

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	21	17.5
Medium : English,	Part - B	16	50
E-mail :	Part - C	7	35
Exam Date : 24/12/2023	Total		102.5
Inviligator's Signature :			
ECN:	RCN:	Hindi: 0	English: 0

अनुदेश (Instructions)

1. परीक्षा शुरू होने से पहले पुस्तिका को जाँच लें।
Please check the booklet before commencement of the exam.
2. दिये गये रिक्त स्थान में निर्देशित शब्द सीमा में उत्तर दें।
Write the answers according to the prescribed word limit, in the space given.
3. अंक योजना प्रत्येक खंड के प्रारम्भ में दी गई है।
The marking scheme is given at the start of every section.
4. 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. → Do use map in 3 marks & 10 marks
2. compulsorily. Don't write plain
3. answer if you want to fetch good
4. marks
5. → Read the questⁿ properly, particularly
6. in 2 marks you are writing irrelevant
7. content
- 8.
9. → 10 marks and 5 marks are
10. attempted well, structure then
11. well Ad the Best

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?

Rat hole mining is a technique in which traditional equipment are used and cares are formed for mining.

It is also helpful in evacuation of miners in case of collapse of mine.

Very wrong
negative
they are destructive
North East

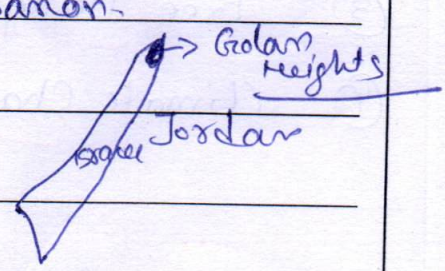
(Write above this line only)

2. 'गोलन हाइट्स' पर टिप्पणी लिखिए?

Write a comment on 'Golan Heights'?

Golan Heights is a disputed area situated north of Israel. It is between Israel & Lebanon.

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-

① Position of Aravalli parallel to direction of Arabian sea branch of south-west monsoon.

② Long distance from the sea. (less moisture)

③ Presence of dry condition due to that desert.

Bangladesh Branch

(Write above this line only)

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

- ① Palana = Bikaner (Mainly lignite)
- ② Gaisal, Bhadres = Badmer

Write more

(Write above this line only)

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

① Afforestation-

② Remove Poverty

③ Free Hunger-

④ Climate Change

Its for disaster

(Write above this line only)

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

Rift valley are those low grounds found in between mountain ranges ~~are~~ formed due to fault, tension in ~~the~~ geological plates/boundaries.

ex: ① East African Rift Valley

② Rift valley between Vindhyan & Satpura Mountains.

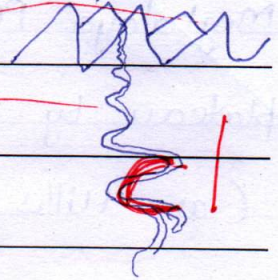
(Write above this line only)

make diagram

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 are formed in mature stage of rivers.

due to high meandering and change in direction of flow of river.



How are they formed?
Name any lake -
(Write above this line only)

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

Fly ash is that ash / particle of smoke which are released in atmosphere after ^{coal} combustion. Usefulness:-

- ① Collective fly ash can be used to form bricks.
- ② Used in disposing waste in pits format.
- ③ Used in Construction of Roads.

(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 refers to that type of forestry in which community participation is ensured. Different pool of land is concentrated and forestry is done. Its type:-

- ① Community forestry.

→ Farm
→ Extension

(Write above this line only)

give eg

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

Meghalaya Plateau is separated from ~~from~~ Chota Nagpur plateau by Nalda fault. It is divided into Garo Hills, Khasi Hills and Jaintia Hills.

Map it Rajmahal Hills

(Write above this line only)

11. बॉन चैलेंज
Bonn Challenge

Bonn Challenge is related to prevention of use of CFC gases and in direction of ~~for~~ conservation of Ozone layer.

Forest Landscape Restoration

(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-

① Drain of industrial waste into rivers, lakes, oceans.

~~② Sinking of large ships or containers~~

③ Land encroachment and excessive use of fertilisers in agriculture ~~or~~

untreated water

(Write above this line 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-

- ① Aravali Green Wall for afforestation. & prevent soil erosion.
- ② Ban on illegal mining in Aravali region.
- ③ Atal Bhu-Jal Mission to improve water groundwater

1/2

green wall project
forbander to purpat

(Write above this line only)

14. किशन गंगा जल विद्युत परियोजना
Kishan Ganga Hydroelectric Project

1/2

Kishan Ganga Hydroelectric Project is run by
Central government in Uttarakhand over
Kishan Ganga river.

