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GENERAL STUDIES (TEST CODE : 1440)

Name of Candidate	GURLEEN	Registration Number	292784
Medium Eng./Hindi	ENGLISH	Date	31/08/19
Center			

INDEX TABLE		
Q. No.	Maximum Marks	Marks Obtained
1	10	
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3	10	
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16	15	
17	15	
18	15	
19	15	
20	15	

Total Marks Obtained:

Remarks:

INSTRUCTIONS

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

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EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

1. Among various modes, trade played an important role in the spread of Indian culture abroad in the ancient period. Discuss. (150 words) 10

विविध साधनों के साथ-साथ, व्यापार ने भी प्राचीन काल में विदेशों में भारतीय संस्कृति के प्रसार में महत्वपूर्ण भूमिका निभाई है। चर्चा कीजिए।

Trade with India (the golden bird) was a major source of spread of Indian culture abroad in ancient period as evident from

- 1) Evidences of Indus valley pots, seals and trade in ~~pearls~~ peacocks, ivory beads etc with Mesopotamia
- 2) Arabs in medieval times became middlemen between India and Europe.
- called Mathematics "Hindusat" and spread it.
- 3) the stories of wealth and prosperity of India must have been the reason for likes of Mohammad Gohri and Ghaznavi coming to India.
- 4) Trade with Mauryan empire saw spread of Buddhism to China, Myanmar, Sri Lanka etc.

- 5) As Chola empire had trade with South East Asia saw the spread of South Indian culture.
- 6) Even Angkorwat Temple of Cambodia is a major example.
- 7) Indian calicos, fashions became popular among Europeans which was the major cause of their ~~desire to find~~ a monetary drain to India.

Even today, trade of Bollywood movies is a major tool of spread of Indian culture abroad.

2. Netaji Subhas Chandra Bose was a far-sighted realistic leader with great diplomatic and military skills. Discuss in the context of his contribution to national freedom struggle. (150 words) 10

नेताजी सुभाष चंद्र बोस उत्कृष्ट राजनयिक और सैन्य कौशल रखने वाले एक दूरदर्शी यथार्थवादी नेता थे। राष्ट्रीय स्वतंत्रता संघर्ष में उनके योगदान के संदर्भ में इस पर चर्चा कीजिए।

Subhash Chandra Bose was a far sighted and realistic leader as he saw that the British were not going to leave India easily and realistic because he was ready to follow any method or methodology (non violence, aggression, teaming up with Germany etc) to rid India of the colonial rule. (Unlike Gandhiji who wished to stick to the core principles of Satyagraha & non violence which as seen to be too idealistic by Bose).

He was a great diplomat with military skills as evidenced by the fact that :-

- (i) he was able to take charge of Indian National army, organise them and ~~to~~ to attack the British

in India.

- (ii) He roused the nationalist passions among his charge by slogans of:-
"Give me blood or give me freedom"
"Delhi Chalo" etc.
- (iii) He was able to work with Japanese government and even establish control over Andaman and Nicobar for a time.
- (iv) He was diplomatic enough to gain approval of his Provisional government from several nations.

Thus, he was truly a beacon of hope for the nationalists looking for an alternative to the Gandhian methods of struggle.

3. Enumerate the factors responsible for the decline of Mughal empire in India. How did it help in the expansion and consolidation of British power?

(150 words) 10

भारत में मुगल साम्राज्य के पतन के लिए उत्तरदायी कारकों को सूचीबद्ध कीजिए। इसने ब्रिटिश शक्ति के विस्तार और सुदृढ़ीकरण में किस प्रकार सहायता प्रदान की?

Mughal empire declined in India because of:-

- (i) Weak successors.
- (ii) Attacks by foreigners like Nadir Shah etc. which crippled the already weak empire.
- (iii) Freedom bids by provincial governors and zamindars.
- (iv) Lack of efficient administration at decentralised level.
- (v) Emergence of other powers in the region e.g. Rajputs, Marathas etc.

These things left India divided into multiple weak states with no strong, efficient administration or army who could effectively repel the British bid of conquest.

This was aggravated by the fact that :-

- the resultant smaller states were suspicious of one another.
- at conflict
- no ambitious leader present who could consolidate them under one banner.

