

Samyak

An Institute For Civil Services

RAS - 23 MAINS TEST SERIES

सिद्धि-II - 018/FLT-02

Time : 3 Hours

(Paper - II)

Maximum Marks : 200

सामान्य ज्ञान व सामान्य अध्ययन-II
General Knowledge & General Studies-II

Name :		MARKS	
Enroll. No.:	Part	Att. Ques.	Marks Obtained
Date of Birth :	Unit- I	13	34
Medium : English	Unit - II	14	46
E-mail :	Unit - III	13	26
Exam Date : 9th June, 2024-	Total	40	106
Evaluator's Code	Reviewer's Code	Invigilator's Signature	Student's Signature

अनुदेश (Instructions)

1. परीक्षा शुरू होने से पहले पुस्तिका को जाँच लें।
Please check the booklet before the commencement of the exam.
2. अंक योजना प्रत्येक खंड के प्रारम्भ में दी गई है।
The marking scheme is given at the start of every section.
3. अभ्यर्थियों को उत्तर निर्धारित शब्द सीमा से अधिक नहीं लिखना चाहिए, इसका उल्लंघन करने पर अंक काटे जा सकते हैं।
Candidates should not write more than the prescribed word limit in answers, violating this may result in deduction of marks.
4. अभ्यर्थियों को निर्देशित किया जाता है कि किसी भी प्रश्न का उत्तर प्रश्नोत्तर पुस्तिका में निर्धारित स्थान पर ही लिखें। बॉर्डर लाईन से बाहर उत्तर नहीं लिखें। बॉर्डर लाईन के बाहर लिखे गये उत्तर को जाँचा नहीं जायेगा।
Candidates are directed to write answers only in the prescribed space of booklet. They should not write answer outside the border line. Answer written outside the border line will not be checked.

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	REVIEW PARAMETERS	SCALE			
		Good	Above Average	Average	Below Average
1.	DOES THE ANSWER ADDRESS THE DEMAND OF THE QUESTION?		✓		
a.	Answer Relevancy		✓		
b.	Answer Enrichment points like use of: · Key Terms/ Subject Vocabulary. Use of Commission/ report/ government publication/ judgements, etc. Association with the Current Affairs and use of examples to explain the concept and idea		✓ ✓		
2.	HOW WELL IS THE ANSWER PRESENTED?		✓		
a.	Structure - Intro, Body, Conclusion			✓	
b.	Presentation – Using Subheadings/ points/ highlighting/ flowcharts/ diagrams/ maps		✓		
c.	Language & Grammar		✓		
d.	Word limit		✓		

Detailed Comments / Feedback / Suggestions for Improvement
विस्तृत टिप्पणियाँ/फीडबैक/सुधार के लिए सुझाव

1. Your performance is good keep it up till exam.
2. Also ~~or~~ link your answer with currents.
3. In some answer you don't write conclusion add it.
4. Same with introduction ↑

Best of luck.

Unit-1
(यूनिट - I)

(65 Marks)
(65 अंक)

Part - A
भाग - अ

Marks : 10
अंक : 10

Note : Attempt all questions. Answer the following questions in 15 words each. Each Question carries 2 marks.
नोट : सभी प्रश्नों के उत्तर दें। निम्न प्रश्नों के उत्तर 15-15 शब्दों में दें। प्रत्येक प्रश्न के 2 अंक निर्धारित हैं।

1. "प्रत्येक व्यक्ति का महत्त्व केवल एक व्यक्ति का महत्त्व है, इससे अधिक नहीं।" उक्त कथन को स्पष्ट कीजिए।
"The importance of each person is only the importance of one person, not more than that." Explain the above statement.

The statement emphasising upon the ⁽²⁾ 'Utilitarian Principle' of ethics. This means that the utility of an individual is not above than the utility of society as a whole. Thus focusing on the "maximum good for maximum number".

(Write above this line only)

2. मानवीय चिंता का क्या तात्पर्य है?
What is meant by human concern?

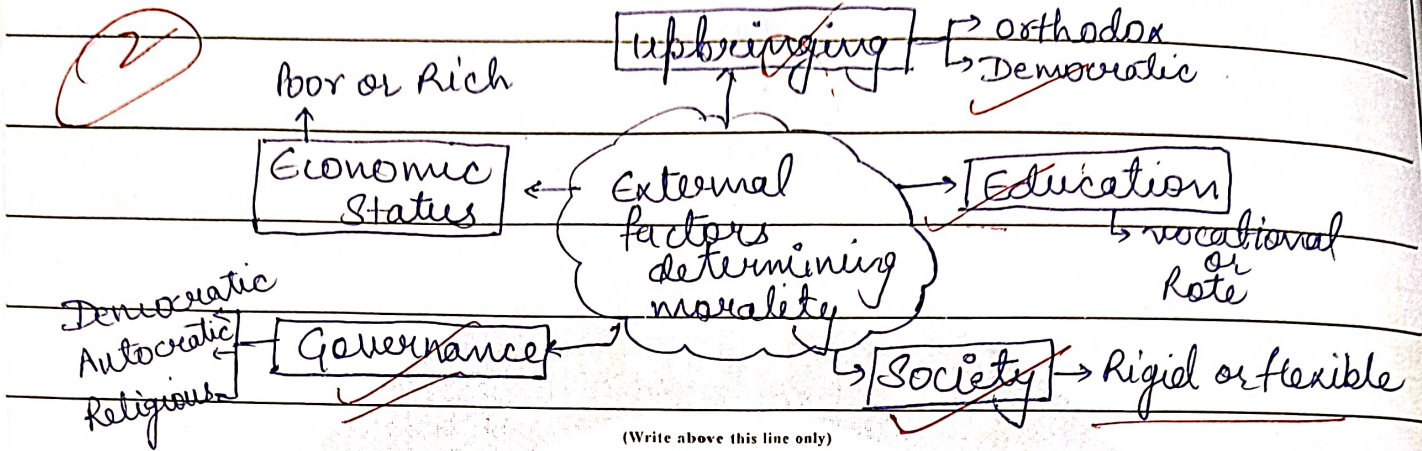
The Problems facing humans.

Human concern is the concept of ethical a issue i.e., to resolve various aspects of ^{ethical} situation where human has to choose among any two rights.

for ex → To choose between family and Profession.

(Write above this line only)

3. नैतिकता का निर्धारण करने वाले बाहरी/बाह्य कारकों को नामोल्लेखित कीजिए।
Name the external factors that determine morality.



4. "सहानुभूति, परानुभूति से किस प्रकार भिन्न है?" स्पष्ट कीजिए।
"How is sympathy different from empathy?" Explain.