Jammu & Kashmir

Asso. states \Rightarrow Uttarakhand, UP, Haryana, Rajasthan, Delhi etc.

(Write above this line only)

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

(Write above this line only)

16. राफा क्रॉसिंग
Rafa Crossing

Rafa Crossing denotes the border between Israel and Egypt.

Map it
why in news ??

(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-

(Write above this line only)

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

① Karnataka = Bellary, Hospet.

② Rajasthan = Nimra Raisola, Morija Banola, Thun Hunder.

③ Jharkhand = Singbhum,

④ Chhattisgarh.

Map them
→ Diversify
N-S
E-W

(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)-

(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?

Rajasthan has 6 crore population acc. to 2011 census and large number of population is in young categories. So, Yes Raj. can be considered in situation of demographic dividend. Challenge \Rightarrow Low literacy, Gender discrimination, low digital literacy, low infrastructure development.

(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'.

~~1730~~
Khejadli movement was started by Amrita Devi Bishnoi for the protection of Khejdi trees in which more than 300 people sacrificed their lives. Relevance \Rightarrow Inspiration for environment conservation.

(Write above this line only)

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

- $\frac{1}{2}$
① Mahi Bajaj Sagar Dam = Banswara b/w Raj. & Gujrat.
② Jakhama Dam = Pratapgadh.
③ Kagdi Pickup Dam = Banswara
④ Som-Kagdar Dam = Udaipur.
⑤ Som-Kagdar Backwaters
Map them

(Write above this line only)

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

- $\frac{1}{2}$
① Water Conservation.
② Prevent Soil erosion.

Water harvesting
Laxman Singh

(Write above this line only)

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

classify in cooled
vindhyans
Deccan

Hadoti plateau is in South-east dir. of Rajasthan.

① Population = 11% of Raj. ② Area = 6.89% of Raj.

③ Districts = Kota, Jhalawar, Baram, Bundi.

④ Climate = Humid-Sub humid. ⑤ Soil = Black soil.

⑥ Rivers = Chambal, Kalisindh etc.

(Write above this line only)

1/2

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.

3

Indian Ocean Dipole is a high pressure condition developed in Indian Ocean. Positive IOD \Rightarrow In this ~~the~~ a

high pressure condition developed in Indian Ocean

Effect \Rightarrow It is suitable for south-west

monsoon as it intensifies the wind flow

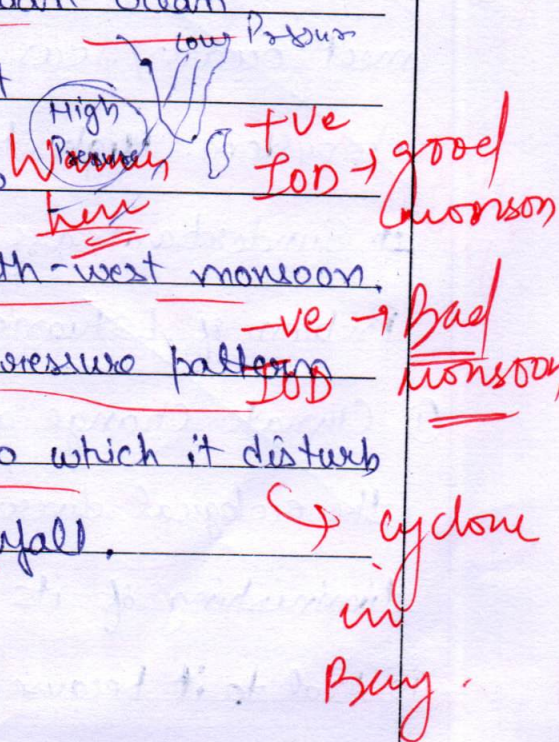
and result in more rainfall from south-west monsoon.

Negative IOD \Rightarrow In this condition the pressure pattern

reverses and low pressure area form due to which it disturb

the south-west monsoon. Leading to low rainfall.

(Write above this line only)



2. भारत में शहरी बाढ़ को रोकने के उपाय बताइए।
Tell the measures to prevent urban floods in India.