Thus, one after another → Bengal,
Maratha,
Mysore,
Punjab etc.

kingdoms fell to the might of British which ~~only~~ a great emperor like Akbar might have been able to avoid.

4. Though the conditions in France were vastly different from those in America, many of the driving factors behind the two revolutions were similar. Discuss in the context of French revolution. (150 words) 10

यद्यपि फ्रांस में परिस्थितियाँ अमेरिका की परिस्थितियों से बहुत भिन्न थीं, तथापि इन दो क्रांतियों के पीछे कई प्रेरक कारक समान थे। प्रारंभिकी क्रांति के संदर्भ में चर्चा कीजिए।

French and American revolutions were powered by the engines of despotic rule, be it from a local ruler or in form of colonial power. The various factors which led to both these revolutions are :-

1) Economic factors :-

- Louis the ~~XVI~~ XIIIth had made the conditions of financial bankruptcy by 7 year war worse by sending military help to Americans in 1781.
- His successors could not bring things in control, rather demanded increased taxes from already impoverished masses.

(America too was demanded taxes in form of Stamp duty, Sugar duty by Britain)

2) Political factors :-

- excessive inequalities and inefficient rule.

3) Role of Intellectuals :-

- Voltaire, Rousseau, Montesquieu & spread

awareness about the abysmal conditions of masses and roused passions

(Like Henry Patrick, Benjamin Franklin in American revolution)

4) Social factors :-

- inequalities between Aristocracy and common people.
- demand of 'one man, one vote' in Estate General

(Like American slogan "No taxation without representation")

Thus, both revolutions were a result of rise of oppressed against oppressors who were trying to extort the value of their own mistakes from the hard working common man.

5. Globalization has been a significant force in shaping the contemporary education system in India in both positive and negative ways. Examine.

(150 words) 10

वैश्वीकरण, सकारात्मक और नकारात्मक दोनों प्रकार से भारत की समकालीन शिक्षा प्रणाली को आकार देने में एक महत्वपूर्ण शक्ति रहा है। परीक्षण कीजिए।

Globalization is about bringing together of the various cultures of world with respect to polity, economy, society etc. Thus, shaping the World into one cohesive community.

Its effect on Indian education system :-

* POSITIVE :-

- (i) Increased focus on scientific temper, rational, inquisitive approach to education
- (ii) Reduced focus on religious, superstition based education
- (iii) More focus on understanding, research and development.
- (iv) Higher focus on education itself i.e. education as a fundamental right of all.

(v) Options opened up for education at international institutions.

* Negative :-

(i) Increased competition has made children rats in a rat race

(ii) More focus on destination, than journey.

(iii) Bag burden increasing

(iv) Increasing stress and psychological disorders.

(One of the causes of Juvenile delinquency)

(v) Reduced focus on quality over quantity of education (rote learning)

Thus, India must keep the good and work on making education what it is meant to be i.e. developer of personality

"Education is what is left after we forget what we learnt at school"

- Einstein

6. The lack of clarity over what constitutes an urban area encourages haphazard development pattern in India. Discuss. (150 words) 10

शहरी क्षेत्र का गठन करने वाले तत्वों के संबंध में स्पष्टता की कमी भारत में अनियोजित विकास प्रतिरूप को प्रोत्साहित करती है। चर्चा कीजिए।

Urban area hasn't been properly defined. There are various definitions

- (i) ~~Cons~~ Census based definition :-

- > 5000 people
- > 400 / km² density
- > 75% males = non agricultural occupation.

- (ii) Statutory :- having municipality, municipal corporation etc.

Thus there is no set comprehensive definition which encourages haphazard development in India including :-

- (i) Rising urban agglomeration
- (ii) Development of slums.
- (iii) Encroachment of vulnerable, hazard prone areas.

- (iv) Overcrowding
- (v) Increased competition for resources
- (vi) Lack of safe water, sanitation
- (vii) Lack of waste management
- (viii) Increasing urban crime.

Thus, first policy makers need to define an urban area along with planning of consolidation of nearby areas for future urbanisation so that the current (31.16%) urban population and the future can benefit from its development without losing their dignity and fullness of life.