Empathy → To feel the situation of others i.e.,
"to put oneself in shoe of others"

Sympathy → To have emotional support for
the situation of other.

Sympathy < Empathy < Compassion

(Write above this line only)

5. क्या गीता को कर्म सन्यास अथवा कर्म त्याग की अवस्था माना जा सकता है? स्पष्ट कीजिए।
Can Gita be considered as a state of renunciation of action (Karma)? Explain.

Gita propounds for "Nishkam Karma yog" i.e., to
do work or your duty selflessly without attaching
to the fruits of it. Thus it does not supports
complete renunciation but avoids thinking
of results and thus deviating from doing work.

(Write above this line only)

Note : Attempt all questions. Answer the following questions in 50 words each. Each Question carries 5 marks.
नोट : सभी प्रश्नों के उत्तर दें। निम्न प्रश्नों के उत्तर 50 शब्दों में दें। प्रत्येक प्रश्न को 5 अंक निर्धारित हैं।

1. "डॉ. सर्वपल्ली राधाकृष्ण का दर्शन समन्वयवादी दृष्टिकोण वाला है।" टिप्पणी लिखिए।
"Dr. Sarvepalli Radhakrishnan's philosophy has an approach of coordination." Comment.

Dr. Sarvepalli Radhakrishnan was our former President of India. He emphasised on educating the citizens.

His Philosophy :- [for raising India & society high]

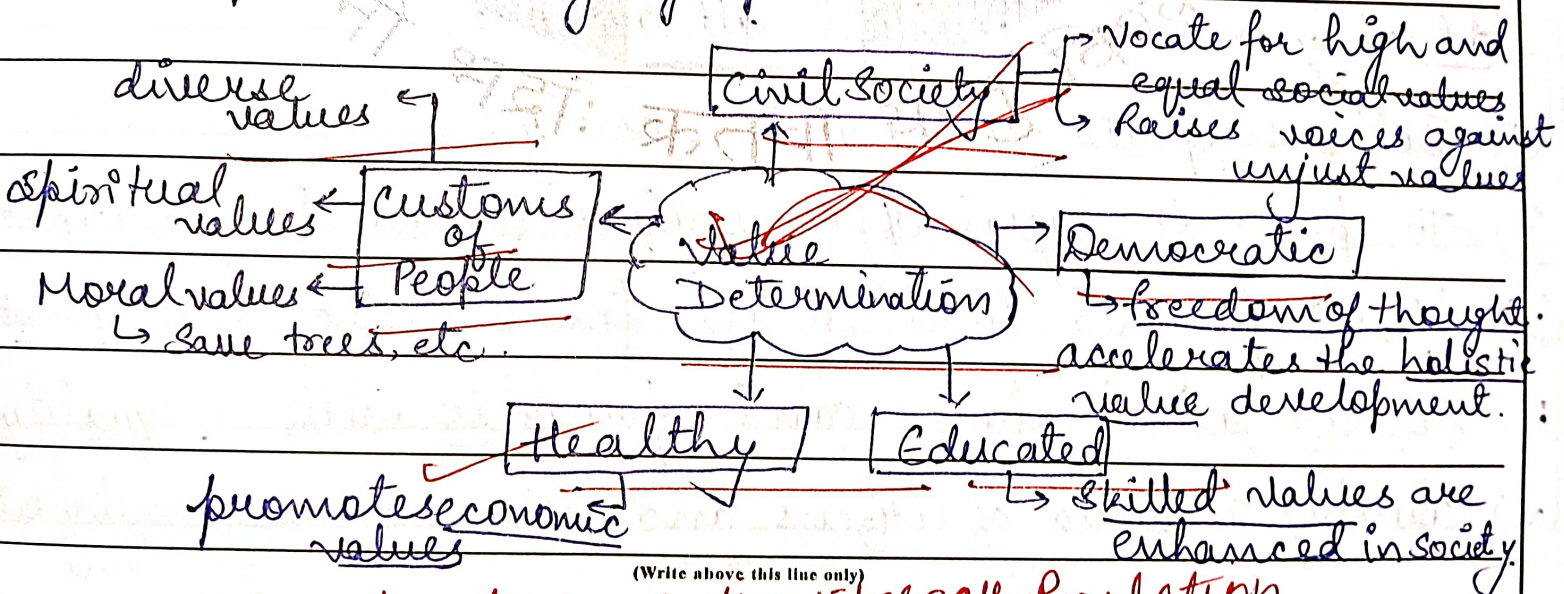
- 1.) An aware citizenry → literate & modern thinking
- 2.) Democratic values → Society must have contribution of all
- 3.) Active Society → Society/citizen's participation in governance
- 4.) Equal opportunity to all should be focused upon.
- 5.) Rights and duties to be obeyed parallelly.

(Write above this line only)

which he talked - explain that.
He proposed cultural coordination

2. "जनांकिकी समाज में मूल्यों के निर्धारण में सहायक है।" स्पष्ट कीजिए।
"Demography is helpful in determining values in society." Explain.

Demography of a society/country is the citizens living in a particular geographical area.



(Write above this line only)

wrote about sex ratio, literacy, population
→ how these affect values.
→ more - balanced society.
less - imbalance

3. प्रतिबद्धता की अवधारणा को स्पष्ट कीजिए तथा नाकरशाही का प्रतिकार करने के लिए क्या करना चाहिए?
 Explain the concept of commitment and what should bureaucrats be committed to?

3. Commitment is 'one of the integral values' for bureaucrats. It advocates for making a decision and sticking solely upon it to achieve the decided target.

Bureaucrats must be committed upon →

1. > Integrity → Strong support to code of ethics. ex → IAS Ashok Khemka ji
2. > Public welfare → Maximise public oriented work. ex → IAS Dr. Jitendra Soni, IAS
3. > Compassion → Action to eradicate injustice. "Compassionate Kozhikode"
4. > Honesty → Accountability & Transparency for public. citizen's charter, RTI.
5. > Selflessness → Public priority over personal. IAS Durga Shakti Nagpal Mam.

(Write above this line only)

4. "गांधी का सर्वोदय का सिद्धांत अद्वैत मूलक अवधारणा का समर्थक है।" स्पष्ट कीजिए।
 "Gandhi's principle of Sarvodaya is a supporter of the concept of Advaita." Explain.

'Sarvodaya' [inspired from John Ruskin's "Unto the last"] ^{by} ~~of~~ Gandhiji means upliftment of all in society especially the marginalised one.

'Advaita' means 'unified' all ~~one one~~ → "one for all, all for one".

