QUESTION 1.

Consider the following statement about India's agricultural sectors:

1. The 54.6% of the India's total workforce is engaged in agricultural and allied sector activities (Census 2011)

2. Agriculture contributed 25% to the country's Gross Value Added for the year 2017-18 (at current prices).

Which of the statements given above is/are correct?

a) 1 Only
b) 2 Only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: A
Your Answer: C
Explanation

Solution (a)

Basic Information:

· Agriculture plays a vital role in India's economy. 54.6% of the population is engaged in agriculture and allied activities (census 2011) and it contributes 17% to the country's Gross Value Added (current price 2015-16, 2011-12 series).

· As per the Land Use Statistics 2014-15, the total geographical area of the country is 328.7 million hectares, of which 140.1 million hectares is the reported net sown area and 198.4 million hectares is the gross cropped area with a cropping intensity of 142%.

· The net sown area works out to be 43% of the total geographical area.

· The net irrigated area is 68.4 million hectares.

· There has been a continuous decline in the share of agriculture and allied sectors in the GVA from 18.2 percent in 2014-15 to 16.0 percent in 2018-19.

· The Agriculture and Allied sector witnessed a growth of -0.2 per cent in 2014- 15, 0.6 per cent in 2015-16, 6.3 in 2016-17, 5.0 per cent in 2017-18 and 2.7 per cent in 2018-19 at 2011-12 basic prices.

Statement Analysis:

Statement 1	**Statement 2**
Correct	**Incorrect**

54.6% of total population depends on agriculture and allied activities, hence agriculture plays an vital role in India's economy.	It accounts for 17.1% of the country's Gross Value Added (GVA) for the year 2017-18 (at current prices).

(Source: http://agricoop.nic.in/sites/default/files/AR_2018-19_Final_for_Print.pdf)

QUESTION 2.

Which of the following factor(s) have impact on land-use pattern of a country?

1. The size of the economy

2. the composition of the economy

3. Size of population

Select the correct code from the following:

a) 1 Only
b) 1 and 2 Only
c) 2 and 3 Only
d) 1, 2 and 3

Correct Answer: D
Your Answer: D
Explanation

Solution (d)

Basic Information:

· Land-use in a region, to a large extent, is influenced by the nature of economic activities carried out in that region.

· However, while economic activities change over time, land, like many other natural resources, is fixed in terms of its area.

At this stage, one needs to appreciate three types of changes that an economy undergoes, which affect land-use.

· The size of the economy (measured in terms of value for all the goods and services produced in the economy) grows over time as a result of increasing population, change in income levels, available technology and associated factors. As a result, the pressure on land will increase with time and marginal lands would come under use.

· Secondly, the composition of the economy would undergo a change over time. In other words, the secondary and the tertiary sectors usually grow much faster than the primary sector, specifically the agricultural sector. This type of change is common in developing countries like

India. This process would result in a gradual shift of land from agricultural uses to non-agricultural uses.

· Thirdly, though the contribution of the agricultural activities reduces over time, the pressure on land for agricultural activities does not decline.

(Source: Class XII NCERT - India: People and Economy)

QUESTION 3.

Consider the following statements:

1. The total area coverage under food grains has decreased in 2018-19 compared to 2017-18.

2. The total area coverage under pulses has increased in 2018-19 compared to 2017-18.

3. The total pulses production during 2018-19 is more than the total pulses production in 2017-18.

Which of the statements given above is/are correct?

a) 1 Only
b) 1 and 2 Only
c) 3 Only
d) 1, 2 and 3

Correct Answer: A
Your Answer: Unanswered
Explanation

Solution (a)

Basic Information:

Production in 2018-19 and 2017-18

(Million Tonnes)

Crop	2018-19 (2nd Advance Estimates)	2017-18 (4th Advance Estimates)	Absolute Difference (2018-19 over 2017-18)	Percentage Increase/decrease (+)/(-) in 2018-19 over 2017-18
Foodgrains	281.37	284.83	-3.46	-1.21
Oilseeds	31.50	31.31	0.19	0.61
Sugarcane	380.83	376.90	3.93	1.04
Cotton@	30.09	34.89	-4.80	-13.76
Jute& Mesta*	10.07	10.14	-0.07	-0.69

@ Production in million bales of 170 kg each.

* Production in million bales of 180 kg each

Source: Directorate of Economics & Statistics, Department of Agriculture, Cooperation & Farmers Welfare

Statement Analysis:

Statement 1	Statement 2	Statement 3
Correct	**Incorrect**	**Incorrect**
The total area coverage under food grains is estimated at 1227.38 lakh hectares during 2018-19 (as per 2nd Advance Estimates) as compared to 1275.63 lakh hectares in 2017-18 (as per 4th Advance Estimates).	The area coverage under pulses is estimated at 282.82 lakh hectares as compared to 299.93 lakh hectares in previous year.	Total pulses production during 2018-19 is estimated at 24.02 million tonnes which is lower by 1.21 million tonnes than the previous year's production of 25.23 million tonnes.

(Source: http://agricoop.nic.in/sites/default/files/AR_2018-19_Final_for_Print.pdf)

QUESTION 4.

To achieve the target of doubling the farmers' income by 2022, an Inter-Ministerial Committee has identified main sources of income growth. Which of the following are the identified main sources of farmers' income growth?

1. Improvement in crop and livestock productivity

2. savings in the cost of production

3. increase in the cropping intensity

4. diversification towards high value crops

5. shift from farm to non-farm occupations

Select the correct code from the following:

a) 1, 2, 3 Only
b) 2, 3, 4 and 5 Only
c) 3, 4 and 5 Only
d) 1, 2, 3, 4 and 5

Correct Answer: D
Your Answer: A
Explanation

Solution (d)

Basic Information:

The Government has set a target of doubling of farmers' income by the year 2022.

An Inter-Ministerial Committee has been constituted to examine issues relating to doubling of farmers' income.

The IMC has recommended a strategy to achieve doubling of farmers' income in real terms by the year 2022.

The Committee has identified main sources of income growth:

· improvement in crop and livestock productivity;

· resource use efficiency or savings in the cost of production;

· increase in the cropping intensity;

· diversification towards high value crops;

· improvement in real prices received by farmers;

· and shift from farm to non-farm occupations.

The Committee is also looking into the investments in agriculture e.g. increasing public investments for agriculture-rural roads, rural electricity, irrigation; and the need for policy support to enable investments by corporate sector in agriculture.

To achieve the target of doubling farmers' income, a number of schemes and programmes are being implemented by the Government i.e. Pradhan Mantri Krishi Sinchayee Yojana, Pradhan Mantri Fasal Bima Yojana, Paramparagat Krishi Vikas Yojana, Soil Health Scheme, Neem Coated Urea and e-National Agriculture Market. These are a few of the Department's flagship programs that aim to improve the productivity and earnings of farmers.

(Source: http://agricoop.nic.in/sites/default/files/AR_2018-19_Final_for_Print.pdf)

QUESTION 5.

Consider the following statements:

1. India is the largest producer, consumer and importer of pulses in the world

2. India is the largest producer of milk.

3. India is the largest fruit and vegetable producer in the world

Which of the statements given above is/are correct?

a) 1 and 2 Only
b) 1 and 3 Only
c) 2 and 3 Only
d) 1, 2 and 3

Correct Answer: A
Your Answer: D
Explanation

Solution (a)

Basic Information:

Agriculture, with its allied sectors, is the largest source of livelihoods in India. 70 percent of its rural households still depend primarily on agriculture for their livelihood, with 82 percent of farmers being small and marginal. In 2017-18, total food grain production was estimated at 275 million tonnes (MT).

Statement Analysis:

Statement 1	**Statement 2**	**Statement 3**
Correct	**Correct**	**Incorrect**
India is the largest producer (25% of global production), consumer (27% of world consumption) and importer (14%) of pulses in the world.	India's annual milk production was 165 MT (2017-18), making India the largest producer of milk, jute and pulses	India is the second-largest fruit and vegetable producer, accounting for 10.9% and 8.6% of the world fruit and vegetable production, respectively.

(Source: http://www.fao.org/india/fao-in-india/india-at-a-glance/en/)

QUESTION 6.

Consider the following statements with reference to dryland farming:

1. It is largely confined to the regions having annual rainfall less than 75 cm.

2. Hardy and drought resistant crops such as ragi, bajra, moong, gram, etc, are grown under it.

Which of the statements given above is/are correct?

a) 1 Only
b) 2 Only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: C
Your Answer: C
Explanation

Solution (c)

Basic Information:

· On the basis of main source of moisture for crops, the farming can be classified as irrigated and rainfed (barani).

· Rainfed farming is further classified on the basis of adequacy of soil moisture during cropping season into dryland and wetland farming.

· In India, the dryland farming is largely confined to the regions having annual rainfall less than 75 cm. These regions grow hardy and drought resistant crops such as ragi, bajra, moong, gram and guar (fodder crops) and practise various measures of soil moisture conservation and rain water harvesting.

· In wetland farming, the rainfall is in excess of soil moisture requirement of plants during rainy season. Such regions may face flood and soil erosion hazards. These areas grow various water intensive crops such as rice, jute and sugarcane and practise aquaculture in the fresh water bodies.

(Source: Class XII NCERT - India: People and Economy)

QUESTION 7.

Consider the following statements:

1. Its cultivation in India is done during winter i.e. rabi season.

2. India is second largest producer of this crop in the world after China

3. Uttar Pradesh is the largest producer of this crop in India.

The above statements are related to which crop?

a) Rice
b) Jowar
c) Sugarcane
d) Wheat

Correct Answer: D
Your Answer: D
Explanation

Solution (d)

Basic Information:

· Wheat is the second most important cereal crop in India after rice.

· India accounts for about 8.7% of the total wheat production in the world, and 13% of all cultivated land in India is dedicated to cultivation of this crop. (https://www.worldatlas.com/articles/top-wheat-producing-countries.html)

· It is primarily a crop of temperate zone. Hence, its cultivation in India is done during winter i.e. rabi season.

· About 85 per cent of total areaunder this crop is concentrated in north and central regions of the country i.e. Indo-Gangetic Plain, Malwa Plateau and Himalayas up to 2,700 m altitude.

· Being a rabi crop, it is mostly grown under irrigated conditions. But it is a rainfed crop in Himalayan highlands and parts of Malwa plateau in Madhya Pradesh.

· Uttar Pradesh, Punjab, Haryana, Rajasthan and Madhya Pradesh are five leading wheat producing states.

· The yield level of wheat is very high (above 4,000 k.g. per ha) in Punjab and Haryana whereas, Uttar Pradesh, Rajasthan and Bihar have moderate yields. The states like Madhya Pradesh, Himachal Pradesh and Jammu and Kashmir growing wheat under rainfed conditions have low yield.

(Source: Class XII NCERT - India: People and Economy)

QUESTION 8.

Consider the following pairs:

Crop	Top Producer State
1. Jowar	Maharashtra
2. Bajra	Gujarat

3. Tea Assam

4. Cotton Maharashtra

Which of the statements given above is/are correct?

a) 1, 2 and 4 Only
b) 1 and 3 Only
c) 2 and 3 Only
d) 2, 3 and 4 Only

Correct Answer: B
Your Answer: B
Explanation

Solution (b)

Statement Analysis:

Statement 1	Statement 2	Statement 3	Statement 4
Correct	Incorrect	Correct	Incorrect
Maharashtra (MH) is top producer with 36.57% of total production in India, followed by Karnataka (22.83%), MP (11.52%)	Rajasthan is top producer with 41.03% of total production in India, followed by UP (19.69%), GJ (10.07%)	Assam topped the production table with 33.35 mkg, followed by West Bengal with 29.14 mkg	Gujarat (GJ) is top producer with 126.37 lakh bales of 70kg each, followed by MH 65.46, Telangana 47.54.

(Source: https://agriexchange.apeda.gov.in/ , https://pib.gov.in/newsite/PrintRelease.aspx?relid=181286)

QUESTION 9.

Which of the followings factors determine the agricultural practices, cropping patterns and their productivity?

1. Land tenancy and size of land holding

2. Credit and marketing

3. High yielding Varieties and farm machinery

Select the correct code from the following:

a) 1 and 2 Only
b) 1 and 3 Only
c) 2 and 3 Only
d) 1, 2 and 3

Correct Answer: D
Your Answer: D
Explanation

Solution (d)

Basic Information:

The agricultural practices, cropping patterns and their productivity are closely determined by the following factors:

· Physical factors: Terrain, topography, climate and soil;

· Institutional factors: Land tenure, land tenancy, size of land holdings, size of fields and land reforms.

· Infrastructural factors: Irrigation, electricity, roads, credit and marketing, storage facilities, crop insurance and research.

· Technological factors: High yielding varieties, chemicals fertilisers, pesticides, farm machinery.

(Source: Geography of India – Husain Majid)

QUESTION 10.

Consider the following statements:

1. Fisheries mainly deal with catching, processing, and selling fish, while aquaculture is related to the cultivation of both aquatic animals and aquatic plants.

2. India ranks second in global aquaculture and 3 rd in fisheries.

Which of the statements given above is/are correct?

a) 1 Only
b) 2 Only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: C
Your Answer: A
Explanation

Solution (c)

Basic Information:

· Indian fisheries and aquaculture is an important sector of food production providing nutritional security, besides livelihood support and gainful employment to more than 14 million people, and contributing to agricultural exports.

· The total fish production during 2017-18 is estimated to be 12.60 million metric tonnes, of which nearly 65% is from inland sector and about 50% of the total production is from culture fisheries, and constitutes about 6.3% of the global fish production.

· Fish and fish products have presently emerged as the largest group in agricultural exports from India, with 13.77 lakh tonnes in terms of quantity and Rs. 45,106.89 crore in value. This accounts for around 10% of the total exports and nearly 20% of the agricultural exports, and contribute to about 0.91% of the GDP and 5.23% to the Agri - GVA of the country.

· Aquaculture is the cultivation of aquatic organisms. It is also known as aquafarming, implies the controlled cultivation of aquatic population under the controlled conditions.

