GSSCORE

An Institute for Civil Services

IAS TOPPER'S

TEST COPY

VYOM BINDAL

RANK - 141

GEOGRAPHY, DISASTER
MANAGEMENT & AGRICULTURE
TEST - 2





GEOGRAPHY, DISASTER MANAGEMENT AND AGRICULTURE

Time Allowed: 3 hrs.

Max. Marks: 250

Q.	Marks	Instructions to Candidate
1.	4.5	There are 20 questions.
2.	4	
3.	4	All questions are compulsory.
4.	4	All documents are familiary.
5.	4	The state of the s
6.	3-5	The number of marks carried by a question is indicated
7.	4.5	against it.
8.		
9.	4.5	 Answers to questions no. 1 to 10 should be in 150 words
10.	4	whereas answers to questions no. 11 to 20 should be in 250
11.	5	words.
12.	6	
13.	5	Keep the word limit indicated in the questions in mind.
14.	6-5	
15.	6	Answers must be written within the space provided.
16.	5	- Miswels illust be written within the shape blosteds.
17.	5-5	
18.	6	Any page or portion of the page left blank in the Question
19.	6	cum-Answer Booklet must be clearly struck off.
20.	5-5	

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1.	Invigilator	STUMBLISHE	
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Name	UYOM	BINDAL
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Roll No.____

Mobile No.

Date ____

Signature Oyouts

REMARKS



Dear Candidate, following are the areas where you need improvement

- topic. Bring multidimensions in approach in your amount.
- -) Bring organisation in your preuntation.
- -> Add vecent examples from awent events
- -) write proper Introduction and Conclusion

Section - A

Q1. Discuss the major features of Tropical Rainforest Biomes. How Human activities are impacting these biomes? (10 Marks)

Tropical rainforest biomes are located 0-10.

latitute, at worth moeth and south as the equation. They are characteristed by Gollowing beatures:

Vegetation They have evergeen broad leaf trees like rosewood abony, makagany etc due to abundance of heat and moisture.

Floral and faunal biodiversity: They have one occumply of the richest biodiversity in the world occumply of both flora and fauna:

is also high due to direct rays of sum.

4 [Sail]: The soil in these areas is heavily

leached due to high pecifitation, have lack nutirent contents. Elberts of human activity / 1) Degradation of landscape due to large scale deforestation for timber and other froducts, their geography is getting disturbed us for evently madagascae. of Loss of hindinessity The to fractise of main resproculture like rubber, balon, there areas and the saint there was restly infrattragmentation of habital. Due to urbanisation industrialisation agriculture, their is increase in edge effect, leading to fragmentation of habitat frofical rainforests act as "lungs" of the earth, hence every effort should be made to protect them.



India is slowly cleaving into two countries- a richer, older South and a poorer, younger North. Critically analyze. Economic Survey of 2017-18 had clearly pointed out that their one Those Indias one is North which is younger, foor other is south which is rich, old. leasons are) [Poverty]: Southern states like Kerala have powerly less than 10%, but in Bihar it is above 30%, hence difference in levels of 2) Total Fectility ratio . Most of Southern States have gentility cation even below the replacement ratio leg. Kerala, Tamil Made whereas in UP, Bihar, getility Ratio is as high as three. older, while Northern states still hold substantial demographic dividend

Policy Implications) 1) Nigh population especially young is not always lunden, sather it is a potential bour human espital if properly tapped. worm whas are also bringing down population between states mainly Now with schemes like Mission Parivae behind whathern states. war exhips of thattisgach Thankland with lase of doing luciness ranking points towards their etonomic potential. Suggestions Weed to some up with new population policy which takes into account these differences 1) Facilitate easier migration from North to south by measures like portability of ration hard, migrant worker welfare among others.