7. Regionalism need not be regarded as unhealthy unless it takes a militant, aggressive turn and encourages the growth of secessionist tendencies. Discuss. (150 words) 10

क्षेत्रवाद को तब तक हानिकारक नहीं माना जाना चाहिए जब तक कि यह उग्रवादी एवं आक्रामक रुख न अपनाए तथा अलगाववादी प्रवृत्तियों को बढ़ावा न दे। चर्चा कीजिए।

Regionalism refers to the feeling of oneness created in people belonging to a particular area due to commonalities of language, ~~ethn~~ culture, religion, ethnicity etc.

This ideology is that of "son of soil" concept.

It is not unhealthy ~~be~~ in less aggressive state because :-

- (i) Provides sense of identity
- (ii) Promotes development of culture
- (iii) Safeguards regional language etc.

Yet, when it adopts a more militant or secessionist stance, it becomes unhealthy for :-

- (i) growth of region. Leads to under-development.
- (ii) Increased fundamentalist attitude

- (iii) Increased protectionism
- (iv) Conflict between various groups.
- (v) Insurgent behaviour
etc.

For example competition on the basis of development or trade in an area and the feeling of pride for achievement (Competitive federalism) is great but the demand for separate nation etc is unhealthy.

Thus, the core issues (fear of loss of identity) needs to be dealt with before regionalism anywhere turns into a sore.

8. Mention the conditions responsible for occurrence of Temperature Inversion in atmosphere. Elaborating on its various types, highlight its effects on the biosphere. (150 words) 10

वायुमंडल में तापमान व्युत्क्रमण की घटना हेतु उत्तरदायी परिस्थितियों का उल्लेख कीजिए। इसके विभिन्न प्रकारों का सविस्तार वर्णन करते हुए, इसके द्वारा जैवमंडल पर पड़ने वाले प्रभावों पर प्रकाश डालिए।

Temperature inversion refers to the conditions where on increase in altitude there is no corresponding decrease in temperature (as expected due to Environment lapse rate), rather there is a corresponding rise in temperature.

Various conditions where this happens are:-

- (i) Mixing of Warm and cold fronts in temperate regions and if Cold front is dominant, it lifts the warm above it causing inversion.

Such areas are characterised by:-

- calm, clear skies cloud formation
- ~~anti~~ cyclonic conditions
- provides rainfall to area.

- (ii) Closed off Urban areas during winter:-

- at night air near surface cools

down while air mass at higher altitude
~~to~~ warms with insolation.

- creates conditions conducive for
 - fog
 - smog etc.
 - reduces visibility
 - reduces productivity of crops, can cause frost.
- 3) At junction of troposphere & stratosphere
(tropopause)
- creates a virtual lid on the atmospheric disturbances in troposphere.

Thus, temperature inversion has varying effects on biosphere. The naturally occu

9. Assess the feasibility of introducing two time zones in India in the wake of recent proposal made by Council of Scientific and Industrial Research (CSIR). (150 words) 10

वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद (CSIR) के हालिया प्रस्ताव के आलोक में भारत में दो टाइम ज़ोन लागू करने की व्यवहार्यता का मूल्यांकन कीजिए।

Recently a proposal made by CSIR talked about introducing 2 time zones in India because of the 29° East-west extent of India spanning nearly 2 hours on the basis of global time meridians.

* Is it feasible? :-

(A) Yes :- because

(i) Not the first time. Pre independence we had 2 time zones (Kolkata & Bombay)

(ii) The 2nd time zone shall be applicable for North East Region only where they are losing precious sunlight hours.

(iii) Railways and Roads passing through short stretch of Siliguri Corridor can have checkpoints to allow time change.

(iv) Increase productivity, reduce energy/

power wastage and increase leisure time.

- B) NO :-
- (i) Create confusion because of time changes for Railways etc.
 - (ii) ~~Lack of~~ Reduced productivity for Government offices (because North East ones shall be overlapping with mainland for 2 hours less)
 - (iii) May create increased alienation of North East from Indian commerce and cause higher tensions and insurgency.

Thus, careful consideration of pros and cons is necessary before taking any rash decision and till then the "Bagan" time that tea planters already have can be used unofficially.

I mean after all it is just 29° difference. Look at China, it has 60° difference, yet it functions on one time standard time.