· Particular kind of aquaculture include agriculture (the production of kelp, seaweed and other algae), fish farming, shrimp farming, shellfish farming and growing of cultured pearls.

Indian Fisheries	
Global position	3rd in Fisheries 2nd in Aquaculture
Contribution of Fisheries to GDP (%)	0.91
Contribution to Agril. GDP (%)	5.23
Per capita fish availability (Kg.)	9.0
Annual Export earnings (Rs. In Crore)	45,106.89
Employment in sector (million)	14.0

Resources	
Coastline	8118 kms
Exclusive Economic Zone	2.02 million sq. km
Continental Shelf	0.530 million sq. km
Rivers and Canals	1,95,210 km
Reservoirs	3.150 million ha
Ponds and Tanks	2.414 million ha
Flood Plains lakes and derelict waters	0.798 million ha
Brackishwaters	1.240 million ha
Estuaries	0.290 million ha

Some Facts	
Present fish Production (Capture)	7.0 mmt
Inland	3.2 mmt
Marine	3.8 mmt
Potential fish production	8.4 mmt
Fish seed production	40,000 million fry
Hatcheries	1,604 units
FFDA	429
BFDA	39

(Source: http://nfdb.gov.in/about-indian-fisheries.htm and Geography of India – Husain Majid)

QUESTION 11.

Consider the following statements with reference to cotton textile industry in India?

1. Nearly two-thirds of cotton production in India comes from the states of Maharashtra, Rajasthan, Madhya Pradesh collectively known as the Cotton Basket of India.

2. The cotton industry in India leans towards apparel exports.

3. Moist weather may influence the location of cotton textile industry.

Select the correct answer from the codes given below:

a) 1 and 2 Only
b) 1 and 3 Only
c) 2 and 3 Only
d) None

Correct Answer: C
Your Answer: C
Explanation

Solution (c)

Basic Information:

· Textile industry includes cotton, jute, wool, silk and synthetic fibre textiles.

· The cotton sector in India is considered the second most developed sector in the textile industry (after man-made fibres).

· At 18% of the global total, India is the largest producer of cotton.

· It has the largest area under cotton cultivation in the world, representing about 25% of the world area under cultivation.

· India is also the second largest exporter (after the USA) and the second largest consumer (after China).

· The states of Gujarat, Maharashtra, Andhra Pradesh, Haryana, Punjab, Madhya Pradesh, Rajasthan, Karnataka and Tamil Nadu are the major cotton producing areas in India.

· Approximately 62% of India's cotton is produced in rainfed areas, and 38% on irrigated lands.

· India grows all four known species of cultivated cotton.

· Government of India has been rendering support to the cotton textile sector through initiatives such as Scheme for Integrated Textile Parks (SITP), Integrated Skill Development Scheme (ISDS), Integrated Processing Development Scheme (IPDS), Market Development Assistance (MDA) and Market Access Initiative (MAI).

· The location of cotton textile industry is mainly affected by: raw material, proximity to market, moisture in the air, capital, skilled and cheap labour, transport, sea-port, export facility, etc.

Statement Analysis:

Statement 1	Statement 2	Statement 3
Incorrect	**Correct**	**Correct**
Nearly two - thirds of cotton production in India comes from the states of Maharashtra, Gujarat, Andhra Pradesh and Telangana - collectively known as the Cotton Basket of India.	The cotton industry in India leans towards apparel exports, contributing approximately 51% to overall apparel exports in FY 18. Approximately 74% of the apparel exported from India is made of cotton.	Due to enough moisture in the air, the thread does not break frequently. Example: Mumbai (MH)

(Source: https://www.investindia.gov.in/team-india-blogs/cotton-textile-industry-india and Geography of India by Majid Hussain)

QUESTION 12.

Consider the following statements:

1. After partition about 90% of jute mills went to Bangladesh.

2. After partition about 80% of jute growing areas remained in India.

3. West Bengal alone accounts for more than 70% of the total jute production of the country.

Which of the statements given above is/are correct?

a) 1 Only
b) 2 and 3 Only
c) 3 Only
d) 1, 2 and 3

Correct Answer: C
Your Answer: C
Explanation

Solution (c)

Basic Information:

· Jute, the golden fibre, meets all the standards for 'safe 'packaging in view of being a natural, renewable, biodegradable and eco-friendly product.

· The principal varieties of jute in India are tossa (Corchorus Olitorious) and white jute (Corchorus Capsularis).

· Raw jute is produced mainly in the state of West Bengal, Bihar, Assam, Orissa, Andhra Pradesh, Tripura and Meghalaya.

· The first jute factory was established at Rishira, north of Calcutta in 1854.

· India is the leading jute goods producing country in the world, accounting for about 70% of estimated world production.

· Average domestic consumption out of total jute production has been around 90%.

· It is estimated that that the jute industry provides direct employment to 0.37 million workers in organized mills and in diversified units including tertiary sector and allied activities and supports the livelihood of around 4.0 million farm families. In addition, there are a large number of persons engaged in the trade of jute

· In 2015, there were 94 composite jute mills out of which the state of West Bengal has 70 jute mills with Andhra Pradesh having 10 mills, Uttar Pradesh 3 mills, Bihar 3 mills, Orissa 3 mills, Assam 2 mills, Chhattisgarh 2 mills and Tripura 1 Jute Mill. As on 31.08.2015, 26 mills are closed. According to the closure notices issued by the managements, the principal reasons for the closure of mills are labour indiscipline, absenteeism and trade unionism.

· The high concentration of jute mills in West Bengal is because of factors like: Availability of raw material, Cheap and skilled labour, Cheap water transport through Hugli river, Availability of coal from Raniganj coal mines, export facility through Kolkata and Haldia port.

Statement Analysis:

Statement 1	**Statement 2**	**Statement 3**
Incorrect	**Incorrect**	**Correct**
After partition about 90% of jute mills remained in India.	After partition about 80% of jute growing areas went to Bangladesh.	Jute needs highly productive, well drained soils, hot and humid climate. These conditions are ideally available in many tracts of West Bengal like Nadia, Dinajpur, Murshidabad, North 24 Parganas districts.

(Source: http://texmin.nic.in/sites/default/files/note_on_jute_sector_1.pdf and Geography of India by Majid Husain)

QUESTION 13.

Consider the following statements with reference to wool and Woollen textiles industry:

1. Wool industry is a rural based export oriented industry and caters to civil and defence requirements for warmer clothing.

2. Out of total raw wool production in India, about 85% is apparel grade wool.

3. Wool is the only natural fibre in which the country is deficient.

Which of the statements given above is/are correct?

a) 1 Only
b) 2 and 3 Only
c) 1 and 3 Only
d) 1, 2 and 3

Correct Answer: C
Your Answer: Unanswered
Explanation

Solution (c)

Basic Information:

· In India Woollen textiles and clothing industry is relatively small compared to the cotton and man-made fibre based textiles and clothing industry.

· The product portfolio is equally divergent from textile intermediaries to finished textiles, garments, knitwears, blankets, carpets and an incipient presence in technical textiles.

· A small quantity of specialty fibre is obtained from Pashmina goats and Angora rabbits.

· The woollen industry in the country is basically located in the states of Punjab, Haryana, Rajasthan, Maharashtra and Gujarat.

· 40% of the woollen units are located in Punjab, 27% in Haryana, 10%.

· The industry has the potential to generate employment in far-flung and diverse regions and at present provides employment in the organised wool sector to about 12 lakh persons, with an additional 20 lakh persons associated in the sheep rearing and farming sector. Further, there are 3.2 lakh weavers in the carpet sector.

· The bulk of Indian wool is of coarse quality and is used mostly in the hand-made carpet industry. To meet the demand of the wool industry particularly of apparel sector and most of it is being imported from Australia, New Zealand and many other countries.

Statement Analysis:

Statement 1	Statement 2	Statement 3
Correct	**Incorrect**	**Correct**
the woollen sector plays an important role in linking the rural economy with the manufacturing industry, represented by small, medium and large scale units.	India has the 3rd largest sheep population country in the world having 65.07 million sheep producing 43.50 million kg of raw wool in 2017-18. Out of this about 85% is carpet grade wool, 5% apparel grade and remaining 10% coarse grade wool for making rough Kambals etc.	Average annual yield per sheep in India is 0.9 Kg. against the world average of 2.4 Kg. The domestic produce of wool is not adequate, therefore, the industry is dependent on imported raw material and wool is the only natural fibre in which the country is deficient.

(Source: http://ministryoftextiles.gov.in/sites/default/files/Textiles_Sector_WoolandWoollen_1.pdf)

QUESTION 14.

Consider the following statements with reference to silk textile industry:

1. India has the unique distinction of being the only country producing all the five known commercial silks.

2. The Indian Silk Export Promotion Council (ISEPC) has initiated programmes for the growth and development of the silk industry.

Which of the statements given above is/are correct?

a) 1 Only
b) 2 Only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: C
Your Answer: C
Explanation

Solution (c)

Basic Information:

· Silk is the most elegant textile in the world with unparalleled grandeur, natural sheen, and inherent affinity for dyes, high absorbance, light weight, soft touch and high durability and known as the “Queen of Textiles” the world over.

· It stands for livelihood opportunity for millions owing to high employment oriented, low capital intensive and remunerative nature of its production.

· The states of Karnataka (9645 metric tonnes), Andhra Pradesh (6,485 metric tonnes), West Bengal (2,500 metric tonnes), Tamil Nadu (1,602 metric tonnes) were the major producers of mulberry silk in India during 2014-15.

· India is the Second largest producer of silk in the World.

· The Indian silk goods are being exported to the traditional major markets like the USA and European countries and small markets of Asia Region.

Statement Analysis:

Statement 1	**Statement 2**
Correct	**Correct**
Mulberry, tropical tasar, oak tasar, eri and muga, of which muga with its golden yellow glitter is unique and prerogative of India.	The Indian Silk Export Promotion Council (ISEPC) has initiated programmes for the growth and development of the silk industry.

(Source: http://www.texmin.nic.in/sites/default/files/note-on-sericulture.pdf)

QUESTION 15.

Consider the following pairs:

1. The Bhilai Steel Plant Odhisa

2. Rourkela Steel Plant Chattishgarh

3. The Salem Steel Plant Kerala

Which of the pairs given above is/are correct?

a) 1 and 2 Only
b) 2 and 3 Only
c) 1 and 3 Only
d) 1, 2 and 3

Correct Answer: A
Your Answer: A
Explanation

Solution (a)

Basic Information:

· The development of the iron and steel industry opened the doors to rapid industrial development in India. Almost all sectors of the Indian industry depend heavily on the iron and steel industry for their basic infrastructure.

· The other raw materials besides iron ore and coking coal, essential for iron and steel industry are limestone, dolomite, manganese and fire clay.

· All these raw materials are gross (weight losing), therefore, the best location for the iron and steel plants is near the source of raw materials.

· In India, there is a crescent shaped region comprising parts of Chhattisgarh, Northern Odisha, Jharkhand and western West Bengal, which is extremely rich in high grade iron ore, good quality coking coal and other supplementing raw materials.

· Durgapur Steel Plant, in West Bengal, was set up in collaboration with the government of the United Kingdom and started production in 1962. This plant lies in Raniganj and Jharia coal belt and gets iron ore from Noamundi.

· This steel plant was set up in 1964 at Bokaro with Russian collaboration. This plant was set up on the principle of transportation cost minimisation by creating Bokaro-Rourkela combine. It receives iron ore from the Rourkela region and the wagons on return take coal to Rourkela. Other raw materials come to Bokaro from within a radius of about 350 km. Water and Hydel power is supplied by the Damodar Valley Corporation.

Statement Analysis:

Statement 1	**Statement 2**	**Statement 3**
Correct	**Correct**	**Incorrect**
The Rourkela Steel plant was set up in 1959 in the Sundargarh district of Odisha in collaboration with Germany	The Bhilai Steel Plant was established with Russian collaboration in Durg District of Chhattisgarh and started production in 1959.	The Salem Steel Plant in Tamil Nadu was commissioned in 1982.

(Source: INDIA PEOPLE AND ECONOMY - CLASS XII NCERT)

QUESTION 16.

Consider the following statements with reference to Sugar Industry of India:

1. Sugarcane is a weight-losing crop.

2. Location of sugar factories within the cane producing regions can improve the recovery of sugar from sugarcane.

3. The industry is not a seasonal industry due to perennial availability of raw material.

Which of the statements given above is/are correct?

a) 1 and 2 Only
b) 2 and 3 Only
c) 1 and 3 Only
d) 1, 2 and 3

Correct Answer: A
Your Answer: A
Explanation

Solution (a)

Basic Information:

· The sugar industry is the second most important agro-based industry in the country.

· India is among the top three largest producer of both sugarcane and cane sugar.

· The khandasari and gur or jaggery are also prepared from sugarcane.

· Maharashtra has emerged as a leading sugar producer in the country and produces more than one-third of the total production of the sugar in the country.

· Uttar Pradesh is the second largest producer of sugar. The sugar factories are concentrated in two belts – the Ganga-Yamuna doab and the tarai region. The major sugar producing centres in the Ganga -Yamuna doab are Saharanpur, Muzaffarnagar, Meerut, Ghaziabad, Baghpat and Bulandshahr districts; while Kheri Lakhimpur, Basti, Gonda, Gorakhpur, Bahraich are important sugar producing districts in the Tarai region.

· In Tamil Nadu, sugar factories are located in Coimbatore, Vellore, Tiruvanamalai, Villupuram and Tiruchchirappalli districts.

· Belagavi, Ballari, Mandya, Shivamogga, Vijayapura and Chitradurg districts are the major producers in Karnataka.

· The relative significance of Punjab has declined, although Gurdaspur, Jalandhar, Sangarur, Patiala and Amritsar are major sugar producers.

