

Samyak

An Institute For Civil Services

RAS - 23 MAINS TEST SERIES


सिद्धि - 10/A10

Time : 3 Hours

Maximum Marks : 200

पृथ्वी विज्ञान (भूगोल एवं भू-विज्ञान) (विश्व, भारत एवं राजस्थान)
Earth Science (Geography and Geology) (World, India and Rajasthan)

Paper - III (Unit-I)

Name :		MARKS	
Enroll. No.:	Part	Attempted Questions	Marks Obtained
Date of Birth :	Part - A	20	32
Medium : ENGLISH	Part - B	15	45½
E-mail :	Part - C	7	35
Exam Date : 24-12-2023	Total	42	112½
Inviligator's Signature : 			
ECN: _____	RCN: _____	Hindi: 8	English: 9

अनुदेश (Instructions)

- परीक्षा शुरू होने से पहले पुस्तिका को जाँच लें।
Please check the booklet before commencement of the exam.
- दिये गये रिक्त स्थान में निर्देशित शब्द सीमा में उत्तर दें।
Write the answers according to the prescribed word limit, in the space given.
- अंक योजना प्रत्येक खंड के प्रारम्भ में दी गई है।
The marking scheme is given at the start of every section.
- परीक्षा के पश्चात् उत्तर पुस्तिका हॉल अधीक्षक को सौंप दें।
Return the answer booklet to the hall superintendent after completing the paper.

	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. ① 2 marks questions need precision of Information
2. for map - marks...
3. ✓
4. ② Good at subjective knowledge
5. overall good effort
6. ✓
7. ✓
8. Keep learning & writing
9. ✓
10. ✓
- 11.

Note : Answer the following questions in 15 words. Each question carries 2 marks.

नोट : निम्न प्रश्नों के उत्तर 15 शब्दों में दीजिए। प्रत्येक प्रश्न 2 अंक का है।

1. रैट होल माइनिंग क्या है?
What is Rat Hole Mining?

For Extraction of mineral
Mining process carried out without any valid license by
and registration. It is used by locals for their needs.
narrow hole

Many times it is practiced for illegal purposes. Prevalent
mainly in Meghalaya Plateau.

Recently it was in use, while rescuing labourer from Tunnel
in Uttarakhand.

(Write above this line only)

2. 'गोलन हाइट्स' पर टिप्पणी लिखिए?
Write a comment on 'Golan Heights'?

It is area between Israel, Syria and Jordan trijunction.

It is a disputed area, It is source of rivers that
drain in dead sea.

disputed area

between Israel &
Syria

(Write above this line only)

3. राजस्थान में निम्न वर्षा के लिए उत्तरदायी प्रमुख कारणों को लिखिए-
Write main reasons responsible for low rainfall in Rajasthan-

The average Annual rainfall in Rajasthan is 57.5 cm.
which is below National average.

Reasons:- Arawali do not intercept with Arabian sea branch
of S-W Monsoon because it is parallel
Effect of continentality → Monsoon winds shed their
moisture till they reach Rajasthan

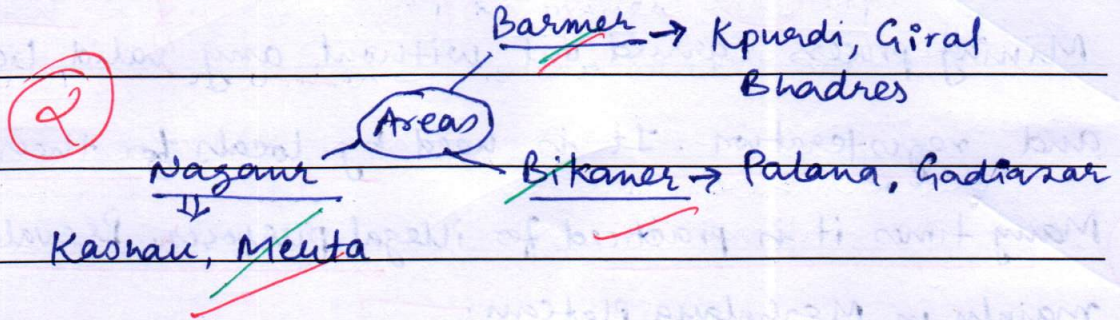
→ More expansion of desert

→ low height of Arawali as it is residual mountain.

(Write above this line only)

4. राजस्थान में प्रमुख कोयला उत्पादक क्षेत्रों का नाम लिखिए-
Name the major coal producing areas in Rajasthan-

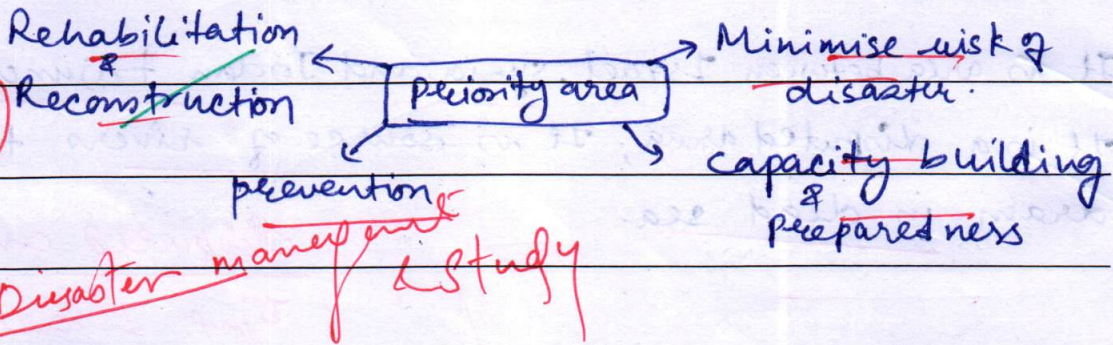
Rajasthan mainly has tertiary coal, that is lignite coal.



(Write above this line only)

5. सेंडाई फ्रेमवर्क के अंतर्गत प्राथमिकता वाले चार क्षेत्र बतायें-
Name four priority areas under Sendai Framework-

Sendai framework is successor of Hyogo protocol on disaster management (2015)



(Write above this line only)

6. भ्रंशघाटी क्या है? इसके दो उदाहरण दीजिए-
What is a Rift valley? Give two examples of this-

It is made by subsidence of a part of an elevated landforms, due to faulting or river erosion.

