be used to better reach and serve rural clients?	Financial	12.5
4	2015	In what way could replacement of price subsidy with Direct Benefit Transfer (DBT) change the scenario of subsidies in India? Discuss.	DBT	12.5
5	2017	How do subsidies affect the cropping pattern, crop diversity and economy of farmers?	Subsidies	15
6	2018	What is the significance of crop insurance, minimum support price and food processing for small and marginal farmers?	MSP	10
7	2019	What do you mean by Minimum Support Price (MSP)? How will MSP rescue the farmers from the low income trap?	PDS	15
8	2022	What are the reformative steps taken by the government to make food grain distribution system more effective? What are the major challenges of Public Distribution System (PDS) in India? How can it be made effective and transparent ?	PDS	10

Slot 3 - Disaster Management , Environment, Science and Technology.

Disasters & Disaster Management				
Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	How important are vulnerability and risk assessment for pre-disaster management. As an administrator ,what are key areas that you would focus in a disaster management	Administration	10
2	2014	Drought has been recognised as a disaster in view of its party expense, temporal duration, slow onset and lasting effect on various vulnerable sections. With a focus on the September 2010 guidelines from the National disaster management authority, discuss the mechanism for preparedness to deal with the El Nino and La Nina fallouts in India.	Drought	12.5
3	2015	The frequency of earthquakes appears to have increased in the Indian subcontinent. However, India's preparedness for mitigating their impact has significant gaps. Discuss various aspects.	Earthquake	12.5
4	2016	The frequency of urban floods due to high intensity rainfall is increasing over the years. Discussing the reasons for urban floods, highlight the mechanisms for preparedness to reduce the risk during such events.	Floods	12.5
5	2016	With reference to National Disaster Management Authority (NDMA) guidelines, discuss the measures to be adopted to mitigate the impact of the recent incidents of cloudbursts in many places of Uttarakhand.	Cloudburst	12.5
6	2017	On December 2004, tsunami brought havoc on 14 countries including India. Discuss the factors responsible for occurrence of Tsunami and its effects on life and economy. In the light of guidelines of NDMA (2010) describe the mechanisms for preparedness to reduce the risk during such events.	Tsunami	15
7	2018	Describe various measures taken in India for Disaster Risk Reduction (DRR) before and after signing 'Sendai Framework for DRR (2015-2030)'. How is this framework different from 'Hyogo Framework for Action, 2005'?	DRR	15
8	2019	Disaster preparedness is the first step in any disaster management process. Explain how hazard zonation mapping will help in disaster mitigation in the case of landslides.	Landslide	15
9	2019	Vulnerability is an essential element for defining disaster impacts and its threat to people. How and in what ways can vulnerability to disasters be characterized? Discuss different types of vulnerability with reference to disasters.	Vulnerability	10
10	2020	Discuss the recent measures initiated in disaster management by the Government of India departing from the earlier reactive approach.	Measures	15
11	2021	Discuss about the vulnerability of India to earthquake-related hazards. Give examples including the salient features of major disasters caused by earthquakes in different parts of India during the last three decades	Earthquake	10
12	2021	Describe the various causes and the effects of landslides. Mention the important components of the National Landslide Risk Management Strategy.	Landslide	15
13	2022	Explain the mechanism and occurrence of cloudburst in the context of the Indian subcontinent. Discuss two recent examples.	Cloudburst	10
14	2022	Explain the causes and effects of coastal erosion in India. What are the available coastal management techniques for combating the hazard?	Coastal	15
Environmental conservation; Environmental pollution and degradation; Environmental Impact Assessment				
Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	What are the consequences of illegal mining? Discuss the ministry of environment and forests' concept of "GO AND NO GO" zones for coal mining.	Mining	10
2	2013	Write a note on India's green energy corridor to alleviate the problems of conventional energy.	Alleviation Measure	10
3	2013	What do you understand by run of the river hydroelectricity project? How is it different from any other hydroelectricity project?	Projects	5
4	2013	Enumerate the National Water Policy of India. Taking river Ganges as an example, discuss the strategies which may be adopted for river water pollution control and management. What are the legal provisions for management and handling of hazardous wastes in India?	Policy	10