Statement Analysis:

Statement 1	Statement 2	Statement 3
Correct	**Correct**	**Incorrect**
Its sucrose content begins to dry during haulage after it has been harvested from the field.	The ratio of sugar to sugarcane varies between 9 to 12 per cent depending on its variety. Better recovery of sugar is dependent upon its being crushed within 24 hours of its harvesting. Sugar factories hence, are located within the cane producing regions.	Sugar industry is a seasonal industry because of the seasonality of raw materials.

(Source: INDIA PEOPLE AND ECONOMY - CLASS XII NCERT)

QUESTION 17.

Consider the following statements:

1. Petrochemical industry mainly comprises of synthetic fibre / yarn, polymers, Synthetic Rubber (elastomers), Synthetic detergent intermediates, performance plastics and plastic processing industry.

2. Petrochemical industries come under the ministry of Ministry of Petroleum & Natural Gas .

Which of the above statements is/are correct?

a) 1 Only
b) 2 Only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: A
Your Answer: C
Explanation

Solution (a)

Basic Information:

· Petrochemical Industries has been growing very fast in India.

· In 1960s, demand for organic chemicals increased so fast that it became difficult to meet this demand. At that time, petroleum refining industry expanded rapidly.

· Many items are derived from crude petroleum, which provide raw materials for many new industries, these are collectively known as petrochemical industries.

· Mumbai is the hub of the petrochemical industries. Cracker units are also located in Auraiya (Uttar Pradesh), Jamnagar, Gandhinagar and Hajira (Gujarat), Nagothane, Ratnagiri (Maharashtra), Haldia (West Bengal) and Vishakhapatnam (Andhra Pradesh).

· Three organisations are working in the petrochemical sector under the administrative control of the Department of Chemicals and Petrochemicals.

o First is the Indian Petrochemical Corporation Limited (IPCL), a public sector undertaking. It is responsible for the manufacture and distribution of the various petrochemicals like polymers, chemicals, fibres and fibre intermediates.

o Second is the Petrofils Cooperative Limited (PCL), a joint venture of the Government of India and Weaver's Cooperative Societies. It produces polyester filament yarn and nylon chips at its two plants located at Vadodara and Naldhari in Gujarat.

o Third is the Central Institute of Plastic Engineering and Technology (CIPET), involved in imparting training in petro-chemical industry.

· The National Organic Chemicals Industries Limited (NOCIL), established in private sector in 1961, started the first naphtha based chemical industry in Mumbai.

Statement Analysis:

Statement 1	**Statement 2**
Correct	**Incorrect**
This group of industries is divided into four sub-groups: (i) polymers, (ii) synthetic fibres, (iii) elastomers, and (iv) surfactant intermediate. Today, petrochemical products permeate the entire spectrum of daily use items and cover almost every sphere of life like clothing, housing, construction, furniture, automobiles, household items, agriculture, horticulture, irrigation, packaging, medical appliances, electronics and electrical etc.	Petrochemicals are derived from various chemical compounds, mainly from hydrocarbons. These hydrocarbons are derived from crude oil and natural gas. It comes under Ministry of Chemical and Fertilizers. The Ministry of Petroleum & Natural Gas is concerned with exploration and production of Oil & Natural Gas, refining, distribution and marketing, import, export and conservation of petroleum products. .

(Source: INDIA PEOPLE AND ECONOMY - CLASS XII NCERT)

QUESTION 18.

Consider the following statements with reference to Aluminium industry:

1. Availability of iron-ore and electricity are basic requirement for the establishment of aluminium industry.

2. The Hindustan Aluminium Corporation Ltd plant at Renukoot of Uttar Pradesh obtains electricity from the Rihand dam.

Which of the above statements are correct?

a) 1 Only
b) 2 Only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: B
Your Answer: Unanswered
Explanation

Solution (b)

Basic Information:

· Aluminium is the second most important metallurgical industry of India.

· Its elasticity and good conductivity of heat and electricity has made it a universally accepted metal.

· It is widely used in the generation and distribution of electricity, manufacturing of planes, railway coaches, defence and nuclear accessories, utensils, packaging and making coins.

· It is cheaper substitute of steel, copper, zinc and lead.

· The Aluminium industry was started in India during Second World War at Alupuram by the Aluminium Company in 1938.

Fig. 11.11 Aluminium Industry

Statement Analysis:

Statement 1	**Statement 2**
Incorrect	**Correct**
Availability of bauxite and electricity are basic requirement for the establishment of aluminium industry. The production of 1 tonne of aluminium requires 6 tonnes of bauxite. About 30 to 40% of the production cost of aluminium is accounted for electricity alone.	HINDALCO was setup at Renukoot, about 60km of Mirzapur in 1958. It obtains bauxite from Lohradaga (Jharkhand and Amarkantak region of MP).

(Source: Geography of India – Husain Majid)

QUESTION 19.

The nucleus of the Gujarat Industrial Region is:

a) Rajkot and Bhavnagar
b) Jamnagar and Rajkot
c) Bharuch and Valsad

d) Ahmedabad and Vadodara

Correct Answer: D
Your Answer: D
Explanation

Solution (d)

Basic Information:

· The nucleus of Gujarat Industrial Region between Ahmedabad and Vadodara.

· This region extends upto Valsad and Surat in the south and to Jamnagar in the west.

· Development of this region is also associated with the location of the cotton textile industry since 1860s. This region became an important textile region with the decline of the cotton textile industry at Mumbai. Located in cotton growing area, this region has double advantage of the proximity of raw materials as well as of market.

· The discovery of oil fields led to the establishment of petrochemical industries around Ankleshwar, Vadodara and Jamnagar.

· The port at Kandla helped in the rapid growth of this region.

· Petroleum refinery at Koyali provided raw materials to a host of petrochemical industries.

· Important industrial centres of this region are Ahmedabad, Vadodara, Bharuch, Koyali, Anand, Khera, Surendranagar, Rajkot, Surat, Valsad and Jamnagar.

(Source: INDIA PEOPLE AND ECONOMY - CLASS XII NCERT)

QUESTION 20.

Consider the following statements:

1. Magnetite is the finest iron ore with a very high content of iron.

2. Very high grade magnetite is found in the famous Bailadila range of hills in the Bastar district of Chhattisgarh.

Which of the above statements are incorrect?

a) 1 Only
b) 2 Only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: B
Your Answer: Unanswered
Explanation

Solution (b)

Basic Information:

Iron ore is the basic mineral and the backbone of industrial development. India is endowed with fairly abundant resources of iron ore.

Hematite ore is the most important industrial iron ore in terms of the quantity used, but has a slightly lower iron content than magnetite. (50-60 per cent).

The major iron ore belts in India are:

· Orissa-Jharkhand belt: In Orissa high grade hematite ore is found in Badampahar mines in the Mayurbhanj and Kendujhar districts. In the adjoining Singbhum district of Jharkhand haematite iron ore is mined in Gua and Noamundi.

· Durg-Bastar-Chandrapur belt lies in Chhattisgarh and Maharashtra. Very high grade hematites are found in the famous Bailadila range of hills in the Bastar district of Chattisgarh. making. Iron ore from these mines is exported to Japan and South Korea via Vishakapatnam port.

· Bellary-Chitradurga-Chikmaglur-Tumkur belt in Karnataka has large reserves of iron ore. The Kudermukh mines located in the Western Ghats of Karnataka are a 100 per cent export unit. Kudremukh deposits are known to be one of the largest in the world. The ore is transported as slurry through a pipeline to a port near Mangalore.

· Maharashtra-Goa belt includes the state of Goa and Ratnagiri district of Maharashtra. Though, the ores are not of very high quality, yet they are efficiently exploited. Iron ore is exported through Marmagao port.

Statement Analysis:

Statement 1	**Statement 2**
Correct	**Incorrect**
Magnetite is the finest iron ore with a very high content of iron up to 70 per cent. It has excellent magnetic qualities, especially valuable in the electrical industry.	Very high grade hematites are found in the famous Bailadila range of hills in the Bastar district of Chattisgarh. The range of hills comprise of 14 deposits of super high grade hematite iron ore.

(Source: CONTEMPORARY INDIA – II, Class X NCERT)

QUESTION 21.

Which of the following statement is incorrect?

a) India is critically deficient in the reservse and production of copper.

b) The Khetri mines in Rajasthan produce 52 per cent of India's copper.
c) Orissa is the largest producer of manganese ores in India.
d) Orissa is the largest bauxite producing state in India.

Correct Answer: B
Your Answer: D
Explanation

Solution (b)

Basic Information:

· India is critically deficient in the reserve and production of copper. Being malleable, ductile and a good conductor, copper is mainly used in electrical cables, electronics and chemical industries.

· The Balaghat mines in Madhya Pradesh produce 52 per cent of India's copper. The Singbhum district of Jharkhand is also a leading producer of copper. The Khetri mines in Rajasthan are also famous.

· Orissa is the largest producer of manganese ores in India. It accounted for one-third of the country's total production in 2000-01.

· India's bauxite deposits are mainly found in the Amarkantak plateau, Maikal hills and the plateau region of Bilaspur- Katni. Orissa is the largest bauxite producing state in India with 45 per cent of the country's total production in 2000-01. Panchpatmali deposits in Koraput district are the most important bauxite deposits in the state.

(Source: CONTEMPORARY INDIA – II, Class X NCERT)

QUESTION 22.

Consider the following statements with reference to Petroleum resource in India:

1. Most of the petroleum occurrences in India are associated with anticlines and fault traps in the rock formations of the tertiary age.

2. About 63 per cent of India's petroleum production is from Mumbai High.

3. Assam is the oldest oil producing state of India.

Which of the statements given above is/are correct?

a) 2 Only
b) 2 and 3 Only
c) 1 and 3 Only
d) 1, 2 and 3

Correct Answer: D
Your Answer: C
Explanation

Solution (d)

Basic Information:

· Petroleum or mineral oil is the next major energy source in India after coal.

· It provides fuel for heat and lighting, lubricants for machinery and raw materials for a number of manufacturing industries.

· Petroleum refineries act as a "nodal industry" for synthetic textile, fertiliser and numerous chemical industries.

· In regions of folding, anticlines or domes, petroleum occurs where oil is trapped in the crest of the upfold.

· The oil bearing layer is a porous limestone or sandstone through which oil may flow. The oil is prevented from rising or sinking by intervening non-porous layers.

· Petroleum is also found in fault traps between porous and non-porous rocks. Gas, being lighter usually occurs above the oil.

· About 63 per cent of India's petroleum production is from Mumbai High, 18 per cent from Gujarat and 16 per cent from Assam.

· Ankeleshwar is the most important field of Gujarat.

· Assam is the oldest oil producing state of India. Digboi, Naharkatiya and Moran-Hugrijan are the important oil fields in the state.

(Source: CONTEMPORARY INDIA – II, Class X NCERT)

QUESTION 23.

Consider the following with reference to the cement industry in India:

1. This industry requires bulky and heavy raw materials like limestone, silica, alumina and gypsum.

2. Apart from rail transportation, this industry needs coal and electric power.

Which of the statements given above is/are correct?

a) 1 Only
b) 2 Only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: C
Your Answer: C
Explanation

Solution (c)

Basic Information:

· Cement is essential for construction activity such as building houses, factories, bridges, roads, airports, dams and for other commercial establishments.

· This industry requires bulky and heavy raw materials like limestone, silica, alumina and gypsum. Coal and electric power are needed apart from rail transportation.

· The industry has strategically located plants in Gujarat that have suitable access to the market in the Gulf countries.

· The first cement plant was set up in Chennai in 1904.

(Source: CONTEMPORARY INDIA – II, Class X NCERT)

QUESTION 24.

Consider the following pairs:

Port	State
1. Paradip	West Bengal
2. Tuticorin	Kerala
3. Ennore	Andhra Pradesh

Which of the pairs given above is/are incorrect ?

a) 1 Only
b) 2 and 3 Only
c) 1, 2 and 3
d) None of the Above

Correct Answer: C
Your Answer: Unanswered
Explanation

Solution (c)

Basic Information:

QUESTION 25.

Consider the following statements:

1. The Asian continent produces more than half of the world's tin.

2. Europe is the leading producer of iron-ore in the world.

3. African continent is the world's largest producer of diamonds, gold and platinum.

4. Australia is the largest producer of bauxite in the world.

Which of the statements given above is/are correct?

a) 1, 2 and 3 Only
b) 2 and 3 Only
c) 2, 3 and 4 Only
d) 1, 2, 3 and 4

Correct Answer: D
Your Answer: Unanswered

Explanation

Solution (d)

Basic Information:

· Brazil is the largest producer of high grade iron-ore in the world. Chile and Peru are leading producers of copper. Brazil and Bolivia are among the world's largest producers of tin.

· The geology of Antarctica is sufficiently well known to predict the existence of a variety of mineral deposits, some probably large. Significant size of deposits of coal in the Transantarctic Mountains and iron near the Prince Charles Mountains of East Antarctica is forecasted. Iron ore, gold, silver and oil are also present in commercial quantities.

· The mineral deposits in North America are located in three zones: The Canadian region north of the Great Lakes, the Appalachian region and the mountain ranges of the west.

· Switzerland has no known mineral deposit in it.

Statement Analysis:

Statement 1	**Statement 2**	**Statement 3**	**Statement 4**
Correct	**Correct**	**Correct**	**Correct**
China, Malaysia and Indonesia are among the world's leading tin producers.	The countries with large deposits of iron ore are Russia, Ukraine, Sweden and France.	South Africa, Zimbabwe and Zaire produce a large portion of the world's gold.	Australia is the largest producer of bauxite in the world. It is a leading producer of gold, diamond, iron ore, tin and nickel.

(Source: RESOURCES AND DEVELOPMENT, NCERT)

QUESTION 26.

The Kalgoorlie and Coolgardie areas of western Australia have the largest deposits of which of the following mineral resource?

a) Gold
b) Coal
c) Uranium
d) Bauxite

Correct Answer: A

Your Answer: D
Explanation

Solution (a)

Basic Information:

· Kalgoorlie and Coolgardie areas of western Australia have the largest deposits of gold.