Example - African rift valley
→ Narmada rift valley between Vindhya & Satpura ranges.

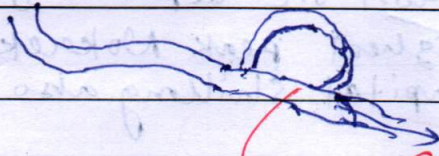
(Write above this line only)

7. गोखुर झील का निर्माण किस अवस्था में होता है? भारत की सबसे बड़ी गोखुर झील (oxbow lake) कौनसी है?
In which stage Ox-bow Lake is formed? Which is the largest oxbow lake of India?

Ox bow lake is feature when river has low energy to carry the sediment load.

It is formed during late mature and senile stage.

(2)



eg. Lake in Jhelum River is largest oxbow lake.

Crescent shape lake

(Write above this line only)

Separated part

8. फ्लाई ऐश (Fly Ash) क्या है? इसकी उपयोगिता बतायें-
What is fly ash? Explain its usefulness-

fly ash is generated due to incomplete burning of coal in thermal power generation.

usefulness - Making fertiliser, soil mulching

(2)

→ Building material

→ Road construction.

Recently govt made mandatory for plants to use fly ash.

(Write above this line only)

9. 'सामाजिक वानिकी' की संकल्पना बतायें तथा प्रमुख प्रकारों को स्पष्ट करें-
Explain the concept of 'Social Forestry' and explain its main types.

Social forestry is type of afforestation practice in which local community grow forests for their needs. It helps in reducing pressure on forest resources.

(Type)

→ Agro forestry → when farmer grow crop and forest simultaneously on same land.

(2)

→ farm forestry - It is commercial type, govt. provide sapling free of cost.

→ Urban forestry - plantation in urban areas, along roads, public land.

10. 'मेघालय का पठार' विभाजन बताइये-
Tell the division of 'Meghalaya Plateau'.

Meghalaya plateau is extension of Peninsular Plateau.
separated by Malda / Rajmahal Garo Gap.

3 division :- Garo hills = source of coal deposits.

Khasi hills - iron ore deposits found here

Jaintia hills - highest peak Nokrek.

capital Shillong also here

Tribes inhabit these plateaus.

(Write above this line only)

11. बॉन चैलेंज
Bonn Challenge

It was carried out to prevent land degradation
and reclamation of degraded land.

It is based on LDN, Land degradation Neutrality
Concept.

India made target to reclaim 26 million hectares
land by 2030.

- Paper

350 million 2030

(Write above this line only)

12. 'विश्व के लगभग 10% महासागर अब मृत क्षेत्र हैं।' विकसित एवं विकासशील देशों में यूट्रोफिकेशन के प्रमुख कारणों को व्यक्त करें-

'About 10% of the world's oceans are now dead zones.' Express the main causes of eutrophication in developed and developing countries-

Eutrophication is uncontrolled rise in ocean productivity
giving rise to phytoplankton and algae which inhibit
growth of ocean ecosystem. It is man-made.

Cause → Excess use of chemical fertiliser in agriculture and
drain in ocean.

→ untreated discharge of industry waste
household waste

areas → Great Pacific patch, Coral areas around
east Australia.

Andaman Nicobars.

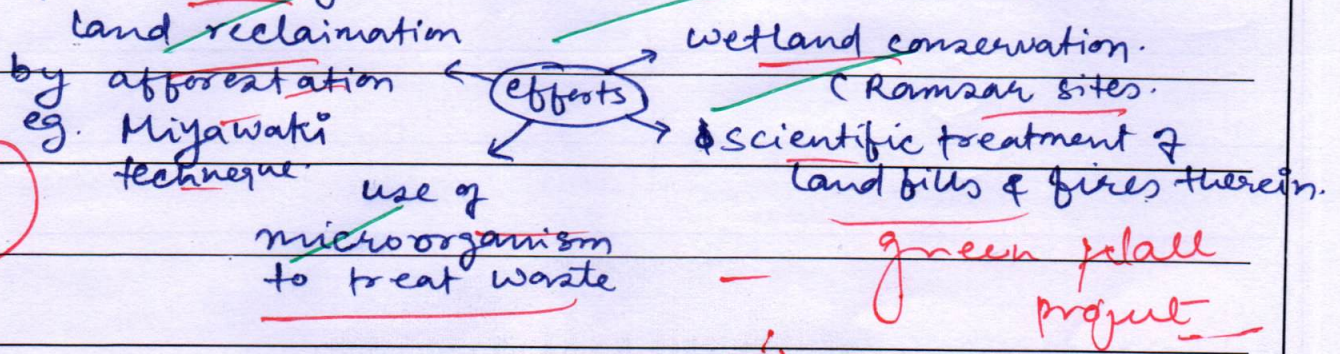
(Write above this line only)

slow or for

Q. 13. 10 marks. (1 only)

13. ISRO की रिपोर्ट में "दिल्ली, गुजरात और राजस्थान की 50% से अधिक भूमि क्षरण" की स्थिति प्रकट की गई है। इस दिशा में भारत सरकार के प्रयास बतायें-
ISRO's report has revealed the situation of "more than 50% land degradation in Delhi, Gujarat and Rajasthan". Explain the efforts of the Government of India in this direction-

land degradation is decreasing land quality and productivity due to anthropogenic causes.



(Write above this line only)

14. किशन गंगा जल विद्युत परियोजना
Kishan Ganga Hydroelectric Project

(Write above this line only)

15. 'हार्ट ऑफ नियोलिथिक ऑर्कनी'
'Heart of Neolithic Orkney'

(Write above this line only)

16. राफा क्रॉसिंग
Rafa Crossing

(Write above this line only)

17. अशोधित जन्म दर से क्या अभिप्राय है? वर्तमान में भारत की CBR बतायें-
What is meant by crude birth rate? Explain the present situation of India-

Crude birth is defined no. of children per thousand women

India has reached to rep replacement level of birth rate (ie. 2.1)

There is spatial variation in that.

↳ Many southern & NE state has crude birth rate below replacement level.