3/2

Measures to prevent urban floods in India are:-

- ① Proper ~~drainage system~~ with ~~regular cleaning up~~ of them.
- ② Encourage Afforestation and increase green cover in cities.
- ③ Prevent encroachment and illegal construction activities which are not inclined with environment laws.
- ④ Effective ~~waste~~ Management by municipalities.
- ⑤ ~~Formation~~ of check dams in nearby areas, to prevent intense flooding.
- ⑥ Proper ~~relining~~ should be done if any river or canal passes through urban area.

(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 estuarine ecosystem?

3/2

Estuarine ecosystem denotes the region where rivers meet oceans/seas. It is one of the highest productive ecosystem. High biodiversity is found in this region.

Sunderbans are one of the example of it :-

Problem of Estuarine Ecosystem are :-

- ① Climate change and global warming has disturbed the ecological diversity.
- ② Illegal encroachment led to diminishing of its area.
- ③ Diversity of this ecosystem is local to it because both river & ocean ecosystem are unfavourable for their existence.

(Write above this line only)

4. P-waves एवं S-waves में अन्तर लिखिए।
Write the difference between P-waves and S-waves.

3 1/2

P-waves and S-waves are generated from earthquake.

P-waves

S-waves

Make diagram

- | | |
|---|--|
| ① These are <u>Primary waves</u> | ① These are <u>Secondary waves</u> |
| ② <u>First to reach the surface</u> of earth. i.e. <u>Epicentre</u> . | ② <u>Reach at surface after</u> |
| ③ Passes \Rightarrow <u>Solid, Liquid, Gases medium</u> | ③ <u>Passes only from Solids</u> |
| ④ These are <u>longitudinal in nature</u> | ④ <u>Transverse in nature</u> |
| ⑤ <u>Destruction level is low</u> . | ⑤ <u>More destructing than P-waves</u> . |
| ⑥ <u>Speed = Lower than S-waves</u> | ⑥ <u>Speed = more than P-waves</u> . |

(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-

2 1/2

Some of the raw material which is helpful in atomic energy production are :-

① Uranium \Rightarrow Used as a fuel; found in Kerala, Andhra, Rajasthan, Jammu-Kashmir. (Name the mines)

② Thorium \Rightarrow Used as fuel; Largest reserve ^{of India} in Kerala, Karnataka, Rajasthan. Monazite

③ Manganese \Rightarrow Rajasthan, Chhattisgarh, Orissa. nuclear & atomic are asked

④ Beryllium \Rightarrow Rajasthan, Karnataka, Andhra, Jharkhand. Zincum

⑤ Graphite \Rightarrow Ajmer (Rajasthan), Jharkhand. Beryllium

(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.

3 1/2

Western Coastal Plain

Eastern Coastal Plain

① These are from Gujarat to Kerala in west.

① These are from Orissa to Tamil Nadu in East.

② Narrower in width

② Wider in width.

③ Result of Submergent coast
no good for ports. ex: Kochi

③ These are emergent coast and not suitable for ports

④ Parts ⇒ Kathiawar Coast (Gujarat), Konkan Coast, etc.
→ JNPT ??
→ Kandla

④ Parts = Northern Circars, Southern Circars, Coromandal coast
Vizag

⑤ Presence of Backwaters. ex: Kerala

⑤ Deltas are present ex: Krishna's

(Write above this line only)

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

IMPORTANCE

① Mangrove vegetation holds a wide range of biodiversity. ② These are helpful in reducing the flow of Tsunami, floods etc. ③ Its products are used for medicinal properties. ④ Economic source for fishing communities.

3

CHALLENGES

① Excessive cutting of these vegetation for gaining land area or for infrastructure. ② These are not suitable for agriculture due to high saltness.

marine species
urban encroachment

use in agri

However, In recent Indian forest Report-2021 it is measured that the area under Mangrove veg. has increased.

(Write above this line only)

return MISHTI

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

3
How are they formed.

Alluvial soil is one of the most fertile soil which is formed by deposition of sand, minerals by rivers.

① Alluvial soil covers largest area in India. *Crops??*

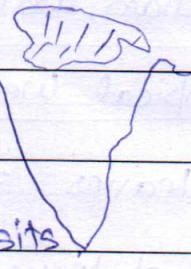
② Found in flood plains areas or in Ganga-Yamuna, etc drainage area i.e. U.P, Bihar, North-East Rajasthan, M.P. etc. *Rain??*
Characteristics

③ The soil is rich in Nitrogen, humus but poor in phosphorus. *Crops ⇒ Rice, Sugarcane etc.*

④ It has good capacity to hold moisture.