10. Discussing the reasons behind disappearance of springs, examine how springshed management can help revive springs, especially in the Himalayan region. (150 words) 10

झरनों के विलुप्त होने के पीछे निहित कारणों पर चर्चा करते हुए, परीक्षण कीजिए कि किस प्रकार स्प्रिंगशेड प्रबंधन झरनों, विशेषकर हिमालयी क्षेत्र में झरनों को पुनर्जीवित करने में सहायता कर सकता है।

Springs in Himalayan region have been vanishing very fast in recent years due to various reasons:-

- (i) disappearance of glacial sources due to melting (:- of global warming)
- (ii) Blasting of rocks to make roads has blocked many sources.
- (iii) Shifting trend of agriculture has been pushing down groundwater level.
- (iv) The ones which are left are subject to pollution of all kinds.

So, springs need to be conserved and one of the methods to do so is springshed management.

It is a multidimensional concept involving conservation of source, ecology, environments etc of the

spring and its source.

It involves steps for :-

- (i) Conserving source & landscape management.
 - (ii) Reducing water intensive cultivation to replenish aquifers.
 - (iii) Conserving the spring areas and finding alternative routes for development.
- etc.

Springs are an important source of freshwater (enriched with minerals) & especially for local wildlife and which thus forms an important factor for sustaining natural ecosystems.

11. India has a long civilizational history. In this context, highlight the significant contributions from ancient India in science, mathematics and medicine. (250 words) 15

भारत का सभ्यता संबंधी एक लंबा इतिहास रहा है। इस संदर्भ में, विज्ञान, गणित और चिकित्सा के क्षेत्र में प्राचीन भारत के महत्वपूर्ण योगदानों पर प्रकाश डालिए।

India has been an incubator for great ideas and innovators since ancient times which is evident by the fact that even before the west was out of caves India had a flourishing, urbanised, scientific society in form of Indus valley civilisation.

* Contributions of India :-

1) Mathematics :-

- Sulvasutra → talks about maths, algebra
- Apastambha → talked about acute, obtuse angles
- Aryabhata →
 - gave value of π
 - gave area of triangle.
 - discovered algebra.
- Brahmagupta → discovered '0' ($\Delta +ve$ $\Delta -ve$ integers)

- Bhaskaracharya gave :- Lilavati,
Beej Ganita,
Goladhyaya,
Grahaganita,
etc.

2) Science :-

- Astronomy :-

- Aryabhatta → told that Earth was round & rotated on own axis
↓
gave concept of "Khugol shastra" - scientific approach to lunar & solar eclipses.

- Swai Jai Singh established 5 Observatories

- Chemistry :-

- Iron pillar near Qutub minar is rust free since ages.
- Perfume making discovered by Noor Jahan's mother (Ain-i-Akbari)
- Sukranama → talks about method of gun powder preparation

3) Medicine :-

- Arthashastra → talks about magic & rituals to treat human ailments.
- Charak → father of Ayurveda
- Dhanvantri → great physician in Ayurveda.
- Sushruta → father of surgery.
- Yoga developed in India etc.

Thus, clearly India was way ahead of ~~beyond~~ its time in ancient times. We just need to emulate that success and again become the leaders in world of science. (Like ISRO is on its way)

12. Over the years, the nationalist movement successfully created an ideology and culture of democracy and civil liberties that became a source of its strength. Discuss. (250 words) 15

समय के साथ, राष्ट्रवादी आंदोलन ने लोकतंत्र और नागरिक स्वतंत्रताओं की विचारधारा और संस्कृति का सफलतापूर्वक मूजन किया जो इसकी शक्ति का स्रोत बनीं। चर्चा कीजिए।

Nationalist movement created awareness and empowerment among people and inculcated in them a culture of democracy & civil liberties through steps like :-

- (i) Swadeshi and boycott movements:
 - created self respect
 - self reliance
 - sense of dignity
- (ii) Newspapers, journals etc.
 - talked about / spread awareness about ideals of liberty, equality, justice as seen in western nations.
- (iii) During civil disobedience ~~and~~ Quit India movements :-
 - self governments sustained by leaders at various places like Satara, Ballia etc.