Q3. Critically examine the Malthus theory of population growth and discuss its relevance in context of India? Malthus in his theory of population scedicted that boad production grows in sithmetic mean and tueman population in geometrice mean. Hence, he fresents an /ou Aptimis pessinistic situation of inevitable conflict, and of humanity, searcity of need exitally examine resources. In order to control this he the previous even prescribes greater number of wars. 04 in action on deadly exidences and disaster his thery in order to being down human population Witicisms - It takes a very pessionistic view, neglecting humans as potential human rapital - Shifting technological frontiers like new

renewable resources, prospects of entra-terristerial mining have patential to address resource curch. Countropions reject malthusian theory they are oftenistic of finding new habitations ocean and even other planets. In Konten of India !: In the would and may many states are grown withersing high population growth. meen thousander, gallouing Bartons need consideration. and the series population growth rate is decreasing propensus after rensus. Hopulation is no longer seen as lunder Kather it is bounder Capital Nence, we need a dual approach which involves voluntary population control as well as human resource development.

Critics argue that organic farming is inefficient and requires more land than conventional agriculture to yield the same amount of food. Do you agree? Critically analyze the potential of organic farming in solving hunger problem and its economic viability for Organic farming is farming without using Munical and synthetic inputs like gestilizers, pesticides etc mainly due to their devastating guironmental concerns. While organic forming 15 Wo-firendly it is riticised on following rounts It is said that yield is law, hence it is economically unriable especially for the small farmers i) Due to low yield, it requires more land than conventional farming, but land is becoming scarce due to rubain sation, induspiralisation . manues, high quantity of run ramport



given the fact India is boring hungar to the enlant of being comped 100 out of 119 on global bunger inden similarly, majority of farmers are small and marginal, with overage sinual income of bounce household being appron. 1.00 laph pas for MBARD survey However, with protection of exology conventional methods of Jaiming will degrade soil, decline productive, of in long term, hence gradual shift to organic forming us not a thorse but necessity in order to puseive land quality for farming. some gort Measures like promotion of cluster organic has there afreach of zero Budget at Musid over showed bugher yields, this is to be promoted



'Animal rearing is a key livelihood and risk mitigation strategy for tribals and small and marginal farmers, particularly across the rainfed regions of India'. Substantiate; also discuss some strategies to realize the potential of this sector? In India more than half of garmers have average land holding of less than a hectique and super as per Economic Survey only 35% of total cropped area is reliably This presents divelihood thallenges for small ingated. and tribal formers, especially in content of climate change, land scarrity which is going to accentinate their problem Wente Animal reasing can be way forward of in for their verause ") It will supplement their form income is it will provide them security against mob loss fribals due to climate change, natural disasters. 5) It is a more reliable source of income and comparatively low lost



1) It ion even complement their forming activities by generating reseput form monuce In order to realise potential of animal rearing following steps are needed suggest) fromating scientific dairy farming by steel huilding more veteriary hospitals improved is to allies och in national livestock of At same time preserving and promoting the like estable birodiversity of India as in 3) Modernisation of abbatairs, meat industry lygeine standarde as suggested by saw Commission in 269th report 9) Organisting Jacomers into 10 operations on lines of Anul, to give their economies of scale.



is mass movement? Discuss its Mass movement refers to the movement of soil and earth material primarly under the force of gravity water may art as a lubricant, but primary force is growing Reasons of mass movement Natural I solivities of various animals of building boroughs, loosening of soil y Alternate enpansion and freezing of soil due to temperature variation lossens its strength 1) themical reactions going on in the socil Anthrop ogenic 1) Rapid deforestation which leads to sail

I knonge in land use pattern, by building 35 phouses, industries on slopes. Types of mass movement Sandslide: when soil which is pos dey it is landslide. Whith water it is mudflow.