⑤ Bhangar and Khadar are areas of Alluvial deposits.

(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-

3

West Asia remain a zone of conflict from a long time. Some

of geopol. problem of it are :- ① Israel-Palestine issue in which

many wars has happened. Effect on India ⇒ • Diplomatic

challenge to balance between Israel and Arab nations. • Have

negative effect on Indian diaspora living in Arab countries. • Concern

of Energy security and *Islamic terrorism* impact from Israel & Arab nation.

② Syria-Yemen war ⇒ *proxy war* India to maintain balance between USA

and Russia in it. ③ Iran sanction by USA ⇒ Effect on India's

large investment in Iran. ex: *Chabahar port*.

(Write above this line only)

What needs to done?? *CEPA with UAE* *concerns*

10. 'उष्ण कटिबंधीय पतझड़/पर्णपाती वन' का वर्गीकरण कीजिए-
Classify 'Tropical deciduous/deciduous forest'-

3 Tropical Deciduous forest are those forest who, ^{mainly} shed their leaves in a year. These are of two types:-

① Tropical Dry Deciduous These forest shed their leaves in winters. and are largest in area in India.

→ ^{Trees??} Rainfall = 60-80 cm → Mostly found in UP, MP, East

Rajasthan, West Maryana, Chattisgarh. → Trees = Teak, ~~Neem~~ Neem etc

② Tropical Wet Deciduous ⇒ These forest do not shed their leaves. ⇒ ^{Region??} Rainfall = 80 cm to 120 cm. ^{Western ghats}

Trees ⇒ Mango, Jamun etc. Santalwood Snisham
(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.

2/2 Geo-heritage site are those ^{Question is this} geographical sites which holds scientific, geological, natural beauty and are site of international importance. ^{What are their potential} It has huge possibilities in

Rajasthan, some of them are Jawar area in Udaipur,

Bap Boulder belt in Jodhpur, Raangrah crater in Bikaner,

Akkal fossil park in Jaisalmer etc are of site of geographical

historical importance. Geological Survey of India is

working positively in this direction.
(Write above this line only)

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

3/2

IGNP originated from Hanikhe Barrage and its main objective was to ensure Drinking and Irrigation problems.

- ① Rajiv Gandhi Canal was built between Sir Pratap Sagar lake and IGNP to ensure drinking facilities to Jodhpur.
- ② Choudhary Kumbharam Agra lift provide drinking facilities to Churu and Jhunjhnu districts.
- ③ Pannalal Barupal lift provide water to Ganganagar & Bikaner for drinking.
- ④ Guru Jambheshwar = Drinking project for Nagaur.
- ⑤ Sagarmal Gopa lift for Jaisalmer

(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?

3

Köppen classification was based on Temperature, Rainfall and Vegetation. Its climatic demarcation for Rajasthan:

make map compulsorily in this type

- ① [Aw] ⇒ Tropical Humid climate ⇒ Baranwara, Dungarpur, Pratapgarh, Jhalawar^{etc}, High rainfall.
- ② [Cwg] = Sub-humid or Savannah type; Jaipur, Tonk, Sirai Madhopur, Bharatpur etc.
- ③ [BShw] = Semi-Arid or Steppe ⇒ Nagaur, Sikar, Jhunjhnu etc.
- ④ [BWhw] ⇒ Arid climate ⇒ Jaisalmer, Bikaner. Rainfall = 0-20cm.

It is unsuitable for higher part due to extreme weather condition where temp. remains low with limited vegetation presence.

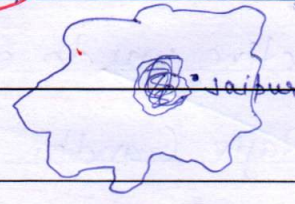
(Write above this line only)

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

3/2

Characteristics of Nagaur highland are:-

- ① It is found in between 25 and 50 isohyete line, with northern boundary is with Gihaghar plains and western with thar desert.
- ② Presence of saline lakes ex:- Sambhar, Didwana etc
- ③ known as "Kubad Patti" due to high presence of fluoride
- ④ It is mainly distributed in Nagaur, Ajmer district.
- ⑤ Rainfall = 25-50 cm ; Vegetation \Rightarrow Khejri, Neem etc.
- ⑥ Presence of inland flow rivers ex:- Khari, Rupangash etc.