↳ Northern state still lag behind
eg. Bihar 3.4

(Write above this line only)

CBR = $\frac{\text{formula}}{\text{current}}$

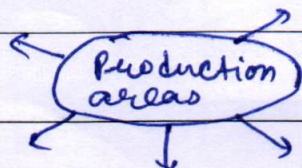
BR = $\frac{16.9}{1000}$

18. भारत में प्रमुख लौह अयस्क उत्पादन क्षेत्र बतायें-
Name the major iron ore production areas in India-

India mainly has good quality Magnetite Iron ore.

Ratnagiri Maharashtra belt

Odisha - Jharkhand belt
(Sambalpur)
(Bolangir)



Chhattisgarh-MP Belt
(Korba belt)

Rajasthan

Jaipur - Morija - Banof
Dausa - Nimla Rasela

Chikmagalur, Bellary, (Karnataka-Goa)

Jhunjhunn - Dabla Singhana

(Write above this line only)

19. जिंस
Zings

(Write above this line only)

20. मिश्टी योजना (MISHTI) के उद्देश्य बतायें-
Explain the objectives of Mishti Yojana (MISHTI)-

This scheme has been announced in union budget 2023-24.

Objective

Mangrove conservation

Restoration

protection of biodiversity

prevent threat from cyclonic erosion and destruction.

coastal

(Write above this line only)

21. क्या राजस्थान में जनांकीय लाभांश की स्थिति मानी जा सकती है?
Can Rajasthan be considered in a situation of demographic dividend?

DD → Situation of advantage where population composition is mainly between 15-65 year age.
→ Basis of economic growth eg. ASEAN Tigers.

Rajasthan's composition lies in this zone as

this age group forms main part of population

This can be ensured by proper education, skill promotion and better employment opportunities

(Write above this line only)

22. 'सिर सांटे रूख रहे, तो भी सस्तो जाण' की धारणा से किया गया खेजड़ली आंदोलन की प्रासंगिकता बतायें-
 Explain the relevance of the Khejadli movement which was carried out with the concept of 'Sir Sante Rukh Rahe To Bhi Sasto Jaan'. *(intro) - 9 brief*

This movement was carried out to protect the felling of trees under leadership of Amrita Devi.

- Relevance → protection of natural heritage *(inspiration)*
 → spirit of sacrifice for nature
 → living in sync with nature
 → Government efforts for environment protection
 eg. EPA-1986
 → Awareness in public.

(Write above this line only)

23. माही नदी तंत्र से संबंधित बांध परियोजनायें बतायें-
 Tell the dam projects related to Mahi river system-

Mahiriver originate in MP and drain in Gulf of Khambhat

Mahi Bajaj Sagar (Raniswar)
 ↳ largest dam.

Ajaan Dam (Pratapgarh)
 ↳ Sita mata Saktuary

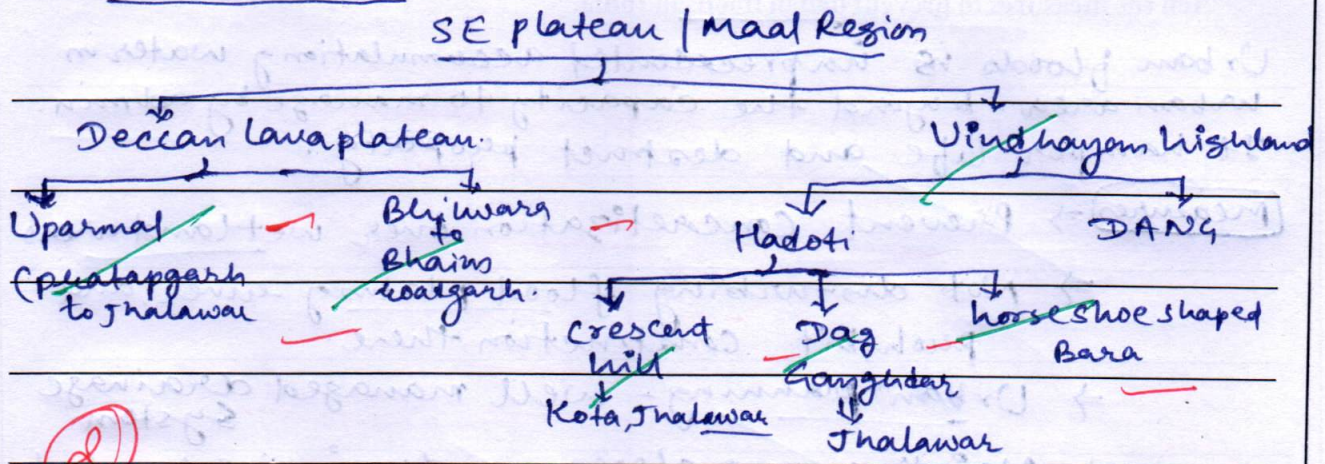
Kadana → Razdi pickup dam

(Write above this line only)

24. चौक/चौका प्रणाली के लाभ बताइये-
 Explain the benefits of Chowk/Chauka system-

(Write above this line only)

25. हाड़ौती के पठार का वर्गीकरण करें-
Classify Hadoti Plateau-



2

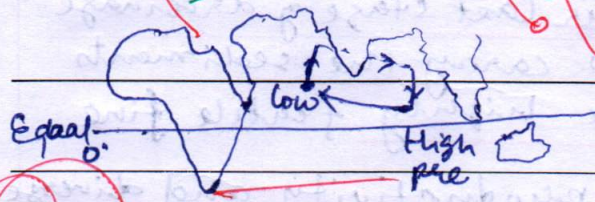
(Write above this line only)

Note : Answer the following questions in 50 words. Each question carries 5 marks.

नोट : निम्न प्रश्नों के उत्तर 50 शब्दों में दीजिए। प्रत्येक प्रश्न 5 अंक का है।

1. इण्डियन ओशन डायपोल (IOD) का दक्षिणी पश्चिमी मानसून पर प्रभाव बताइए।
Explain the effect of Indian Ocean Dipole (IOD) on the south-west monsoon.

IOD is ocean-atmospheric phenomena in southern indian ocean. temperature dipole It is impact of ocean pressure and its fluctuation.



when western side is high temp and low pressure and eastern side is high pressure \Rightarrow supporting wind flow towards india that helps S-W Monsoon.

