

SrNo	1) Q1.a (8.00)	2) Q1.b (8.00)	3) Q1.c (8.00)	4) Q1.d (7.00)	5) Q1.e (7.00)	6) Q2.a (38.00)	7) Q2.b (38.00)	8) Q3.a (38.00)	9) Q3.b (38.00)
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10) Q4.a (8.00)	11) Q4.b (8.00)	12) Q4.c (8.00)	13) Q4.d (7.00)	14) Q4.e (7.00)	15) Q5.a (38.00)	16) Q5.b (38.00)	17) Q6.a (38.00)	18) Q6.b (38.00)	19) Q7.a (8.00)
4.00	3.50	3.00	4.00	3.50	23.00	0.00	0.00	20.50	5.00

20) Q7.b (7.00)	21) Q7.c (7.00)	22) Q7.d (7.00)	23) Q7.e (7.00)	24) Q8.a (36.00)	25) Q8.b (36.00)
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3

General Studies—II

Time : 3 Hours]

[Full Marks : 300

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Section—I

खण्ड—I

1. Write short answer of the following questions :
निम्नलिखित प्रश्नों के लघु उत्तर लिखिए :
- (a) ☒ Critically examine the basic structure theory regarding the Indian Constitution.
- भारतीय संविधान से सम्बन्धित मूल ढाँचे के सिद्धान्त का आलोचनात्मक मूल्यांकन कीजिए।

8

Basic Structure Doctrine was
invented during the Keshavananda
Bharati Case in 1973.

✓
Evolution of
Basic Structure
Doctrine

Keshavananda
Bharati Case
Reversed the old
Judgement ⇒ Parliament can

1973 but not
Basic
structures.

Golaknath Case
Reversed the
Judgement ⇒ Parliament cannot

1967

✓
Keshavananda
Bharati Case

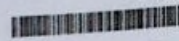
1973

Shankari Prasad Case
⇒ Parliament can amend any law

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Application & Significance →

1) To protect the individuals from state's encroachment.

✓ E.g. Hussainara Khatun Case.

2) Conserving the essential character of Constitution.

3) Check on Executive's arbitrariness.

✓ E.g. I.R. Coelho's Case.

4) Fill the void where legislature is absent.

✓ E.g. through Judicial Review, PILs.

5 Q1.a

Rule of the selected rather than elected.

→ Can lead to Judiciary Overburdening.

✓ E.g. 3.2 cr. cases pending.

→ Hindrance to separation of Power.

→ Basic Structure Doctrine is invented and not pre-present.

✓ Therefore, Basic Structure Doctrine is essential part of Constitution.

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(b) ☐

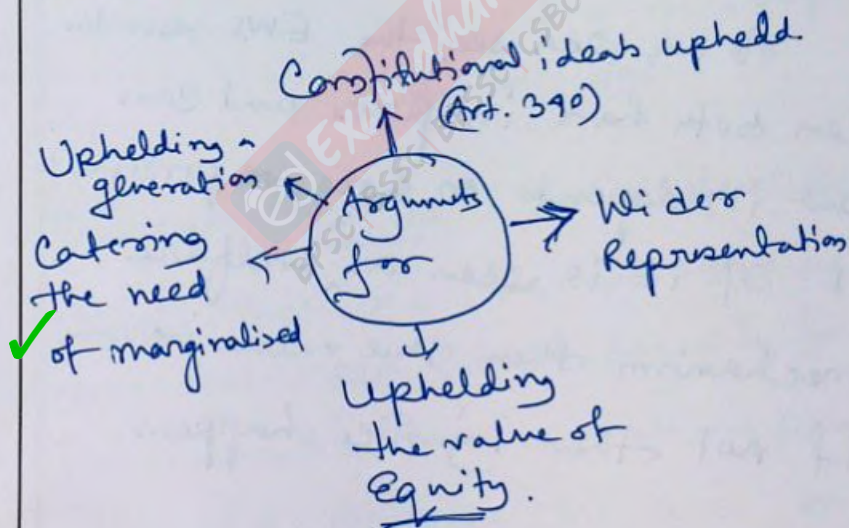
Is reservation for Economically Weaker Sections (EWS) justified? Comment.

8

क्या आर्थिक रूप से पिछड़े वर्ग (ई० डब्ल्यू० एस०) हेतु आरक्षण तर्कसंगत है? टिप्पणी कीजिए।

Recently the Parliament has ~~given~~ passed a bill concerning the reservation for the weaker sections (Economically) $\Rightarrow$ EWS.

Arguments for the Reservation $\rightarrow$



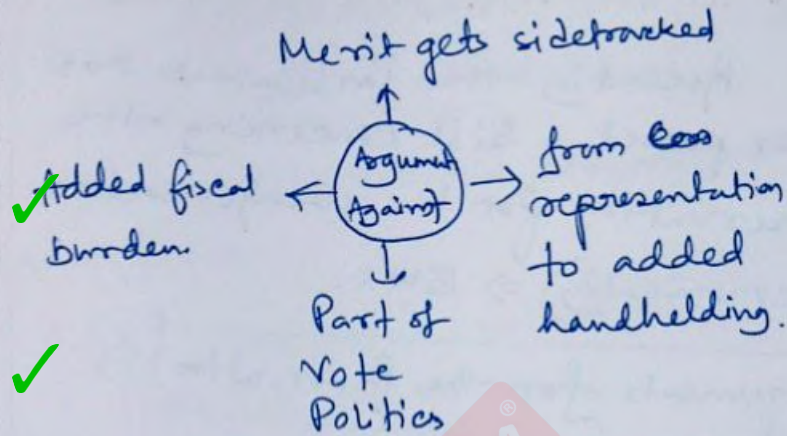
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Arguments Against | →



As we can see, the EWS reservation
can both have its pros and cons
but it depends on how we perceive
it. If it is seen as a welfare
mechanism then the value increases,
if not then injustice happens.

✓ 4.5 Q1.b

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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7

इस हार्जिफ में
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(c) ☐

Critically describe about the amendment process of the Indian Constitution.

8

भारतीय संविधान की संशोधन प्रक्रिया का आलोचनात्मक वर्णन कीजिए।

Amendment process of the Indian Constitution comprises of 3 types —

- ① Simple Majority
- ② Special Majority
- ③ Special majority with ratification of half of the states.

1) Simple Majority → Consists of those topics that are inherent to and does not need added security from Parliament's law-making power.
[e.g.] Altering the area or name of any state.

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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2) Special Majority →

Contains those ~~pro~~ laws and
topics that needs prior approval
✓ of the Parliament and also
✓ Majority + majority of the Present &
Voting in Parliament to Pass the
Bill.

✓ (e.g.) Ruling of National Emergency
(Art. 352).

3) Majority + half ratification of states →
where, ^{half of the} states approval is needed
✓ for the amendment process along
with special majority.

✓ (e.g.) Election of President etc

Therefore, the amendment process
is part & parcel of Indian
✓ Constitution.

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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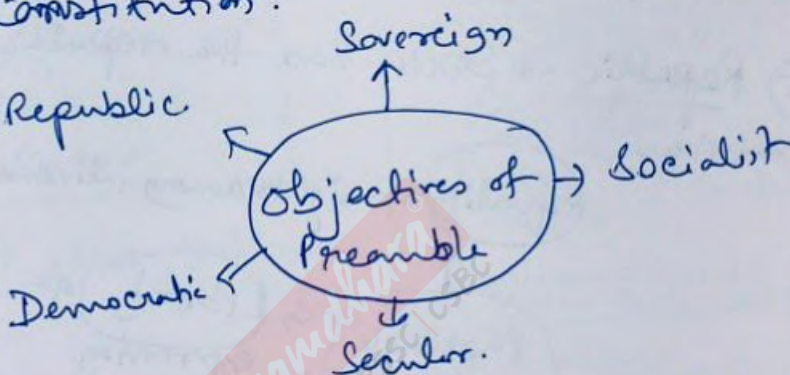
(d) ☐

Explain how Preamble of the Indian Constitution provides a blueprint about the goals of the Constitution.

7

बताइए कि किस प्रकार भारतीय संविधान की प्रस्तावना संविधान के उद्देश्यों की कार्य-योजना प्रस्तुत करती है।

'Preamble' is the soul of the Constitution.



1) Sovereignty of nation → Indian Constitution is free from any outside influence.

2) Socialist → Added in 42nd CAA.

Art. 41, 46 ⇒ explains for the socialist principles of Constitution.

3) Secular → Added in 42nd CAA. In

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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Fundamental Rights (Art. 25-28) calls for secular fabric of Constitution.

1) Democratic → India is a democracy where people reign supreme.

E.g. Art. 326 ⇒ Election.

2) Republic → India has the republic outlook.

(Equality) of rights among individuals

Preamble
Calls for

(Liberty) of
expression,
belief, faith,
worship.