Vegetation
minerals

(Write above this line only)

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

Some of the institutions for development of tribes are:-

- ① Department of Tribal Affairs.
- ② TRIFED for promotion of tribal products.
- ③ Tribal Area Development Authority (TADA)
- ④ Rajasthan Sports Council for development of sports in tribal areas.

Explain their work

mention more

2/2

(Write above this line only)

3/2

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 huge possibilities of solar energy production.

① High intensity of solar radiation ^{found} ~~present~~ in Rajasthan.

② Around 325 days of cloud-free sky present in Raj.

③ Large barren land available in Jaisalmer, Badmer which

are suitable for establishing large solar parks ④ Potential = 142 G.W.

Some of the efforts done in development in this direction.

① Rajasthan Solar Energy Policy - ② Private investment in

solar parks ex:- Reliance, Adani group ③ Bhadla, Nokh, Phalodi

etc solar park developed ④ Current production = 13400 M.W.

What is pvt states
(Write above this line only)

Installed ??

Govt schemes and
Steps

→ ??

5

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.

Geological timescale is the chronological arrangement of different phases of earth based on time and imp. events.

It is Divided into: Eon > Era > Period > Epoch
Pre-Cambrian ⇒ Before Cambrian Period, i.e.

- Archean Eon ⇒ Initial phase of Earth formation, gases formation.
- Hadean Eon ⇒ Earth atmosphere cooled down,
- Phanerozoic Eon ⇒ Present Eon; It has 3 Epoch.

• Paleozoic Era ⇒ It is divided into 6 periods namely.

Start with be 60 after 100

① Cambrian Period ⇒ known for Cambrian explosion, micro-org. grow, ^{Blue green algae}

② Ordovician Period ⇒ first fish evolve; First mass extinction.

③ Silurian ⇒ First fresh water fish; life on land = vegetation.

④ Devonian ⇒ Age of fish; 2nd mass extinction;

⑤ Carboniferous ⇒ Tall 100 feet plants; Large carbon sequestration; → (coal later)

⑥ Permian ⇒ Reptiles evolve; 3rd Mass extinction ⇒ 70% extinct.

• Mesozoic Era ⇒ It is divided into 3 periods,

① Triassic = Earth start warming, Reptile grow in size

② Jurassic = Age of Dinosaur. ③ Cretaceous = Meteorite; Extinction.

• Cenozoic Era ⇒ ① Paleocene Period ② Oligocene ③ Miocene

④ Pliocene period are its part!

mention what happen during this time

4 1/2

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

Make map

Ganga plain are one of the largest fertile plains of the world which are formed due to sediments brought by Ganga and its tributaries. ex. Gandak, Yamuna etc.

separately talk about

Geographical Detail (1) These are formed by sedimentation/ depositional feature. (2) Divided into four parts :-

sub divisions

• Bangar Plains These are found at foothills of Himalayas. Here large pebbles and gravels present so, rivers disappear and flow underground it. • Low in agriculture productivity.

river

vegetation

• Tarai Plains These are marshy areas which are formed by slow flow of rivers emerged from Bangar plains. These are fertile plains and huge biodiv. found. these are of 2 type.

Division

is sketch

too much

• Bhangar Alluvial plains = These are plains of old alluvial deposit. Found at a height from river valley.

• Khadar Alluvial Plains => These are new alluvial deposits, and high fertile regions.

(3) Extend in U.P., Bihar, Jharkhand, W. Bengal.

(4) The Ganga plains are economically very important because of High Agri. productivity, high population density, high industrial activities and due to eagerness in infrastructure development.

5/12

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.

Geopolitics impact a nation in every field. An recent time its impact is also seen on food security, like:-

① Russia-Ukraine War ⇒ Ukraine known as "food basket" and India import sunflower oil, wheat etc and Russia is major exporter of fertilizers and due to war shortage of foodgrains and fertilizers is seen which impact food security globally.

② Historically during second world war the issue of food security arised which led to famines in India.

③ Due to geopolitical issues food security concerns are there in many countries like Pakistan, Afghanistan etc.

India has ban on itself rice

ban on sugar

To ensure food security India should take following

- In geopolitical issues India should prioritise national interest over any other.
- Achieve self-sufficiency in agri. items which are mostly imported, ex Palm oil, fertilizers etc.
- Increase production and become exporter of major items to safeguard food security and national interest.

Importance of open trade
Climate protection

However, India with steps like Green Revolution, Horticulture Mission etc has safeguarded its food security.