The reversal of condition (when high pressure in west and low pressure in east) it weakens the winds of S-W Monsoon.

Index is formed \Rightarrow when IOD is positive \hookrightarrow help monsoon
 \Rightarrow when IOD is negative \hookrightarrow weaken.

IOD helps in neglecting impact of AL-Nino.

(Write above this line only)

cyclonic activities ?

2. भारत में शहरी बाढ़ को रोकने के उपाय बताइए।

Tell the measures to prevent urban floods in India.

Urban floods is unprecedented accumulation of water in urban area beyond the capacity to manage by admin. It hamper life and destruct property.

Measures ⇒ Prevent concretization over wetland areas.

⇒ Not disturbing flood plains, river, and prohibit construction there.

⇒ Urban planning - well managed drainage system.

⇒ Maintenance & clearance of drain pipe regularly.

⇒ Afforestation in urban areas. making green patches ⇒ help in ground water discharge and percolation.

⇒ Proper management of Dams and Reservoirs.

Recent Chennai floods, Kashmir floods (2001) Mumbai floods, highlight the urgency to deal with this problem.

(Write above this line only)

3. ज्वारनदमुख पारितंत्र से आप क्या समझते हैं? ज्वारनदमुख पारितंत्र की समस्याओं का उल्लेख करें?

What do you understand by estuarine ecosystem? Mention the problems of estuaries ecosystem?

Rivers make estuaries in their last stage of drainage. Their energy is very low to carry the sediments further. The deposit these highly fertile fine sediments.

⇒ These are zone of high productivity and diverse ecosystem develop. They are transitional area between marine and terrestrial ecosystem hence high B.D.

Problems ⇒ High siltation.

⇒ loss due to erosion & water logging

⇒ destruction due to Tsunami & cyclones.

⇒ over exploitation due to economic use.

⇒ Eutrophication

⇒ Invasive species.

Western ghats river mainly make estuaries due to short course. These areas should be protected to manage coastal floods. Coastal Regulation Zone (CRZ) is good step in this direction.

very sensitive
20
Ecosystem
zone

3

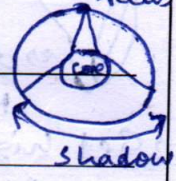
4. P-waves एवं S-waves में अन्तर लिखिए।

Write the difference between P-waves and S-waves.

they are body waves

These are seismic waves generated during earthquake.

P waves	S wave
→ also called Primary wave	- Secondary waves
→ Reach seismograph first	→ later than P wave
→ They <u>longitudinal wave</u> direction of propagation and particle vibration same along the wave.	- They are transverse → particle vibration perpendicular to wave propagation.
→ shadow zone (103-143°) is less	→ shadow zone large (beyond 103°)
→ can pass through solid, liquid, gas.	→ only through solid.
→ like sound wave	- like light wave
⇒ make density difference	⇒ make crest and trough.



P shadow. They help in knowing internal structure of earth.

(Write above this line only)

5. भारत में नाभिकीय या परमाणु ऊर्जा उत्पादन में सहायक प्रमुख खनिज पदार्थों के वितरण पर संक्षिप्त टिप्पणी लिखिए-

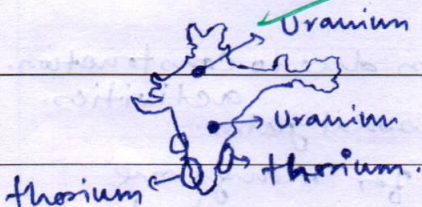
Take a brief note on the distribution of major raw materials helpful in nuclear or atomic energy production in India-

Nuclear energy is made by the radio active material by using fission technology.

Uranium → Andhra Pradesh.
 → Rajasthan - Omra (Udaipur)
 - Khandela.

Thorium → Along coastal areas, found in Monazite sand.
 Maximum in Kerala.

Ilmenite - source of thorium, found in Karnataka, Odisha coast.

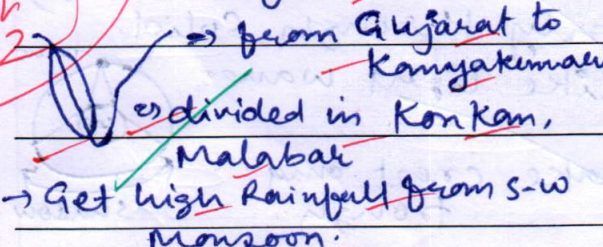
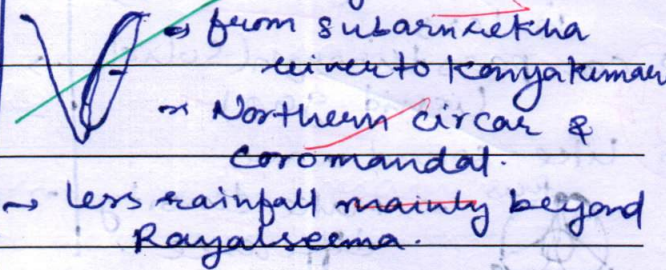


Zircon ?
Barryllium ?

(Write above this line only)

6. पश्चिमी तटीय मैदान और पूर्वी तटीय मैदान की तुलना कीजिए।
Compare the western coastal plain and the eastern coastal plain.

Coastal plains are made by the sediment deposition by Rivers.

West coast	East coast plains
→ They are narrow	→ wider
→ River make estuary due short course, less sediment	→ River make Delta, high sediment, long course
→ Submerged plains, irregular profile	→ Emerged plains
→ hydro power energy potential	→ less favorable for ports
→ location of ports	→ problem of siltation.
 <p>→ from Gujarat to Kanyakumari → divided in Konkan, Malabar → Get high Rainfall from S-W monsoon.</p>	 <p>→ from Subarnarekha river to Kanyakumari → Northern Circar & Coromandel → less rainfall mainly beyond Rayalseema.</p>
Coastal ecosystem support Mangrove vegetation.	

(Write above this line only)

7. कच्छ/मैंग्रोव वनस्पति का महत्व व चुनौतियां बतायें-
Explain the importance and challenges of Kutch/Mangrove vegetation-

Mangrove vegetation is special kind of ecosystem found in coastal areas. India has 3% of world mangrove. It is mainly found in Tropical & subtropical areas.