(Fraternity)

In this way, Preamble calls for the blue-print of Constitution.

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(e) ☐

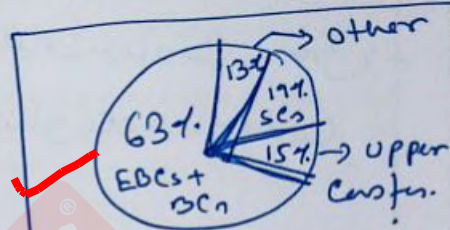
Describe how caste census is going to influence the politics of Bihar.

7

जातीय जनगणना किस प्रकार से बिहार की राजनीति को प्रभावित करेगी, इसका वर्णन कीजिए।

Recently, Caste Census has been performed in Bihar and the results already start to influence politics.

Influence on
Politics of
Bihar



Positive Influence

fig:- Bihar Caste Census

- Enumerating the marginalised.
- Reservation added to SC/ST/ EBCs.
- Tailor-made Policy Implementation
 (e.g.) Reservation criteria increased for BCs.
- Wider Representation.

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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Negative influence

→ Vote-bank Politics

→ Policy-Paralysis or Parochial Politics.

→ from Caste-enumerating to Caste-weighting.

Therefore, the Caste Census has varied effect on the politics of Bihar, however if implemented in a neutral view the data can be beneficial in ensuring key government initiative to large section of society.

✓ 4 Q1.e

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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2. (a) ☐

Discuss the institutional relationship between the President and the Prime Minister as per the Indian Constitutional text. Discuss their changing role in the present context.

38

भारतीय संवैधानिक पाठ के अनुसार राष्ट्रपति और प्रधान मंत्री के बीच संस्थागत सम्बन्ध पर चर्चा कीजिए। वर्तमान संदर्भ में उनकी बदलती भूमिका पर चर्चा कीजिए।

Or / अथवा

(b) ☒

"Indian federalism is fundamentally rooted in two simultaneous pursuits of nationhood : an embrace of state-based cultural diversities and a commitment to the larger Indian political community." Examine critically the nature of Indian model of federalism in the light of the above statement.

38

"भारतीय संघवाद मूल रूप से राष्ट्रीयता के दो एक-साथ प्रयासों में निहित है : राज्य-आधारित सांस्कृतिक विविधताओं को अपनाना और बड़े भारतीय राजनीतिक समुदाय के प्रति प्रतिबद्धता।" उपरोक्त कथन के आलोक में संघवाद के भारतीय मॉडल की प्रकृति का आलोचनात्मक परीक्षण कीजिए।

NA Q2.a

Indian federalism is unique in its operation. Though it was borrowed but with time it focussed to showcase unique characteristics of its own.

An embrace of state-based cultural diversities

These are features which largely cater the federal needs of the nation and they are →

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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1) Rigid Constitution → Under Art. 368
it needs amendment to change the
essential features of the constitution,
safeguarding state's needs.

2) Independent Judiciary → Under Art. 13,
226 and basic structure doctrine,
Judiciary stops executive's encroachment.

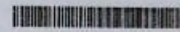
3) Seventh Schedule → by having Union,
State & Concurrent list, it caters the
demand and also values Separation
of Power.

4) Decentralized finance → Under 73rd &
74th Amendment Act, decentralisation
and formation of local body gives state
to breathe some air of autonomy.

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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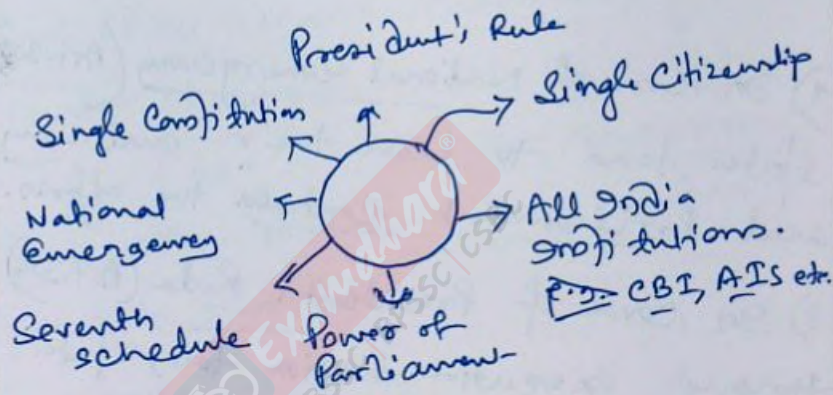
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5) Process of Amendment → needs half
of the state's ratification in case of
special majority issues.

Commitment to the larger Indian
Political Community :-



1) Single Citizenship is shared by all the
people of India and they have their
allegiance to nation only.

2) All India Institutions have overly
powerful ~~trait~~ features over state
institutions.

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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✓ Ex. CBI, PVC, All India Service
etc.

3) Power of Parliament under Art. 3
+
✓ change the name of a state.
alter the area
inclusion of area

4) In case of National Emergency (Art. 352)
states tend to lose their autonomy
✓ and Parliament controls the affairs.

5) In case of President's Rule (Art. 356)
through executive action too, states
tend to lose their autonomy.

✓ Ex. Bihar has experience
of President's Rule up till its
formation to now.

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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✓ Single Constitution is there for both
the Centre & the States.
i.e. In USA, there are 2 separate
Constitutions.

✓ On Seventh Schedule, the Union
List has more number of laws
under it as than State List.
Also in case of Concurrent
List, the Parliamentary order
prevails mostly.

The balancing Act →

✓ After going through the above
discussion, it should be noted that
the Indian model of federalism
has a tendency to lean to Unitary
Model.

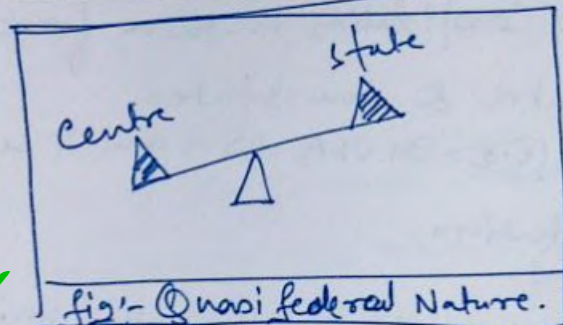
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कृपया
कुछ न लिखें
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According to K.C. Wheare, therefore
the Indian federalism is Quasi =
federal in nature.

✓ S.R. Bommai Judgement in this
case is important that calls
for the balancing Act between
Centre & the States.

✓ It calls for Union's over-
arching power over the states

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and gave a verdict to maintain
the Doctrine of Separation of
Power.

8

Q2.b

Therefore, the Indian federalism
is unique in its feature and
traits where states do have
autonomy but in case of
Unity & sovereignty of India,
Centre reigns Supreme.

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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3. (a) ☒ Discuss and analyze the fundamental principles of coalition politics in Bihar from the point of view of the fulfilment of the national interests specifically. 38

NA Q3.b

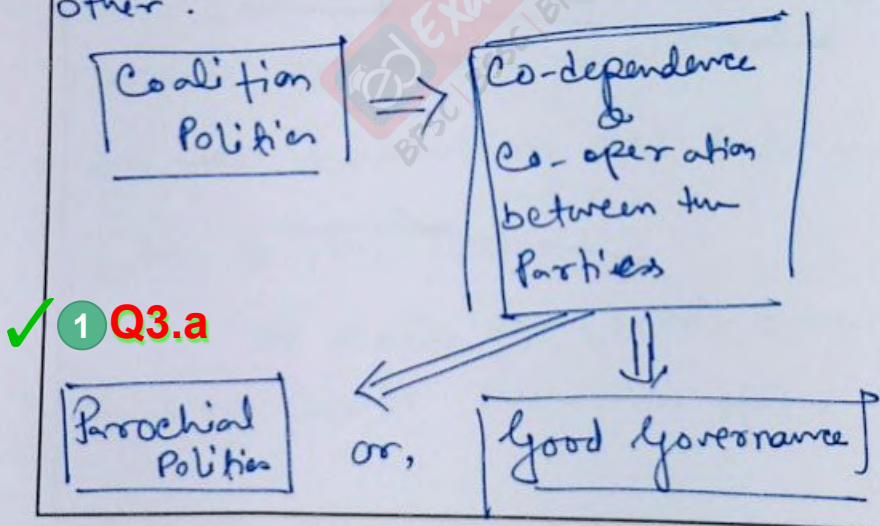
बिहार में गठबन्धन की राजनीति के मूल सिद्धान्तों को, विशेषतः राष्ट्रीय हितों की पूर्ति के दृष्टिकोण से, विवेचित एवं विश्लेषित कीजिए।

Or / अथवा

- (b) ☐ Elucidate and evaluate the local government and its working from the point of view of the empowerment of the Panchayat Raj and the City Institutions with the examples from the grassroot level in Bihar. 19+19=38

स्थानीय शासन एवं उसकी कार्यपद्धति को पंचायत राज तथा शहरी संस्थाओं के सशक्तीकरण के दृष्टिकोण से, बिहार में धरातलीय स्तर से उदाहरणों के साथ, स्पष्ट तथा मूल्यांकित कीजिए।

Coalition Politics stands for the functioning of political parties with the co-dependency on each other.