- (iv) Indian National Congress passed Fundamental Rights Resolution.
- (v) Their demands led to :-
- financial & political decentralisation of power in form of
 - Panchayati Raj Institutions
 - Provincial Governments etc under popular control (1935 act)
- These ideologies became ^{a source of} strength for freedom struggle as :-
- (i) people realised they were not inferior and thus not obligated to subjugation.
 - (ii) Understood about basic human rights such as :-
 - no discrimination
 - power to choose own representative
 - freedom etc.
 - (iii) Inculcated a desire of justice among masses who came out in droves to support the poppr. popular struggle.

Don't write anything this margin
(इस भाग में कुछ ना लिखें)

13. Critically discuss the contribution of the Indian capitalist class in the freedom struggle. (250 words) 15

स्वतंत्रता संघर्ष में भारतीय पूँजीपति वर्ग के योगदान पर समालोचनात्मक चर्चा कीजिए।

~~Indian Capitalist class contributed to Indian freedom struggle by providing monetary support to Indian National Congress~~

Indian Capitalist class's contribution to Indian freedom struggle was 2 sided :-

I) Positive :-

- provided monetary support to Indian National Congress.
- Invested in growth of Indian industries thereby empowering Indians.
- Support to freedom fighter leaders against unpopular bills like Public safety Bill etc at legislative level.
- Asking for industry protectionism around 1924 to prevent economic drain etc.

2) Negative :-

- (i) ~~to~~ Balatant opposition of freedom struggle and popular movements by some capitalists.
- (ii) Non participation in popular mass struggle.
- (iii) Exploitation of Indian workers.
- (iv) Support to British Capitalist policies etc.

Thus, Capitalists contributed but a little to the freedom struggle.

14. Equitable distribution of land plays an important role in bringing about socio-economic transformation. In this regard, analyse the progress of land reforms measures taken in India since independence. (250 words) 15

भूमि का न्यायसंगत वितरण सामाजिक-आर्थिक रूपांतरण लाने में एक महत्वपूर्ण भूमिका निभाता है। इस संबंध में, स्वतंत्रता के पश्चात् भारत में किए गए भूमि सुधार उपायों की प्रगति का विश्लेषण कीजिए।

Land ~~reform~~ reforms are necessary for socio-economic transformation especially in view of huge inequalities in terms of land holdings in India.

- At Post independence only ~~8~~ 25% household held land and ~~85~~ 75% were share croppers working as tenants.

Thus, land reforms were felt necessary which caused Government to bring about :-

- (i) Abolition of Zamindari, intermediaries.
- (ii) Land ceiling rules and Redistribution of excess land.
- (iii) Tenancy laws.
- (iv) 2008 - National ~~Comm~~ Council for Land reforms was set up.

etc.

Yet, only 1.2% land has been redistributed and that too mostly non arable land.

* Why so low :-

- (i) Lack of political will
- (ii) Lack of desire of land owners to part \therefore used money power
benami transfers.
- (iii) Huge land owners \rightarrow themselves having political power.

~~(iv)~~

* What is needed? :-

- (i) Increase power of National Council of Land Reforms (e.g. Land = State subject; Could make it Concurrent)
- (ii) LAAR, 2013 (Land Acquisition & Rehabilitation Act) proper implementation.
- (iii) Benami properties Act, 2016
- (iv) Creation of popular pressure to incite political will
etc

Don't write anything this margin
(इस अंतर में कुछ ना लिखें)

15. State the factors that have influenced India's population growth trends. Also, enlist some measures taken by the government for attaining population stabilization. (250 words) 15

उन कारकों का वर्णन कीजिए जिन्होंने भारत की जनसंख्या वृद्धि की प्रवृत्ति को प्रभावित किया है। साथ ही, जनसंख्या स्थिरीकरण का लक्ष्य प्राप्त करने हेतु सरकार द्वारा उठाए गए कुछ कदमों को भी सूचीबद्ध कीजिए।

India is soon to become the most populous country in the world with projections of it crossing China by 2040s. (Current population 2121 Crore)

* Factors influencing population growth in India :-

1) (i) SOCIAL FACTORS :-
Universal marriage system in India :-

- everyone is married off ~~at~~ (love or arranged)

(ii) Marriage at younger age :-
- more chances of conception.