· Described as the 'Mother of the Goldfields' on signs posted at the town's entrance, Coolgardie, is 550 kilometres east of Perth. Most of the wealth today still comes from gold, discovered at Coolgardie in 1892 and sparking one of the biggest gold rushes the world has ever seen.

· Kalgoorlie (Golden Mile plus Mt Charlotte) accounts for more than half the gold won from the 2000 deposits that comprise the widespread gold mineralization of the Archaean Yilgarn Block of Western Australia. It is also one of the largest gold deposits globally (> 1800 t Au production and reserves).

(Source: RESOURCES AND DEVELOPMENT, NCERT and https://www.abc.net.au/news/2019-10-09/gold-rush-town-of-coolgardie-divided-over-plans-to-explore/11584226)

QUESTION 27.

The Carajas mines – the world's largest iron-ore mine in located in which of the following country: 226180

a) Canada
b) Brazil
c) Ukraine
d) Australia

Correct Answer: B
Your Answer: Unanswered
Explanation

Solution (b)

Basic Information:

· Carajás Mine, the world's largest iron ore mine, is located in the state of Para in Northern Brazil. Fully owned by Brazilian miner Vale (CVRD), it holds 7.2 billion metric tonnes of iron ore in proven and probable reserves.

· The Carajas region boasts the richest reserves and concentrations of iron ore anywhere in the world and was discovered entirely by accident in the late-1960s when a US Steel Helicopter was forced to land on a hill in the area to refuel.

This image of the Carajás Iron Ore Mine was taken by the Advanced Land Imager on NASA's EO-1 satellite on July 26, 2009.

(Source: https://www.mining-technology.com/projects/carajas/)

QUESTION 28.

Consider the following pairs:

Coal Mine	Country
1. North Antelope Rochelle Mine	Canada
2. Donbass coal basin	Ukraine
3. Enugu	South Africa

Which of the pairs given above is/are correct?

a) 1 Only
b) 1 and 2 Only
c) 2 Only
d) 2 and 3 Only

Correct Answer: C
Your Answer: Unanswered
Explanation

Solution (c)

Basic Information:

Statement Analysis:

Statement 1	Statement 2	Statement 3
Incorrect	**Correct**	**Incorrect**
North Antelope Rochelle Coal Mine, Wyoming (USA). The United States' highest rate of coal production is in Wyoming, with almost 400 million short tons extracted in 2004.	Coal mining in Ukraine is often associated with coal-rich Donbass or Donets basin. is the most developed and much bigger coal mining region in the country.	Engugu is the administrative capital of the Eastern Region of Nigeria. Coal seams in the Enugu coal district measure between 1 and 2 metres (3.3 and 6.6 ft) in thickness and the reserves have been estimated to be more than 300 million tonnes

(Source: Google)

QUESTION 29.

Which of the following country has the highest proven reserves of oil in the world?

a) Venezuela
b) Saudi Arabia
c) Iran
d) Iraq

Correct Answer: A
Your Answer: A
Explanation

Solution (a)

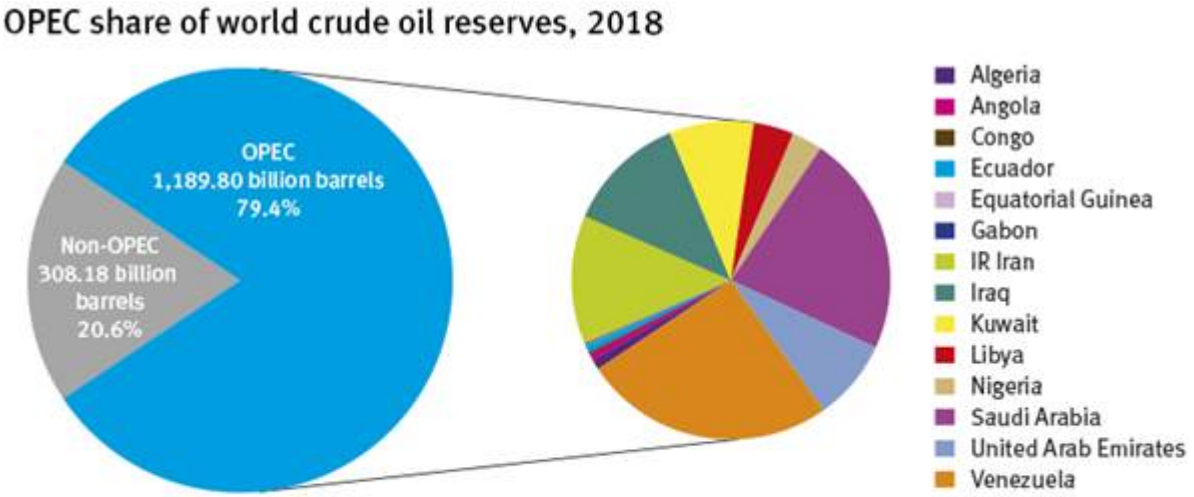
Basic Information:

· With 300,878 million barrels of proven reserves, Venezuela has the largest amount of proven oil reserves in the world.

· The country's oil is a relatively new discovery. Previously, Saudi Arabia had always held the number one position.

· Venezuela's Orinoco tar sands are significantly less viscous than Canada's, so the oil sands there can be extracted using conventional oil extraction methods, giving it a considerable advantage over the Northern American rival in terms of capital requirements and extractions costs.

· According to current estimates, 79.4% of the world's proven oil reserves are located in OPEC Member Countries, with the bulk of OPEC oil reserves in the Middle East, amounting to 64.5% of the OPEC total.



OPEC proven crude oil reserves, at end 2018 (billion barrels, OPEC share)

Venezuela	302.81 25.5%	Kuwait	101.50 8.5%	Algeria	12.20 1.0%	Gabon	2.00 0.2%
Saudi Arabia	267.03 22.4%	UAE	97.80 8.2%	Ecuador	8.27 0.7%	Equatorial Guinea	1.10 0.1%
IR Iran	155.60 13.1%	Libya	48.36 4.1%	Angola	8.16 0.7%		
Iraq	145.02 12.2%	Nigeria	36.97 3.1%	Congo	2.98 0.3%		

Source: OPEC Annual Statistical Bulletin 2019.

(Source: https://www.opec.org/opec_web/en/data_graphs/330.htm)

QUESTION 30.

Consider the following statements:

1. Russia has the largest natural gas reserves in the world.

2. More than half of Russia's gas reserves are located in Siberia.

3. Iran is the world's largest exporter of liquefied natural gas (LNG).

Which of the statements given above is/are correct?

a) 1 and 2 Only
b) 1 and 3 Only
c) 2 and 3 Only
d) 1, 2 and 3

Correct Answer: A
Your Answer: Unanswered
Explanation

Solution (a)

Basic Information:

· Nearly 80% of the world's total proven natural gas reserves are located in ten countries. Russia tops the list, holding about a quarter of world's total gas reserves, followed by Iran and Qatar in the Middle East.

· The state-run oil and gas company Gazprom of Russia dominates upstream gas production in the country. The company accounts for about 80% of Russia's total natural gas output and controls more than 65% of proven gas reserves in the country.

· Iran holds the world's second biggest natural gas reserves. Its proved natural gas reserves as of December 2012 stood at 1,187Tcf.

· Qatar holds the third largest natural gas reserves in the world. Its proven natural gas reserves as of December 2012 were estimated at 885.3Tcf. It accounts for around 13% of the world's total natural gas reserves. Qatar is also the single largest LNG supplier in the world.

Statement Analysis:

Statement 1	**Statement 2**	**Statement 3**
Correct	**Correct**	**Incorrect**
Russia holds the largest amount of natural gas reserves in the world. The country was estimated to possess about 1,688 trillion cubic feet (Tcf) of proven gas reserves as of January 2013, accounting for about one fourth of the world's total proven gas reserves.	More than half of Russia's gas reserves are located in Siberia. Three of the major Siberian fields, namely Yamburg, Urengoy and Medvezh'ye, account for approximately 45% of the country's gas reserves.	Qatar is also the world's largest exporter of liquefied natural gas (LNG).

(Source: https://www.hydrocarbons-technology.com/features/feature-the-worlds-biggest-natural-gas-reserves/)

QUESTION 31.

Consider the following pairs:

1. Mining Towns Singrauli

2. Garrison Cantonment towns Varanasi

3. Industrial towns Salem

Which of the pairs given above is/are correct?

a) 1 Only
b) 2 Only
c) 1 and 3 Only
d) 2 and 3

Correct Answer: C
Your Answer: Unanswered
Explanation

Solution (c)

Basic Information:

On the basis of dominant or specialised functions, Indian cities and towns can be broadly classified as follows:

· Administrative towns and cities: Towns supporting administrative headquarters of higher order are administrative towns, such as Chandigarh, New Delhi, Bhopal, Shillong, Guwahati, Imphal, Srinagar, Gandhinagar, Jaipur Chennai, etc.

· Educational towns: Starting as centres of education, some of the towns have grown into major campus towns such as Rourke, Varanasi, Aligarh, Pilani, Allahabad etc.

· Transport Cities: They may be ports primarily engaged in export and import activities such as Kandla, Kochchi, Kozhikode, Vishakhapatnam, etc. or hubs of inland transport such as Agra, Dhulia, Mughal Sarai, Itarsi, Katni, etc.

· Commercial towns: Towns and cities specialising in trade and commerce are kept in this class. Kolkata, Saharanpur, Satna, etc. are some examples.

· Religious and cultural towns Varanasi, Mathura, Amritsar, Madurai, Puri, Ajmer, Pushkar, Tirupati, Kurukshetra, Haridwar, Ujjain came to prominence due to their religious/cultural significance.

· Tourist towns Nainital, Mussoorie, Shimla, Pachmarhi, Jodhpur, Jaisalmer, Udagamandalam (Ooty), Mount Abu are some of the tourist destinations.

Statement Analysis:

Statement 1	Statement 2	Statement 3
Correct	Incorrect	Correct

These towns have developed in mineral rich areas such as Raniganj, Jharia, Digboi, Ankaleshwar, Singrauli, etc	These towns emerged as garrisson towns such as Ambala, Jalandhar, Mhow, Babina, Udhampur, etc.	Industrial towns Industries constitute prime motive force of these cities such as Mumbai, Salem, Coimbatore, Modinagar, Jamshedpur, Hugli, Bhilai, etc.

(Source: Human Settlements – XII NCERT)

QUESTION 32.

In which one of the following regions does one expect the presence of dispersed rural settlements?

a) Forests and hills in north-east
b) Alluvial plains of Ganga
c) Arid and semi-arid regions of Rajasthan
d) Lower valleys of Himalayas

Correct Answer: A
Your Answer: C
Explanation

Solution (a)

Basic Information:

Dispersed or isolated settlement pattern in India appears in the form of isolated huts or hamlets of few huts in remote jungles, or on small hills with farms or pasture on the slopes. Extreme dispersion of settlement is often caused by extremely fragmented nature of the terrain and land resource base of habitable areas. Many areas of Meghalaya, Uttaranchal, Himachal Pradesh and Kerala have this type of settlement.

Rural settlements in India can broadly be put into four types:

· Clustered, agglomerated or nucleated,

· Semi-clustered or fragmented,

· Hamleted, and

· Dispersed or isolated.

(Source: Human Settlements – XII NCERT)

QUESTION 33.

Consider the following statements:

1. The rural population constitutes more than 70% of the total population India.

2. Himachal Pradesh has the largest proportion of rural population in India

Which of the statements given above is/are correct?

a) 1 Only
b) 2 Only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: B
Your Answer: A
Explanation

Solution (b)

Basic Information:

· In percentage terms, the rural population constitutes 68.8% and Urban population 31.2% of the total population. There has been an increase of 3.4% in the proportion of urban population in the last decade. Himachal Pradesh (90.0%) has the largest proportion of rural.

· India has 640,867 villages according to the Census 2011 out of which 597,608 (93.2 per cent) are inhabited villages.

· The states of Goa and Maharashtra have only little over half of their total population residing in villages.

(Source: http://www.censusindia.gov.in/2011census/PCA/PCA_Highlights/pca_highlights_file/India/4Executive_Summary.pdf)

QUESTION 34.

Consider the following statements with reference to Census data of 2011:

1. The sex ratio of urban areas is greater than the sex ratio of rural areas.

2. The child sex of rural areas is greater than the child sex ratio of urban areas

Which of the statements given above is/are incorrect?

a) 1 Only
b) 2 Only
c) Both 1 and 2

d) Neither 1 nor 2

Correct Answer: A
Your Answer: C
Explanation

Solution (a)

Basic Information:

· Sex Ratio (Number of females per 1,000 males) : The Sex Ratio in the country which was 933 in 2001 has increased by 10 points to 943 in 2011.

· Kerala has recorded the highest sex ratio in respect of Total population (1084), Rural population (1078) and Urban population (1091). The lowest sex ratio in rural areas has been recorded in Chandigarh (690).

· The corresponding value in urban areas has been returned in Daman & Diu (551). Seven States namely Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Bihar, Jharkhand, Chhattisgarh, Maharashtra, and one Union Territory (UT) Lakshadweep show fall in the sex ratio in rural areas. Two UTs, namely, Daman & Diu and Dadra & Nagar Haveli have shown a similar trend in urban areas.

Statement Analysis:

Statement 1	**Statement 3**
Incorrect	**Correct**
Rural sex ratio is 949 which is greater than urban sex ratio of 929.	Rural child sex ratio is 923 which is greater than urban child sex ratio of 905.

(Source: http://www.censusindia.gov.in/2011census/PCA/PCA_Highlights/pca_highlights_file/India/4Executive_Summary.pdf)

QUESTION 35.

Consider the following statements:

1. There has been an increase in the proportion of the Scheduled Caste population in 2011 Census compared to 2001 Census.

2. There has been a considerable decline in the proportion of the Scheduled Tribes population in 2011 Census compared to 2001 Census.

Which of the statements given above is/are correct?

a) 1 Only
b) 2 Only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: A
Your Answer: Unanswered
Explanation

Solution (a)

Basic Information:

· The total Scheduled Caste population returned in Census 2011 is 201.4 million. Of this, 153.9 million are in the rural areas and 47.5 million in urban areas.