✓ 1 Q3.a

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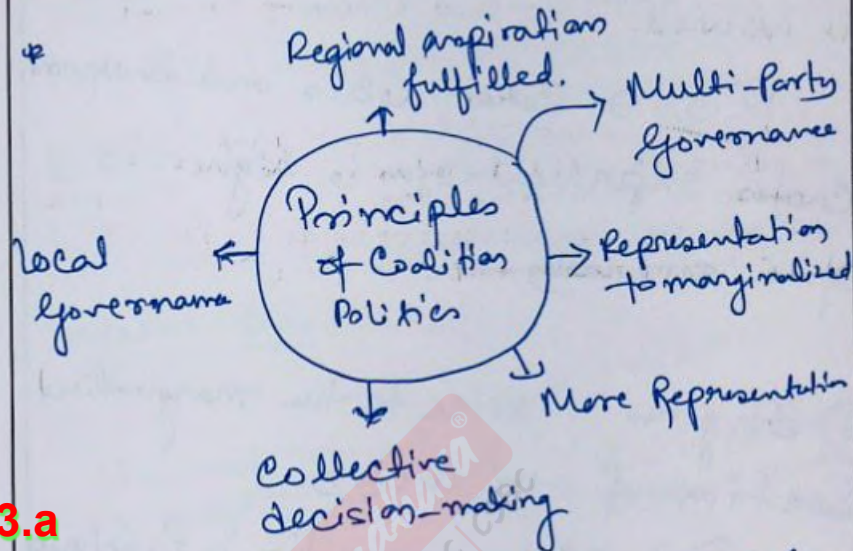
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Fundamental Principles of Coalition Politics :-



✓ 1 Q3.a

1) Multi-Party Governance calls for multiple Political Parties under single umbrella.

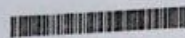
i.e. At present in Bihar, there is coalition party of JDU-RJD.

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2) As multiple stakeholders took shelter under one system, wider-representation is assured.

E.g. In Bihar, OBCs and backward castes representation is higher in state assembly.

✓ 1

3) It gives a voice to the marginalized section of the society.

E.g. 50% reservation in Panchayat for women in Bihar.

4) Decisions are taken collectively with consensus.

5) Local governance has autonomy.

6) Regional aspirations are fulfilled.

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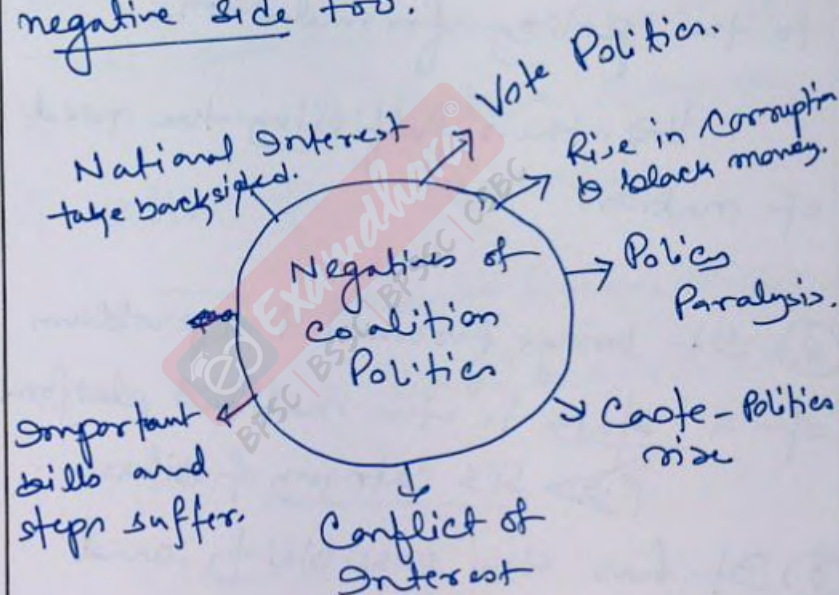


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12.5. Recently, after the Caste Census, JDU-RJD Govt. calls for the Special Category Status for Bihar.

✓ 1 Q3.a

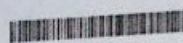
However, there remain some negative side too.



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How Coalition Politics fulfills national interest

① Apart from its negatives, the
Coalition politics bring the people
from 'Antyodaya' (last in the line)
to the policy formulation.

⇒ thus fulfilling the need
of nation.

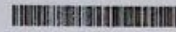
② It brings forward the problems
of a state in the national platform.
E.g. > SCS category of Bihar.

③ It has the possibility and
potential to bringing consensus
among stakeholders on the same

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national front.

④ Coalition Politics can fulfill regional as well as national aspirations.

✓ 1 Q3.a

⑤ It gives birth to leaders that ~~has~~ have the potential to run the future course of action of a country.

F.e. Present Prime Minister was once a Chief Minister of a State.

Therefore in this way, Coalition politics becomes instrumental in securing the

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rights and needs of a transforming
nation.

✓ 9 Q3.a

—————> —————

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Section—II

खण्ड—II

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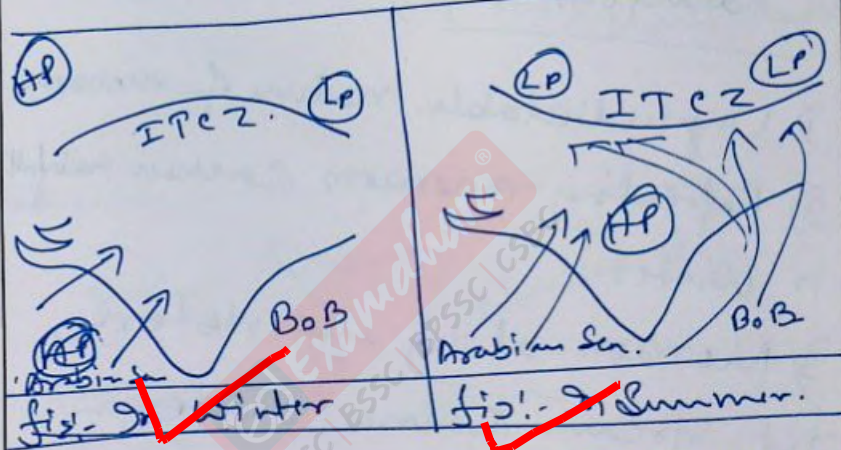
4. Write short answer of the following questions :

निम्नलिखित प्रश्नों के लघु उत्तर लिखिए :

(a) ☐ Analyze the mechanism and characteristics of Indian monsoon system. 8

भारतीय मानसून तंत्र की क्रियाविधि एवं विशेषताओं का विश्लेषण कीजिए।

Indian Monsoon System
Comprises of two system.



① In Summer → the ITCZ moves
towards mainland and Low Pressure
area created.

② Two branches from BoB &
Arabian Sea generated and

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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South-West monsoon created
③ In Winter, the ITCZ moves
upward and from ~~the~~ High Pressure
Zone winds come to Western Coast
in the form of North Eastern Monsoon

Characteristics →

- 1) Unpredictable nature of monsoon
- 2) Retreating monsoon causes rainfall in Winter.
- 3) Monsoon along with westerly jet stream causes Western Disturbances in North Western India.

✓ 4 Q4.a

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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(b) ☐

What are the sources of energy in India? Are they sufficient to meet domestic needs? What are the possible alternative sources of energy for India? Present a critical review.

8

भारत में ऊर्जा के स्रोत क्या हैं? क्या ये घरेलू माँग की पूर्ति के लिए पर्याप्त हैं? भारत के लिए संभावित वैकल्पिक ऊर्जा के स्रोत क्या हैं? समीक्षात्मक विवरण प्रस्तुत कीजिए।

Sources of Energy in India
Consist of majorly → Renewable
Non-Renewable
Sources.

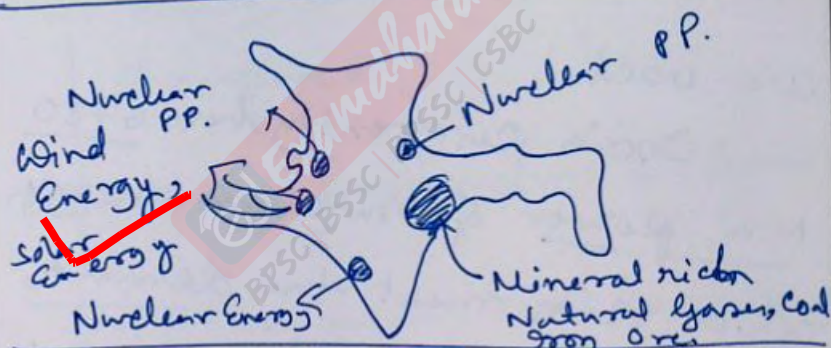


Fig:- Energy Sources in India

The non-renewable sources comprises
of → Iron ore etc.
→ Coal
→ Natural Gas

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They are not sufficient because,

- 1) Limited availability.
- 2) Perishable items.
- 3) Not enough for increasing population

Therefore Non-renewable
energy sources like solar,
wind,

Nuclear
energy

are used.