Recently, India's Prime Minister has appealed for a "three-pillared" approach to farming, which included crop farming, agro-forestry and animal husbandry. Discuss what needs to be done to successfully implement this approach to bring about farmer's welfare. Indian gout had the target of doubling the formers income by 2022, that cannot come by good forming alone thence frime Minister had suggested thee - filland approach. To success foully implement this strategy Gollowing steps are needed with regard to crop farming. Guigation: Their is need to enfound the water efficient irrigation techniques like spinbler dut forming. As few Monomice survey, only 35% of suce is reliably ungated Marketing reforms: there is need to bring in marketing reforms by amending APMC ACT and bringing in more efficient and open not diversification. Need to promote growing



of roops other than rereals like pulses, millet among others. Agro-borestey]; India had already become first country in would with agro-forestry policy. I weed to come up with scientific research to Need to ensure availability of seed people market for the Joursey produce put proposeds, animal discesses And the foreeds, animal diseases.

Cover Need to ensure modernisation by geine of mederindustry as sugged by 269th report of wind layer resolution of ro-operatives on lines of small with a count forming gives livelhood to around half of india's population, hence their uplishment is essential from inclusive growth.

Remarks



Q8. India need significant focus in agriculture research through projects like TIGR2ESS using multi-partner approach to deliver a second, more sustainable Green Revolution. In this context, discuss TIGR2ESS project funded by Global Challenges Research Fund (GCRF) by Research Councils UK in India. (10 Marks)

production and marketing of fisheires. 3) Integrated fisheries mission, aquaculture mission to promote Listeines. Commercial Joishing is less developend in Southern demissiblere because species diversity. Southern hemisphere have high histories diversity, hence trigle strand of fisheires are not available as in Northeen homisphele Market]: Since countries of south have kigher temperature their is less Consumption of histories 3) (Investment) Southern hemisphere countines are relatively poor, hence lack adequate capital you gull emploitation of fisheries. 9) Shelf life ! Dhe to higher temperature of these countries, shelf life of fishery products Remarks Southern herrisphere.



Q10. While discussing the causes of formation of planetary winds elaborate on their characteristics. Clanetary winds refer to the permany wind circulations which flow the roughout the flower and you the entire year like trade winds, westerlies and polar easterdies. Lauses of Jamation Rotation of earth xotation of earth causes these winds to be tilted towards right in north, towards left in south. 4 Differential heating differential heating of earth surface tauses pressure differentials good which is primary cause of wind formation. 3) Presence of uniform pressure belts like tropical low pressur, sul-tropical high pressure, temperate low pressure belts among others.



Major characteristics of planetary winds They blow tonsistently throughout the year winds like monocon so much so that trade winds are mamed as warmetor they help in formation of secondary wind western they hall of circulations like monsoons, temperate They help in the heat transfer from hower to higher latitudes. Hence they marition the heat budget, They are primary clason for generating oceanic suevents due to the birctional drag they evert.

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Section - B

Q11. Gulf Dust storm is considered as one of the contributing factor (apart from stubble burning) behind the smog that had smothered Delhi and its neighborhood, as per Scientific Assessment of Delhi Winter Air Quality Crisis Report by SAFAR. Elaborate on the factors that increase dust storm and analyze its impact on Indian weather?

SAFAR report highlighted that gulf dust storm ørginating en middle east was one of the major contributory factor for pellis air pollution.

factors which hereases dust stock

I climate change doads to intrease in almormal weather activities like dust

2) Increase in descripination of sulf countries and

2) Role of ongoing conflict, was in the anddle Fast and resultant bromb employions

changing local weather

of change in the atmospheric wind contration

systems leirnging in dust storms. Imparts of dust storms of middle East of on India: If they lead to trapping of pollutants in the lower atmosphere, giving inse to They bring in elevation in local temperature grown pas they come from dry hat region. weather the dust storms lowers the tisibility in rities of Northern plains. 4) These dust storm increases the quantity of particulate matter in the atmosphere. 3) These storms interfere with puripitation which was expected to come because of western disturbances.



In order to reduce devastating impact of these dust so stoms, ballowing stets can be taken:) Developing better weather borecasting techniques to increase The preparedness this not 4) to operation with egulf countries in order Justed to get adiable and timely data box nestion movement of these starms, 5) In long um, promoting the steps to prevent ratastrophic climate change. Air quality of Delhi is stready one of the worst in the would. To improve their is need to manage stubble burning as well as find ways to mitigale impact of dust storms.



