GEOMETRY

Name of Candidate: 

Test Code: 

Schedule: Geography - 02

Registration No. 

Place: M. Nagar

Time: 02:50 PM

Module: 

Coffee Break

Classroom

Distance Learning

Classroom & Distance Learning

EVALUATION INDICATORS

1. Alignment Competence
2. Context Competence
3. Content Competence
4. Language Competence
5. Introduction Competence
6. Structure - Presentation Competence
7. Conclusion Competence

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Total Marks Obtained

Remarks:

Signature of Examiner

INSTRUCTIONS:

1. Do furnish the appropriate details in the answer sheet (viz. Name, ID Number and Test Code) The Candidate should fill the index table, especially for him/her.

2. In the left margin, she/he should write only question number and in the right margin, nothing should be written.

3. The page number should be coded by the candidate himself and the range of page number related to the answer of the question should be used to complete the index table.

4. All Parts of the questions should be written at one place.

5. No Supplementary sheet shall be provided by the management. So the candidate is advised to accommodate required information within the space provided.

6. The candidate need not write anything in his/her answer that derogates the dignity of an individual or an organization.

7. The candidate should respect the instructions, given be the invigilator.

8. The Examinee has to submit the answer sheet to the invigilator after completion of examination.

9. However, he/she is allowed the take away the question paper.

103, 1st Floor B/1-2, Ansal Building, Behind UCO Bank, Dr. Mukherjee Nagar, Delhi-09

13/10/12

HARSH SIR
Role of dryland farming

Dryland farming is practicing of sustainable, subsistence or intensive tillage agriculture in dry regions where opportunities of irrigation or irrigation potential is available but not properly utilized.

Role:

1. Dryland areas include about 100 mha which is about 2.8% of the geographical area (329 mha) and is inefficient in grain production.

2. Dryland areas are mainly an outcome of variability of rainfall, erratic monsoon, increasing desertification due to unsustainable agri-practices, so there is lot of potential of production of crops if proper infrastructure and institutional factors are provided.
3. Millets, Jowar, Bajara, Ragi, Maize etc. produced in dryland areas are nutritious as well as low price grain which will be helpful in achieving nutritional security.

4. Pulses, oilseeds, groundnuts and potential for aquaculture will help in fulfilling protein deficiency in rural as well as urban areas.

5. Major dryland areas of India - dryland region (indicated)
5. It has the potential for increasing economy of agro-based areas through production of medicinal plants and herbs and also tree crops and plantation agriculture with boom of social forestry will help in ecological balance.

This will act as a deterrent to suicide of farmers and give better living condition to poor farmers and providing nutritious crops to country will help achieving food security.
Question 5 (b)

Physiographic regions of India

2. India is endowed with multi-cultural, multi-lingual and diverse population which is because of its physiographic diversity and unity in nature.

Major regions

1. North Himalayan Mountains
2. Northern Alluvial plains
3. Peninsular region
4. Coastal regions
5. Islands region

India is divided into major above physiographical regions. However, based on general geology, physical characteristics, types of soils, relief and drainage pattern...
India — Showing major physiographic regions (indicating mountain region, alluvial plain, peninsular region, coastal plain, islands).

and local variations these physiographic regions are further divided into different micro-regions. Accordingly, the vegetation type, agricultural practice, cropping pattern etc. change from one area to another. Physiographical regions have also affected the life of people and animals and thus adaptation to environment.
Further division

1. Alluvial plain
   a. Trans gangetic or Punjab plain
   b. Rajasthan plain
   c. Upper ganga doab
      - Rohilkhand
      - Ganga-Yamunan doab
   d. Middle ganga plain
      - Awadh plain
      - Bundelkhand plain
      - Mithila
      - Magadh Plain
   e. Lower ganga plain
      - Barind
      - Raib

2. Himalayan mountain
   - West Himalaya
   - Eastern Himalaya

3. Peninsular plateau
   a. North Deccan plateau
   b. South Deccan plateau
   c. Eastern plateau and hills
      - Central Highlands

4. Coastal plain
   - West coast plain
   - East coast plain
5(c)

Role of Marine resources and coastal regions

Marine resources are last frontiers of mankind and are such in diverse flora and fauna, and minerals and energy.

Role

1. Energy — Marine resources are full of energy and can fulfill current energy demands and will diversify our energy needs with lessening the burden on conventional energy resources.