India currently has 6780

MW power of nuclear energy

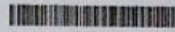
which can meet the demand,

However, better infrastructure and
value-addition is needed.

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उम्मीदवार
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(c) ☐

Discuss the state of tourism industry in India and analyze its future in the country.

8

भारत में पर्यटन उद्योग की स्थिति की विवेचना कीजिए तथा देश में इसके भविष्य का विश्लेषण कीजिए।

State of Tourism Industry

- Transportability inaccessible for most of the parts.
- Safety & security of tourists hampered.
- Low infrastructure development
- tour guide, skill lacking
- Non-digitization of the sector.

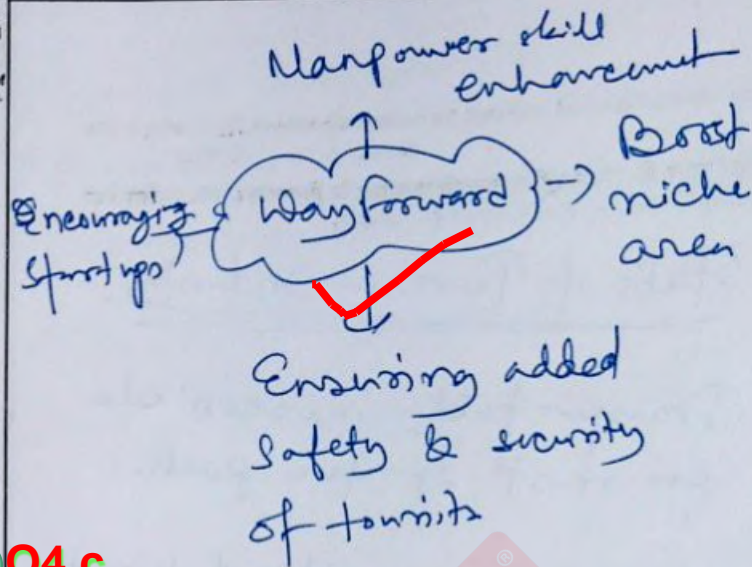
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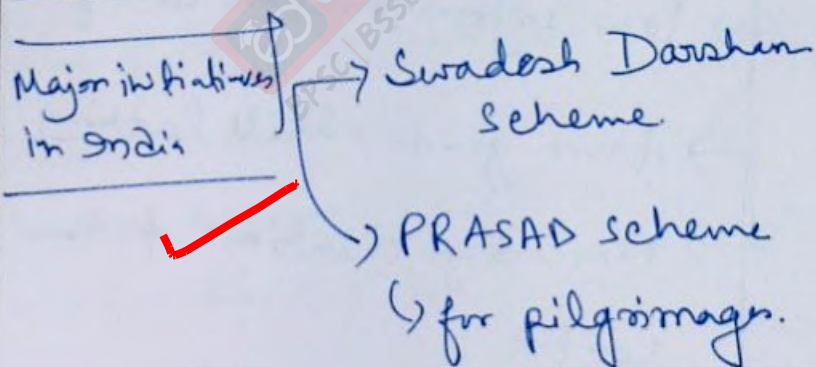
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✓ 3 Q4.c

In this way India's tourism
Sector can be valued.



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(d) ☐

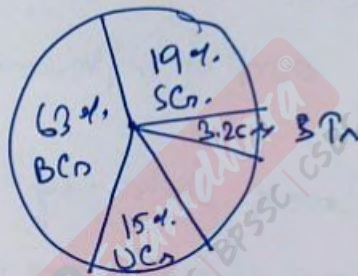
Describe the distribution of Scheduled Caste and Scheduled Tribe population in Bihar and comment on their level of socio-economic conditions.

7

बिहार में अनुसूचित जाति एवं अनुसूचित जनजाति जनसंख्या के वितरण का वर्णन कीजिए तथा इनकी सामाजिक-आर्थिक दशाओं के स्तरों पर टिप्पणी कीजिए।

In Bihar, the distribution of SCs & STs

fig. - the share of SCs/STs.



Level of socio-economic conditions

→ SCs ~~have~~ are higher in number than the STs.

→ they lack basic amenities like housing, education for

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most of the parts.

P.S. CM - ~~SC/ST~~ Awaas
gratia therefore increased to
₹ 60 lakh for them.

→ they lack in taking high jobs

✓ 4 Q4.d

P.S. CM - SC/ST Pratsahan
Yojana to ~~assist~~ them.

→ They lack start-up skills
and suffer from poverty.

P.S. ~~Further~~ start up policy
going to cater to them.

→ For Education encouragement there
are initiatives like ~~cycle~~ cycle and
scholarships under Mukhyamantri-Yojana

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(e) ☐

Divide India into major physiographic divisions and describe the region in which the land of Bihar State is included.

7

भारत को प्रमुख भौतिक विभागों में विभाजित कीजिए तथा उस प्रदेश का वर्णन कीजिए जिसमें बिहार राज्य की भूमि सम्मिलित हो।

Major Physiographic division in India

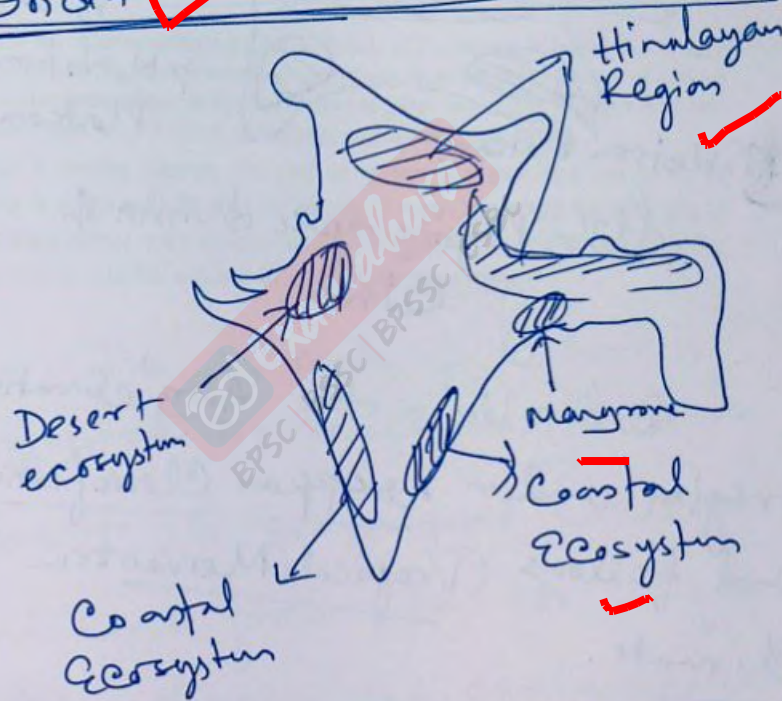


Fig:- India's major Physiographic division

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Bihar's Division | -)

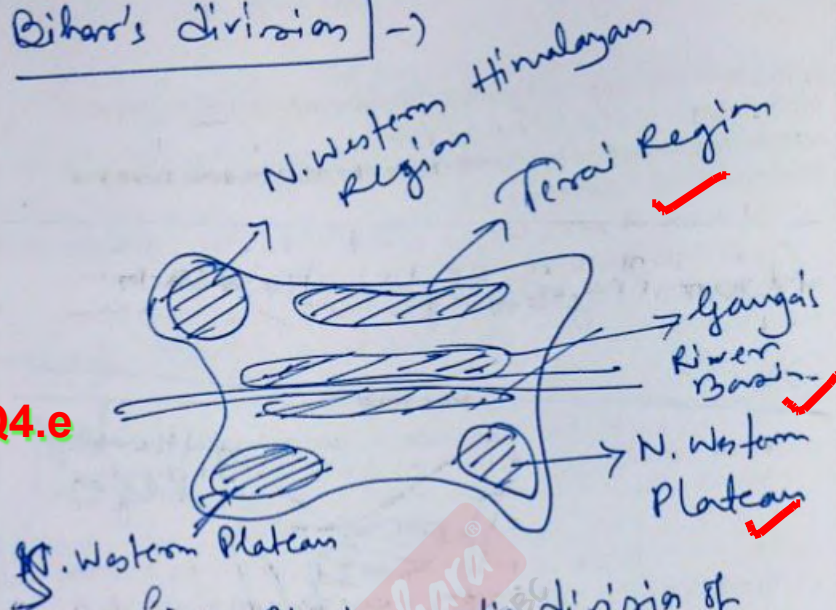


Fig. - Physiographic division of Bihar.