· The highest number of Scheduled Castes has been recorded in Uttar Pradesh (41.4 million) and the lowest in Mizoram (1218).

· The total Scheduled Tribe population returned in Census 2011 is 104.3 million. Of this, 93.8 million are in rural areas and 10.5 million in urban areas.

· The highest number of Scheduled Tribes has been recorded in Madhya Pradesh (15.3 million) and the lowest in Daman & Diu (15,363).

Statement Analysis:

Statement 1	**Statement 2**
Correct	**Incorrect**
In terms of proportion, the Scheduled Caste population constitutes 16.6 % of the total population. The proportion during the last Census was 16.2%. There has thus been an increase of 0.4% during the last decade.	In terms of proportion, the Scheduled Tribe population constitutes 8.6 % of the total population. The proportion during the last Census was 8.2%. There has thus been an increase of 0.4% during the last decade.

(Source: http://www.censusindia.gov.in/2011census/PCA/PCA_Highlights/pca_highlights_file/India/4Executive_Summary.pdf)

QUESTION 36.

Syria does not share its border with which of the country/countries?

1. Iraq

2. Iran

3. Israel

4. Saudi Arabia

5. Egypt

Select the correct code:

a) 1, 4 and 5 Only
b) 2, 3 and 5 Only
c) 3, 4 and 5 Only
d) 2, 4 and 5 Only

Correct Answer: D
Your Answer: D
Explanation

Solution (d)

Basic Information:

The killing of Iranian general Qasim Suleimani in a US drone attack has marked new hostilities in West Asia.

(Source: Current Affairs and Internet)

QUESTION 37.

Chagos Archipelago were recently in news, they are located in which of the following ocean?

a) Atlantic Ocean
b) Southern Ocean
c) Indian Ocean
d) Pacific Ocean

Correct Answer: C
Your Answer: C
Explanation

Solution (c)

Basic Information:

· Chagos Archipelago, a group of seven atolls comprises of more than 60 islands in Indian Ocean. It is located about 500 km south of Maldives in Indian Ocean. Since 18th century when the French first settled in islands, it had been part of Mauritius only. In 1801, all of the islands of French colonial territory in region were ceded to British.

· As per International Court of Justice, in 1965 Britain unlawfully carved up Mauritius (when it was a British colony) which Chagos Archipelago was a part of. Thus even after Mauritius gained its independence from Britain in 1968 UK retained its sovereignty over islands to form British Indian Ocean Territory.

· UK then forcibly removed entire population of Chagos islands from territory between 1967 and 1973, and also prevented them from returning.

· Since then islands have been known by Foreign Office as British Indian Ocean Territory (BIOT), and being used for defence purposes by UK and United States. The US also established a military base on island of Diego Garcia which is largest of all islands.

· India was among 116 nations to vote in favour of a UN General Assembly resolution demanding the UK to withdraw its “colonial administration” from the Chagos Archipelago.

(Source: https://www.thehindu.com/news/international/india-votes-in-favour-of-unga-resolution-demanding-uk-withdraw-from-chagos-archipelago/article27215087.ece)

QUESTION 38.

The Xinjiang province of China does not border with which of the following country?

a) India
b) Pakistan
c) Russia
d) Afghanistan

Correct Answer: B
Your Answer: Unanswered
Explanation

Solution (b)

Basic Information:

· Xinjiang, a Chinese border region where most residents are not Han Chinese but Uighur or other Turkic minorities, and where the Chinese government has only a tenuous historical territorial claim, has long chafed under Beijing's rule. Discontent turned into mass violence in July 2009, when riots in Urumqi prompted a state crackdown that has continued ever since.

· The Kunming terrorist attack of 2014, when the violence spilled beyond the borders of the region itself, was a gruesome turning point.

· I n late 2017, of a network of camps that grew to hold over a million Uighurs and other Turkic minorities such as Kazakhs. These camps were described as "reeducation" facilities by the Chinese authorities; virtually any perceived offense, from having travelled overseas to owning a tent, was enough to result in detention.

(Source: https://foreignpolicy.com/2019/12/30/xinjiang-crackdown-uighur-2019-what-happened/)

QUESTION 39.

The Trans Karakoram Tract is located between which of the following countries?

a) India - Afghanistan
b) Afghanistan - China
c) India – China
d) Pakistan - Afghanistan

Correct Answer: C
Your Answer: Unanswered
Explanation

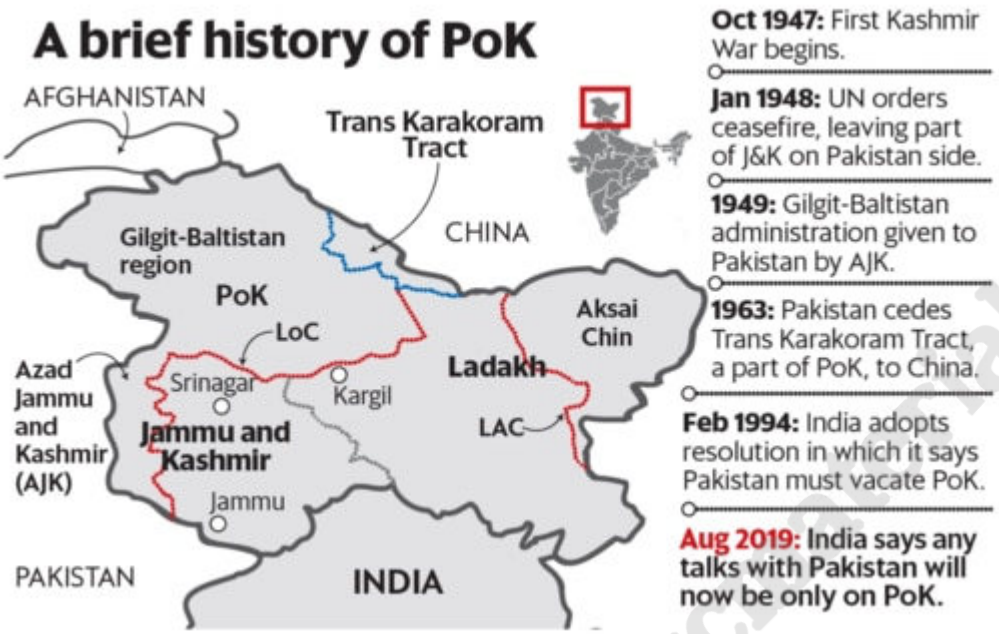
Solution (c)

Basic Information:

· PoK comprises the so-called Azad Jammu and Kashmir (AJK) and Gilgit-Baltistan. Pakistan ceded a part of PoK, called the Trans Karakoram Tract, to China in 1963.

· Defence minister that any future talks with Pakistan will focus on Pakistan-occupied Kashmir (PoK) has brought the focus back on the disputed region.

· The statement shifts India's position on J&K to offensive from defensive, it also puts China on notice as it seeks to push ahead with its plan for China-Pakistan Economic Corridor (CPEC). Part of China's Belt and Road Initiative, India considers CPEC a national security threat as it proposes to pass through Gilgit-Baltistan, thus bringing China's military power closer to India's western border.



(Source: https://www.livemint.com/politics/news/why-new-delhi-is-turning-up-the-heat-on-pok-now-1566324538622.html)

QUESTION 40.

Which of the following geographical entity separates Iran and Saudi Arabia?

a) Persian Gulf
b) Gulf of Oman
c) Red Sea
d) Gulf of Aden

Correct Answer: A
Your Answer: A
Explanation

Solution (a)

Basic Information:

The Houthis, the Iran-aligned rebel army that has been fighting a Saudi-led military coalition in neighbouring Yemen for the past four years, claimed responsibility for the attack on Khurais oilfield and Abqaiq processing facility both owned by Saudi Aramco, the country's state-owned oil company, often described as the kingdom's crown jewel.

(Source: https://www.theguardian.com/world/2019/sep/16/saudi-arabia-oil-attacks-everything-you-need-to-know)

QUESTION 41.

Which of the following region is referred to as the world's "Third Pole"?

a) Greenland
b) Alaska
c) Siberian region
d) Hindu Kush Himalayan region

Correct Answer: D
Your Answer: D
Explanation

Solution (d)

Basic Information:

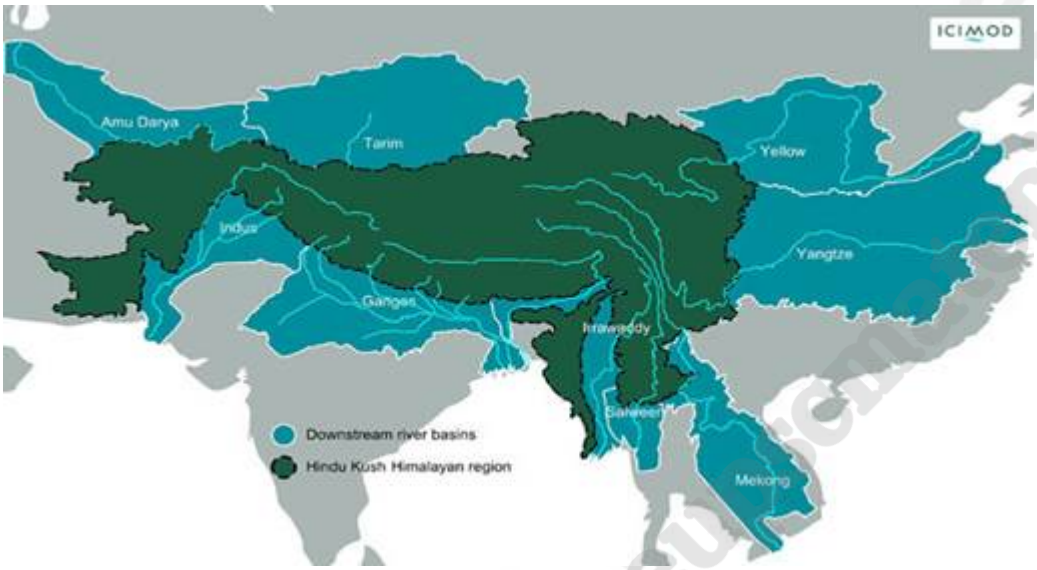
· Hindu Kush Himalayan region contain the largest volume of fresh water outside of Earth's polar ice sheets, leading hydrologists to nickname this region the Third Pole.

· One-seventh of the world's population depends on rivers flowing from these mountains for water to drink and to irrigate crops.

· An IPCC report says two-thirds of glaciers on the largest ice sheet after the Arctic and Antarctic are set to disappear in 80 years. It is expected a third of the ice will be lost even if the internationally agreed target of limiting global warming by 1.5C above pre-industrial levels is adhered to.

· It's home to 10 major river basins and some of the world's highest mountain peaks, including Mount Everest, which straddles the border between Nepal and China.

· Around 250 million people live in this mountainous region, and experts estimate another 1.65 billion or so benefit from the water that flows downstream from its rivers.



(Source: https://climate.nasa.gov/news/2887/the-water-future-of-earths-third-pole/)

QUESTION 42.

Tugali island recently in news is part of which of the following Pacific island nation?

a) Kiribati
b) Papua New Guinea
c) Solomon Islands
d) Hawaiian Islands

Correct Answer: C
Your Answer: B
Explanation

Solution (c)

Basic Information:

· Tulagi is an island within the Solomon Islands, which are located in the South Pacific, directly between Australia and the U.S.

· Under a secretive deal signed with a provincial government in the Solomon Islands, a Beijing-based company with close ties to the Chinese Communist Party has secured exclusive development rights for the entire island of Tulagi and its surroundings.

· China is also pushing to end the region's status as a diplomatic stronghold for Taiwan. The Solomons cut ties to Taipei and allied with Beijing just a few days before the Tulagi deal. A second Pacific nation, Kiribati, followed suit the same week.

(Source: https://www.nytimes.com/2019/10/16/world/australia/china-tulagi-solomon-islands-pacific.html)

QUESTION 43.

Consider the following statements:

1. The Western Dedicated Freight Corridor passes through six states, from Dadri to Jawaharlal Nehru Port.

2. The Eastern Dedicated Freight Corridor passes through five states, from Ludhiana to Dankuni.

Which of the statements given above is/are correct?

a) 1 Only
b) 2 Only
c) Both 1 and 2

d) Neither 1 nor 2

Correct Answer: D
Your Answer: C
Explanation

Solution (d)

Basic Information:

· Recently, First Trial Run of Double Stack Train conducted on newly built Rewari-Madar section of Western Dedicated Freight Corridor (WDFC).

· Under the Eleventh Five Year Plan of India (2007–12), Ministry of Railways is constructing a new Dedicated Freight Corridor (DFC) in two long routes namely, the Eastern and Western freight corridors.

· DFCCIL has been designated by Government of India as a `special purpose vehicle`, and has been created to undertake planning & development, mobilization of financial resources and construction, maintenance and operation of the Dedicated Freight Corridors. DFCCIL has been registered as a company under the Companies Act 1956 on 30 October 2006.

Statement Analysis:

Statement 1	**Statement 3**
Incorrect	**Incorrect**
The Western Dedicated Freight Corridor passes through five states covering more than 1500 kms. Haryana, Rajasthan, Uttar Pradesh, Gujarat, Maharashtra.	The Eastern Dedicated Freight Corridor passes through six states covering more than 1800 Kms. Punjab, Haryana, Uttar Pradesh, Bihar, Jharkhand, West Bengal.

(Source: https://www.urbantransportnews.com/dedicated-freight-corridor-information-features-benefits-routes-project-update/)

QUESTION 44.

India has dispute over the sharing of the Feni river water with which of the following country?

a) Nepal
b) Bangladesh
c) Bhutan
d) China

Correct Answer: B
Your Answer: B

Explanation

Solution (b)

Basic Information:

· The Feni river, which forms part of the India-Bangladesh border, originates in the South Tripura district, passes through Sabroom town on the Indian side, and meets the Bay of Bengal after it flows into Bangladesh.