   - Tidal energy
   - Wave energy
   - Salinity difference energy
   - OTEC — Ocean thermal energy
   - Biomass energy etc.
Minerals - Oceans are endowed with all kinds of minerals like Fe, Cu, Ni, Co, Mo, Br, NaCl, other salts etc. and also great concentration of polymetallic nodules.

Water - Demand of urban areas for drinking and domestic water supply can be fulfilled by ocean water with cost-effective technologies.
4. Living resources like fish, crabs, prawns, etc., can fulfill nutritional demands of the country.

5. Other sea weeds like, Sargassum, Enteromorpha, and kelp etc. can provide medicines, food for aquaculture and biomasses and fertilizers.

Marine resources have helped the development of coastal regions by helping with:

1. Provide fishing zones and thus providing employment opportunity on a large scale.

2. Marine resources have developed coastal region by providing occupation in transportation sector and further in harbour area.

3. 90% of the world trade is done by marine transportation, so it has helped
the coastal zone economic development.

4) Marine resources has increased the industrialization in coastal zone with textile, power, pharmaceutical based industrial development.
Sericulture is large scale production of silk from silk worms by providing adequate environment for silk worms through plantation of mulberry and other trees.

Challenges -

1. Sericulture as a practice was done by tribal people but due to intrusion of urban system, money lenders etc. cultural practice of silk production by tribals got degenerated.

2. Sericulture as new development has faced many challenges as cutting of trees for commercial purpose and widespread deforestation has ruined proper habitat for silk worms.

3. Due to rapid industrialization and urbanisation areas of silk production decreased.
4) Competition from china - silk and artificial silk cloth/products has affected production in India.

5) Vulnerability and less durability of silk cloth has decreased its demand and also, higher maintenance on silk cloth was a major reason.

6) Less economic gain to farmers in sericulture has reduced its interest in production.

Opportunities:

1) Due to recent change in fashion and new trends demand of silk products has risen.

2) Mixing of silk with cotton, polyester etc to make it more durable and maintenance free applications has risen.
interest in milk products and further demands.

3. Government initiative to provide credit and other infrastructure and institutional facilities with incentive-based schemes has affected the production.

4. There is lot of opportunities in semi-cultivation due to new plantation of mulberry trees in Karnataka and AP.

Thus it has provided employment to lakhs of people.
India is a monsoonal country and the fate of agriculture in India depend upon monsoon. Major irrigation in India for its 45% arable land is done by monsoonal rainfall and in dry times by irrigation canals, wells, tanks, tubewells etc. In utilizing wells and tubewells and for drinking purpose, ground water is utilized. This unscientific utilization of ground water has lead to ground water depletion or pollution and thus posed a major challenge of drinking water problem for Indian people.

Cause for pollution:

1. Use of excessive fertilizers (a product of green revolution) and industrial waste reaching to water-resources and further to ground water.
2. Over and excess utilization of ground water making increased content of arsenic, nitrates, sulphur, iron etc in ground water making it unfit for use.

3. Seepage of brackish or saline water into aquifers due to excessive use.

India showing well-irrigated areas
This excessive use of ground water and its pollution has affected the larger population because—

1. Majority of ground water rich areas is also a high population density area and any change in ground water condition or quality will affect a large population.

2. Due to dependence of high yield agriculture on ground water, it will affect the agriculture and food production at large.
3. Harmful chemicals from ground water like salts of bromine, arsenic, iron, nitrate has increased diseases and created a poor and malnourished poor people.

4. Increased cost of purification of ground water.

5. Polluted ground water in urban areas has affected the large urban population and has created war-like situation in urban areas.

However, it is not late till now to stop this aggravated problem of pollution and depletion of ground water and govt. has initiated various measures to control its pollution like

1. Pay- pricing policy
2. Economical distribution of water in urban areas
3. Ground water recharge by wells, rainwater and core water harvesting etc.
'Forests are the lungs of the earth',

it is the forests on which we can dwell

and our existence depend upon them.

Wildlife resources are proof of diversity
of nature and together they have

maintained the food chain and the

ecology. They are food, shelter and

a carrier for humankind.

challenge faced by forest and

wildlife resources

1. Excessive exploitation and unscientific

use of forest, trees and wildlife.

through poach poaching for fun and

hunting for food and other valuables

has unbalanced the ecology and

has created the challenge of further
development on many of the species
of flora and fauna are vanished and majority are in danger.

2. Widespread pollution by industrialization and increasing urbanization has either reduced the area under forest and number of wild life or vanished them.