Bihar lies in the 'Awg' climatic region under Koeppean Classification and follows Tropical Monsoon Climate.

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5. (a) ☒

Explain the factors affecting the climate of Bihar. In what way and in how many parts the agro-climatic zone has been divided in the State? How many seasons are found here in a year? Discuss the effect of these seasons on agriculture.

38

बिहार की जलवायु को प्रभावित करने वाले कारकों की व्याख्या कीजिए। राज्य में कृषि जलवायु क्षेत्र (agro-climatic zone) को किस प्रकार से एवं कितने भागों में विभाजित किया गया है? यहाँ साल में कितने मौसम पाए जाते हैं? इन मौसमों के कृषि पर प्रभाव की विवेचना कीजिए।

Or / अथवा

(b) ☐

How are cities classified by the Directorate of Population in India? Throw light on the total population and their rate of growth as per 2011 Census of various classified cities. Discuss the population of Bihar as per 2011 Census and also throw light on the trend of working population in the State.

38

भारत में जनसंख्या निदेशालय द्वारा शहरों का वर्गीकरण किस प्रकार किया गया है? विभिन्न प्रकार से वर्गीकृत शहरों की 2011 की जनगणना के अनुसार कुल आबादी एवं उनकी वृद्धि दर पर प्रकाश डालिए। 2011 की जनगणना के अनुसार बिहार की जनसंख्या की विवेचना कीजिए एवं राज्य में कार्यशील जनसंख्या की प्रवृत्ति पर भी प्रकाश डालिए।

NA

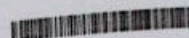
Q5.b

The climate of Bihar is affected by multiple factors due to its geographic location. And each factor has its unique role in shaping the agri-culture scenario of Bihar.

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Factors affecting Climate of Bihar

1) Geographical location of Bihar has tropical essence therefore lies in the zone under 'Awg' (Koeppen Classification)

2) Monsoon → S. West Monsoon largely effects the Climatic Culture of Bihar

[E.g.] In June-September Bihar receives highest rainfall (1140 mm)

3) Distance from Sea → As the state is far off located from the Sea, and thus landlocked — the

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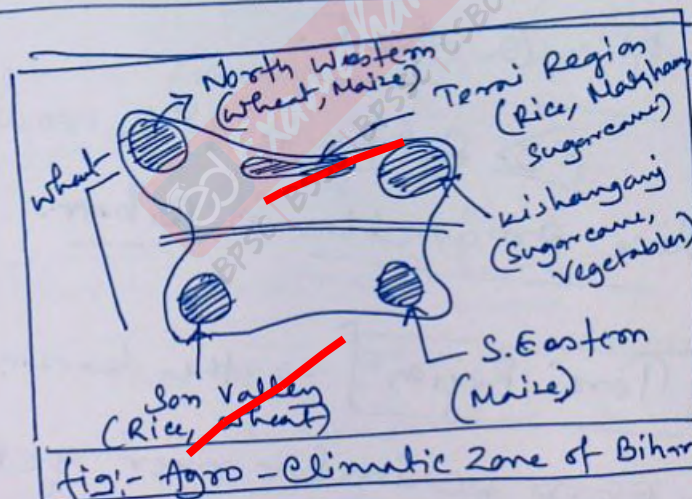


इस हार्गिफ में
उम्मीदवार
कुछ न लिखें
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Climate lacks moisture.

4) Presence of Himalaya →
Northern Bihar is neighbored
by Nepal and there the
great Himalayas affects the
climate of Bihar.

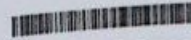
Division of Agro-Climatic Zone :-



अप्रयुक्त स्थान को क्रॉस (x) कर दें
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प्रश्नों के सामने
दिये गये सही बॉक्स में
Tick (✓) का
निशान लगाएँ।
Mark Tick (✓)
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Question No.

40



इस हार्जिस में
उम्मीदवार
कुछ न लिखें
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4777-770-77

1) North Western Region → Here West
Champaram, East Champaram, Rice,
Sitamarhi districts comprises of
wheat production mainly.
[e.g.] Marchha Rice of W. Champaram
got A. I. tag.

2) Son Valley → Rohitas & Kaimur
plateau instrumental in cultivation
of Rice & wheat.

[e.g.] Rohitas is 1st in rank
in Rice production in Bihar.

3) Terai Region → the basin
of peninsular river gets
Terai Region most fertile throughout

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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प्रश्नों के सामने
बने सही बॉक्स में
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निशान लगाएँ।
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Question No.

41



इस हानिए में
उम्मीदवार
कुछ न लिखें
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the year.

Here, Water-efficient crops
like Sugarcane, Rice etc. are
cultivated.

I.E.S. Mithila Makhana of
Mithila Region got G.I. tag.

4) South-Eastern Plateau →

The Bhagalpur, Munger
belt is famous for the maize
production largely.

5) North-Eastern Bihar →

The area receives maximum
rainfall and therefore is
instrumental in Sugarcane

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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प्रश्नों के सामने
दिए गए बॉक्स में
Tick (✓) का
निशान लगाएँ।
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appropriate
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Question No.

42

इस हार्डिंग में
उम्मीदवार
कुछ न लिखें
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Production.

E.g. → the kishanganj receives
maximum rainfall in Bihar.

Seasons found in a year →

→ In Bihar, one can find
four seasons mainly →

- ① Scorching Summer (Moist)
- ② Tropical Monsoon.
- ③ ~~Harsh Dry~~ Winter.
- ④ Pleasant Autumn.

Effect of Seasons on Agriculture →

① Summer Season → In Summer
season multiple cereal crops

अप्रयुक्त स्थान को क्रॉस (x) कर दें
Please Cross (x) unused space

प्रश्नों के सामने
बने सही बॉक्स में
Tick छक
निरान लगाएँ।
Mark Tick छक
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Question No.

43



इस हानिए में
उम्मीदवार
कुछ न लिखें
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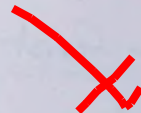
are sowed between March - May.

2) In June-September, there remains
Monsoon season, then Amam Dhan
is cultivated.

3) After Monsoon, before winter the
crops are cut.

4) In winter, boro rice is cultivated

Therefore, it is to be noted
that the agro-climatic region
of Bihar is largely influenced
by the seasons.



अप्रयुक्त स्थान को क्रॉस (x) कर दें
Please Cross (x) unused space

✓ 23 Q5.a

प्रश्नों के सामने
दिए गए बॉक्स में
Tick (✓) का
निशान लगाएँ।
Mark Tick (✓)
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Question No.

44

इस हार्जिण में
उम्मीदवार
कुछ न लिखें
Candidates
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6. (a) ☐ Explain 'trickle-down' theory of economics, its major elements, benefits, limitations and criticisms in context to Indian planning. 38

भारतीय नियोजन के संदर्भ में अर्थशास्त्र के 'ट्रिकल-डाउन' सिद्धान्त, इसके प्रमुख तत्व, लाभ, सीमाओं और आलोचनाओं को स्पष्ट कीजिए।

NA Q6.a

Or / अथवा

- (b) ☒ Describe 'monsoon system of India', its nature, types, climate change, distribution, synonyms, east and west jet stream and feasibility. 38

'भारत की मानसून प्रणाली', इसके स्वभाव, प्रकार, जलवायु परिवर्तन, वितरण, समानार्थी शब्द, पूर्वी एवं पश्चिमी जेट स्ट्रीम तथा व्यवहार्यता का वर्णन कीजिए।

Monsoon System of India largely follows the tropical path and in mid-June it comes to India from South-West Direction (then called South-West Monsoon) and retreats in mid September.

However, in Southern states the North-East monsoon also causes winter-rainfall.

अप्रयुक्त स्थान को क्रॉस (x) चार दें
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✓ 20. Q6.b

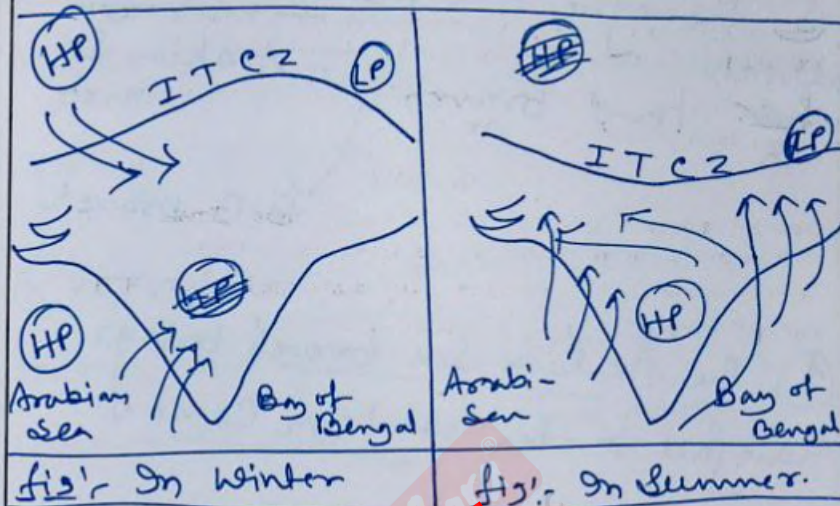
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निराकरण लगाएँ।
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इस हार्डिग में
उम्मीदवार
कुछ न लिखें
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Nature of Monsoon →



① In summer ⇒ when ITCZ moves towards the mainland of India, then ITCZ (Inter Tropical Convergence Zone) has Low Pressure Zone nearby it.