5	2014	Should the pursuit of carbon credit and clean development mechanism set up under UNFCCC be maintained even though there has been a massive slide in the value of carbon credit? Discuss with respect to India's energy needs for economic growth.	International Mechanisms	12.5
6	2014	Environmental impact assessment studies are increasingly undertaken before project is cleared by the government. Discuss the environmental impacts of coal-fired thermal plants located at Pitheads.	EIA	12.5
7	2015	To what factors can the recent dramatic fall in equipment costs and tariff of solar energy be attributed? What implications does the trend have for the thermal power producers and the related industry?	Power Industry	12.5
8	2015	The Namami Gange and National mission for clean Ganga (NMCG) programmes and causes of mixed results from the previous schemes. What quantum leaps can help preserve the river Ganga better than incremental inputs?	Projects	12.5
9	2016	Rehabilitation of human settlements is one of the important environmental impacts which always attracts controversy while planning major projects. Discuss the measures suggested for mitigation of this impact while proposing major developmental projects.	EIA	12.5
10	2016	Give an account of the current status and the targets to be achieved pertaining to renewable energy sources in the country. Discuss in brief the importance of National Programme on Light Emitting Diodes (LEDs).	Programmes	12.5
11	2017	'Climate Change' is a global problem. How India will be affected by climate change? How Himalayan and coastal states of India will be affected by climate change?	Impact	15
12	2017	Not many years ago, river linking was a concept but it is becoming reality in the country. Discuss the advantages of river linking and its possible impact on the environment.	Projects	10
13	2018	What are the impediments in disposing the huge quantities of discarded solid wastes which are continuously being generated? How do we remove safely the toxic wastes that have been accumulating in our habitable environment?	Waste	10
14	2018	What is wetland? Explain the Ramsar concept of 'wise use' in the context of wetland conservation. Cite two examples of Ramsar sites from India.	International Mechanisms	10
15	2018	How does biodiversity vary in India? How is the Biological Diversity Act, 2002 helpful in conservation of flora and fauna?	Act	15
16	2019	Define the concept of carrying capacity of an ecosystem as relevant to an environment. Explain how understanding this concept is vital while planning for sustainable development of a region.	Concept	15
17	2019	Coastal sand mining, whether legal or illegal, poses one of the biggest threats to our environment. Analyse the impact of sand mining along the Indian coasts, citing specific examples.	Mining	10
18	2020	How does the draft Environment Impact Assessment (EIA) Notification, 2020 differ from the existing EIA Notification, 2006?	EIA	10
19	2020	What are the salient features of the Jal Shakti Abhiyan launched by the Government of India for water conservation and water security?	Programmes	10
20	2020	Describe the benefits of deriving electric energy from sunlight in contrast to the conventional energy generation. What are the initiatives offered by our Government for this purpose?	Programmes	15
21	2020	What are the key features of the National Clean Air Programme (NCAP) initiated by the Government of India?	Programmes	15
22	2021	Explain the purpose of the Green Grid Initiative launched at the World Leaders Summit of the COP26 UN Climate Change Conference in Glasgow in November 2021. When was this idea first floated in the International Solar Alliance (ISA)?	International Mechanisms	10
23	2021	Describe the key points of the revised Global Air Quality Guidelines (AQGs) recently released by the World Health Organisation (WHO). How are these different from its last update in 2005? What changes in India's National Clean Air Programme are required to achieve these revised standards?	International Mechanisms	10
24	2021	Describe the major outcomes of the 26th session of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC). What are the commitments made by India in this conference? (International Mechanisms	15
25	2022	Each year a large amount of plant material, cellulose, is deposited on the surface of Planet Earth. What are the natural processes this cellulose undergoes before yielding carbon dioxide, water and other end products?	Concept	10
26	2022	Discuss in detail the photochemical smog emphasizing its formation, effects and mitigation. Explain the 1999 Gothenburg Protocol.	International Mechanisms	10
27	2022	Discuss global warming and mention its effects on the global climate. Explain the control measures to bring down the level of greenhouse gases which cause global warming, in the light of the Kyoto Protocol, 1997.	International Mechanisms	15

1) S&T developments and everyday applications & effects

2) Awareness in fields of IT, Space, Computers, Robotics, Nanotech, Biotech, IPR issues