- (i) Both supports equality in society.
- (ii) To provide equal opportunities for all to participate.
- (iii) 'level playing field' to all for holistic development.
- (iv) Society as a whole can't progress with inequality.
- (v) Country is build of citizens and all must have country built on in this.

(Write above this line only)

Also explain how Advaita and Gandhian philosophy were same.

5. अभिवृत्ति, मूल्य से कैसे भिन्न है? बताइये।
How is attitude different from value? Explain.

Attitude

Value

1. > Perception of a person towards anything.

1. > values are the good and moral conducts of a person.

2. > personal concept.

2. > Social & moral concept.

3. > limited scope.

3. > Wider application

4. > Rationality based concept

4. > social acceptance based

5. > Can be changed in less time

5. > It takes comparatively more time to change values.

ex → Attitude of a person for homosexuality may vary.

ex → value of honesty, integrity are followed in all societies

(Write above this line only)

Your answer is good.

॥ आ नो भद्राः क्रतवो यन्तु विश्वतः ॥

Note : Attempt all questions. Answer the following questions in 100 words each. Each Question carries 10 marks.

नोट : सभी प्रश्नों के उत्तर दें। निम्न प्रश्नों के उत्तर 100 शब्दों में दें। प्रत्येक प्रश्न के 10 अंक निर्धारित हैं।

1. सार्वजनिक संबंधों में नैतिकता के पतन के कारणों को लिखते हुए नैतिकता के पतन के विभिन्न पक्षों को वर्णित कीजिए। किसी लोक सेवक के निजी हित व व्यक्तिगत हित में टकराव की स्थिति में कौनसे हितों की प्राथमिकता देनी चाहिए कारण सहित स्पष्ट करें।

Describe the various aspects of moral degradation in public relations while writing the reasons for the decline of morality. In case of conflict between private interest and personal interest of a public servant, which interest should be given priority, explain with reasons.

Moral degradation → Declining moral values in society.

Aspects in public Relation

- (i) Not adhering to code of ethics → No transparency
→ No accountability
- (ii) Public loss in order to fulfil personal interest. → nepotism
- (iii) Practising corruption for greed, materialism.

Reasons for declining Morality

- (i) Social → nuclear family system, rote learning, etc.
→ Abusing, smoking.
- (ii) Generation-gap → degraded moral values looks cool to new generation.
- (iii) Democratic → No proper implementation of laws.
→ social, Res, etc.
- (iv) Media → unregulated universal media coverage.
- (v) Political → criminalised Politicians as role models for society.

Increase of ethical dilemma between private & public interest following the principles of ① Swadharma (Geta)

- ② Categorical imperative (Kant) ③ Devotion for duty (Gandhi)
- ④ Maximum good for maximum one (utilitarian) person,
must priorities public interest.

(Write above this line only)

Public interest
should be given
Preferance by a servant.

2. निम्न बिन्दुओं पर प्रकाश डालिए/टिप्पणी लिखिए/Throw light on the following points/Comment.

1. गांधीजी के कथन 'अपने को पहले सुधारो' का क्या तात्पर्य है?

What is the meaning of Gandhiji's statement 'Reform yourself first'?

2. स्वामी विवेकानन्द के दर्शन के मूल में निहित नैतिकता का वर्णन कीजिए।

Describe the morality that lies at the core of Swami Vivekananda's philosophy.

(3)

Good

1.7 According to Gandhiji, "Reform starts from within one self" i.e., one is not have the right to advise for those practices which are yet not followed by himself first. This can be seen as -

(a) Gandhiji himself lead life of peasants → Dharti to understand Ashram them.

(b) His 'My experiment with Truth' have a number of such practices that he followed first.

(c) He renoked Non-violence movement after Chauvi-Chaura incident.

2.7 [Swami Vivekananda's morality] → (2)

(a) Adopted mixed model of religion → western thought Indian/vedic values.

(b) Complete devotion to work : 100% focus on one thing.

(c) Youth must have vision and energy.

(d) Strong adherence to achieve target → "Utho Jago! cur tab tak mat ruko, Jab tak lakshya n hapt hojaye."

(e) Respect for all - women, untouchables, marginalised.

(f) Education must be provided to all in society.

(g) Strong decision making capacity. out of all core moral value is of 'full focus & faith' as per him.

(Write above this line only)

3. केस स्टडी-

आप एक कम्पनी में एक साल से कार्यरत हैं। आपके अधीनस्थ सुरेश कुमार काफी कार्यकुशल तथा मेहनती व्यक्ति है। वे उत्तरदायित्व लेते हैं तथा काम को पूरा करके दिखाते हैं। हालाँकि आपने सुना है सुरेश कुमार महिलाओं के प्रति नकारात्मक टिप्पणियाँ करते हैं। आपके अधीनस्थ सुरेश कुमार के अधिन मोनिका नामक महिला कार्य करती हैं। मोनिका एक दिन आपके पास आती हैं उन्हें देखने से प्रतीत होता है कि वे परेशान हैं, वे कहती हैं कि सुरेश कुमार लगातार उनकी ओर अनुचित ढंग से आगे बढ़ने का प्रयास कर रहे हैं। यहाँ तक कि उन्होंने उनसे अपने साथ रात के भोजन के लिये कहीं बाहर चलने को कहा है। वह सुरेश कुमार के विरुद्ध कार्रवाई की मांग करते हुए लिखित शिकायत दर्ज कराना चाहती हैं, आप क्या करेंगे तथा क्यों?

Case Study-

You have been working in a company for one year. Your subordinate Suresh Kumar is a very efficient and hardworking person. He takes responsibility and gets the work done. However, you have heard that Suresh Kumar makes negative comments about women. A woman named Monika works under your subordinate Suresh Kumar. Monika comes to you one day. Her tone seems to be upset, she says that Suresh Kumar is constantly trying to make inappropriate advances towards her. He has even asked her to go out for dinner with him. She wants to file a written complaint demanding action against Suresh Kumar, what will you do and why?

(b)

1.7 Stakeholders : Me, Company, Sub-ordinate Suresh Kumar and an employee Monika.

2.7 Ethical dilemma : Principles v/s Justice.

Possible steps :-

- (i) Avoid complaint of Monika.
- (ii) ^{direct} Action against Suresh
- (iii) First investigate the situation then following proper procedure.

2) If I choose step - I :

Positives → (a) I will not be engaged in such matter.
 (b) No Tension arising.

Negatives → (a) Against code of ethics
 (b) faith of employees towards me will decrease.
 So, I will not opt for this.

(ii) If I choose step II -

[Positives] → (a) Monika will feel secure

[Negatives] → (a) Against the principle of 'audi alteram partem' [No one should be condemned unheard.]