② The mainland due to retreating winter has High Pressure Area

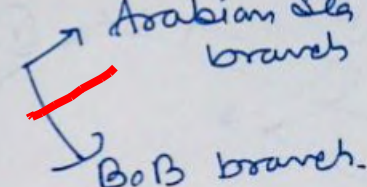
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प्रश्नों के सामने
दिए गये बॉक्स में
Tick (✓) का
चिह्न लगाएँ।
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appropriate
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Question No.

46

इस स्थान पर
कुछ न लिखें
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Over it.

③ Therefore, the Monsoon-trough
attracts ~~has~~ two branches 
Arabian Sea branch
BoB branch.

④ The Arabian Sea branch brings
rainfall to the Western Coast of
India.

⑤ The Bay of Bengal branch again
bifurcates and goes to North-East
and Northern plains and brings
rainfall. (Called S-W-Monsoon)

⑥ In Winter → When the monsoon
trough moves northward then
the Low Pressure Zone evaporates.

अप्रयुक्त स्थान को क्रॉस (x) कर दें
Please Cross (x) unused space

प्रश्नों के सामने
यने सही चिह्न में
Tick छ का
निशान लगाए।
Mark Tick छ
in the
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Question No.

47



इस हारिफ में
उम्मीदवार
कुछ न लिखें
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⑦ From the surrounding areas, there comes Western Disturbances in North-Western part of India that brings Winter Rain.

⑧ In South-Western Coast, this brings rainfall in winter in the name of North-Eastern Monsoon.

Types of Monsoon →

1. South-Western Monsoon (June to September)
2. Retreating Monsoon or North-Eastern Monsoon (November-December)

Climate Change →

Due to changing climatic

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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प्रश्नों के सामने
दिये गये टिक बॉक्स में
Tick ☐ का
निशान लगाएँ।
Mark Tick ☐
in the
appropriate
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Question No.

48

इस हानिपूर्वक
उम्मीदवार
कुछ न लिखें
Candidates
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margin

Conditions the monsoon become
erratic.

1) Monsoon brings higher rainfall to
some area and some area remains
deserted.

Distribution →

1) Higher Rainfall Area →
West Bengal, Odisha, Andhra Pradesh,
Telangana, Kerala, Tamil Nadu,
North-East India, Maharashtra.

2) Low Rainfall →
The area of
North-western
Rajasthan, Gujarat,
Delhi, Chandigarh.

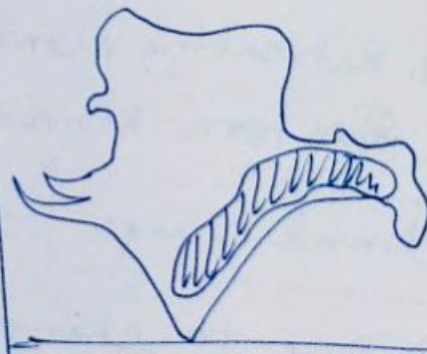


Fig: High Rainfall.

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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दिए गए चिह्न में
Tick (✓) का
निशान लगाएँ।
Mark Tick (✓)
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Question No.

49

Synonyms | →

Monsoon also known as
Kalbaishakhi in Bengal,
Mango shower in Kerala.



Fig:- low rainfall

इस हार्मिण में
उम्मीदवार
कुछ न लिखें
Candidates
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East & West Jet Stream & feasibility

- 1) Due to Eastern and Western Jet Stream the Monsoon pattern changes.
- 2) Eastern Jet stream has positive effect on Monsoon.
- 3) whereas Western Jet stream brings winter rainfall (Western Disturbances) in North-West India.

Therefore it should be concurred that Monsoon has large effect on our climatic system as well by affecting the Agriculture system as well.

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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प्रश्नों के सामने
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Tick (✓) का
चिह्न लगाएँ।
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Section—III

खण्ड—III

इस हार्गिण में
उम्मीदवार
कुछ न लिखें
Candidates
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7.

Write short answer of the following questions :

निम्नलिखित प्रश्नों के लघु उत्तर लिखिए :

(a) ☐

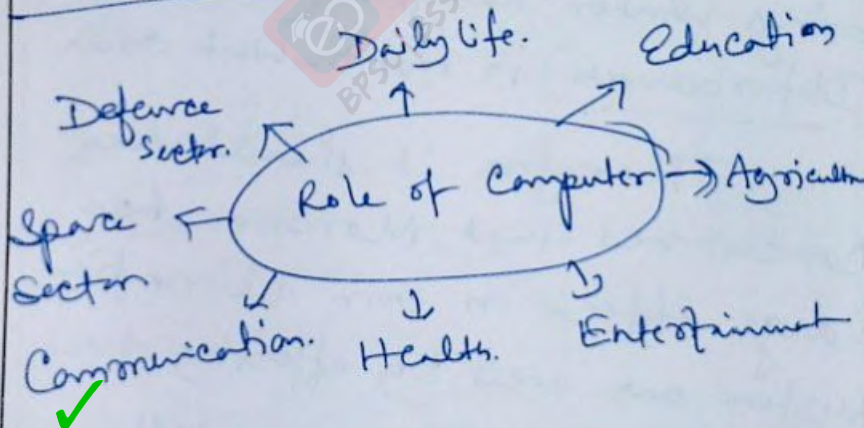
What is the role of computer in modern society?

आधुनिक समाज में कम्प्यूटर की क्या भूमिका है?

8

Computer also known as the
equipment that has become the
necessary for all.
It applies the binary bits
to produce Results.

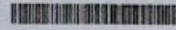
Role in Modern Society →



अप्रयुक्त स्थान को क्रॉस (x) कर दें
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प्रश्नों के सामने
दिए गए बॉक्स में
Tick (✓) का
निशान लगाएँ।
Mark Tick (✓)
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Question No.

51



इस हार्डिकॉप में
उम्मीदवार
कुछ न लिखें।
Candidates
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write in this
margin

1) Daily life → from the simplest android
to laptops, Computers are everywhere.

2) Education → with Smart Classes in
view, Computer revolutionize the
Education Sector.

3) Agriculture → Smart Jai'sh Mandi,
Digitulisation of Agriculture needs
Computer.

4) Health → scanning, imaging, diagnosis
and treatment needs use of Computer.

5) In Space & Defence Sector →
Computer establish connection with
satellites like IRNSS etc.

6) Computer has Entertainment
value too.

7) It generates employment in IT
Sector.

(Therefore, Role of Computer is vivid)

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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प्रश्नों के सामने
दिये गये बॉक्स में
Tick (✓) का
चिह्न लगाएँ।
Mark Tick (✓)
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52

इस हार्डिंग में
उम्मीदवार
कुछ न लिखें
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(b) ☐

With suitable examples, discuss the relationship between technology and social development.

समुचित उदाहरणों के साथ तकनीक (टेक्नोलॉजी) एवं सामाजिक विकास में सम्बन्ध की विवेचना कीजिए।

Technology and social development
often goes hand in hand



Inclusive society.

Relationship between these two →

1) With technological value added
the education system flourishes.

✓ e.g. Smart Class.

2) E-governance system elaborates
the role of relationship between
citizen & government.

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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प्रश्नों के सामने
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इस हार्डिंग में
उम्मीदवार
कुछ न लिखें
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Ex. CP-CRAMS Portal.

3) Drone technology help in agriculture sector for seed distribution and land mapping.

Ex. Bhu-Portal (Bihar).

1) With Remote sensing satellites the defence sector is well-equipped.

✓ 5) Space technology help in creating society on modern ideas.

Ex. Chandrayaan-3
launched recently made India's
goodwill in foreign platform.

Therefore, technology and
social development are complementary
to each other.

✓ 5 Q7.b

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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चिह्न लगाएँ।
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Question No.

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इस हार्गिफ में
उम्मीदवार
कुछ न लिखें
Candidates
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(c) ☐

Discuss the role of science and technology in industrial development of Bihar.

बिहार में औद्योगिक विकास में विज्ञान एवं प्रौद्योगिकी की भूमिका का वर्णन कीजिए।

Bihar has 51% area under industrially developed. With the application of science & technology it is going to excel.