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	What do you understand by Umpire decision review in cricket? Discuss its various components. Explain how silicon tape on the edge of a bat may fool the system?	Technology	10
2	2013	What is an FRP composite material? How are they manufactured? Discuss their applications in aviation and automobile industry	Technology	5
3	2013	Bring out the circumstances in 2005 which forced amendment to section 3(d) in the India n Patent Law, 1970. Discuss how it has been utilized by Supreme court in its judgment rejecting Novartis patent application for "Glivec". Discuss briefly the pros and cons of the decision.	IPR	10
4	2013	How does the 3D printing technology work? List out the advantages and disadvantages of the technology.	Technology	5
5	2013	What do you understand by fixed dose drug combinations (FDCs)? Discuss their merits and demerits.	Biotechnology	10
6	2014	In a globalised world, intellectual property rights assume significance and are a source of litigation. Broadly distinguish between the terms - copyrights, patents and trade secrets.	IPR	12.5
7	2015	India's Traditional Knowledge Digital Library (TKDL) which has a database containing formatted information on more than 2 million medicinal formulations is proving a powerful weapon in the country's fight against erroneous patents. Discuss the pros and cons making this database publicly available under open-source licensing	IPR	12.5
8	2015	What are the areas of prohibitive labour that can be sustainably managed by robots? Discuss the initiatives that can propel research in premier research institutes for substantive and gainful innovation.	Robot	12.5
9	2017	Stem cell therapy is gaining popularity in India to treat a wide variety of medical conditions including Leukaemia, Thalassaemia, damaged cornea and several burns. Describe briefly what stem cell therapy is and what advantages it has over other treatments?	Biotechnology	10
10	2018	Why is there so much activity in the field of biotechnology in our country? How has this activity benefitted the field of biopharma?	Biotechnology	15
11	2020	What do you understand by nanotechnology and how is it helping in health sector?	Nanotechnology	10
12	2020	How is science interwoven deeply with our lives? What are the striking changes in agriculture triggered off by the science-based technologies?	Impact	10
13	2020	COVID-19 pandemic has caused unprecedented devastation worldwide. However, technological advancements are being availed readily to win over the crisis. Give an account of how technology was sought to aid management to the pandemic.	Vaccine	15
14	2021	How is S-400 air defence system technically superior to any other system presently available in the world?	defence	10
15	2021	What are the research and developmental achievements in applied biotechnology? How will these achievements help to uplift the poorer sections of society?	Biotechnology	15
16	2022	The increase in life expectancy in the country has led to newer health challenges in the community. What are those challenges and what steps need to be taken to meet them ?		
17	2022	Launched on 25th December, 2021, James Webb Space Telescope has been much in the news since then. What are its unique features which make it superior to its predecessor Space Telescopes? What are the key goals of this mission? What potential benefits does it hold for the human race?	Space	15
Achievements of Indians in S&T; Indigenisation of technology & development of new technology				
Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2014	Scientific research in Indian universities is declining, because a career in science is not as attractive as our business operations, engineering or administration, and the universities are becoming consumer oriented. Critically comment.	Research	12.5
2	2014	Can overuse and the availability of antibiotics without doctor's prescription, the contributors to the emergence of drug-resistant diseases in India? What are the available mechanisms for monitoring and control? Critically discuss the various issues involved.	Issue	12.5
3	2015	What do you understand by 'Standard Positioning Systems' and 'Protection Positioning Systems' in the GPS era? Discuss the advantages India perceives from its ambitious IRNSS programme employing just seven satellites.	satellite	12.5
4	2016	Discuss India's achievements in the field of Space Science and Technology. How the application of this technology has helped India in its socio-economic development?	Space	12.5
5	2016	Why is nanotechnology one of the key technologies of the 21st century? Describe the salient features of Indian Government's Mission on Nanoscience and Technology and the scope of its application in the development process of the country.	Nanotechnology	12.5
6	2017	India has achieved remarkable successes in unmanned space missions including the Chandrayaan and Mars Orbiter Mission, but has not ventured into manned space mission, both in terms of technology and logistics? Explain critically.	Space	10
7	2017	Give an account of the growth and development of nuclear science and technology in India. What is the advantage of fast breeder reactor programme in India?	Nuclear	15
8	2018	Discuss the work of 'Bose-Einstein Statistics' done by Prof. Satyendra Nath Bose and show how it revolutionized the field of Physics.	Scientist	10
9	2019	What is India's plan to have its own space station and how will it benefit our space programme?	Space	10
10	2019	How is the government of India protecting traditional knowledge of medicine from patenting by pharmaceutical companies?	Pharma	15
11	2021	The Nobel Prize in Physics of 2014 was jointly awarded to Akasaki, Amano and Nakamura for the invention of Blue LEDs in 1990s. How has this invention impacted the everyday life of human beings?	Scientist	15
12	2022	What is the basic principle behind vaccine development? How do vaccines work? What approaches were adopted by the Indian vaccine manufacturers to produce COVID-19 vaccines?	Vaccine	15