(b) It may or may not be true as lack of evidences are there.

So, I will not go for this one also.

(iii) If I choose step III -

[Positives] (a) Proper procedure is followed.

(b) with ^{standing} - code of ethics and business.

[Negatives] (a) It will take time and efforts -

I definitely go for this and will do →

(I) Investigating properly into the case.

(II) If Sukesh find guilty → ^{complaint} file of Monika will be filed in the Internal Complaint Committee set up under POSH Act in company.

This will led to an example in company and may avoid similar acts in company.

Good answer keep it up

(Write above this line only)

Unit - II
(यूनिट - II)

Part - A
भाग - अ

Note : Attempt all questions. Answer the following questions in 15 words each. Each Question carries 2 marks.
नोट : सभी प्रश्नों के उत्तर दें। निम्न प्रश्नों के उत्तर 15-15 शब्दों में दें। प्रत्येक प्रश्न के 2 अंक निर्धारित हैं।

1. प्रतिनिषेचक औषधि किसे कहते हैं? किन्हीं चार प्रतिनिषेचक रसायनों के नाम लिखिए।
What is called antifertilizer drug? Write the names of any four antifertilizer chemicals.

Antifertilizer drugs (1) To boost or revive the exposed capacity of land with excessive use of fertilisers, these chemicals are used to treat.

Name those chemicals.

(Write above this line only)

2. डॉप्लर प्रभाव के दो अनुप्रयोग लिखिए।
Write two applications of Doppler effect.

Applications of doppler effect -

- 1) In walls of cinema halls or auditoriums.
- 2) Building sound proof construction of Rooms, walls, offices.

(2)
(Write above this line only)

3. डी-ऑक्सरी राइबोन्यूक्लियोटाइड अणु के घटक अणुओं के नाम लिखिए।
Write the names of the constituent molecules of deoxyribonucleotide molecule.

Deoxyribo nucleotide molecule -

D-glucose ($C_6H_{12}O_6$)



(2)

-OH group

Nucleotides = Nitrogenous base

phosphate group.

(Write above this line only)

4. औद्योगिक इंटरनेट की अवधारणा को स्पष्ट कीजिए।
Explain the concept of Industrial Internet.

(2)

Industrial internet refers to the fixed or pre-determined internet connection to all the industrial setup only.

(Write above this line only)

5. मानव तंत्रिका तंत्र को प्रभावित करने वाले किन्हीं चार रासायनिक हथियारों के नाम लिखिए।
Write the names of any four chemical weapons that affect the human nervous system.

Chemical weapons - कतवो (2)

(i) Sarin gas (used in Syria attack)

(ii) Phosgene gas

(iii) Mustard gas (used in W.W.I)

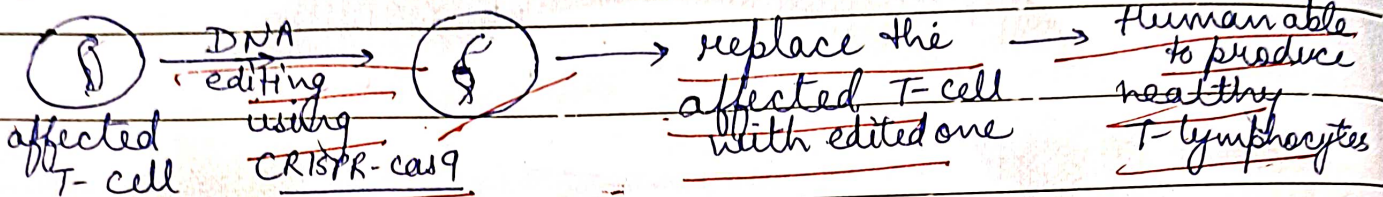
(iv) Tear gas (CN_2O)

(Write above this line only)

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1. काइमेरिक एंटीजन रिसेप्टर T-सेल थेरेपी (CAR T Therapy) पर संक्षिप्त टिप्पणी लिखिए।
Write a short note on Chimeric Antigen Receptor T-Cell Therapy (CAR T Therapy).

CAR-T cell therapy is a form of genetic engineering
in which the T-cell producing gene is edited.



It is used to treat immune deficiency related to
T-lymphocytes in a person. *write what is T cells?*

(Write above this line only)

2. उपग्रह आधारित इंटरनेट क्या होता है? उपग्रह आधारित इंटरनेट के लाभों के उल्लेखित कीजिए।
What is satellite based internet? Mention the advantages of satellite based internet.

Satellite based internet - Advanced form of internet.

connectivity in which satellite is launched in
space in geostationary position and will provide
internet to a defined region with 24x7 services

Advantages - ① High speed with negligible latency.

② Connectivity to far-regions ③ Privacy secured.

④ No interference in connectivity ⑤ Data safety.

Recently, Elon musk launched this satellite based internet.

(Write above this line only)

3. आयुष सेवा/पद्धति में सम्मिलित चिकित्सा पद्धतियों के नाम लिखिए तथा पारम्परिक चिकित्सा पद्धतियों के समक्ष उत्पन्न चुनौतियाँ बताइये।
Write the names of the medical systems included in AYUSH service/system and tell the challenges faced by traditional medical systems.

(3)

Good

AYUSH - Ayurvedic - Unani - Siddha - Homeopathy.

are the services included in its medical system.

Challenges faced by traditional medical systems are -

- (i) lack of awareness among society about AYUSH.
- (ii) It takes ample time to treat comparing to Modern medication.
- (iii) It provides costly services → not affordable to all.
- (iv) Have less accessibility : village level AYUSH centres are yet not reached.
- (v) Not having universalised medication process.

(Write above this line only)

4. विद्युत प्रतिरोध को परिभाषित करते हुए प्रतिरोध को प्रभावित करने वाले कारकों पर टिप्पणी लिखिए।
Define electrical resistance and write a note on the factors affecting resistance.

(3)

Electrical Resistance - It is defined as the hindrance faced by the electric current while flowing.

$$R = \frac{V}{I}$$

R = Resistance, V = voltage, I = current

Good

Factors affecting :- $\rho = \frac{RL}{A} \rightarrow R = \frac{\rho L}{A}$

- (i) length of wire = longer the wire → more will be Resistance.
- (ii) Area of wire = large area = low resistivity.
- (iii) Quality of material = Ag, Au, Cu show less resistance than other metals.

(Write above this line only)

5. परिरक्षक क्या होते हैं? परिरक्षकों के आवश्यक गुणों को लिखते हुए किन्हीं चार परिरक्षकों के नाम लिखिए।
 What are preservatives? Write the names of any four preservatives while describing the essential properties of preservatives.

Preservatives : These are the ^{life} organic molecules

used to enhance the storage capacity of food.