2) (iii) ECONOMIC factors :-

(i) Concept of "more hands, more money"

(ii) Poor people have higher fertility rate.

3) Educational factors :-

- Less educated → (especially women), more children.
- Less awareness about contraceptive measures (about their safety)

4) Religious factors :-

- Contraception and abortion considered against religious values.

5) etc. High IMR → fear of loss of children.

* Steps by Government :-

(i) India was 1st country to come out with Family Planning Program as early as 1952.

(ii) Other steps over the years :-

- Clinic oriented approach
- Targetted approach (1970s era)
- Awareness generation programs.

e.g. Hum 2 hamare 2.

- (ii) National Population Policy, 2002
with
Short → by 2010
Medium → by 2045
△
Long term Goals → by 2075
with goal of achieving replacement
Total Fertility Rate of 2.1 by medium
term. (achieved by most states).
- * Thus, population reduction means only
possible via voluntary people's
participation in conjugation with
reduced fear of child mortality &
financial security.

16. Examine the contemporary trends and reasons for change in the traditional family structure in India. Discuss the reforms needed in the existing social security protection measures in this regard. (250 words) 15

भारत में परिवार की पारंपरिक संरचना में परिवर्तन की समकालीन प्रवृत्तियों और इसके कारणों का परीक्षण कीजिए। इस संबंध में वर्तमान सामाजिक सुरक्षा उपायों में आवश्यक सुधारों की चर्चा कीजिए।

Recently, the family structures in India have been shifting from Joint families (3 generations under same roof, eating from 1 kitchen, common property etc) to Nuclear (2 generations) or Extended families

* Reasons :-

(i) Globalisation :-

- intermixing of western culture with Indian
- Increased focus on individual than on family values.

(ii) Better communication, transportation allowing better connectivity even farther away.

(iii) Economic factors :-

- better job opportunities farther away forces migration

(iv) Geographical factors :-
Migration due to natural disasters
or "climate refugees" tend to travel
as nuclear families (∵ of loss of
human life)

(v) Educational factors :-
- study and settle farther away.

(vi) Social factors :-
- changing societal dynamics e.g.
- increased trend of love marriages,
working women etc.

* Reforms needed :-

(i) Revival of traditional values of
- ~~ed~~ elderly love → They raised us,
now it's our turn to help.

- not regarding elderly as burden.

(ii) Better social security measures
for elderly

e.g.

Indira Gandhi Pension scheme for
Old Age person

- ∴ allowing them to contribute in family and live with dignity.
- ∴ Children will not regard them as a burden.
- (iii) Better old age healthcare programs etc.
- (iv) With demographic dividend moving towards increasing elderly population, making available new job opportunities for utilising their experience + increasing retirement age.
- (v) Education + employment → if available in quality everywhere, no need to leave.

17. Differentiate between eustatic and isostatic type of sea-level changes. Also, discuss the resultant landforms which are likely to be formed as a result of sea-level fluctuations. (250 words) 15

मुस्थितिक और समस्थितिक प्रकार के सागर तल परिवर्तनों के मध्य अंतर स्पष्ट कीजिए। साथ ही, सागर-तल के उतार-चढ़ाव के परिणामस्वरूप निर्मित होने वाली संभावित परिणामी भू-आकृतियों की भी चर्चा कीजिए।

• Sea Level changes are of 2 types :-

1) Eustatic :- due to

- ~~no~~ change of volume of water

OR

- change of holding capacity of oceanic basins.

2) Isostatic :- due to

- emergence or submergence of coast in an area.

∴ Eustatic = global

Isostatic = local phenomenon.

• Sea level changes can result in changes of coastal landscape :-

(i) Eustatic changes :-

• increase sea level can lead to

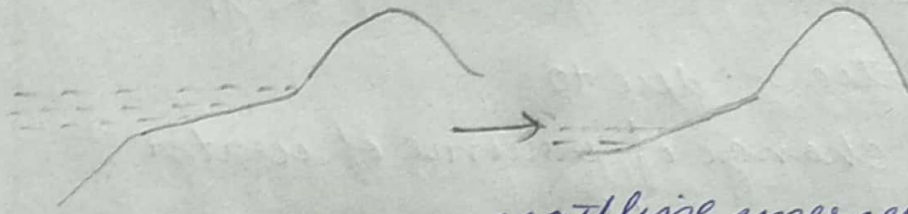
- submergence of low lying coastlands, wetlands etc.