- Importance**
- Support coastal ecosystem, prevent coastal erosion.
 - Protection from cyclone & Tsunami.
 - Various flora, fauna, es. Bengal Tiger, Sundari, etc.
 - Commercial importance.
 - Viviparity and pneumatophores help in saline alkaline ecosystem
 - recharge of ground water,
- Challenge**
- Ocean heating and temperature rise.
 - Eutrophication.
 - Coastal erosion and destruction due to construction activities.
 - Local community exploit for personal gains.

Recently MISHTI project is launched for mangrove protection

(Write above this line only)

8. भारत के संदर्भ में जलोढ़ मिट्टी का संक्षिप्त विवरण दीजिए-
Give a brief description of alluvial soil in the context of India-

Alluvial soils are depositional soils, made by sediment deposition by rivers. They are Azonal soils, soil profile is not well developed.

- 2 type
- Khadar → New Alluvium deposit every year → high fertile, fine sediments.
 - Bangar → old alluvium, away from coarse. → Coarse, large sediment, Not recharged Annually, Kankar and calcareous. Load, K/a Boor.

Alluvial soil make around 45% of total area. Mainly found in Northern plains of Ganga, Indus, Brahmaputra plain. also in coastal areas.

- Importance
- highly fertile, Rich in Potash, deficient in humus & N_2 and organic matter.
 - support dense population,
 - Agriculture production more
 - Animal husbandry is supported.
- Crops like wheat, mustard etc are sown in these areas.
- Rice
(Write above this line only)

9. पश्चिम एशिया की भू-राजनीतिक समस्या बताते हुए भारत पर इसके प्रभावों की समीक्षा कीजिए-
Explaining the geopolitical problem of West Asia, review its effects on India-

West Asia has various geopolitical problems that have impact on India.

- problem
- Islamic fundamentalism → Islam being the state religion, it has negative impact on community in India.
 - Terrorism - This region has safe houses for many terrorist organisation es. Al Qaeda, ISIS, Heviti.
 - Autocracy & lack of democracy → it further lead to anarchy and outfall to nearby regions.
 - Civil war - Like Yemen.
 - influence of west over Saudi Arabia, UAE
 - Shia and sunni conflict.
 - Iran and syria conflicts.
 - illegal migrations.

- effects of India
- strategic interests like Chahbar port in Iran.
 - Energy security from UAE, Saudi
 - terrorist attacks.
 - illegal migration, drug & human trafficking
- (Write above this line only)

Balancing the relations w/ w/p western world & Islamic world.

10. 'उष्ण कटिबंधीय पतझड़/पर्णपाती वन' का वर्गीकरण कीजिए-

Classify 'Tropical deciduous/deciduous forest' -

found in 75-200cm rain

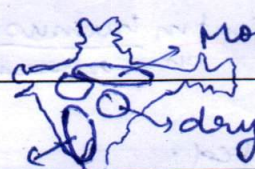
Tropical deciduous forest shed leaves during the moisture deficient period due to inbuilt mechanism.

2 Types ① Moist deciduous → found in rainfall areas of 150-200 cm. Main vegetation → Teak

Areas → Himalaya foothills, eastern slope of W. Ghats
UP, Bihar, West Bengal, Jharkhand

② Dry deciduous → found in rainfall areas of 75-100 cm. Main vegetation → Babool, Kheer, Neem.

Areas → internal plateau regions, MP, Chhatisgarh, Telangana, Rajasthan, Haryana,

 moist deciduous. These forest mainly used for fuel and making furniture.

(Write above this line only)

11. भू-धरोहर स्थल की अवधारणा स्पष्ट कीजिए तथा राजस्थान में इसकी संभाव्यता पर प्रकाश डालिये-
Explain the concept of geo-heritage site and throw light on its potential in Rajasthan.

Geo heritage sites are areas of historical importance due to peculiar geological importance. They are formed during time of significant geological activities. They are recognised by UNESCO for their local and global importance. Special efforts are made by community and government for their protection.

Potential in Rajasthan - Rajasthan has total 11 / 2 Geo heritage sites.

ex. Sander (Pali), Ranigarh crater (Baran), Akalwood (Jaisalmer), Marble area (Nagaur).

Rajasthan govt is making efforts to conserve these sites. These sites help in tourism development.

(Write above this line only)

12. IGNP की पेयजल परियोजनाएं बतायें-
Tell the drinking water projects of IGNP-

[Faint handwritten text, mostly illegible due to bleed-through and lightness]

(Write above this line only)

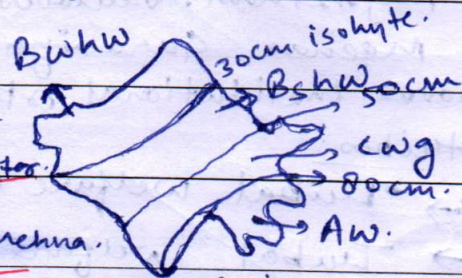
13. राजस्थान में डॉ. व्लादिमिर कोपेन द्वारा 'जलवायु प्रदेश सीमांकन' का वर्णन करें तथा यह भी स्पष्ट करें कि कोपेन सूत्र ऊंचे भागों के लिये अनुपयुक्त क्यों है?
Describe the 'climatic region demarcation' by Dr. Vladimir Köppen in Rajasthan and also explain why Köppen's formula is unsuitable for higher parts?

Köppen classification is based on Rainfall, vegetation and temperature

4 climate zone in Rajasthan.

① **[Aw]** → Tropical Savannah type
80-120cm Rain found in Hadoti plateau & Chittor.

except Bundi, ~~ca~~
Main vegetation → Teak, Gulab, Mehna.



② **[Cwg]** → short winter season. 50-80cm Rain
area → Udaipur, Bhilwara, Dholpur, Alwar, Bharatpur, Dausa, Tonk, Jaipur.

③ **[Bshw]** → Steppe type climate, semi-arid region, 30-50cm Rain
areas → Nagaur, Shekhawati, Luni basin (Jalore, Sirohi, Pali)
vegetation → Rohida, Acacia, Babool, Kher.

④ **[Bwhw]** - Arid region, Rainfall less than 30 cm; Xerophyte
areas: Jaisalmer, Jodhpur, Barmer, Churu, Bikaner, Hanumanagar, Gangaganagar

vegetation - cactus, Aloe vera, thorn Bush

Köppen gave (E) type climate for higher part which is unsuitable because it is complex part effected by Rainfall & temperature.