· The dispute over the sharing of the Feni river water has been long-standing between India-Bangladesh

· The Union Cabinet approved an Memorandum of Understanding (MoU) between India and Bangladesh on the withdrawal of 1.82 cusecs (cubic feet per second) of water from the Feni river by India for a drinking water supply scheme for Sabroom town in Tripura.

(Source: https://indianexpress.com/article/explained/explained-significance-of-the-feni-river-mou-between-india-and-bangladesh-6108389/)

QUESTION 45.

Consider the following statements:

1. Kalapani is also a tri-junction point, where the Indian, Nepalese and Tibetan (Chinese) borders meet.

2. India claims Kalapani area as part of the Pithoragarh district of Uttarakhand.

Which of the statements given above is/are correct?

a) 1 Only
b) 2 Only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: C
Your Answer: C
Explanation

Solution (c)

Basic Information:

· Both India and Nepal claim Kalapani as integral part of their territory — India as part of Uttarakhand's Pithoragarh district and Nepal as part of Darchula district.

· Kalapani is a 35 square kilometre area, which is claimed by both India and Nepal. River Mahakali, earlier known as river Kali, flows through Kalapani, which is situated on the eastern bank of the river.

· Kalapani is also a tri-junction point, where the Indian, Nepalese and Tibetan (Chinese) borders meet. The region has been manned by the Indo-Tibetan Border Police since 1962.

(Source: https://theprint.in/theprint-essential/why-kalapani-is-a-bone-of-contention-between-india-and-nepal/317926/)

QUESTION 46.

The Korean peninsula which was in the news recently is located between which of the following Seas?

a) Sea of Japan and Yellow Sea
b) Yellow Sea and East China Sea
c) Korea Bay and Yellow Sea
d) East China Sea and Sea of Japan

Correct Answer: A
Your Answer: A
Explanation

Solution (a)

Basic Information:

· Kim Jong-un has signalled that North Korea will lift its moratoriums on nuclear and intercontinental ballistic missile tests in a move likely to anger Donald Trump.

· North Korea has previously fired missiles capable of reaching the entire US mainland and has carried out six nuclear tests.

· A self-imposed ban has been at the centre of the nuclear diplomacy between Pyongyang and Washington over the past two years, which has involved three meetings between him and Trump, but little tangible progress.

(Source: https://www.theguardian.com/world/2019/dec/31/north-korean-leader-to-end-missile-test-ban-claims-state-media)

QUESTION 47.

The state of Tripura share border with which of the other following state(s) of India:

1. Meghalaya

2. Assam

3. Mizoram

4. Manipur

Select the correct code from the following:

a) 1 and 4 Only
b) 2 Only
c) 2 and 3 Only
d) 1, 3 and 4 Only

Correct Answer: C
Your Answer: C
Explanation

Solution (c)

Basic Information:

· Prime Minister greeted the people of Manipur, Meghalaya and Tripura on their Statehood Day (21 st Jan, 1972) and hailed the traditions and culture of the three northeast states.

· Tripura has accommodated a large number of migrants from the then East Pakistan after the partition of the country.

· Before joining Indian union in 1949, Tripura was a princely state and ruled by tribal king, and due to influx of people from East Pakistan the majority tribals were reduced to minority. Such claims have caused unrest in Tripura against the CAA.

(Source: https://thewire.in/rights/anti-caa-protests-tripura-pradyot)

QUESTION 48.

Consider the following pairs:

Beach	State/UT
1. Shivrajpur beach	Karnataka
2. Bhogave beach	Maharashtra
3. Chandrabhaga beach	Odisha

Which of the pairs given above is/are correct?

a) 1 and 2 Only
b) 1 and 3 Only
c) 3 Only
d) 2 and 3 Only

Correct Answer: D

Your Answer: C
Explanation

Solution (d)

Basic Information:

· The Ministry has embarked upon a programme for 'Blue Flag' Certification for select beaches in the country.

· This Certification is accorded by an international agency "Foundation for Environment Education, Denmark".

· The 'Blue Flag' beach is an Eco-tourism model endeavouring to provide to the tourists/beach goers clean and hygienic bathing water, facilities/amenities, safe and healthy environment and sustainable development of the area.

· 13 pilot beaches that have been identified for the certification, in consultation with concerned coastal States/UTs, are Ghoghala Beach (Diu), Shivrajpur beach (Gujarat), Bhogave (Maharashtra), Padubidri and Kasarkod (Karnagaka), Kappad beach (Kerala), Kovalam beach (Tamil Nadu), Eden beach (Puducherry), Rushikonda beach (Andhra Pradesh), Miramar beach (Goa), Golden beach (Odisha), Radhanagar beach (Andaman & Nicobar Islands) and Bangaram beach (Lakshadweep).

· Rushikonda beach in Andhra Pradesh also features in the list of 13 pilot beaches, for development of facilities and infrastructure accordingly.

· Chandrabhaga beach of Odisha's Konark coast was the first to complete the tag certification process will be the first in Asia to get the Blue Flag certification.

(Source: https://pib.gov.in/newsite/PrintRelease.aspx?relid=195279)

QUESTION 49.

The river Sukapaika is a distributary of which of the following river?

a) Mahanadi
b) Baitarna
c) Godavari
d) Brahmani

Correct Answer: A
Your Answer: Unanswered
Explanation

Solution (a)

Basic Information:

· Sukapaika is one of the several distributaries of the mighty Mahanadi river in Odisha.

· It branches away from the Mahanadi at Ayatpur village in Cuttack district and flows for about 40 kilometres (km) before rejoining its parent river at Tarapur in the same district. In the process, it drains a large landmass comprising over 425 villages under 26 gram panchayats in three blocks — Cuttack Sadar, Nischintakoili and Raghunathpur.

· The riverbed has suffered erosion and it is full of hyacinth from Ayatpur to Tarapur. Most trees along the river have also disappeared. At some patches, cattle heads are seen to be grazing on a dry patch in the middle of it.

· Embankments have killed Odisha's Sukapaika river that was the lifeline of over 0.5 million people.

· The average rainfall in Cuttack is around 1,700 mm, but as the river has lost its water holding capacity, it remains dry most of the year.

· The 858 Kilometers long Mahanadi river flows through the states of Chhattisgarh and Odisha.

· The major tributaries of Mahanadi are Seonath, Jonk, Hasdo, Mand, Ib, Ong, Tel etc.

· Hirakud Dam is built across Mahanadi River, about 15 km from Sambalpur in Odisha.

(Source: https://www.downtoearth.org.in/news/water/sukapaika-death-of-a-river-68283)

QUESTION 50.

Which if the following tunnel upon completion, will be the world's longest highway tunnel at an altitude of above 10,000 feet?

a) Atal Tunnel
b) Chenani-Nashri tunnel
c) Sela Tunnel
d) None of the above.

Correct Answer: A
Your Answer: A
Explanation

Solution (a)

Basic Information:

· The Rohtang Tunnel, which will connect Manali in Himachal Pradesh with Leh, Ladakh, and Jammu Kashmir, will be known as Atal Tunnel.

· Cutting through the mighty Pir Panjal range, the Atal Tunnel (Rohtang tunnel) will reduce the distance between Manali and Leh by 46 kilometres, and save crores of rupees in transport costs. It will also provide all-weather connectivity to remote border areas of Himachal Pradesh and Ladakh.

· Upon completion, the 8.8 km-long tunnel will be the world's longest highway tunnel at an altitude of above 10,000 feet (3,000 metres).

· It is a 10.5 m-wide single tube, a bi-lane tunnel with a fireproof emergency tunnel built into the main tunnel itself. The 10.5-m width includes a 1-metre footpath on both sides.

· The decision to construct a strategic tunnel below the Rohtang Pass was taken by former Prime Minister Atal Bihari Vajpayee.

· The tunnel is expected to be ready for an official inauguration by September 2020

(Source: https://indianexpress.com/article/explained/rohtang-tunnel-named-after-atal-bihari-vajpayee-manali-leh-ladakh-6184702/)

QUESTION 51.

The reading of gravity at different places on the earth differs from the expected values. This difference is called gravity anomaly. With respect to gravity anomaly consider the following statements

1. The distribution of mass of materials in the earth crust can be understood by measuring gravity anomaly.

2. Gravity anomaly can be measured from artificial satellites revolving earth.

Which of the statements given above is/are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: C
Your Answer: Unanswered
Explanation

Solution (c)

Basic information:

Gravity Anamoly

· It is the observed difference between the acceleration of a free fall on earth's surface and the corresponding value predicted from a model of the planet's gravity field.

· Gravity anamoly are the result of varying density distributions within the earth crust.

Statement Analysis:

Statement 1	Statement 2
Correct	**Correct**
Since density variations gives rise to gravity anamoly, it is possible to understand the distribution of mass based on anamolies.	Gravity anomaly can be measured from artificial satellites revolving earth. E.g GRACE project jointly conducted by NASA and German Aerospace centre measured gravity anomolies. The twin satellites under the project were launched in 2002 and ended in Oct 2017.

QUESTION 52.

With respect to the position in the orbit of a planet about the Sun what does perihelion and aphelion denotes?

1. Perihelion is the nearest point on the planet's direct orbit around the Sun.

2. Aphelion is the farthest point on the planet's direct orbit around the Sun.

Which of the statements given above is/are incorrect?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: D
Your Answer: D
Explanation

Solution (d)

Basic Information:

· The planets orbit around the Sun is not circular. It is elliptical. Hence there are two extreme points in the orbit i.e, the farthest or the nearest.

· The terms perihelion and aphelion describe different points in the Earth's orbit of the Sun.

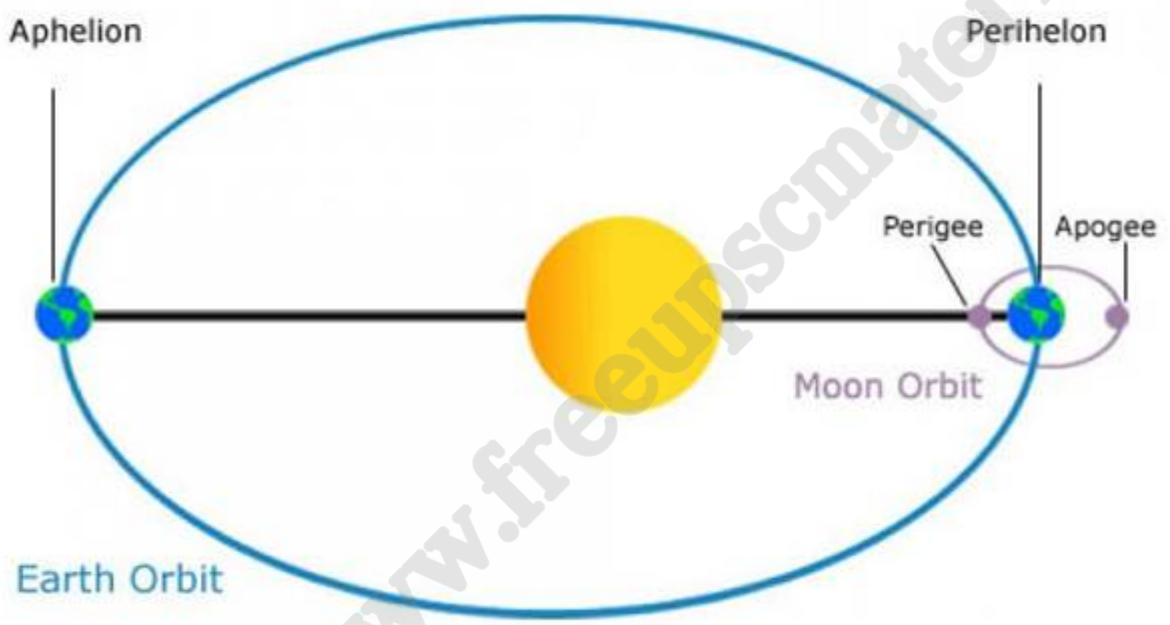
· The farthest is called the aphelion and the nearest is called the perihelion.

Statement Analysis:

Statement 1	Statement 2
Incorrect	**Incorrect**
Perihelion is the point of the Earth's orbit that is nearest to the Sun. Perihelion always happens in early January. About two weeks after the December Solstice, Earth is closest to the Sun.	Aphelion is the point of the Earth's orbit that is farthest away from the Sun. Aphelion always happens in early July. About two weeks after the June solstice, Earth is farthest from the Sun.

Do you know?

· The words come from Ancient Greek, in which helios means "Sun," apo means "far," and peri means "close."



QUESTION 53.

With respect to measuring earthquakes consider following statements:

1. Richter scale measures the energy released during the earthquake.

2. Mercalli scale measures the intensity of the earthquake taking into account the visible damage caused.

Which of the statements given above is/are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: C
Your Answer: C
Explanation

Solution (c)

Basic Information:

· The earthquake events are scaled either according to the magnitude or intensity of the shock.

· The magnitude scale is known as the Richter scale. The magnitude relates to the energy released during the quake. The magnitude is expressed in numbers, 0-10.

· The intensity scale is named after Mercalli. The intensity scale takes into account the visible damage caused by the event. The range of intensity scale is from 1-12.

Statement Analysis:

Statement 1	**Statement 2**
Correct	**Correct**
The Richter scale measures the seismic waves, or the energy released, causing the earthquake and describes the quake's magnitude. It is a logarithmic. The logarithmic scale for the Richter is base-10 and is based on the amplitude of waves. The scale on the Richter ranges from 2.0 to 10.0, or higher but has never been recorded. The consistency of the scale varies at different distances from the epicenter, but a single value is given for the quake as a whole.	The Mercalli scale bases its measurement on the observed effects of the earthquake and describes its intensity. It is a linear measurement. The calculation for the Mercalli scale is quantified from the observation of the earthquake's effect on the earth's surface. It is also based on the effect on humans, objects, and man-made structures. The linear scale for the Mercalli ranges from I, meaning not felt, to XII, which is total destruction of the area affected by the quake. The consistency of the scale varies and depends on the distance from the epicenter.