- submergence of island chains.

(ii) Isostatic changes:-

a) Emergent coastline:-

- Lowering ~~of~~ emergent coastline:-

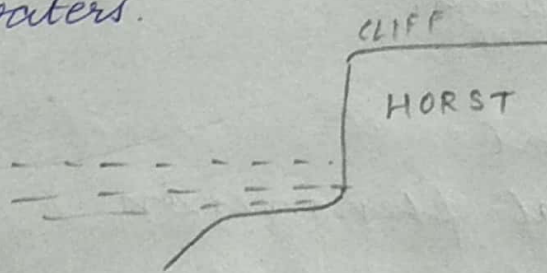


∴ ~~the~~ gently sloping coastline emerges.

(iii) Upland emergent

• due to faulting

• cliff along with very deep offshore waters.



b) Submergent coastline:-

- Ria Coast → Mountains perpendicular to coastline submerge.

- Dalmatian Coast → Mountains parallel to coastline submerge.

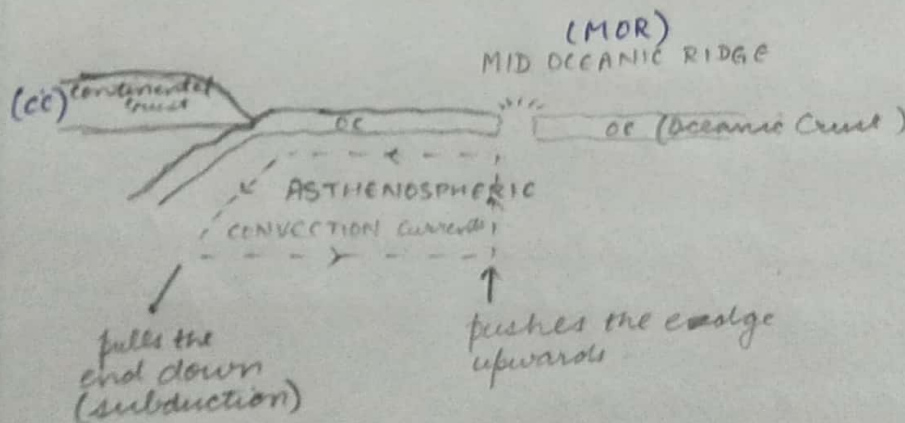
- Fjord Coast :- Submergence of terminal moraine
- Estuarine coast .
- India's
 - Western Coast (Malabar) = Submergent
 - Eastern Coast (Coromandal) = Emergent

18. What are the forces that drive the movement of lithospheric plates? In this context, identify the different types of plate boundaries based on their nature of interaction with suitable examples of the characteristic features formed along them. (250 words) 15

स्वतंत्रपट्टीय प्लेटों को संचलित करने वाले बल कौन-से हैं? इस संदर्भ में, उनके किनारे निर्मित अभिवाहकिक विशेषताओं के उपयुक्त उदाहरणों के साथ उनकी अंतरक्रिया की प्रकृति पर आधारित विभिन्न प्रकार की प्लेट सीमाओं की पहचान कीजिए।

Earth's crust is seen to be divided into various lithospheric plates lying over a semi-solid, plastic substance called Asthenosphere (capable of moving albeit very slowly) over which they move over time causing changes in Earth's surface.

* Cause of movement :-



- (i) Key Links of the Asthenospheric convection currents :-

- upward limb → pushes the part of ocean crust at

mid oceanic ridge up thereby allowing the other end to be pushed down under continental crust by - the weight of the edge itself
- downward limb of current.

(ii) Oceanic crust is itself denser and thus heavier than continental crust. Thus, sinks.

- These factors are considered responsible for subduction

(iii) Transverse limb of Asthenospheric current and the eruptions at MOR pushes the OC apart and into the CC.