Q12. Oceans are suffocating, as dead zones have quadrupled in size since 1950s. In this context, discuss the causes and effects of Ocean Dead Zones on marine ecosystem. Dead zones refers to the zones of law or no onygen in the ocean leadies. They have been on isse since 1950s due to following anthropogenic activities. Marine pollution is one of the primary good cause in form of industrial waste, which changes ocean water chemistry. 2) Accidental oil spills and waster from ship collisions also relates dead yours. 3) Freecosing word bleathing due to ocean acidification also incueses ded zones as corals are "lungs" of the oceans

a) With ensignitific transportation activities

their is growth of invasive alian species which destroy local biodiversity and leady pad movie to fishing Jones. 7) Washing away of agentultural residuer pomh Causes like feetilizers, pesticides into the ocean biodies also mates diad zones. Effects of dead your ? I They decrease the fisheries and equaculture production in oceans. 2) Dead zones lead to maine hisodirecusity lass, disturbing the whole maine Good chain and Good webs. 3) Increasing number of dead zones also destroy beauty of beaches due to hilling torals, colourlyd marine negetation, hance Remarks

4) Oceans are large sints of carbon disoride, but extension of dead zones reduces this capacity of oceans. 5) Dead zone can also accentisate the problem of ocean acidification. Sustainable Development Goal mimber fromteen, sets a target of sustainable and hisologically diverse maine ecosystem, house every effort should be token to eliminate anthropogenic activities leading to dead some formation.



Q13. The United Nations Convention on the Law of the Sea (UNCLOS) not only protect the jurisdiction and economic rights of its member states overseas, but also the marine life and environment. Examine. protects jurisdiction and economic eights 1) It defines area refto twelve nautical miles as textitorial sea, where the coastal Discon state has godt jurisdiction I Area repto two hundred nautical misles guindretten is defined as enclusive Monomic Jone, where countries have right to enphase the Monomic resources. 3) It sets up tisbunal to resolve the maistime disputers. However, spart from mention previous this UNCLOS also have provisions for protection of maine life and environment such

) It outs member countries to take steps (5) to deninate maine pollution. 2) It had provission to promote inter-Explain furisdictional co-operation to deal with scamply envasive species. por steps to puserve hisodirectly and maine and provides framework for communication among nations to present oil spills, coalition of ships. Hence, UNCLOS not only defines the same of economic eights and jurisdiction but also preservation of maine anticonement and hisodirectity!



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Q14. Why are the west coast beaches receive more tourists and are more famous than east coast beaches in India? Also shed some light on India's Port led development initiatives. (15 Marks)

beach tourism is an important source of cevenue, it is prevalent on both the eastern and the Western coasts. Yet Western Coasts erreive more lawists because of Relatively developed Western states are well connected with railways, roadways and airways. y since Eastern beaches have fertile deltaic Soil, their firme focus is agriculture like Kijshno-Godarai Delta. Western beaches have loss nutrient inch laterite soil, hence scope for agriculture seduces, so these beaches develop tourism

3) Western beaches have tertain distinctive austhetic features like Kayals (back waters), sand hour in Kecala which attracts property Water shorts facilities like Kayaking western hard developed in Western levs westorn is frome to ydones sometimplating truise running between Muntia and Goa. Endia's Port led development initiatives Sagarmala project for bout led industri-alisation and modernisation of the logistus, to build industrial countries, manufacturing

Remarks

hubs along the coast. 2) Pout trust Bill is being brought in order to modernise the poit management, bring in pirate sector participation in port development 9) SAGAR initiative which is security and growth for all bost development in co-operation Bringwith neighbouring littoral countries Ports are major transportation 65 mode for foreign trade às 68% of our foreign trade by value passes through posts. Hence for led development will usher in blonomy wide growth.