QUESTION 54.

Which fault separates Chota Nagpur Plateau from North Eastern Himalayan Mountains?

a) Bhima fault
b) Malda fault
c) Meghalaya fault
d) None of the above

Correct Answer: B
Your Answer: Unanswered
Explanation

Solution (b)

Basic Information:

· In geology, a fault is a planar fracture or discontinuity in a volume of rock across which there has been significant displacement as a result of rock-mass movement. Large faults within the Earth's crust result from the action of plate tectonic forces, with the largest forming the boundaries between the plates.

· Bhima Fault is in the Bhima basin in the peninsular plateau. It has undergone significant seismic activities.

· Malda Fault is in West Bengal and separates Chotanagpur plateau from North Eastern Himalayan ranges.

QUESTION 55.

Arrange the following hills/ranges from North to South

1. Nallamalla hills

2. Javadi hills

3. Palkonda range

4. Shevaroy hills

Select the correct code?

a) 1-2-3-4
b) 1-3-2-4
c) 2-3-1-4
d) 3-2-1-4

Correct Answer: B

Your Answer: Unanswered
Explanation

Solution (b)

Correct order (From North to South)

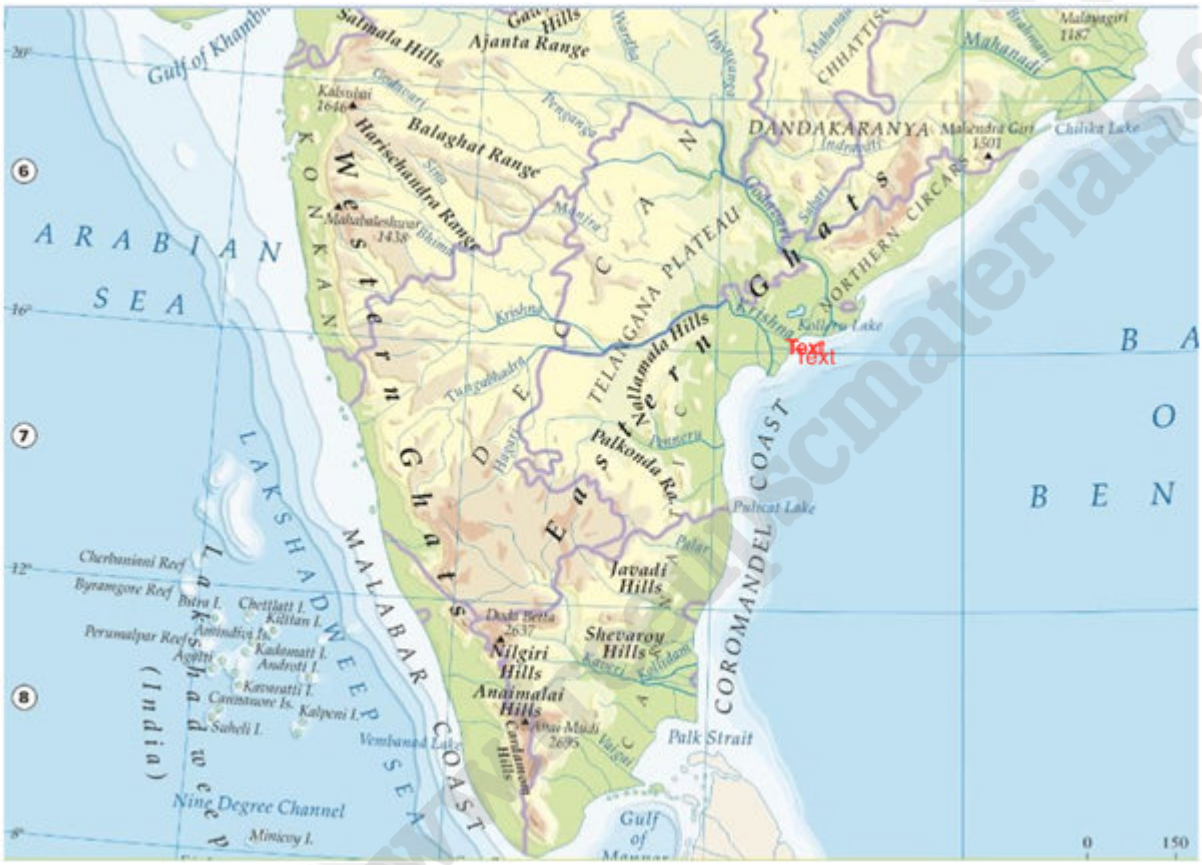
· Nallamalla Hills

· Palkonda Range

· Javadi Hills

· Shevaroy Hills

Refer to figure below



QUESTION 56.

Consider the following pairs:

(Passes) : : (Associated Ranges)

1. Zoji La pass : : Great Himalayas

2. Banihal : : Pir Panjal

3. Photu La : : Zaskar

4. Khardung La : : Ladakh range

Which of the above statements is/are correctly matched?

a) 1 Only
b) 1 and 2 Only
c) 1, 2 and 3 Only
d) 1, 2, 3 and 4

Correct Answer: D
Your Answer: Unanswered
Explanation

Solution (d)

Basic Information:

· A mountain pass is a navigable route through a mountain range or over a ridge.

Important passes in India: (Himalayan ranges)

1. Zoji La pass : Great Himalayas

2. Banihal pass: Pir Panjal

1. Photu La pass: Zaskar

2. Khardung La pass : Ladakh range

3. Shipki la pass : Kinnaur in Himachal Pradesh

4. Jhelep la : Between Sikkim and Tibet autonomous region.

5. Mana pass: border between India and Tibet in Uttarakhand

6. Bara Lacha la: Zanskar range

7. Rohtang pass: Pir Panjal range

8. Bomdi la: Greater Himalayas in Arunachal Pradesh

QUESTION 57.

The term “Bugyals” are associated with –

a) Nomadic tribes in Eastern Himalayas
b) Grasslands in Western Himalayas

c) Nomadic tribes in Western Himalayas

d) Grasslands in Eastern Himalayas

Correct Answer: B
Your Answer: Unanswered
Explanation

Solution (b)

Basic Information:

· Bugyals are alpine pasture lands, or meadows, in higher elevation range between 3,300 metres (10,800 ft) and 4,000 metres (13,000 ft) of the Himalayas in the Indian state of Uttarakhand, where they are called "nature's own gardens.

QUESTION 58.

Which of the following basins is said to be Molasses basin due to its nature of unconsolidated deposits

a) Mizoram basin

b) Brahmaputra basin

c) Teesta basin

d) None

Correct Answer: A
Your Answer: A
Explanation

Solution (a)

Basic Information:

· In geology, the name "molasse basin" is sometimes also used in a general sense for a synorogenic (formed contemporaneously with the orogen) foreland basin of the type north of the Alps.

· The basin is the type locality of molasse, a sedimentary sequence of conglomerates and sandstones, material that was removed from the developing mountain chain by erosion and denudation, that is typical for foreland basins.

· In India Mizoram is known as Molassis basin.

QUESTION 59.

Which of the following coastal plains of India is/are submerged facilitating in location of majority of natural ports?

Select the correct answer

a) Western only
b) Eastern only
c) Both
d) None

Correct Answer: A
Your Answer: A
Explanation

Solution (a)

Basic Information:

· Favourable locations for the natural ports to form are at places where the sea is submerged. Because the deeper the sea is the better condition for natural ports.

· Western coast is formed by submergence in most parts. Hence most favourable for natural ports. While the east coast is formed by Deltas. Hence not suitable for ports.

QUESTION 60.

Consider the following geographical features/Places

1. Amindivi

2. 11 degree channel

3. Cannanore (Kavratti)

4. Minicoy

Arrange the above from North to South

a) 1-2-3-4
b) 2-1-3-4
c) 1-2-4-4
d) 2-1-4-3

Correct Answer: A
Your Answer: Unanswered
Explanation

Solution (a)

Basic Information:

Lakshadweep group of islands is broadly divided by the Eleventh degree channel, north of which is the Amini Island and to the south of the Canannore Island.

QUESTION 61.

Which among the following are categorised as sedimentary rocks?

1. Sandstone

2. Limestone

3. Granite

4. Gabro

5. Shale

Choose the correct option

a) 1 and 2
b) 1, 2 and 5
c) 3 and 4
d) 5 only

Correct Answer: B
Your Answer: Unanswered
Explanation

Solution (b)

Basic Information:

· Sedimentary rocks are formed from the sediments accumulated over long periods of time. They can be formed mechanically (Derived from other rocks. E.g, sandstone, grit), organically

(derived from the remains of living organisms. E.g limestone, chalk) or chemically (Precipitated chemically from solutions of one kind or other e.g rock salt)

· Granite and gabbro are igneous rocks formed by plutonic activity. Other examples of igneous rocks include basalt, diorite etc.

QUESTION 62.

Consider the following statements

1. Block mountains are formed by faulting of the earth's crust due to tensional or compressional forces operating within earth crust.

2. The North eastern hills like Garo, Khasi, Jaintia represent classic examples of block mountains in India.

Which of the statements given above is/are correct?

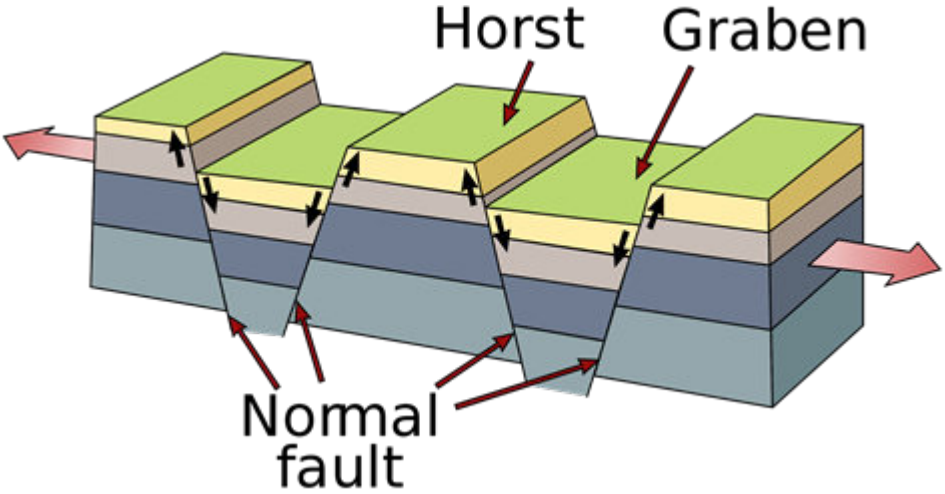
a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: A
Your Answer: Unanswered
Explanation

Solution (a)

Basic Information :

Earth Movements generates tensional forces that tend to pull the crust apart and faults are developed. If the block enclosed by the faults remains as it is or rises and the land on either side subsides, the upstanding block becomes the horst or block mountain. The depressed block is called the Graben. In a similar way, compressional forces set up by the earth movements produce a thrust or reverse fault and the block may be raised or lowered in relation to surrounding areas.



The satpura and vindhya ranges in central India are classic examples of block mountains in India. Narmada rift valley is formed due to faulting.

Statement Analysis:

Statement 1	**Statement 2**
Incorrect	**Incorrect**
Faulting of earth crust forms block mountains.	Garo, Khasi, Jaintia are part of Himalayan orogeny and they depict fold mountain features.

QUESTION 63.

With respect to volcanic eruptions consider the following statements.

1. Basic lavas are rich in iron and magnesium.

2. Acidic lavas are rich in silica.

3. Basic lavas flow slowly and do not travel far while acidic lavas flow readily spreading extensively over large distances.

Which of the statements given above is/are correct?

a) 3 only
b) 1 and 2 only
c) 1, 2 and 3

d) None

Correct Answer: B
Your Answer: Unanswered
Explanation

Solution (b)

Basic Information:

Lava is molten rock which has reached the surface. Lava composition varies from location to location. In some places it is the sort of material geologists refer to as 'acidic' and in other places, it is the sort of material geologists refer to as 'basic'.

Properties of Basic lava:	**Properties of Acid lavas:**
· Hottest lavas with temperature as high as 1000 degree centigrades · Dark colored. Rich in Iron and magnesium · High fluidity · Flow readily and extensively over long distances · The resulting volcano is gently sloping with a wide diameter and forms a flattened shield or dome	· Highly viscous (Not fluid) with high melting point · Light coloured with a high percentage of silica. · Flow slowly and travel short distances before solidifying.

Statement analysis:

Statement 1 and 2	**Statement 3**
Correct	**Incorrect**
'Acidic' rocks (or lava) are rocks containing a higher percentage of SiO_2 (silica), while the rocks we call 'Basic' contain less silica, and more iron, magnesium and calcium.	Acidic lavas flow slowly and travel short distances before solidifying, while Basic lavas flow readily spreading extensively over large distances.

QUESTION 64.

Which of the following composite volcano is named as "Lighthouse of the Mediterranean"?

a) Mt Vesuvius
b) Mt Fuji
c) Mt Stromboli
d) Mt Chimborozo

Correct Answer: C
Your Answer: Unanswered
Explanation

Solution (c)

Basic Information:

· Mt Stromboli is one of the active volcanoes in Italy.

· Frequent eruptions from this mountain make the summit glow and hence it is named as "Lighthouse of the Mediterranean".

QUESTION 65.