Such as - Table salt, Sugar, Vegetable oil,
Acetic acid, vinegar.

Properties of Preservatives :-

- (i) They binds with the free radicals in oxidising food thus reducing / slowing the spoilage of food.
- (ii) They are themselves not harmful to be consumed with the preserved food.

(Write above this line only)

6. पादप कोशिका व जन्तु कोशिका में मूलभूत अन्तर लिखिए।
 Write the basic differences between plant cells and animal cells.

<u>Plant cell</u>	<u>Animal cell</u>
(i) <u>cell wall</u> <u>present</u> .	(i) <u>cell wall</u> <u>absent</u> .
(ii) <u>large</u> <u>central</u> <u>vacuole</u>	(ii) <u>small</u> <u>size</u> of <u>vacuoles</u>
(iii) <u>chloroplast</u> <u>is</u> <u>present</u>	(iii) <u>chloroplast</u> <u>absent</u> .
(iv) <u>Thylakoids</u> <u>are</u> <u>present</u>	(iv) <u>Thylakoids</u> <u>are</u> <u>absent</u> .
(v) <u>Pigments</u> like <u>chlorophyll</u> , <u>xanthophyll</u> <u>are</u> <u>there</u> .	(v) <u>pigments</u> <u>are</u> <u>absent</u> .
(vi) <u>Performs</u> <u>photosynthesis</u>	(vi) <u>Does</u> <u>not</u> <u>perform</u> <u>photo-</u> <u>synthesis</u> .

Excellent

(Write above this line only)

Part - C

भाग - स

(30 Marks)

(30 अंक)

Note : Attempt all questions. Answer the following questions in 100 words each. Each Question carries 10 marks.

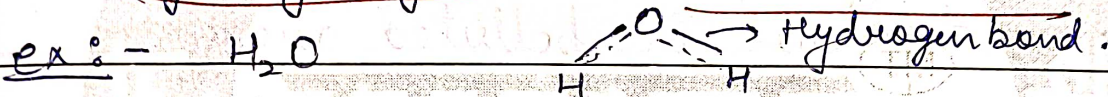
नोट : सभी प्रश्नों के उत्तर दें। निम्न प्रश्नों के उत्तर 100-100 शब्दों में दें। प्रत्येक प्रश्न के 10 अंक निर्धारित हैं।

1. निम्न बिन्दुओं पर प्रकाश डालिए/टिप्पणी लिखिए/Throw light on the following points/Comment.
- हाइड्रोजन आबंधन/Hydrogen bonding
 - अम्ल-क्षारक के सन्दर्भ में ब्रन्स्टेड-लोरी की संकल्पना/Brunsted-Lowry concept in context of acid-base
 - भँवर धाराएँ व इनके अनुप्रयोग/Eddy currents and their applications

1. Hydrogen bonding

(a) Also named as weak van der Waals force. (3)

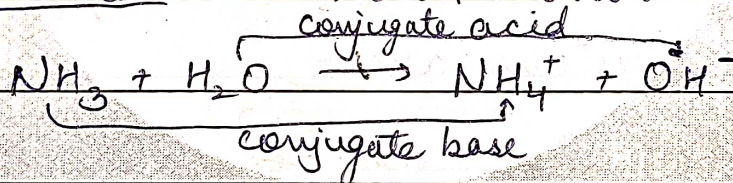
(b) It is the inter molecular weak force present among Hydrogen atom and other molecules.



2. Brunsted Lowery concept of Acid-Base

Conjugate Acid: Proton acceptor

Conjugate Base: Proton donor.



→ water behave as amphoteric → conjugate base in different conjugate acid medium.

3. Eddy currents

All the electric field lines passing through an electric flux refers to eddy currents.

Application → (i) Electric fuse (3) Good

(ii) Miniature Circuit Break (MCB)

(Write above this line only)

2. निम्न बिन्दुओं पर टिप्पणी लिखिए/प्रकाश डालिए/Write a note/ throw light on the following points.

1. लाइकेन/Lichen
2. पाचन तंत्र के विभिन्न भाग/अंगों में अवशोषित होने वाले भोज्य/खाद्य घटक/Food components absorbed in different parts/organs of the digestive system

1. Lichen: It is the 'symbiotic association' between 'algae' and 'fungi'.

• Algae → provides food to fungi through ^{Photosynthesis}

• Fungi → provides shelter to algae/cyanobacteria

Lichens are the good pollution indicators as they do not grow in polluted areas.

Mostly found on rocks, submerged water system and in moist area.

2. Food components absorbed in different parts of digestive systems are -

(a) Maltose $\xrightarrow{\text{Saliva}}$ Glucose $\xrightarrow{\text{3}}$ Glucose (Mouth)

(b) Stomach:-

Protein $\xrightarrow{\text{Pepsin}}$ dipeptides

fat $\xrightarrow{\text{lipase}}$ fatty acids

(c) Pancreas → Pancreatic juices digests proteins -

(d) Liver → Bile juices digests dipeptides → $\text{NH}_2-\text{C}_6\text{H}_5-\text{NH}_2$

(e) Small intestine → villi → maximum absorption of digested food material.

(f) Kidney & large intestine → chemical reabsorption

(Write above this line only)

3. निम्न पर टिप्पणी लिखिए/Write a note on the following.
1. राजस्थान सरकार की बौद्धिक सम्पदा नीति के लक्ष्य/Goals of the Intellectual property policy of the Rajasthan government
 2. आदित्य L-1 पर लगे पेलोड्स के नाम व आदित्य L-1 के प्रेक्षण के उद्देश्य/Names of payloads on Aditya L-1 and objectives of Aditya L-1 launch.
 3. भारत में रोबोटिक्स के विकास के समक्ष आने वाली चुनौतियाँ/Challenges faced in the development of robotics in India

1. Goals of Intellectual Property Policy of Raj. Govt. →

- (a) To make the state leading among IPR generations.
- (b) Enhance the state's potential in IPR field.
- (c) Capacity building & Skill utilization of the diverse cultural heritage into IPRs. (3) ~~cross~~

2. Objective of launch of Aditya L-1 → To study the corona of and interior structure of sun.

Seven payloads of Aditya L-1 are -

- (i) HELIX
- (ii) PAPA
- (iii) SOLEX
- (iv) SUIT
- (v) VELC (3)
- (vi) Magnetic arch reader in z-axis $\begin{matrix} \rightarrow M_x \\ \rightarrow M_y \\ \rightarrow M_z \end{matrix}$ and
- (vii) coronary study based payload.

