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Unit - 3

India - Agriculture

I) Choose the correct answer.

1. The soil which is rich in iron oxides is
a) Alluvial b) Red c) Black d) Alkaline.

Ans → b) Red

2. Which of the following organisation has divided the Indian soils into 8 major groups?
a) Indian council of Agricultural Research
b) Indian Meteorological Department
c) Soil survey of India
d) Indian Institute of soil science.

Ans → a) Indian council of Agricultural Research

3. The soils formed by the rivers are;
a) Red soils b) Black soils c) Desert soils d) Alluvial soils.

Ans → d) Alluvial soils

4. _____ dam is the highest gravity dam in India.
a) Hirakud dam b) Bhakra Nangal dam
c) Mettur dam d) Nagarjuna Sagar dam

Ans → b) Bhakra Nangal Dam

5. _____ is a cash crop.
a) Cotton b) Wheat c) Rice d) Maize

Ans → a) Cotton.

6. Black soils are also called as
a) Arid soil b) saline soils c) Regur soils d) mountain soils.

Ans → c) Regur soils

7. The longest dam in the world is _____.
a) Mettur dam b) Kosi dam
c) Hirakud dam d) mountain soils.

Ans → c) Hirakud dam

8. Which crop is called as 'Golden Fibre' in India?
a) Cotton b) Wheat c) Jute d) Tobacco.

Ans → c) Jute.

II] Consider the given statements and choose the right option given below.

1) Assertion (A): Horticulture involves cultivation of fruits, vegetables and flowers.
Reason (R): India ranks first in the world in the production of mango, banana and citrus fruits.
a) Both (A) and (R) are true and (R) explains (A)
b) Both (A) and (R) are true (R) does not explain (A)
c) (A) is correct (R) is false.
d) (A) is false (R) is true.

Ans → a) Both (A) & (R) are true and (R) explain (A)

2) Assertion (A): Alluvial soils is formed by the deposition of eroded and decayed materials brought by the rivers.
Reason (R): Paddy and wheat are grown well in the soil.
a) Both (A) & (R) are true and (R) explain (A)
b) Both (A) & (R) are true and (R) does not explain (A).

c) (A) is correct (R) is false.
d) (A) is false (R) is true.

Ans → d) (A) is false (R) is true.

III] Pick the odd one out.

1) a) wheat b) Rice c) millets d) coffee

→ d) coffee

2) a) Khadar b) Bhangar c) Alluvial soil d) Black soil.

→ d) Black soil.

3) a) Inundation canals b) Perennial canals.
c) Tanks d) Canals.

→ c) Tanks

IV] match the following.

1.	Sugar bowl of India	a) Mahanadi
2.	Coffee	b) Golden revolution
3.	Tehri	c) Karnataka
4.	Hirakud	d) Uttar Pradesh & Bihar
5.	Horticulture	e) Highest dam in India.

Ans → 1 → d ; 2 → c ; 3 → e ; 4 → a ; 5 → b

V] Answer in brief

1. Define soil.

→ Soil is the uppermost layer of the land surface, usually composed of minerals, organic matter, living organisms, air and water.

2. Name the types of soil found in India.

→ There are 8 major groups of soil found in India, they are - Alluvial soil, black soil, Red soil, Laterite soil, forest and mountain soil, arid and dessert soil, saline and alkaline soil, Peaty and marshy soils.

3. State any 2 characteristics of black cotton soil.

→ • Black cotton soil is sticky (clayey) when wet and develops cracks when dry.
• It has high degree of moisture retentivity.

4. Define Agriculture.

→ Agriculture is a procen of producing food for people, fodder for cattle, fiber and many other desired products by cultivation of certain plants and raising of domesticated animals (livestock).

5. State the types of agriculture practices in India.

→ Types of agriculture practices in India are :
a) Subsistence farming
b) Shifting agriculture
c) Intensive farming
d) Dry farming
e) Mixed farming agriculture
f) Terrace cultivation.

6. Name the seasons of agriculture in India?

→ Seasons of agriculture in India are:

1. Kharif season
   → (June - September)
2. Zaid season
   (April - June)
3. Rabi season
   (October - march)

7. Mention the plantation crops of India.

→ Tea, coffee, rubber and spices are major plantation crops of India.