1) Linkages between Development & spread of Extremism;

2) Linkages of Organized crime and Terrorism

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	Article 244 of Indian Constitution relates to Administration of Scheduled areas and tribal areas. Analyze the impact of non-implementation of the provisions of fifth schedule on the growth of Left Wing Extremism.	LWE	10
2	2015	The persisting drives of the government for development of large industries in backward areas have resulted in isolating the tribal population and the farmers who face multiple displacements with Malkangiri and Naxalbari foci, discuss the corrective strategies needed to win the left wing extremism (LWE) doctrine affected citizens back into the mainstream of social and economic growth.	LWE	12.5
3	2015	Religious indoctrination via digital media has resulted in Indian youth joining the ISIS. What is ISIS and its mission? How can ISIS be dangerous for the internal security of our country?	Terrorism	12.5
4	2016	"Terrorism is emerging as a competitive industry over the last few decades." Analyse the above statement.	Terrorism	12.5
5	2017	Mob violence is emerging as a serious law and order problem in India. By giving suitable examples, analyze the causes and consequences of such violence.	Organised Crime	15
6	2017	The scourge of terrorism is a grave challenge to national security. What solutions do you suggest to curb this growing menace? What are the major sources of terrorist funding?	Terrorism	15
7	2017	The north-eastern region of India has been infested with insurgency for a very long time. Analyze the major reasons for the survival of armed insurgency in this region.	Insurgency	10
8	2018	Left Wing Extremism (LWE) is showing a downward trend, but still affects many parts of the country. Briefly explain the Government of India's approach to counter the challenges posed by LWE.	LWE	10
9	2019	Indian government has recently strengthened the anti-terrorism laws by amending the unlawful activities (Prevention) Act (UAPA), 1967 and the NIA Act. Analyze the changes in the context of prevailing security environment while discussing the scope and reasons for opposing the UAPA by human rights organizations.	Anti-Terrorism	15
10	2019	The banning of 'Jamaat-e-islami' in Jammu and Kashmir brought into focus the role of over-ground workers (OGWs) in assisting terrorist organizations. Examine the role played by OGWs in assisting terrorist organizations in insurgency affected areas. Discuss measures to neutralize the influence of OGWs.	Terrorism	10
11	2020	What are the sound determinants of left-wing extremism in Eastern part of India? What strategy should Government of India, civil administration and security forces adopt to counter the threat in the affected areas?	LWE	15
12	2021	Analyze the complexity and intensity of terrorism, its causes, linkages and obnoxious nexus. Also, suggest measures required to be taken to eradicate the menace of terrorism.	Terrorism	15
13	2022	Discuss the types of organised crimes. Describe the linkages between terrorists and organised crime that exist at the national and transnational levels.	Organised Crime	10
14	2022	Naxalism is a social, economic and developmental issue manifesting as a violent internal security threat. In this context, discuss the emerging issues and suggest a multi-layered strategy to tackle the menace of Naxalism.	LWE	15

1) Border Areas (security challenges and management thereof)

2) Security forces & agencies (mandate)

3) Role of External State & Non-State actors in creating internal security challenges