Q15. Migration is a physical and social transformation and is also an instrument of cultural diffusion and social integration. Elaborate. Also, explain the nature of gendered mobility (15 Marks) Migration refers to movement of people from one place to another. It is mainly because of two factors I hush factor: like poverty, distress. It is a not asked forced migration When migration when migration happens to Nach on better livelihood offortunities es 4 sural to reston migration. Dyrew physical Emparts of Migration Social impact: It stronges the demography Soural of both the origin and destination of the transform migration e.g. noumber of bemale headed mouseholds in villages are on vite. Similarly their is nuclearisation of family

2) Physical impact: It is leading to overcrowding and pressure or usban Areas in terms of Kin amerities . Scarrity of land five rise to sturn, illegal colonies where migrants live in book conditions. However, inigration also leads to following cultural impacts:) Cultural diffusion. With migrants come good their distinct rulture, language, pesticals which are integrated with the local rulture for example, "Delti is referred to "Minis India sof the to sultimal diversity like ganesh chatarthi, Pongal in North and vice versa in South. 3 Social integration Migration also gives
Remarks

offortunity to people to know each other learn and framiliainse with oother tultures, which generates at sense of Graterily and belongingness gendered nature of migration. - Fraditionally, male nigration from rural to whon sueas was higher in search of work. It still continues to be higher than bemale migration in absolute teems. However Fromomic Survey 2017-19 notes their is higher growth in Jernale migration in last census, which grew almost double that of male migration. Also primary reason was economic. Hence their is need to ensure conducive atmosphere for women nigrants in terms of housing, safety, public thansport
Remarks

Q16. Population growth and urbanization rates will have dramatic impact on food security across the world by 2050. In light of this, discuss the role of Big-data and upcoming startups in bringing next green revolution in the Indian agriculture? Examine. (15 Marks)

Population and urbanistation are grawing at fast face, as bee UN Habitat report, India alone is likely to add around 300 million new urbon residents by 2050.

Nowever, the Rate of growth of Good production had not pept up pace with

population growth because .

1) so weity of land due to ubonistation,

findustrialisation.

New shallenges like climate change, extreme

weather events solversely impacting the

expantaltime

of human heings. India already cours

100 out of 119 on Global Hunger Index house

in content of growing population ensuing good security becomes even more important. However, traditional approach of using feetilizers, pesticides has proved to be unsustainable and degrading the soil feetility. Therefore Indian agus rulture needs new ideas such as use of Big-data for market analysis, predicting weather and helping formers to make informed theice y Encouraging start-ups in fields such as fucision farming nano-technology in form sector to jaine productivity in a sustainable manner

labouty and vulnerable areas. Even the successful utilization of aid and assistance by tested and State government defends upon effectionly of local government. It is hights ghted by following enamples During the retent Kerala Gloods it was chain of strong Primary healthcare tentres which prevented break out of epidenie 2) In Herala Gloods total fisherman contributed with their boats for evacuation and their knowledge of safer 3) During the forest five incident in the



Then distinct of Janil Nadu, it was local villagers who aisked their lives in order to sove the stranded tourists 4) On other hand, pailure of local bodies 5.5 in chennai to stop encoachment of wetlands, fonds, lakes accentuated the forcal community problem of floods. Hocal Therefore, the role govt in of local community and local gout is Die durin critical in ensuing disporter management, and this is even recognised by Sendoi part manag gramework of disputer management. Hence their is need you adequate capacity building of these bodies.

Q18. Drought is a broader concept than just deficiency of rainfall. Discuss, how drought is more of a man-made disaster than a mere deficiency of rainfall. Elaborate on the consequences of desertification that drought prone regions face. Also, bring out the preventive steps need to be taken in light of targets to curb desertification as mentioned (15 Marks)

Drought refers to the prolonged day spell, loss of soil moissure, deficiency of rainfall. Around 12% of India's area is deought from. Traditionally drought is taken up as natural disaster due to deficiency of rains. But now it is recognised as majorly a man-made disaster because 1) Burning of fossil buels is leading to climate change, which distuels the principitation fathern, increases drought. 2) Rampant defocestation semoves trees which pet as natural holders of moisture, result