8. What do you mean by livestock?

→ • Livestock consists of cattle, goats, buffaloes, sheeps and pigs; poultry.
• It is an integral component of the farming system in India, due to its multi functional outputs and contribution to socio cultural security.

9. Write a brief note on categories of fisheries in India?

→ • Fisheries in India are a very important economic activity & a flourishing sector with varied resources & potential.
• In India, fishing is of 2 types [Marine/Sea Fisheries; Inland or fresh water fisheries.

a) Marine or Sea fisheries:
• includes coastal, Offshore and deep sea fisheries mainly on continental shelves.
• Kerala leads in marine fish production in India.

b) Inland or fresh water fisheries:

- Rivers, lakes, canals, reservoirs, ponds, tanks etc are the sources of fresh water fisheries.
- About 50% of country's total fish production comes from inland fisheries.
- Andhra Pradesh is leading producer in India.

vi] Give Reasons:

1. Agriculture is the backbone of India.

→
- More than 50% of Indian population is engaged in agriculture & its allied industries.
- 25% of our National Income comes from agricultural sector.
- It is the livelihood for the Indian population.

Hence Agriculture is the backbone of India.

2. Rain water harvesting is necessary.

→
- Rain water harvesting: is an activity of direct collection & storage of water for our purpose or it can be stored in ground for later withdrawal.
- India experiences tropical monsoon type of climate and has seasonal rainfall.
- Rainfall is not uniform and highly erractic and most of the times scanty. Hence it is necessary to perform rain water harvesting.

VII] Distinguish between the following:

1. Rabi and Kharif crop seasons.

RABI	KHARIF
• Rabi crops are sown in beginning of winter (ie) in November	• Kharif crops are sown in the beginning of monsoon (ie) in June.
• The crops are harvested in the beginning of summer (ie) in march.	• The crops are harvested in early days of November.
• Major crops: Wheat, tobacco, mustard, pulses, linseed and grains.	• Major crops: Paddy, maize, cotton, millets, jute and sugarcane.

2. Inundation canal and Perennial Canal.

Inundation Canal	Perennial Canal.
• Water is taken out directly from the rivers without making any kind of barrage or dam.	• These are developed from perennial rivers by constructing barrage to regulate the flow of water.
• These canals are not useful for irrigation.	• These canals are useful for irrigation.
• Found in Punjab where large number of inundation ~~canals~~ canals draw water from sutlej river.	• Found in Punjab, Haryana & UP.

3. marine fishing and inland fishing.

Marine fishing	Inland fishing.
• It includes coastal off-shore and deep sea fisheries mainly on the continent shelf. • Kerala leads in the marine fish production in India.	• Rivers, lakes, canals, reservoirs, ponds, tanks etc. • Andhra Pradesh leading producer in India

4. Alluvial soils and black soils.

Alluvial soil	Black soil.
• formed from sediments deposited by rivers. • It is rich in potash. • It has moisture retention capacity. • Suitable for cultivation of Paddy, wheat & sugarcane. • Found in Punjab, Haryana, U.P, Bihar & West Bengal. Mahanadi, Godavari, Krishna Kaveri rivers deposits alluvial soil along their courses.	• formed from weathering of igneous rocks. • It is rich in lime, iron, potash, alumina, calcium & magnesium carbonates. • High moisture retention capacity. • Suitable for cultivation of cotton, jowar and millets. • Largely found in Deccan traps. Found in valleys of Godavari, Krishna, Narmada and Tapti.

VIII] Answer in paragraph.

1. State any 5 types of soil in India and explain the characteristics and distribution of soil.

→

SOIL TYPE	CHARACTERISTICS	DISTRIBUTION
① Alluvial soil	Khadar - light coloured, more siliceous. Bhangar - the older alluvium composed of lime nodules & has clayey composition. It is dark in colour. * Formation - sediments deposited by streams & rivers when they slowly loose. * Chemical properties : rich in potash, phosphoric acid lime & carbon compounds but poor in nitrogen. * Nature - sandy-loam-silt-clay profile shows no marked differentiation.	Ganga and Brahmaputra river valleys; Plains of Uttar Pradesh, Uttaranchal, Punjab, Haryana, West Bengal & Bihar & river mouth of east coast.
② Red soil	* Formation - decomposition of ancient, crystalline rocks like granites & gneisses & from rock type. * Chemical properties - rich in minerals, such as iron & magnesium. Deficient in nitrogen, humus, phosphoric acid & lime. * Nature - light texture, porous friable presence of limited soluble salts. Clay fraction of red soils generally consists of Kaolinitic minerals	Eastern parts of Deccan Plateau, southern states of Kerala, Tamil Nadu Karnataka & Chota Nagpur Plateau (Jharkhand).