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	How far are India's internal security challenges linked with border management, particularly in view of the long porous borders with most countries of South Asia and Myanmar?	Border	10
2	2014	International civil aviation laws provide all countries complete and exclusive sovereignty over the airspace above the territory. What do you understand by airspace? What are the implications of these laws on the space above this airspace? Discuss the challenges which this poses and suggests ways to contain the threat.	Forces	12.5
3	2014	The diverse nature of India as a multireligious and multi-ethnic society is not immune to the impact of radicalism which has been in her neighbourhood. Discuss along with the strategies to be adopted to counter this environment.	Challenge	12.5
4	2014	How illegal transborder migration does pose a threat to India's security? Discuss the strategies to curb this, bring out the factors which give impetus to such migration.	Border	12.5
5	2014	In 2012, the longitudinal marking of the high-risk areas for piracy was moved from 65° East to 78° east in the Arabian Sea by International Maritime Organisation. What impact does this have on India's maritime security concerns?	Maritime	12.5
6	2014	China and Pakistan have entered into an agreement for development of an economic corridor. What threat does it dispose for India's security? Critically examine.	Border	12.5
7	2015	Human rights activists constantly highlight the view that the Armed Forces (Special Powers) Act, 1958 (AFSPA) is a draconian act leading to cases of human rights abuses by the security forces. What sections of AFSPA are opposed by the activists? Critically evaluate the requirement with reference to the view held by the Apex Court.	Forces	12.5
8	2016	The terms 'Hot Pursuit' and 'Surgical Strikes' are often used in connection with armed action against terrorist attacks. Discuss the strategic impact of such actions.	Forces	12.5
9	2016	Border management is a complex task due to difficult terrain and hostile relations with some countries. Elucidate the challenges and strategies for effective border management.	Border	12.5
10	2018	The China-Pakistan Economic Corridor (CPEC) is viewed as a cardinal subset of China's larger 'One Belt One Road' initiative. Give a brief description of CPEC and enumerate the reasons why India has distanced itself from the same.	Border	10
11	2019	Cross-border movement of insurgents is only one of the several security challenges facing the policing of the border in North-East India. Examine the various challenges currently emanating across the India-Myanmar border. Also, discuss the steps to counter the challenges.	Border	15
12	2020	Analyze internal security threats and transborder crimes along Myanmar, Bangladesh and Pakistan borders including Line of Control (LoC). Also discuss the role played by various security forces in this regard	Border	15
13	2020	For effective border area management, discuss the steps required to be taken to deny local support to militants and also suggest ways to manage favourable perception among locals	Border	10
14	2021	Keeping in view India's internal security, analyse the impact of cross-border cyber attacks. Also, discuss defensive measures against these sophisticated attacks.	Border	10
15	2021	Analyse the multidimensional challenges posed by external state and non-state actors, to the internal security of India. Also, discuss measures required to be taken to combat these threats	Actors	15
16	2022	What are the maritime security challenges in India? Discuss the organisational, technical and procedural initiatives taken to improve the maritime security.	Maritime	10

Money laundering & Prevention

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	Money laundering poses a serious threat to country's economic sovereignty. What is its significance for India and what steps are required to be taken to control this menace?	Steps	10
2	2018	India's proximity to two of the world's biggest illicit opium-growing states has enhanced her internal security concerns. Explain the linkages between drug trafficking and other illicit activities such as gunrunning, money laundering and human trafficking. What counter-measures should be taken to prevent the same?	Linkage	15
3	2021	Discuss how emerging technologies and globalisation contribute to money laundering. Elaborate measures to tackle the problem of money laundering both at national and international levels.	Technologies	10

1) Basics of Cyber Security

2) Role of media and social-networking sites in internal security challenges

3) Internal security challenges through communication networks.

Qn.No	YEAR	QUESTION	TOPIC	MARKS
1	2013	Cyber warfare is considered by some defense analysts to be a larger threat than even Al Qaeda or terrorism. What do you understand by Cyber warfare? Outline the cyber threats which India is vulnerable to and bring out the state of the country's preparedness to deal with the same.	Terrorism	10
2	2013	What is digital signature? What does its authentication mean? Give various salient built in features of a digital signature.	Concept	5
3	2013	What are social networking site and what security implications do these sites present?	Social Network	10
4	2015	Discuss the advantage and security implications of cloud hosting of server vis-a-vis in-house machine-based hosting for government businesses.	Concept	12.5
5	2015	Considering the threats cyberspace poses for the country, India needs a "Digital Armed Force" to prevent crimes. Critically evaluate the National Cyber Security Policy, 2013 outlining the challenges perceived in its effective implementation.	Policy	12.5
6	2016	Use of Internet and social media by non-state actors for subversive activities is a major concern. How have these been misused in the recent past? Suggest effective guidelines to curb the above threat.	Social Network	12.5
7	2017	Discuss the potential threats of Cyber attack and the security framework to prevent it.	Prevention Measure	10
8	2018	Data security has assumed significant importance in the digitized world due to rising cyber crimes. The Justice B. N. Srikrishna Committee Report addresses issues related to data security. What, in your view, are the strengths and weakness of the Report relating to protection of personal data in cyber space?	Data	15
9	2019	What is the CyberDome Project? Explain how it can be useful in controlling internet crimes in India.	Project	10
10	2020	Discuss different types of cyber crimes and measures required to be taken to fight the menace	Concept	10
11	2022	What are the different elements of cyber security? Keeping in view the challenges in cyber security, examine the extent to which India has successfully developed a comprehensive	Concept	10