1) Enceoaching upon natural groundwater recharging mechanisms like wetlands, bands, lakes detleters water resources. e) Overuse, enpolytation and water pollution had reduced bee-capita availability of water in India brown 1820 m3/ person to 15.45 mi) person in less than two decades lonsequences of drought] Agricultural : Agricultural productivity declines, Good security comes into pecil. 4 Ecological damage due to loss of Viadirecity, Rabitat Gragmentation and oven entinction of species) social consequences: scarcity of productive land gives rise to social invest, deeper the racial and ethnic tensions.

Remarks



4) Economy suffers due to falling agistultural intomes, impacting the demand even in areas not kneetly impacted. Reventice steps to prevent deoughts).) Stirt adherence to climate change mixigation goals as committed by countries in their CHOCs y years awareness compaign to propagate dea of water conservation, climate smeet agriculture like use of dist inigation. 3) Promoting obfocestation, unban guens in participation with local communities. 4) Rutting in place mechanisms four rain water howesting essential resource, hence it is important to mistigate deoughts before damage is inseresible.

Q19. Cooperativization was seen as an important element in the agenda for institutional changes sought to be achieved through land reforms. Discuss. Also explain why the progress made by the cooperative movement in India largely fell far short of the goals set by its early proponents. to-operatives refer to the bodies where producers also manage the company. It was an important part of including rural incomes, land reforms because " It leads to economies of scale and make adoption of modern technologies Why It y co-operatives directly link the producers was seen as with consumers, hence eliminate the Important dement leakager which some due to middlemen) cooperatives even promote social set states agentific of marginalised groups, status of women changes as the successful ensuple of Anul shows

4) lo-operatives promote pooling of resources knowledge, hence a partnership which gives more than the mere aggregate of individual outfuts However, boring few examples like Anul, co-operative movement had not Ween successful in India due to the following reasons 1) Access to Ginance Due to lack of collateral, complicated documentation co-operatives fore failure of formance 4 Goet intervention in management). Board of to operatives are generally failled with state govt appointers, which lack knowledge of ground level facts.

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"> (Seterogenous social content). Co-operatives work best when all members are similar in terms of socio-economic status. But enral India thas socio-economic distinction of raste, which impacts cohesironess of the co-operatives. 4) Many of co-operatives are found by Kich and wealthy James first to escape the tanation laws. Some measures to promote to operative Dedicated financing facilities like / cruenidhis (redit co-operative of Andhia y Involvement of NISO, tivil society for eapacity building of co-operatives. Coosening the gout control over the cooperatives, to Gailitate democratic Gunctioning.



Q20. What are the various types of rural tourism? What will be the impact of promoting rural tourism in India? Elaborate the steps taken by the government so far? hurd towism is new way to promote rual growth, too the potential of rultural Curamediversity of rued India and ensure not justainable torrism. vortory Impact of rural tourism with freme la the source of Income for the swal Indians who are currently dependent on agriculture. - fund toursen is generally provided in a local context as USP, hence It is non-dest suctive and ecologically sustainable. s Rual tourson will also promate private investment in litherto trachward areas



bringing employment generation - It will help boost much economy and address sund foverty which is as high as around 25% As a consequences of eneal on growth, emal-urban migration will reduce, which is remembly resustainable and leading to happagard growth of urbanisation. - It can also give differentials by projecting Indio's rultural divereity It will streat foreign tourists, romaning our emports as well as foreign turients to luison gout had taken following steps

, Himachal Praduck had some up with perhene of "How goon ki Kahani" to attract towns on basis of rich cultural 5.5 Meritage of erual kimachal. Gort. had relaned the protected Area legnit norms in order to boost tourism in so border villages Intentives for the tred and breakfast scheme, which promotes home stays in erral Indias. Bhatenata Pairyojana to link semote. backward villages. Fransportation facilities will being townsom. Sund townsom can be undia's "next beig thing" and help when in a broad based inclusive growth.