3. Challenges faced in the development of Robotics in India are → (4)

- (a) Less skilled and learned entrepreneurs are less.
- (b) no / less investment from private sector.
- (c) Budgetary compliances are not effective.
- (d) No regulatory authority specifically for robotics.

(Write above this line only)

(Unit - III)

(यूनिट - III)

Part - A

भाग - अ

(70 Marks)

(70 अंक)

(10 Marks)

(10 अंक)

Note : Attempt all questions. Answer the following questions in 15 words each. Each Question carries 2 marks.
नोट : सभी प्रश्नों के उत्तर दें। निम्न प्रश्नों के उत्तर 15-15 शब्दों में दें। प्रत्येक प्रश्न के 2 अंक निर्धारित हैं।

1. कोपेन के जलवायु वर्गीकरण के अनुसार 'लघु ग्रीष्म तथा ठण्डी शीत ऋतु जलवायु' वाले प्रदेशों/राज्यों के नाम लिखिए।
According to Koppen's climate classification, write the names of regions/states with 'short summer and cold winter climate'.

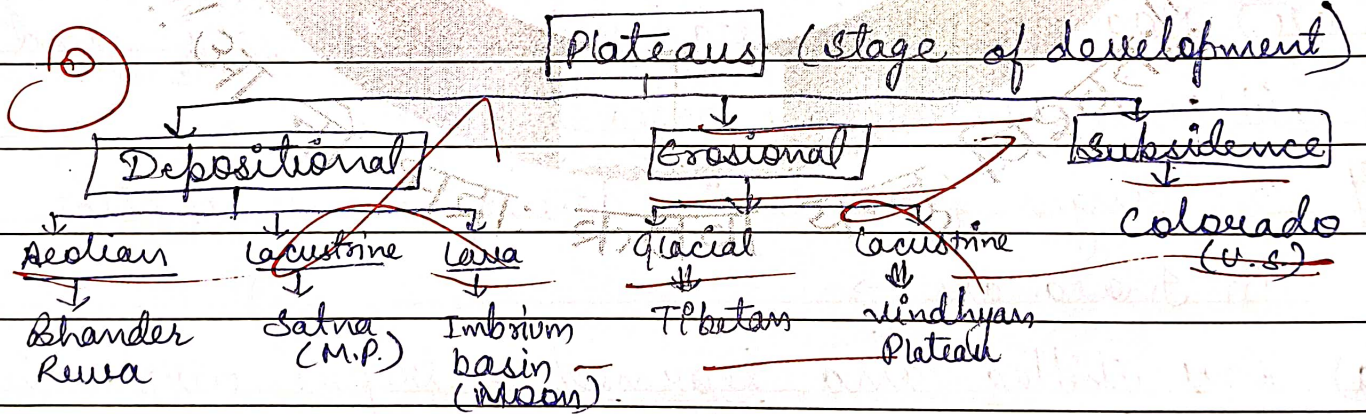
Regions with Short Summer and cold winter climate are (A w) →

Banswara, Deogarh, Thalassar, Bikaner, Kota, Bundi.



Sikkim, Arunachal, Himachal etc.

2. विकास की प्रक्रिया/अवस्था के आधार पर पठारों का सोदाहरण वर्गीकरण कीजिए।
Classify plateaus on the basis of process/stage of development with examples.



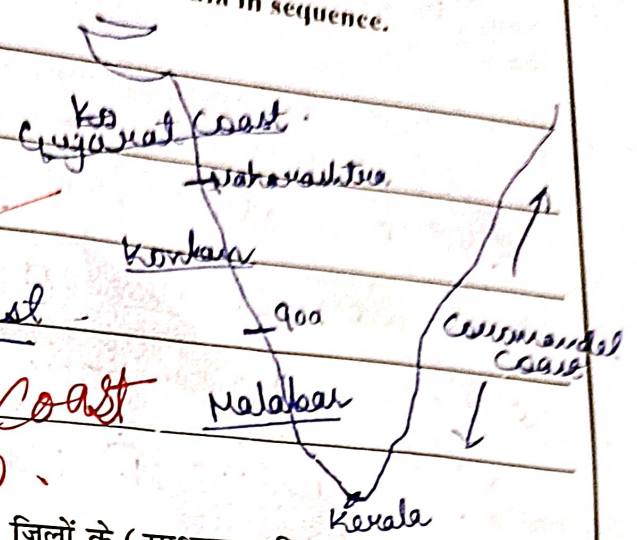
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New Plateaus
Old
structure rejuvenated

3. Write the names of the coasts situated on the western coastal border of India in sequence.

2

- 1.) Gujarat to Maharashtra → Gujarat coast
- 2.) Maharashtra to Goa → Konkan Coast
- 3.) Goa to ~~Kerala~~ → Malabar coast



Kannada Coast
 (Write above this line only)
 also

जनगणना वर्ष 2011 के अनुसार राज्य के न्यूनतम साक्षरता वाले चार जिलों के (साक्षरता प्रतिशत) नाम लिखिए।
 According to Census 2011, write the names of four districts of the state with minimum literacy (literacy percentage).

States with minimum literacy are -

- 1.) Jalore
- 2.) Banswara
- 3.) Pratapgarh
- 4.) Dungarpur

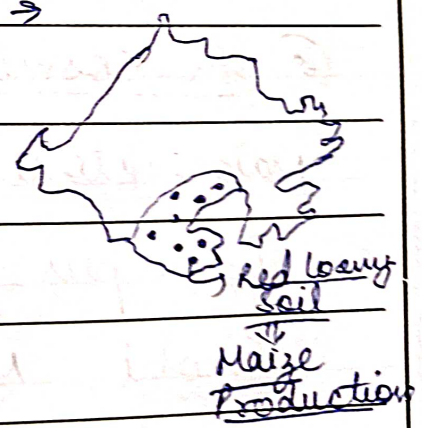
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राजस्थान के अग्रणी/शीर्ष मक्का उत्पादक जिलों के नाम लिखिए।
 Write the names of leading/top maize producing districts of Rajasthan.

Top maize producing district of Raj. →

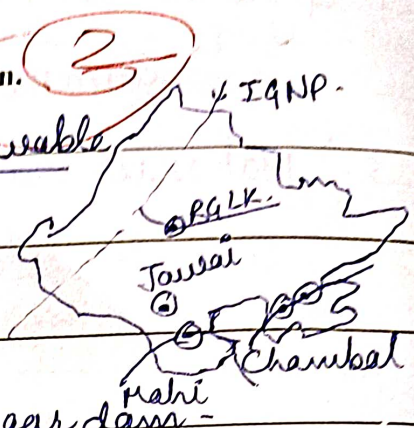
- 1.) Udaipur
- 2.) Banswara
- 3.) Pratapgarh
- 4.) Dungarpur

(Write above this line only)



Note : Attempt all questions. Answer the following questions in 50 words each. Each Question carries 5 marks.
 नोट : सभी प्रश्नों के उत्तर दें। निम्न प्रश्नों के उत्तर 50 शब्दों में दें। प्रत्येक प्रश्न के 5 अंक निर्धारित हैं।

1. राजस्थान की प्रमुख जल-विद्युत परियोजनाओं पर संक्षिप्त टिप्पणी लिखिए।
 Write a short note on the major hydroelectric projects of Rajasthan.