Role of S&T in Industrial Development of Bihar

1) ✓ For land-mapping and land occupation Remote Sensing Satellites used.

P.S. Bhu-Portal.

2) Skill enhancement, people are being trained in drone technology.

3) ✓ For mining & quarrying latest technology in mining used through

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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प्रश्नों के सामने
दिए गये सही बॉक्स में
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निशान लगाएँ।
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इस हाशिए में
उम्मीदवार
कुछ न लिखें
Candidates
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write in this
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Satellite mapping.

1) Transportation cost is avoided through better logistics.

Ex. 2 PM-CATI SHAKTI & National Logistics Policy.

✓ 5) Grievance Redressal System enhanced to ease of Doing Business.

Ex. 3 Khajane Portal.

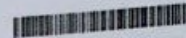
In this way, S&T has role in industrial development in Bihar.

✓ 4 Q7.c

अप्रयुक्त स्थान को क्रॉस (x) कर दें
Please Cross (x) unused space

प्रश्नों के सामने
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निशान लगाएँ।
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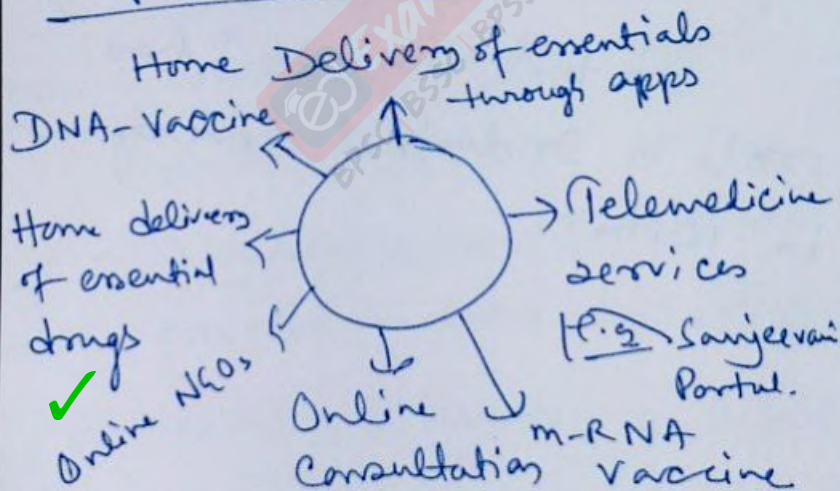
इस हाशिये में
उम्मीदवार
कुछ न लिखें
Candidates
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- (d) ☐ Discuss how modern technology helped us during corona pandemic.

कोरोना महामारी के समय नयी तकनीक ने हमलोगों की किस प्रकार सहायता की, इसकी विवेचना कीजिए।

During the Covid Pandemic
People were locked down in their
homes and normal life style
was hampered.

How Modern technology
helped?



अप्रयुक्त स्थान को क्रॉस (x) कर दें
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प्रश्नों के सामने
बने सही चिह्न में
Tick (✓) का
निशान लगाएँ।
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57



इस हार्डिंग में
उम्मीदवार
कुछ न लिखें
Candidates
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margin

1) Telemedicine Services brought ^{medical} daily problems of local household within the reach.

2) Online Consultation with allo-
pathic doctors mental therapies
was possible due to technological
advancement.

3) N40s ~~be~~ after receiving grievance
online helped senior citizens in need,
also covid patients.

4) Through apps like Zomato, Swiggy
Instamart - delivery of essentials
was possible.

Therefore, modern technology
changed the pandemic scenario in
country.

अप्रयुक्त स्थान को क्रॉस (x) कर दें
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प्रश्नों के सामने
दिये गये बॉक्स में
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चिह्नान लगाएँ।
Mark Tick ☒
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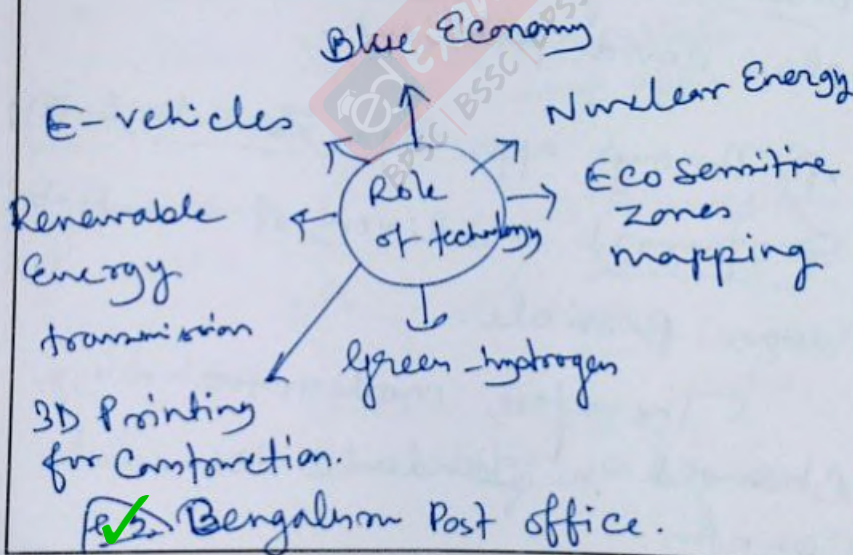
इस हासिए में
उम्मीदवार
कुछ न लिखें
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(e) ☐ Write a note on the role of technology in sustainable development.

सतत विकास में तकनीक (टेक्नोलॉजी) की भूमिका पर एक नोट लिखिए।

Sustainable development calls
for development of a society
without hampering the ecosystem

Role of technology in Sustainable
development



✓ Bengaluru Post office.

अप्रयुक्त स्थान को क्रॉस (x) कर दें
Please Cross (x) unused space

प्रश्नों के सामने
दिये गये बॉक्स में
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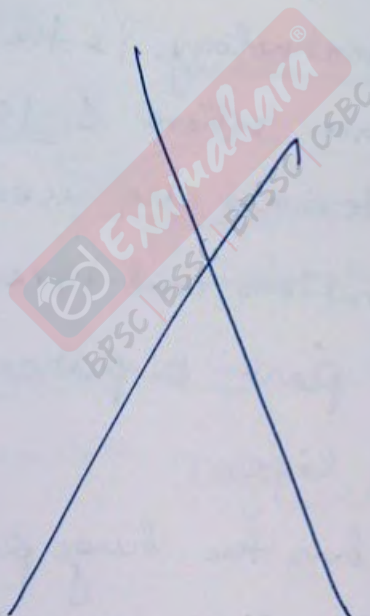
59



इस हार्डिल में
उम्मीदवार
कुछ न लिखें
Candidates
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margin

The sustainable development needs
added infrastructure and skilled
manpower to hold the ideals of
Ecosystem restoration within the
prescribed framework.

✓ 3 Q7.e



अप्रयुक्त स्थान को क्रॉस (x) कर दें
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प्रश्नों के सामने
दिए गये सही बॉक्स में
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निशान लगाएँ।
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इस हार्डिकॉप में
उम्मीदवार
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8. (a) ☐

Misuse of technology and its wrong application lead to pollute the environment and cause climatic changes. Discuss with suitable examples, how misuse of technology has become a curse to the environment of India. 36

NA Q8a

तकनीकी का दुरुपयोग एवं इसका गलत प्रयोग पर्यावरण के प्रदूषण की तरफ ले जाता है एवं जलवायु परिवर्तन का कारण बनता है। उचित उदाहरणों की सहायता से विवेचना कीजिए कि किस प्रकार भारत के पर्यावरण के लिए तकनीकी का दुरुपयोग एक अभिशाप बन गया है।

Or / अथवा

(b) ☒

Nanotechnologies have a huge potential to revolutionise our life. Discuss the emerging applications of nanotechnology in human health. 36

हमलोगों के जीवन में क्रांतिकारी परिवर्तन लाने में नैनोटेक्नोलॉजी के पास असीम सम्भावनाएँ हैं। मानव स्वास्थ्य के संदर्भ में नैनोटेक्नोलॉजी के उभरते प्रयोगों की विवेचना कीजिए।

Nanotechnology is the technology for the future where 1-100 nm scale materials are used to bring innovations and inventions that are part & parcel of our daily life.

It has the huge potential to revolutionise our life.