14. नागौर उच्च भूमि की विशेषताओं का संक्षिप्त वर्णन कीजिए-
Briefly describe the characteristics of Nagaur highland-

Western part
Sambhar
Digwara

- Nagaur highland, → It is semi-arid region, having rainfall range of 30-50 cm.
- It has saline lakes, maximum salt production.
 - It is also known as Banka Belt due to high rate fluorosis cases.
 - It is part Bangar region of semi arid desert areas.
 - Vegetation in this area - Rohida, Acacia/Babool, Khejri, Kher, etc.
 - It is Bshw type climate region of Koeppe.
 - Rajasthan state chemical works lies in this region.
 - It has white marble reserves eg. Deedwana, Makeana.
 - Tungsten is found in Revat hills (Dezana).

Gypsum

(Write above this line only)

15. राजस्थान में जनजातीय विकास हेतु प्रमुख संस्थाएँ-
Major institutions for tribal development in Rajasthan-

Tribal population make around 13% of total population of Rajasthan. Various tribes like Saharia, Bhil, Meenas, Garasiya, Damor, Kathodi found here various institutional structure is formed for welfare of tribes.

Tribal Development Dept

- Tribal welfare ministry.
- Tribal welfare Board.
- Dev narayan Janajatiya Vikas Parishad.
- Tribal Infrastructure Development Board.

Other measures → BK ambedkar entrepreneurship Development scheme.

→ Van dham scheme

→ TRIFED scheme.

→ Kali Bai Bheel scooter vitam yojana

(Write above this line only)

16. राजस्थान में सौर ऊर्जा उत्पादन की अनुकूल संभावनायें बतायें एवं इस दिशा में राज्य की प्रगति का विवरण प्रस्तुत करें-

Explain the favorable possibilities of solar energy production in Rajasthan and present the details of the state's progress in this direction.

Rajasthan has potential of 142 GW in solar energy.

Favourable condition → Solar intensity high.
Sunny days in year (~320 days)
Large desert expansion.

State progress → Currently 13531 MW solar power is being generated.

→ Solar parks have been established eg. Bhadla (Jodhpur), Nadia Kala, Dudhsar, Nokh (Jaisalmer), Phalodi, Pokaran.

→ Rajasthan solar policy-2019 ⇒ target of 30 GW by 2024-25

→ SEEZ (State energy enterprising zone)

→ Asia's largest solar park is proposed (10000 MW) in Rajasthan

→ private sector companies like Azure, Amazon, Reliance, Tata, and Adani working to provide enabling technology

- 1st private sector solar plant in Khinvsar (Nagaur).

(Write above this line only)

Note : Answer the following questions in 100 words. Each question carries 10 marks.

नोट : निम्न प्रश्नों के उत्तर 100 शब्दों में दीजिए। प्रत्येक प्रश्न 10 अंक का है।

1. पृथ्वी के भू-वैज्ञानिक समय मापक्रम का विवरण दीजिये-
Describe the geological time scale of the Earth.

It is chronological method of mapping earth's geological history based on Rock system based on chronostratigraphy.

EON	ERA	PERIOD	EPOCH	Major Event	
PHANEROZOIC	CENOZOIC (65 MYA)	Quaternary	Holocene Pleistocene	→ Mountain (orogeny)	
		Tertiary	Pliocene	→ Archean - Aravali Vindhya	
			Miocene	→ Caledonian - Scottish scandinavian	
			Oligocene	→ Hercynian - Ural	
			Eocene	→ great dividing range	
	MESOZOIC (65-245) MYA	Cretaceous	Alpine fold mountain eg. Rocky, Alps, Andes, Himalaya		
		Jurassic			
		Triassic			
		Paleozoic (245-570) MYA	Permian	→ Fish emerge - Devonian - Silurian	
			Carboniferous	→ Amphibian → Carboniferous - Permian	
Proterozoic	Archean Headean	Devonian	→ Reptile → Mesozoic		
		Silurian	→ Mammal → CENOZOIC		
		Ordovician			
		Cambrian			

Event Related to Rajasthan

- Aravali mountains → pre cambrian time → Dharwar Rocks.
- plains & desert → Tertiary time - pleistocene.
- Hadoti plateau → Cretaceous.
- Deccan lava plateau

Mass extinctions :- Silurian - Devonian
→ Cambrian explosion.
Triassic - Jurassic.
Cretaceous - dinosaur extinct

GTS helps geologists, earth scientist & paleontologist in research related to earth structure, Rocks.

Classification?

2. गंगा के मैदान पर विस्तृत चर्चा करें-
Discuss in detail on the Ganga plain-

5 lakh km² plain

Ganga Plain is made by deposition activity of Himalayan Rivers and their tributaries. It is 2500 km long and 500 km wide.

Main Rivers → Yamuna, Giri, Chambal, Banas.
→ Ken, Betwa, Son,
→ Kosi, Ramganga, Gandak, Gomti, Ghaghra.

features → It make Alluvial plains.

↳ highly fertile plains suitable for agriculture

→ Support dense population, transportation network eg. Road, Railway is dense. inland waterways also developed.

→ Rivers deposit large sediments, due to lack of energy for carrying further.