* Types of plate boundaries:-

- (1) Convergent
- (2) Divergent
- (3) Transverse

1) Convergent:-

- Continental-Continental = Collision
Lead to :- fold mountain formation

- Continental - oceanic
- Oceanic - oceanic

} subduction

Lead to formation of :- volcanic island chains

e.g. Aleutian islands.

2) Divergent :-

- constructive = lead to formation of new lithospheric plate area.

e.g. Rift Valley (of Africa)
Volcanic lakes (e.g. Lake Turkana)

3) Transform :-

- lead to earthquakes etc.

19. Highlight the factors responsible for location of automobile industries in India. Also, examine the challenges in the wake of transformations taking place in the automotive industry. (250 words) 15

भारत में ऑटोमोबाइल उद्योगों की अवस्थिति के लिए उत्तरदायी कारकों पर प्रकाश डालिए। साथ ही, ऑटोमोटिव उद्योग में हो रहे परिवर्तनों के आलोक में चुनौतियों का भी परीक्षण कीजिए।

Automobile industry has recently seen a slump in growth in the past year or so.

Factors responsible for location of automobile industry :-

- 1) Raw Material :-
 - parts = imported (near ports),
 - manufactured (near Iron & steel works)
- 2) Cheap Labour
- 3) Capital \rightarrow ^{because} capital intensive industry
- 4) Cheap Power availability
- 5) Land availability for setting up industries
- 6) Market \rightarrow especially urban, metropolitan areas with high demand for vehicles
- 7) Government Policies :- - easier land, procurement, better power sops etc attract this industry

It is due to this reason that automobile industries are clustered in and around :-

- Ahmedabad - Vadodra
- Mumbai - Pune
- Bengaluru - coimbatore regions etc .

* Challenges faced due to transformations :-

- (i) Bharat Stage VI :- coming of fast approaching BS norms will make older technology obsolete .
- (ii) Focus on Electric vehicles, hybrid vehicles by Government policies. Thus, less attractive for traditional vehicles .
- (iii) Reducing demand
- (iv) Overdependence on ϕ readymade parts which are imported .
- (v) etc .

Therefore, over the years the automobile industry needs to stay on its feet and keep in tandem with the changing

requirements of automobile industry especially in wake of environment / climate change and growing focus on clean energy based vehicles.

20. Identify the major Uranium reserves in the world and the countries from where India sources it. What measures are required to ensure supply security of fuel for nuclear plants in the country? (250 words) 15

विश्व के प्रमुख यूरेनियम भंडारों और उन देशों की पहचान कीजिए जहाँ से भारत इसका आयात करता है। देश में परमाणु संयंत्रों के लिए ईंधन आपूर्ति की सुरक्षा सुनिश्चित करने के लिए किन उपायों की आवश्यकता है?

Uranium reserves are found worldwide in areas such as :-

- Central Asia
- Australia
- China's Manchuria province
- South America (Venezuela, Argentina etc).

Main sources for India includes :-

- Australia
- Central Asia → Kazakhstan, Uzbekistan. (Recent pact has been signed)

India, itself has some reserves of Uranium in areas of :-

Rajasthan,
Maharashtra,
Himachal Pradesh,
Chattisgarh &
Jharkhand

But not enough to sustain its nuclear power (for peaceful uses especially) ambitions. Therefore, she is majorly

dependent on import for good quality enriched Uranium (U_{235} & U_{238}).

* Various measures which could be taken to ensure security of fuel supply are:-

- (i) India's image in international forums as a responsible nuclear state.
e.g. $\text{\$}$ India - Japan nuclear agreement signifies this posture of India.
- (ii) Better and more remunerative deals with countries who are rich in Uranium resources.
- (iii) Better connectivity with Central Asia (e.g. via INSTC, Chabahar & Zaranj - Delaram Highway project etc).
- (iv) Better Research & development to develop technologies for utilisation of Thorium reserves in India as the fuel.
- (v) India's ^{bid of} entry into ~~NTP~~ NPT (Non Nuclear non proliferative Treaty) without signing NSG.
Just as it has entered MTCR, Wassenaar arrangement & Australia

group etc.

Thus, India must look within & outside for Uranium resources and make optimum use of the ones it already has (Thorium) while maintaining the goodwill at global level to prevent any kind of "sanctions" against it which might prove a hurdle in its nuclear dreams.