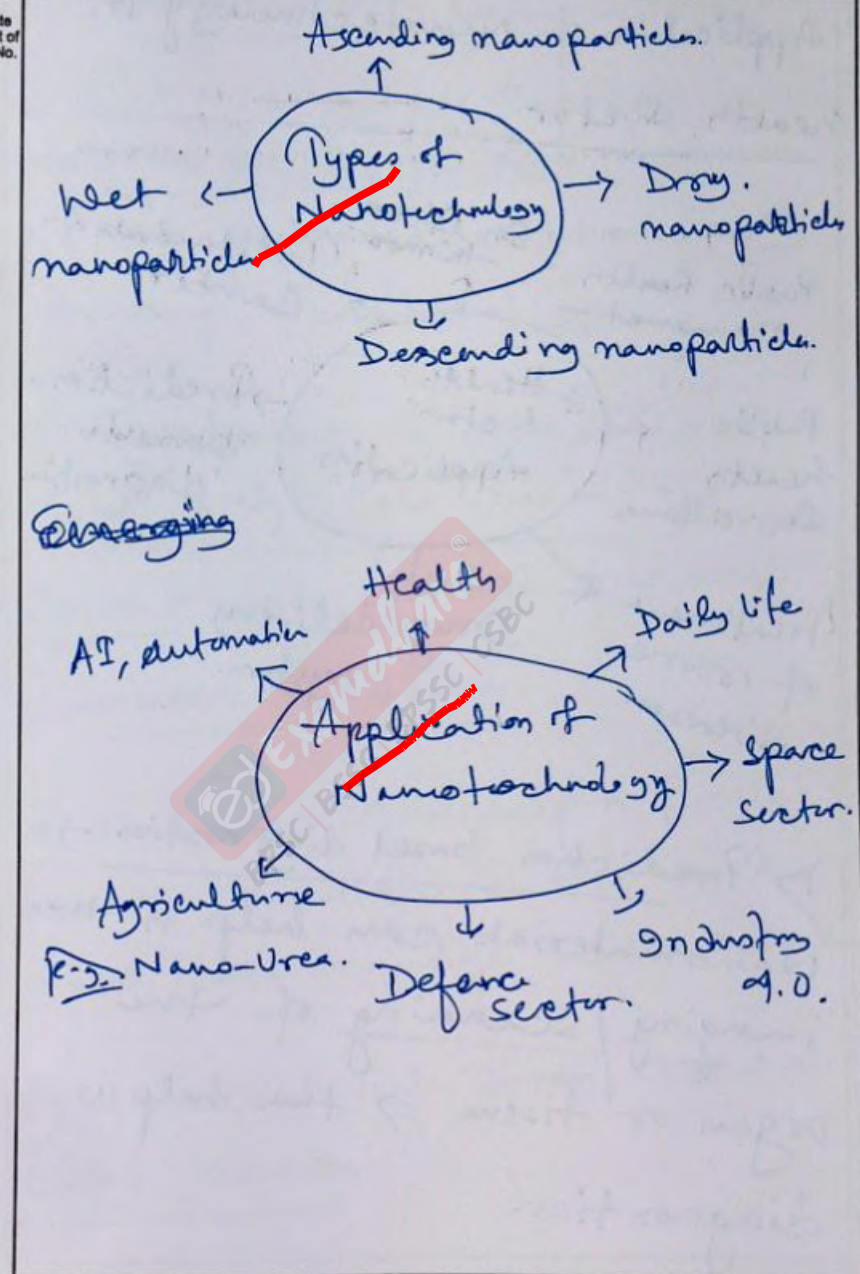
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निशान लगाएँ।
Mark Tick ☐
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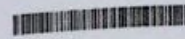
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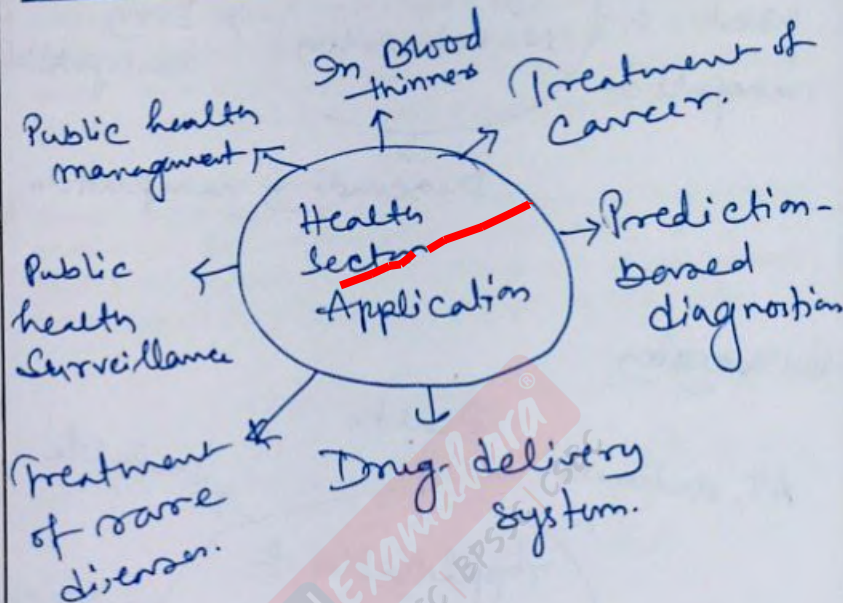
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Application of Nanotechnology in Health Sector



➤ Prediction-based diagnosis →
Nanomaterials can help in the
imaging/scanning of the
organ or tissue ⇒ thus help in
diagnosis.

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2) Drug-delivery system →

Nanomaterial can help in
delivers of drugs and materials
to the patient's system directly
through nanotubes.

3) Treatment of rare diseases
like Sickle Cell anaemia,

Cancer etc. possible through
Carbon nanotubes.

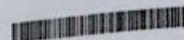
4) Nanodots can help in public
health surveillance too and
thus can manage health scenario.

5) Nanomaterials often used as
blood thinner.

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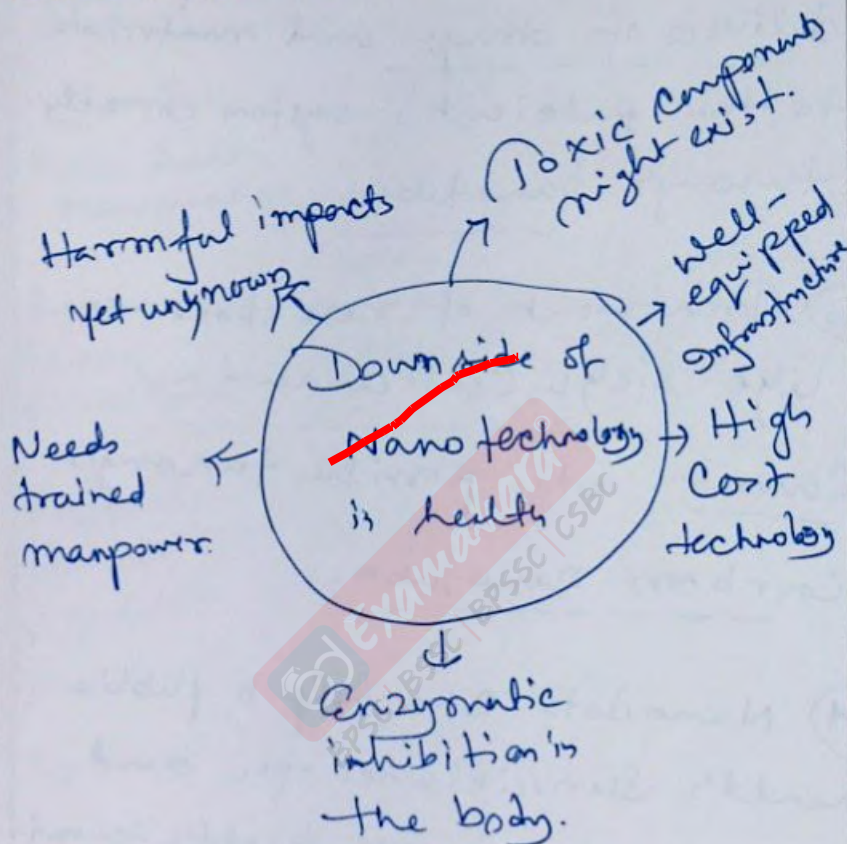
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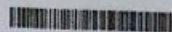
However, there remains some
downside too.



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Therefore, it should be noted that though nanotechnology proved to be the technology of essential, it needs additional care and awareness to benefit the larger mass.

Some Initiatives by Govt. of India

- 1) Nanotechnology became part of India's technology during 9th Five Year Plan.
- 2) Nanotechnology labs have been established.
- 3) Mission Nano-Science & Technology have been launched in 2007.

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बने सही बॉक्स में
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✓ 15 Q8.b

In this way, nanotechnology
transforms our lives.

— a —

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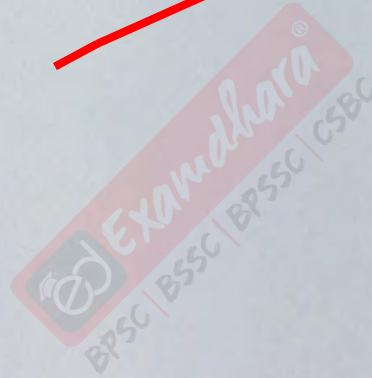
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