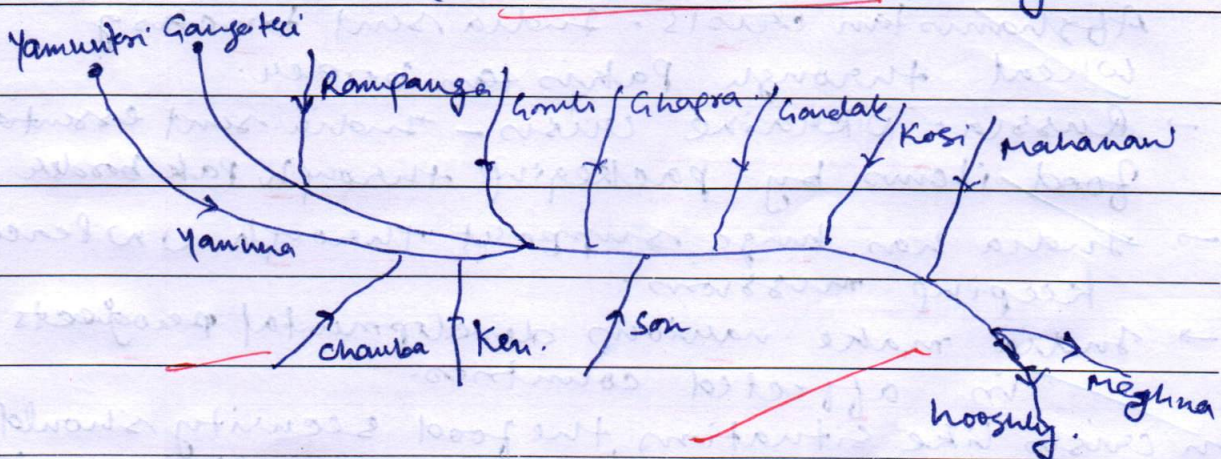
3 1/2

→ Khadar plain - Replenishment annually - fine sediment.

→ Bangar plains - older Alluvium, Kankar.

→ Kosi - sorrow of Bihar due to large sediment load and river flooding.

→ Damodar - River valley project - Distributary - at Farakka - Hooghly river.



India → keep in global supply & demand
 → in domestic consumption / inflation of
in domestic market

3. खाद्य सुरक्षा पर भू-राजनीति का प्रभाव बताते हुए, वर्तमान समय में उत्पन्न हो रही खाद्य असुरक्षा की संभावना से निपटने के लिए भारत द्वारा किए जा सकने वाले उपाय बताइए।

Explaining the impact of geopolitics on food security, explain the measures that can be taken by India to deal with the possibility of food insecurity arising at present.

Geopolitical issues have wide impact on food security mechanism of food scarce regions of world eg. central Africa, Afghanistan etc.

Impact → Recent Russia-Ukraine conflict created hurdle in wheat export from central Asia (wheat basket of world).

→ Afghanistan issue created situation of food shortage in the region.

→ Sudan civil war created problems in adjoining regions like Ethiopia, Somalia.

→ maritime regions are blocked to create uncertainty and food inflation in many areas.

→ Prices of crude oil increase due to conflict like Israel, & Palestine.

Steps by India → India once again showing its Humanitarian role by ensuring diplomatic reach to the affected areas. eg. during Afghanistan crisis - India sent trucks of wheat through Pakistan border.

→ Russia-Ukraine crisis - India sent essential food items by packaging through Pak border.

→ India has huge support through UN peace keeping missions.

→ India make various developmental projects in affected countries.

In crisis like situations, the food security should not be impacted. World leaders should solve it by diplomatic way.

politics game
 Climate change
 Conflicts
 Refugee Crisis

India

Challenges

Steps to grab this opportunity

4. "भारत के जनसांख्यिकी लाभाने देश की वृद्धि और विकास के संदर्भ में अवसर की खिड़की खोली है और इस खिड़की के बंद होने से पहले इसका लाभ उठा लेने की आवश्यकता है।" टिप्पणी करें-
 "India's demographic dividend has opened a window of opportunity in terms of growth and development of the country and there is a need to take advantage of this window before it closes."
 Comment-

Demographic dividend :- It is defined as large young population group in 15-65 years age, which may help boost economic growth of a country if provided suitable opportunities.

15-29 age → 17.2% - 2021

decline 2036

Indian DD will end around 2047, India has world's youngest population average age is 29 year

Opportunity → large labour base for industrial development. ensure economic cheap labour

Current opportunity window

- Support in entrepreneurship activities and job generation.
- creation of demand due to huge market.
- Able to learn modern technology related skills like AI, Bigdata, Machine learning
- Innovation in economy
- startups in e-commerce, space sector, digital marketing and software development.

How to take advantage → Govt should focus on creating opportunities for reaping benefits of DD.

- es. Vocational education, & training.
- Apprenticeship in ITIs.
 - skill development, tech ready youth.
 - healthcare management.
 - creating job opportunities.

various steps like Make in India, Startup India, National Skill Development Council, entrepreneurship Boards are good steps to ensure benefits of DD.

Asian tigers like China, Indonesia, Korea are good examples of taking advantage of their DD.

5. भारत की दीर्घकालिक 'निम्न उत्सर्जन विकास रणनीति' (LT-LEDS) पर प्रकाश डालिये-
 Throw light on India's long-term 'Low Emission Development Strategy' (LT-LEDS)-

India made commitment to achieve net zero by 2070 in COP 27 of UNFCCC.

To achieve such ambitious target, India is making efforts in various sectors.

→ NDCs (Nationally determined contributions)

→ India overachieved 40% energy target from fossil fuels and now aiming 50%.

→ creating forest sink of 2-2.5 billion tonne equivalent of CO₂ emission.

→ Reducing emission intensity by 35-40% of 2005 level by 2030.

→ emphasis on electric vehicles by policies like FAME-2

→ Blending of Biodiesel and Bioethanol in Diseals 40% + ethanol

→ low carbon emission in power sectors by promoting renewable energy.

→ National Action plan on climate change. (NAPCC)

→ International solar alliance.

→ Promoting organic farming

→ concept of Life, lifestyle for environment.

⇒ Industries following emission related norms by taking Environment impact assessment. (EIA)

Such steps will help ensuring boost to global efforts. Develop countries should help by transferring technology and funds (\$100 Bn Annually) Global stocktake mechanism, to achieve Net zero by 2045 to limit 1.5°C increase in global warming.

imp forest tree

2070

5%

Stamp

2070
Carbon

6. राजस्थान खनिज सम्पदा की दृष्टि से सबसे समृद्ध राज्यों में से एक है तथ्यात्मक विवरण दीजिए तथा इस क्षेत्र से संबंधित समस्याओं को बिंदुवार स्पष्ट करें-

Rajasthan is one of the richest states in terms of mineral wealth. Give factual details and explain the problems related to this area point by point -

Rajasthan is known as 'Museum of Minerals' as it has highest diversity, 2nd position in Reserves and production.

Rajasthan produce 22% of national production, in which 25% contribute in Non-metallic & 15% in Metallic minerals.

Rajasthan has 87 minerals out of which 57 are being mined out currently.