Hydro-electric projects are the renewable and non-conventional sources of energy. Major one in Raj. are →

- 1.) Chambal → ① Maharana Pratap sagar dam -
- ② Jawahar Dam
- 2.) Mahi → Mahi Project.
- 3.) Luni R. → Jawai project, 4.) Parwan Project.
- 5.) Rajiv Gandhi lift canal → Hydroelectric Project.
(Write above this line only)

2. भारत में घीया पत्थर के उत्पादन में राजस्थान का स्थान चिह्नित करते हुए राज्य के प्रमुख घीया पत्थर उत्पादक क्षेत्रों के नाम लिखिए।

Identifying the position of Rajasthan in the production of Ghiya stone in India, write the names of the major Ghiya stone producing areas of the state.

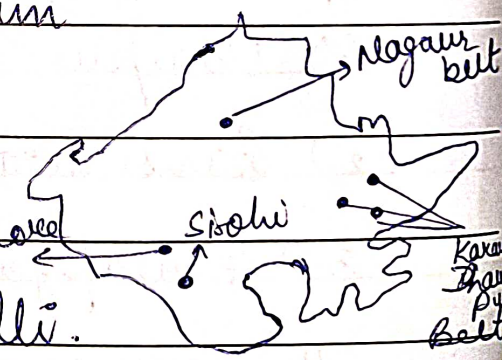
Ghiya stone → Also known as soap stone.

uses: ① In artistic work → anti architecture, stone statues, etc.

② In cosmetic industry - in Talcum

major stone producing areas -

Dhaulpur, Karauli, Jalore, Jalore, Sirohi, Nagaur. belt of Aravalli.



(Write above this line only)

3. वैश्विक पर्यावरण सुविधा पर चर्चा करते हुए इसके द्वारा वित्तीय सहायता प्राप्त अंतर्राष्ट्रीय अभियमनों के नाम लिखिए।
While discussing the Global Environment Facility, write the names of the international conventions that receive financial assistance from it.

Global Environment Facility :- (10)

(*) To reduce the carbon emission concept of Environmental trade investment facility.
International conventions -

- (i) Paris convention, 2015 (ii) IPCC [3rd Panel for Climate Change]
- (iii) UNCCD [United Nations Convention on climate change and Desertification]

(iv) CITES [Convention on Int. Trade of Endangered species]

(Write above this line only)
Minamata Convention . UNFCCC
UN CBD

4. विश्व के प्रमुख शीतोष्ण कटिबंधीय घास के मैदानों पर संक्षिप्त टिप्पणी लिखिए।
Write a short note on the major temperate grasslands of the world.

Major temperate grassland of world - (11)

1. > Prairies - U.S.A. - wheat basket of world

2. > llanos, Pampas - S. America.

3. > Savannah - Africa - woodlands of Africa. temperate grassland.

4. > velde - Australia - Merino sheep.

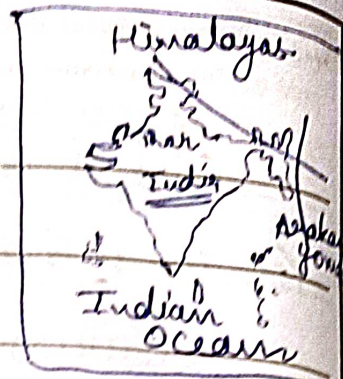
5. > steppes - Europe (Hungary--)

Temperate grasslands are large grasslands with less tree cover [between 33°N to 33°S] best for livestock.

(Write above this line only)

Prairies
Pampas
Down steppes

5. "भारत की भौगोलिक अवस्थिति भारत के लिए लाभदायक है।" सतर्क बताइये।
The geographical location of India is beneficial for India. Explain.



India is located in Northern Hemisphere,

Benefits:- 2 Good

Geographical → Diverse range of Geography from Mountains - Plateaus - Hills - Ocean - Bay - Rivers, etc

Climatic → All range of climates - Cold desert, Hot desert etc

Economic → Agricultural diversity, livestock No. 1.

International → natural boundary through. ocean border, Mountainous north - Eastern Protection.

(Write above this line only)

A. निम्न विचारों के प्रत्येक सही/गलत होने के लिए उचित तर्कों के साथ प्रकाश डालिए।
1. विदेशी निवेश का प्रोत्साहन
2. विदेशी निवेश का नियंत्रण

Blank lined area for writing answers to question A.

(Write above this line only)

(Unit - III) (यूनिट - III)

Part - C (भाग - स)

(30 Marks)

(30 अंक)

Note : Attempt all questions. Answer the following questions in 100 words each. Each Question carries 10 marks.
 नोट : सभी प्रश्नों के उत्तर दें। निम्न प्रश्नों के उत्तर 100-100 शब्दों में दें। प्रत्येक प्रश्न के 10 अंक निर्धारित हैं।

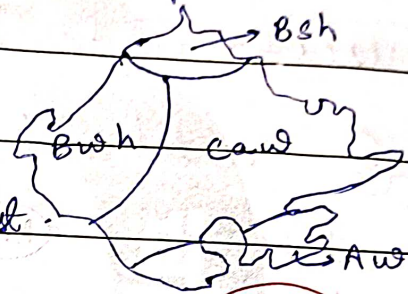
1. राजस्थान की जलवायु को प्रभावित करने वाले कारकों को उल्लेखित करते हुए, राजस्थान की जलवायु के लिए थॉर्नथ्वेट द्वारा प्रतिपादित वर्गीकरण लिखिए।
 Write the classification proposed by Thornthwaite for the climate of Rajasthan, mentioning the factors affecting the climate of Rajasthan.

Thornthwaite classified Rajasthan into four parts -

① [Bsh] → Semi Arid Region

Precipitation = 30-50 cm

vegetation = Deciduous Thorny forest.



② [Bwh] → Arid desert regions

Pptⁿ = 10-30 cm, vegetation = Xerophytes.

③ [Caw] → Irregular (canal/well) Eastern-Central regions

Pptⁿ = 50-70 cm, vegetation = Dhank forest.