3. Deforestation for agri-land and lumbering purposes has reduced both population.

4. Due to being Tropical region diverse species with no single species of stands of trees found in India, that has challenged lumbering process and commercial utilization.

5. Decrease in forest area has affected the environment as they act as carbon sink and help in purification of environment.
6. Wildlife resources are used for transportation as a food, providing milk, skin and hide. Thus, a reduction in their population has affected the rural economy and tribal people specially.

Critical analysis:

1. Change in food habit and food pattern has reduced burden on wildlife resources rather domesticated and farm poultry and beef production has fulfilled the gap.

3. Transportation means has now developed and thus new vehicles on coal & petroleum have replaced older transportation methods.

4. Rural economy however affected by forest and wildlife depletion but new form of social forestry (agro-forestry, farm forestry etc.) and domestication
at animals (like animal husbandry, revolution in pisciculture, aquaculture etc) has given new opportunities to people for employment and economy.

Major concern is environmental degradation and change in ecosystem should be tackled with serious efforts because this can't be replenished easily and new initiatives by government has helped a lot to improve forest and wildlife resources.
Indian agriculture, physiography, social customs, traditions, culture and population pattern is affected by the type, distribution, time, and variability of rainfall. India is a monsoon country with tropical to semi-tropical region affected by rainfall mostly confined in 3 months and with lot of variability and heterogeneity in its distribution.

Rainfall pattern

India rainfall pattern
[summer-winter rainfall]

Area affected by winter rainfall
Winter + summer rainfall
Other - summer rainfall
India - major rainfall and dry areas

On the basis of rainfall volume, India can be divided into:

1. Very high rainfall areas (> 200 cm of rainfall) → Meghalaya - Surna valley
2. Kerala and Malabar coast
3. Some part of Himachal Pradesh
3. High rainfall areas (>100 cm)
   - Upper and middle Ganga plain
   - Lower Ganges plain
   - Coromandel coast
   - Krishna-Godavari delta

4. Medium rainfall area (80-100 cm)
   - Adjacent regions of Ganges plain
   - Upper Marath region

5. Low rainfall area (40-80 cm)
   - Baghelkhand region
   - Chilka and Banda Karananga regions

6. Very low rainfall (<40 cm)
   - Rajasthan west and Upper Gujarat
   - Rainshadow region of Western ghats

Despite variation in rainfall pattern,
majority of the rainfall is in 3 months
and some in winter season. It is
not evident from the rainfall regions.
which is a deficient or surface region. Variability in moisture availability will be a better criteria to know about rainfall pattern.
Impact of rainfall pattern:

Impact of rainfall can be seen on all features of the region which can be categorized as:

1. Impact on vegetation:

   Vegetation of India is largely affected by the rainfall pattern and soil characteristics which are also affected by rainfall. In India, 100 cm is the line designated for the change in vegetation types.

   ![Diagram of vegetation types in India]

   - Mountainous/alpine vegetation
   - Dry to moist evergreen
   - Dense evergreen vegetation
   - Desert, cold or thorny
9. Impact on agriculture

Rainfall has affected the type and practice of agriculture. Rainshadow or rain-deficient areas practice dryland agriculture, and the rest depend on monsoon.

3. Impact on population density

India

High density of population
Rainfall and availability of moisture has facilitated agriculture which further has affected the population density at large. Majority of high population density areas fall in monsoonal rainfall with less variability areas.

Impact on soil nature and characteristics

Soil has been affected by rainfall since geological times. Soil leaching and erosion and formation of new fertile soil is a result of action of rainfall and surface water. There is a lot of variation in soil type due to rainfall variability.
Rainfall pattern — □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ ▥
1. The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate baseline.
2. The External Boundary and coast-line of India shown on this map agree with the Record/Master copy certified by the survey of India, Dehra Dun, vide their letter No. TB 88/62-A-3/A-2 dated 15-03-2010.
Q. 1 (a) 
Pamban Island -
It is situated in the Gulf of Mannar and is the last island toward Sri Lankan territory. It is having a military base and is also a tourist destination.

Distance between India and Sri Lanka (i.e., Pamban Island and Kaachchatiree Island) is only 16 km. This island is famous for its sand beaches and also for a fishing zone.

Q. 1 (b)
Question 1 (c) 10° Channel

10° degree channel divides Andaman and Nicobar Islands. It is also called as Duncan passage. This channel basically divides Little Andaman and Nicobar Island groups. Ferry route is provided for passage through this channel for movement. It is a fishing zone and is a strategic location due to current geopolitical situation in Indian Ocean.