③ Laterite soils	* formation : formed in regions where alternate wet & hot dry conditions prevail. It is formed by process of leaching. * chemical properties :- composed mainly of hydrated oxides of iron & aluminium. * Nature : more acidic on higher areas poor in high level, cannot retain moisture while plains they consist of heavy loam & clay and easily retain moisture.	Assam hills, hill summits of Kerala & Karnataka & eastern Ghats & region of Odisha.
④ Saline & alkaline soils.	* formation : formed due to ill drainage which causes water logging, injurious salts are transferred from subsurface to top soil by the capillary action, it causes salinisation of soils * Chemical Properties - liberate sodium, magnesium & calcium salts & sulphurous acid. * Nature - consists of an excess of sodium salts & mineral fragments which are weathering.	Andhra Pradesh & Karnataka. In the drier parts of Bihar, Uttar Pradesh, Haryana, Punjab, Rajasthan and Maharashtra.
⑤ forest & mountain soils.	Differ from region to region depending on climate formation - due to mechanical weathering caused by snow, rain, temperature variation Chemical properties - are deficient in potash, phosphorus & lime. Nature - light, sandy, thin & found with the pieces of rock, Their character changes with parent rocks. Very rich in humus, slow decomposition makes it acidic.	Coniferous forest belts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand & Sikkim. Eastern & western ghats.

2. What is multipurpose projects and write about any two Multipurpose projects of India.

→ • Multipurpose projects is a scientific management of water resources in our country.
• Construction of dam across rivers is aimed to serve many purposes such as irrigation, hydro power generation, floods control, water supply for drinking and industrial purpose, development of fisheries, navigation etc.
• In India we have many multipurpose River valley projects:

* Bhakra Nangal Project.
* It is the largest and most important river valley project named after two dams built at Bhakra & Nangal to harness the water ~~to~~ of Sutlej river.
• This dam is highest gravity dam in the world and forms the Gobind Sagar Reservoir.
• It irrigates the states of Punjab, Haryana & Rajasthan.
• Generates about 500 megawatt of hydropower electricity.
• Second tallest dam in Asia with a height of 226 m.

* Mettur Dam
• Mettur Dam has been constructed on the river Kaveri at Salem. The reservoir behind this dam has been called Stanley Reservoir with a height of 176 ft.
• Irrigates about 12 districts of TamilNadu in Kaveri delta basin.
• 40 megawatts of hydropower is being produced from this project.

3. Bring out the characteristics of Intensive and Plantation farming.

→ * Intensive farming:

- It involves various types of agriculture with higher levels of input such as capital & labour, per unit of agricultural land area.
- It aims to maximise yields from available land through various means such as heavy use of pesticides & chemical fertilizers.
- Intensive farming is practised in Punjab, parts of Rajasthan, Uttar Pradesh and Madhya Pradesh in India.

* Plantation farming.

- It is a single crop farming, practiced in a large area.
- Crops are mainly grown for the market.
- It is both labour intensive and capital intensive.
- It has an interface of agriculture and industry.
- A developed network of transport and communication connecting the plantation processing industries & markets play an important role in development of plants.

Example - tea, coffee, rubber, sugarcane etc.

4. Examine the geographical conditions favourable for cultivation of rice and wheat.

→ Geographical conditions favourable for cultivation of ~~etc~~:

a) Rice:

- Rice is an indigenous crop.
- Soil - Deep fertile clayey or loamy soils.
- Rainfall and temperature -: Mean temperature of 24°c & annual rainfall of 150cm.

b) Wheat:

Wheat is temperate or sub-tropical crop.

Soil: fertile alluvial soil or mixed soil is ideal for wheat cultivation.

Rainfall: moderate 50-100cm rainfall

Temperature: Requires 10°-15°C at time of sowing and 20°-25°C at time of ripening.