④ [Aw] → Moist Region / Southern region

Pptⁿ = 70-100 cm, vegetation = Deciduous forest.

Factors affecting Raj. Climate -

① Position of state → Temperature ↑↑. Sub tropical high pressure belt.

② No orographic rainfall from Arabian sea branch.

③ Desert → Shifting / March of Desert towards East

④ less rainfall from Bay of Bengal branch of Monsoon

⑤ less vegetative cover → Humidity is more

(Write above this line only)

distance from sea, monsoon, Temperature etc. (25)

2. निम्न बिन्दुओं पर टिप्पणी लिखिए/प्रकाश डालिए/Write a note/throw light on the following points.
1. भारत में धरातलीय जल संसाधन की स्थिति व उपयोग/Status and use of surface water resources in India
 2. भारत में लौह अयस्क खनन की पेटियाँ/Belts of iron ore mining in India

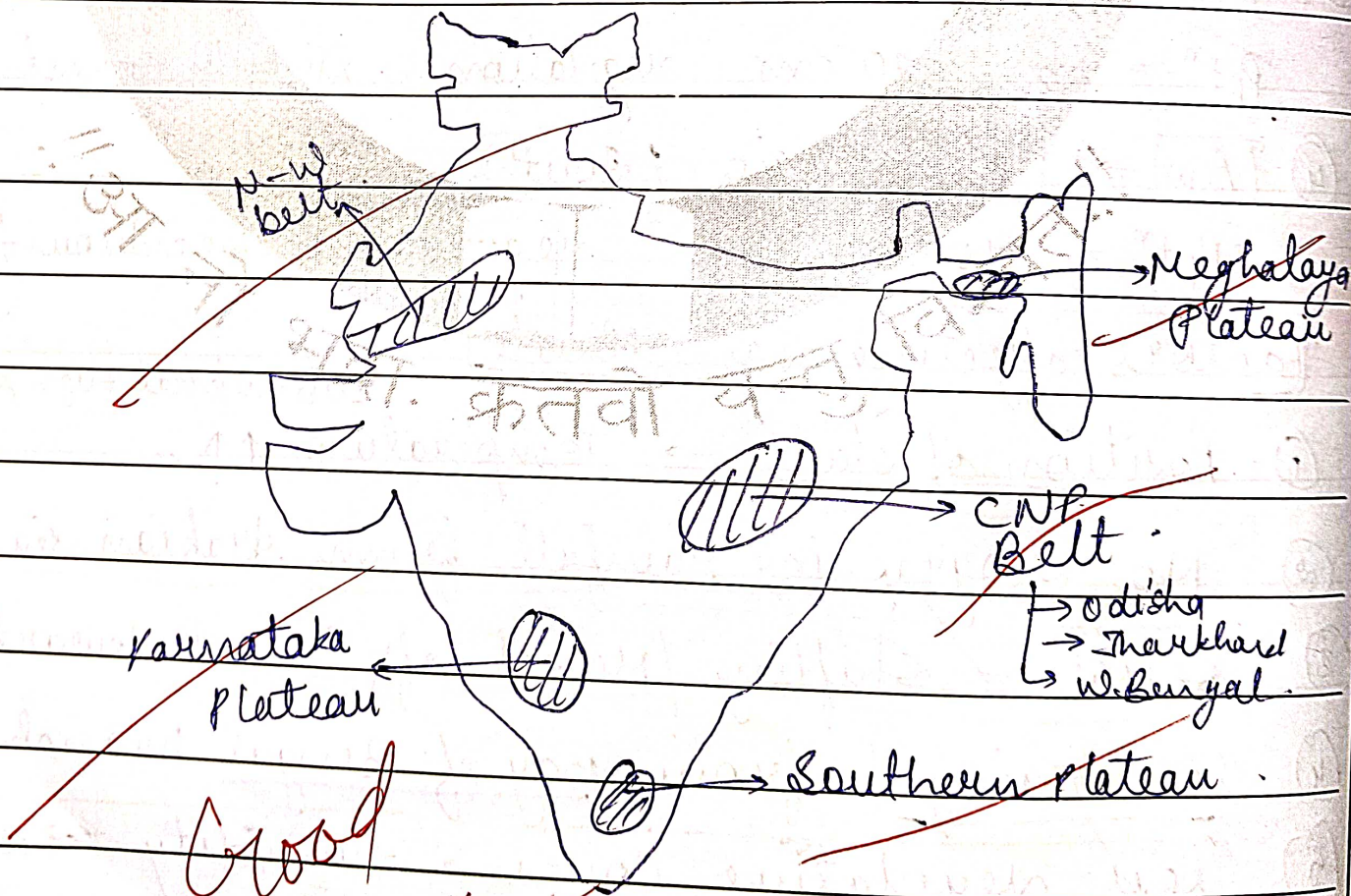
1. Status of surface water Resources →

$\left\{ \begin{array}{l} \text{underground} \\ \text{lakes} \\ \text{rivers} \end{array} \right. \rightarrow \text{less than 2\% is in lakes}$
 $\left\{ \begin{array}{l} \text{underground} \\ \text{lakes} \\ \text{rivers} \end{array} \right. \rightarrow 2\% \text{ is in rivers.}$
 $\left\{ \begin{array}{l} \text{glacier} \end{array} \right. \rightarrow \text{more than 80\% is in form of glacier}$

uses → ① In Industries. ② Drinking.

③ household → food, clothes ④ Hydro-electric project ⑤ Aquaculture ⑥ Irrigation.

2. Belts of Iron ore mining in India.



(Write above this line only)

3. हिन्द महासागर क्षेत्र का भारत के लिए महत्व उल्लेखित करते हुए, वर्तमान में इस क्षेत्र में भारत के समक्ष उत्पन्न चुनौतियाँ बताइये।
Mentioning the importance of the Indian Ocean region for India, tell the challenges currently faced by India in this region.

Indian Ocean : Geostrategically important to India →

- (i) International → Presence of India as protector in Indian Ocean. : Open border for trade
- (ii) Economic → Fisheries, Ports, sea-trade.
- (iii) Geographic → Arabian Sea, Bay of Bengal Monsoon
- (iv) Trade connectivity → Taxes
- (v) Military → A number of naval exercises.

Challenges faced

- ① Presence of China through its Maritime Silk route. (String of Pearls)
- ② Disputes with maritime neighbours → Maldives.
- ③ Oceanic acidification → Eastern & western border on verge to extinction
- ④ Migration issues → Bangladesh - Myanmar

Solution

↳ Indian Ocean Rim Association is the platform through which India plays role of big brother.

Good answer keep it up

(Write above this line only)