(d) Parasnath hills

Parasnath hills are situated in Maharashtra and these hills are having humid warm climate, having scarp-like features. They are extension of Harishchandra Ghati situated south of Satpura mountains.
They are of major concern due to excessive deforestation and erosion and ecology in their hills is disturbed due to urbanisation.

1 (f) Banipah pass.
Banipah pass is situated in Jammu and Kashmir and nearby to Drass region. It connects the Jammu to Sri Nagar Region. Recently it's in news for because of a Tunnel is made nearby Banipah pass to shorten the distance between Jammu and Sri Nagar.

1(g) Kalimpong
Kalimpong is situated in Sikkim state and is about 40 km away from Gangtok. It is a hill station and major tourist location of Sikkim. This hill station is famous for its scenic beauty and rising sun and sunset scenes. Hills near Kalimpong are afflicted by landslides and are having wet climate with moist evergreen forests.
Question 1 (b) Nanconwy: -

Nanconwy is a small island situated in Lake District Island group. This island is made up of coral reefs and is deposition of calcium carbonate. Very small population and vegetation is found.

Q1 (c) Idduki Dam

This Dam is situated in Kerala. It is a major dam project of Kerala state which provide water and electricity peak demands to nearby Ernakulam (Kochi) and Ponavaram areas. Problem of silting and recurrent flood in recent times has increased in Idduki Dam.
(1) Ramganga River

It originates in upper Uttarakhand state nearby to origin of Yamuna. It is a left bank tributary to Ganga and meets Ganga near Firozabad. Ramganga river is snowfed and rainfed both and cut deep gorges in its upper reaches. Recently concern for pollution in Ramganga river has risen.

2. Kishwar
Q1 (a) Nohugi thiang.

Q1 (c) Kaswar
Question 6:

Geographical basis of India’s relations with its neighbouring countries

1. Border Issues: There is a contention with Pakistan, China, and Bangladesh with India and is a major challenge for India’s development and its relations with neighbours and strategic relations.
Border disputes

Pakistan
1. Sir Creek Issue in Gujarat/Pak border
2. PoK region and line of control
3. Area handed over by Pakistan to China

China
1. Aksai-Chin Area
2. Arunachal Pradesh

Bangladesh
1. Teknaf-Berga corridor
2. Indented coastal areas and islands
3. Other border (parbrak) areas in Assam and Tripura

Sri Lanka
1. Island issues
2. Fishing issues

2. River water disputes with Pakistan on Indus Water Treaty and other rivers like Kishanganga, Torsa, and Chenab, water distribution
issues. With China of Brahmaputra and with Bangladesh of Ganga and Kesta river disputes also with Nepal on Kosi and other rivers.

③ Rough Terrain, military bases etc

④ Coastal water and EEZ issues with Sri Lanka, Pakistan and Bangladesh.

Majority of the geographical basis of disputes with rivers are solved or under process of dispute resolution but there is a need for greater consensus and negotiations with neighbouring countries if India has to become a superpower and for strategic relations. India has further notified the different issues and challenges and resolved many of the issues.
Ques.- 6(c)

**Major challenges related to exploration of various minerals resource:**

Minerals are the **lifeline of the country**. A country rich in resources is having prospect of being prosperous and develop, however availability of resources is not a major criteria but availability of technology, population and utilization of resources combined will cut for development of country.

**Challenges:**

1. **Non availability of important industrial minerals** like - Magnesin, Molybdenum, Titanium, Indium etc., Uranium etc.

2. Low or under availability of minerals like, Cu, Al, Ni based etc.

3. Under utilization and over exploitation of some minerals.
4. Availability of technology and scientific methods is not proper in India.

5. Over-exploitation by unscientific method for coal extraction has created vast coal reserve unutilized and that can't be further used.

6. Non-availability and scarcity of skilled manpower for mineral extraction.

7. Coal is found is not of very good quality and moisture and ash-content is more.

8. Cu availability is less with per tonnage Cu mineral extraction is less than international standard.
Petroleum and natural gas availability is very less in India.

Exploration of petroleum and natural gas are a major challenge in coastal areas due to seepage of water and obsolete technologies of extraction.

Major reserves are either very small or not fit for commercial exploration.
Extraction of marine resources are not on full scale due to:
1. Social and customary reasons
2. Non-availability of mechanized boats
3. Less technology improvement and research in vast oceanic minerals