Monopoly in Lead, zinc, silver, Wollastonite etc.

Mineral belt :- ① Aravali belt → Metallic minerals like copper, iron, zinc, lead, silver

Copper → Jhunjhunu → Kolihan, Khetri, Chandmani
Sikar - Banno Kidhani, Alwar - Khodawaba, Udaipur - Anjani

Iron → Jaipur - Morija Band, Dausa - Nimla-Rozela Salumbar
Bhilwara - Tunga Region

Lead, zinc & silver - Rajsamand - Dariba, Udaipur - Debari
Bhilwara - Rajpura - Agucha, Sawai Madhopur

② Vagad Belt - Gold → Ghotia Amba reserve found.
↳ Chauthi Ka Barwara

Diamond - Pratapgarh - Nandokipal.
↳ Anandpura - Bhukia, Tappura.

Tungstom - Banswara - Leelanwati, Udaipur, Dungarpur.

③ clay → fire clay, Ball clay, Bleaching clay, Fuller earth

④ stone → slate stone - Alwar, sandstone - Bharatpur,
Red stone - Dholpur, limestone - Jodhpur, Gypsum,
Granite, marble.

⑤ Tungstom - only in Nagaur - Dezema (Revat hills)

⑥ sedimentary deposits of petroleum → Barmer - Sanchole
↳ Jaisalmer, Bikaner.

Problem → less amount of metallic mineral, reflect in mineral income (5th in India)

↳ lack of clear policy and enabling guideline

↳ lack of infrastructure - beeight, turnaround time more.

↳ illegal mining in Aravali, & Gypsum belt.

Mineral policy - 2015, emphasis on scientific exploration and increase in GDP of mineral sector.

7. राजस्थान राज्य वन नीति 2023 का विजन बतायें तथा इस उद्देश्य की प्राप्ति हेतु अपनाये जाने वाले सिद्धान्तों की व्याख्या करें-
 Explain the vision of Rajasthan State Forest Policy 2023 and explain the principles to be adopted to achieve this objective.

Rajasthan state forest policy - 2023 ~~is~~ ^{is} taken out to improve the forest area and prevent desert expansion in east direction.

- Vision/Aim → To create 20% geographical area under forest from current 9.6% area, step by step approach to achieve target of 20%.
- creating employment opportunities at local level.
 - improving green cover of Rajasthan, making it sync with National target of 33%.
 - increase in the carbon sequestration potential of forests by capturing carbon.

Principles → ~~state sponsored afforestation program.~~

- Community ~~now~~ involvement.
- social forestry promotions.
- CMF - Community managed forest.
- promotion to sacred grooves.
- safeguarding tribal rights over forest by forest right Act - 2006.
- creating local buffer of forests.
- soil conservation and water table recharge.

This policy is created to contribute to achieve national targets under REDD strategy.

Community forestry

Bam Chaulsi (Write above this line only)

Explosion

1. पारिभाषिक शब्दावली

3

अंक - 10

(i) Appellate -

X

(ii) Custodian - मालिक

X

(iii) Legal Adviser - विधि सलाहकार

✓

(iv) Tribunal - प्राधिकरण

X

(v) Witness - गवाह

✓

(vi) Ultravires -

X

(vii) Rejoinder -

X

(viii) Misuse -

दुरुपयोग

✓

(ix) Permanency -

पूर्णमालिक

X

(x) Inconsistent -

असतंत

X

2. प्राचार्य राजकीय महाविद्यालय अजमेर की ओर से महाविद्यालय परिसर में सभागार निर्माण कार्य हेतु निविदा का प्रारूप तैयार कीजिए। अंक- 10

राजस्थान सरकार

कार्यालय राजकीय महाविद्यालय, अजमेर ११५००१

ह्रमांक - १(क) / रा.महावि. / सभागार / 2023 / 25 दिनांक :- 25-12-2023

निविदा सूचना संख्या - 27 / 2023

महामहिम राज्यपाल महोदय की अनुशंसा पर महाविद्यालय परिसर में सभागार निर्माण हेतु पंजीकृत संवेदकों से निश्चित प्रपत्र में निविदाये आमंत्रित की जाती है। निविदा प्रपत्र निश्चित शुल्क जमा करा कर अधोहस्ताक्षर करके कार्यालय से दिनांक 30-12-2023 तक प्राप्त किये जा सकते हैं। निविदा प्रपत्र वांछित सूचनाये सरकार इस कार्यालय में 05-01-2024 तक जमा कराये जा सकते हैं। निविदा खुलने का समय दिनांक 06-01-2024 को 11 बजे पूर्वदिन के बाद सत्र समस्त संवेदकों के समक्ष होगा।

क्र.स.	कार्य का नाम	अनुमानित लागत	निविदा शुल्क	धरोहर राशि	समय पूर्ण करने का
1.	सभागार निर्माण	3,00,000/-	500/-	6,000	6 महीने

- शर्तें :-
- 1) निविदा में किसी भी प्रकार का बदलाव व गिरावट करने का अधिकार अधोहस्ताक्षर करके पास रहेगा।
 - 2) इमेल / ऑनलाइन निविदाये मान्य नहीं होंगी,

3) कार्य में देरी या मानकता पूर्ण कार्य नहीं होने पर खरोहर
रशि जल्ल की जायेगी।

(कखग) प्राचार्य

क ख ग

प्राचार्य रा. महा. वि.

अजमेर

(A) Rewrite choosing the appropriate expression to form a meaningful sentence: (Q. No. 1-10)

Marks 10

1. The meeting was put by/put off for Sunday.

The meeting was put off for Sunday ✓

2. We must root out/rule out corruption.

We must root out corruption ✓

3. The chief guest gave away/gave up the prizes.

The chief guest gave away prizes. ✓

4. Do you look on/look out him as a gentleman?

Do you look on him as a gentleman? ✓

5. She is running down/putting up weight these days.

She is putting up weight these days ✓

6. "Apple of discord" means cause of quarrel/a hypocrite.

cause of quarrel ✓

7. "At one's beck and call" means to show that one is ready to discuss peace-making/at one's service.

one is ready at one's service ✓

8. "Gift of the gab" means talent for speech/an honour or compliment.

talent for speech. ✓

to settle a matter

to settle a matter