(Write above the line only)

but could have been better

4. "भारत के जनसांख्यिकी लाभांश ने 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-

India is the ^{most} ~~largest~~ populated country in world with pop. around 150 crore. This huge population is a two-way sword.

Demographic dividend is said for the working population which is in age-group 16-66.

India has one of the largest demographic dividend currently in world with large part in young category.

Just like China, if India use its demographic dividend effectively then it has the possibility to transform into a developed countries.

Challenges in Demo. Dividend

- ① Low literacy level
- ② Lack of infrastructure and investment
- ③ Poor skill level
- ④ Lack of labour intensive industries.
- ⑤ Issue of jobless growth.
- ⑥ Patriarchal mindset and low level of women participation and high gender discrimination.
- ⑦ High digital literacy etc.

However, Govt. has taken steps to utilise this demo. dividend and reduce challenges like:

- P.M. Kausthal Vikas Yojana.
- Skill India Mission.
- Startup India.
- Nat. Rural & Urban Livelihood prog.
- Make in India.
- PLI scheme etc.

to increase the skill set and infuse entrepreneurship capacity into its demographic dividend.

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 has ascribed its target to control its carbon footprint and emission level. India's ~~Net zero emission by 2070~~

Low Emission Development Strategy includes:-

① To promote renewable source of energy example Solar energy, Wind Energy, Biomass Energy etc.

② Increase ethanol blending in petrol to 20% by 2025

③ Increase the level of forestation upto 33% of its total geographical area. ~~most just mention goal~~

④ Achieve Carbon emission level upto zero upto 2070

~~policy & how it would be achieved~~

⑤ In this direction India has launched National

Bio-diesel policy also.

⑥ Transform the conventional source of energy production to non-conv. source by establishing Nuclear reactors, solar and wind parks etc.

India is inclined with its targets of Low Emission ~~and~~ ~~with achieves it~~ ^{strategy} and performing better ~~as~~ comparison to many developed countries.

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 -

5

Rajasthan is known as warehouse of minerals. Rajasthan has deposits of 82 minerals and among them 57 type of minerals are mined. In Rajasthan ~~minerals~~ minerals like Iron (Monji Baniola, Nimla Baniola etc), Copper (Khetri, Daxiba, Khetri etc), Tungsten (Degana, Nagore); Gold in (Jagpura Bhukia), Diamond (Kesarpura), Quartz, feldspar, Pyrite in Ajmer, Calcite in Sikar, Lead-Zinc (Udaipur), Non-Metallic Minerals ⇒ Gypsum (Jammagar, Goth Mangled), Fire clay, China clay in Bikaner; Asbestos in Udaipur, Dholpur stone, Kota stone etc are few stones which also found. Nuclear mineral like Uranium, Thorium also found in Banswara, Sikar etc.

Map them
Mapping them
will reduce
the space used

Problem related to mineral wealth are

Give equal
space to
pus

- ① Majority of minerals are non-metallic so economic importance is low
 - ② Low quality of iron found
 - ③ Lack of infrastructure in mining these minerals
 - ④ There are many mineral which are not mined (25 approx)
- However, Steps are taken to improve mining sector.

write atleast
5 points

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 launched its second state forest policy-2023

Its Vision

- ① To achieve large afforestation and increase the forest cover of Rajasthan to 20% of its total geographical area.
- ② Increase in area of Recorded forest cover which currently is 9.04%.
- ③ To incline the target of India's commitment for attaining SDG goals i.e. reduce carbon footprint, increase afforestation.

Principles Adopted

- ① Conservation of forest areas and effective management.
- ② Use "Tree outside Forest" approach to increase the area of forest and tree cover.
- ③ Promote "community forest" approach in which responsibility and participation of community ensured.
- ④ Promote "Private forest" concept in which people will be persuaded for afforestation at their private land to increase tree cover.

Rajasthan Afforestation & Biodiversity Protection prog. by IICA,

Aravalli Green Wall etc are some of the steps in afforestation.

(Write above this line only)

Very good usage in answers

1. पारिभाषिक शब्दावली

अंक - 10

(i) Appellate –

(ii) Custodian –

(iii) Legal Adviser –

(iv) Tribunal –

(v) Witness –

(vi) Ultravires –

(vii) Rejoinder –

(viii) Misuse –

(ix) Permanency –

(x) Inconsistent –

(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.

2. We must root out/rule out corruption.

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

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

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

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

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

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