With respect to the layers in the earth's crust consider the following:

Discontinuity	*Layers*
1. Conrad Discontinuity	Between upper and lower crust

2. Mohorovicic Discontinuity	Between Crust and mantle
3. Repetti Discontinuity	Between Upper mantle and Lower mantle
4. Gutenberg Discontinuity	Between outer core and inner core

Which of the above pairs are correctly matched?

a) 1 and 2
b) 2 and 3
c) 3 and 4
d) 1, 2 and 3

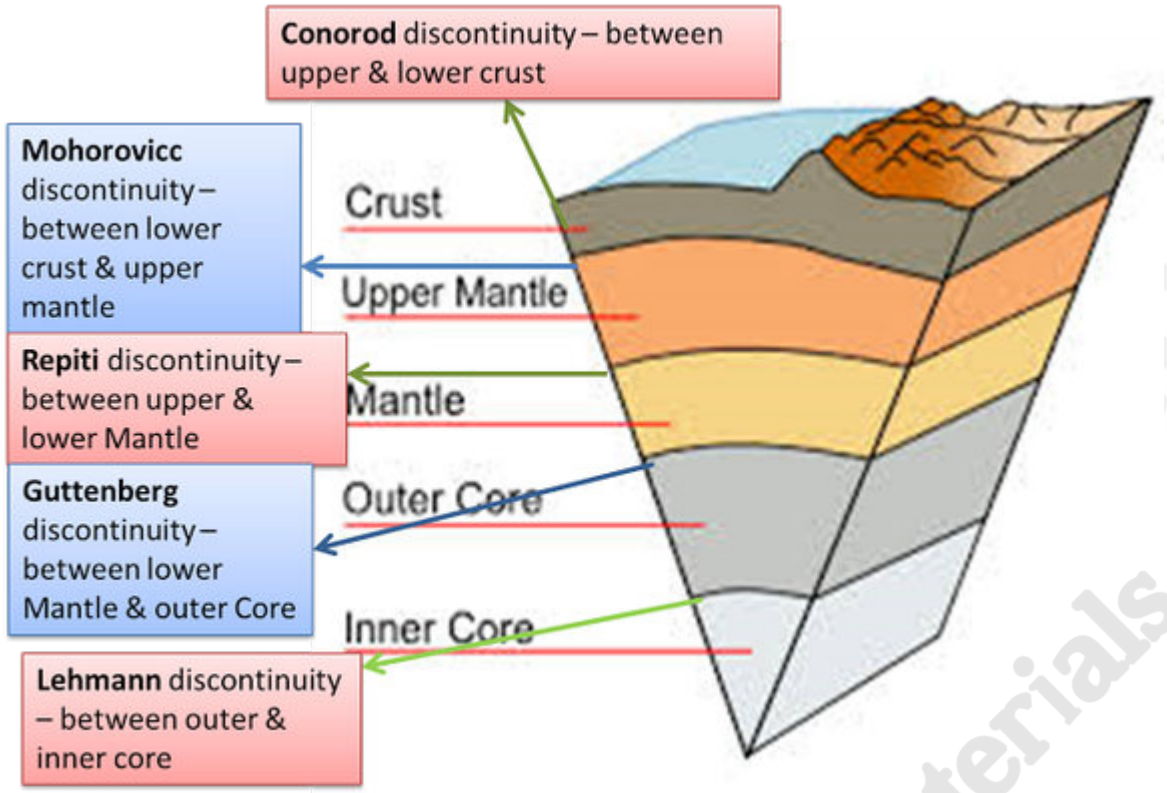
Correct Answer: D
Your Answer: D
Explanation

Solution (d)

Basic Information:

Layers and discontinuities according to chemical properties

Discontinuity	Layer/Sub layer
Conrad Discontinuity	Upper crust and lower crust
Mohorovicic Discontinuity	Crust and mantle
Repetti Discontinuity	Upper mantle and lower mantle
Gutenberg Discontinuity	Mantle and core
Lehman Discontinuity	Outer core and inner core



QUESTION 66.

With respect to the metamorphic rocks consider the following pairs:

(Parent rock) : : (Metamorphic rock)

1. Limestone : : Clay

2. Sandstone : : Quartzite

3. Granite : : Gneiss

4. Shale : : Slate

Which of the above pairs are correctly matched?

a) 1 and 2
b) 2, 3 and 4
c) 1, 3 and 4
d) 1, 2 and 3

Correct Answer: B
Your Answer: B

Explanation

Solution (b)

Parent rock	Metamorphic rock
Clay	Slate
Limestone	Marble
Sandstone	Quartzite
Granite	Gneiss
Shale	Schist and slate
Coal	Graphite

QUESTION 67.

According to Continental Drift Theory proposed by Alfred Wegener which among the following forms the evidence for his theory?

1. “Jig-Saw fit” of the coasts of continents.

2. Geological similarity at the central part of two continents.

3. Permo-carboniferous glaciations

Choose the correct option:

a) 1 and 3
b) 1 and 2
c) 2 and 3
d) 1, 2 and 3

Correct Answer: A
Your Answer: A
Explanation

Solution (a)

Basic Information:

According to Alfred Wegener's Continental drift theory earth's land had once been joined into a single supercontinent surrounded by an ocean. This continental mass started breaking up about 200 million years ago. Since then the pieces had moved to their present positions and are still moving.

Evidences in support of the theory

1. **"Jig saw" fit** - Wegener was struck by the geographical similarity between the opposite coasts of the Atlantic Ocean. The outlines of the two coasts appears to be the detached portion of the other ie. The east coast of north and South America can be exactly fit into the left coast of Africa and Europe.

2. **Geological structure** - there is remarkable similarity in geological structure along the two coasts of Atlantic. The best example is provided by the Appalachian mountains of North America which come right up to the coast and continue their trend across the ocean in old Hercynian Mountains of south west Ireland, Wales and central Europe. The opposite coasts of Africa and Brazil display even greater resemblance in their structure and rocks.

3. **Permo-carboniferous glaciations** - it presents a strong proof that at one point of time these land masses were assembled together , since the evidence of this glaciation are found in Brazil, Falkland island, South Africa, Indian peninsula as well as Australia. It is difficult to explain these extensive glaciations on the basis of existing distribution of landmass and water. According to Wegener at the time of Pangaea, the South Pole was situated near Durban of the present coast of South Africa. Similar Fossil remains of terrestrial animals are found on both coasts of the Atlantic. This cannot be possible if the two landmasses were not joined as it is quite impossible for these animals to swim across the Atlantic.

QUESTION 68.

According to plate tectonics what drives the plates to move in a particular direction?

a) Radioactive decay of the elements below the earth crust.
b) The slow movement of hot, softened mantle that lies below the rigid plates.
c) The rotation of the earth.
d) Tidal force caused by the attraction of the moon and Sun.

Correct Answer: B
Your Answer: D
Explanation

Solution (b)

Basic Information:

Heat within the earth comes from two main sources: radioactive decay and residual heat. This heat melts the rock beneath the plates and gives mobility. The mobile rock beneath the rigid plates is believed to be moving in a circular manner. The heated material rises to the surface, spreads and begins to cool, and then sinks back into deeper depths. This cycle is repeated over

and over to generate a convection cell. This slow movement of mantle below the plates drives their movement.

QUESTION 69.

With respect to the diastrophism consider the following statements:

1. Epeirogeny is the continental building process whereas orogeny is the mountain building process.

2. Epeirogenetic forces are horizontal in nature whereas orogenetic forces are vertical in nature.

Which of the statements given above is/are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: A
Your Answer: C
Explanation

Solution (a)

Basic Information:

All processes that move, elevate or build up portions of the earth's crust come under diastrophism. The diastrophic forces operate slowly and their effects becomes visible after thousands and millions of years. The diastrophic forces/ movements are further subdivided into Epeirogenic movements and orogenetic movements.

· Epeirogenetic movements cause upliftment and subsidence of continental masses through upward and downward movements. The forces act vertically.

· Orogenetic movements are caused due to endogenetic forces acting horizontally leading to the building of mountains.

Statement 1	**Statement 2**
Correct	**Incorrect**
Epeirogeny-Continent building Orogeny - Mountain building	Epeirogeny- Vertical Orogeny - Horizontal

QUESTION 70.

Which of the following landforms are formed by glaciers?

1. Arete

2. Gorges

3. U-shape valley

4. Hanging valley

5. Oxbow lakes

Choose the correct option:

a) 1, 2 and 5
b) 1, 2, 4 and 5
c) 1, 2, 3 and 4
d) 1, 3, 4 and 5

Correct Answer: D
Your Answer: C
Explanation

Solution (d)

Explanation:

Agents	**Erosive landforms**	**Depositional Landforms**
Fluvial / Water channel/river	V-Shape valley, potholes, waterfalls, plunge pools, cascades, rapids, meanders	Oxbow lake, flood plain, braided channel, riverine island, natural levees, delta,
Aeolian/Wind	Blowout, mushroom rock, Yardang, Driekanter, Demoiselles, zeugen	Sand dunes, siefs, Nephka, Loess
Glacial	Arete, Cirque, Horn, U-shape valley, Hanging valley, Fjord	Outwash plain, eskers, drumlin, kettle holes, kame, morain
Sea waves	Notch, Cave, stack, cove,	Beach, sand bar, hook, loop, tombolo

QUESTION 71.

Which among the below factors are favourable conditions for formation of Karst Topography?

1. Moderate Rainfall

2. Large thickness and area of limestone rock bed.

3. Porous rocks.

4. Jointed rocks with high density

Choose correct answer:

a) 1 and 2 only
b) 1, 2 and 3 only
c) 2,3 and 4 only
d) 1, 2, 3 and 4

Correct Answer: D
Your Answer: C
Explanation

Solution (d)

Basic Information:

Karst Topography:

Karst is a topography formed from the dissolution of soluble rocks such as limestone, dolomite, and gypsum. It is characterized by underground drainage systems with sinkholes and caves.

Preconditions for formation of Karst Landform –

· Rainfall should be optimum (Semi-arid region). Rainfall should be moderate i.e. it shouldn't be high otherwise it will dissolve the entire rock structure without forming desired topography. It should be too low either otherwise water won't be able to dissolve the rock at all.

· The thickness and area of limestone rock bed should be large enough for carving.

· The rock should be jointed and the density of joints should be high so that water can penetrate through cracks systematically eroding the rock bed.

· Rocks should not be porous otherwise water will penetrate through the body of the rock and dissolve the whole rock rather than surface erosion.

QUESTION 72.

Which among the following are considered passive factors in soil formation

1. Parent material

2. Topography

3. Climate

4. Biological activity

5. Time

Choose the correct option.

a) 1, 2 and 3
b) 1, 2 and 5
c) 3, 4 and 5
d) 1 and 5

Correct Answer: B
Your Answer: D
Explanation

Solution (b)

Basic Information:

· There are five basic factors controlling the formation of soils: (i) parent material; (ii) topography; (iii) climate; (iv) biological activity; (v) time

· Climate and biological activity are considered active agents due to their intensity and influence in soil formation.

QUESTION 73.

Consider the following characteristics/features:

1. Characterized by an alternative hot, rainy season and cool, dry season.

2. Monthly temperature ranges between 21 degree celsius to 32 degree celsius.

3. The vegetation is typified by tall grass and short trees.

4. Trade winds bring rain to the coastal areas.

Which Climatic region best describes the above features?

a) Tropical monsoon climate
b) Central Continental Steppe type
c) Savannah or Sudan type
d) Mediterranean type

Correct Answer: C

Your Answer: C
Explanation

Solution (c)

Basic Information:

Savannah or Sudan type climate description:

· It is a transitional type of climate found between the equatorial forests and the trade wind hot deserts.

· In the northern hemisphere the hot rainy season begins in May and lasts until September. The rest of the year is cool and normal.

· Annual temperature range is usually 10-15 degree Celsius.

· Masai and Hausa are prominent tribes inhabiting the area.

Q. 74) Solution (d)

Basic Information:

The topography of the Mediterranean region is unique with high Alps in the north, the sahara desert in the south, continental interiors in the east and open Atlantic on the west. This gives rise to great differences in the temperature, pressure and precipitation. The passing cyclones from the atlantic, the anticyclones from the north and the cold air masses from the continental interiors are often interrupted or channelled by relief features giving birth to local winds.

· Sirocco is hot dusty wind.

· Mistral and bora are cold winds

· Tramontana and Gregale are cold winds of Mediterranean Sea.

Statement Analysis:

Statement 1	**Statement 2**	**Statement 3**
Correct	**Correct**	**Correct**
Sirocco is hot dusty wind	Mistral and Bora are cold winds	Bora is a cold north-easterly wind experienced along the Adriatic coasts

QUESTION 74.

With respect to the local winds of the Mediterranean region, consider the following statements:

1. Sirocco is a hot, dry dusty wind originating from the Sahara Desert.

2. Mistral is cold wind from the Northern regions

3. Bora is a cold north-easterly wind experienced along the Adriatic coasts.

Which of the statements given above is/are correct?

a) 1 only
b) 1 and 2
c) 3 only
d) 1, 2 and 3

Correct Answer: D
Your Answer: Unanswered

QUESTION 75.

The term "PLAYAS" refers to –

a) Shallow lakes formed in the desert basins
b) Landform associated with rivers
c) A kind of shifting cultivation practiced by few tribes in North-eastern India
d) Silica material found at the earth's mantle

Correct Answer: A
Your Answer: B
Explanation

Solution (a)

Explanation:

Playas, also called pan, flat, or dry lake, flat-bottom depression found in interior desert basins and adjacent to coasts within arid and semiarid regions, periodically covered by water that slowly filtrates into the groundwater system or evaporates into the atmosphere, causing the deposition of salt, sand, and mud along the bottom and around the edges of the depression.

Playas are among the flattest known landforms. Their slopes are generally less than 0.2 metre per kilometre. When filled with only a few centimetres of water, many kilometres of surface may be inundated.

QUESTION 76.

Consider the following statements

1. Gases of the present atmosphere are the direct residues of the early stage of earth's formation.

2. Atmosphere acts as a greenhouse by allowing long wave radiation from the SUN and trapping short-wave terrestrial radiation from earth's surface.

Which of the statements given above is/are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: D
Your Answer: C
Explanation

Solution (d)

Basic Information:

The gases of the present atmosphere are not the direct residue of the early stage of earth's formation. They are a product of progress through volcanic eruptions, hot springs, chemical breakdowns of solid matter and redistribution from the biosphere.

Atmosphere contains living gases like oxygen for man and animal, and carbon dioxide for plants (important for survival). It protects the earth from the harmful radiation from the sun. It acts as Green house by allowing short-wave radiation (from Sun) and trapping long-wave terrestrial radiation (from Earth's surface).

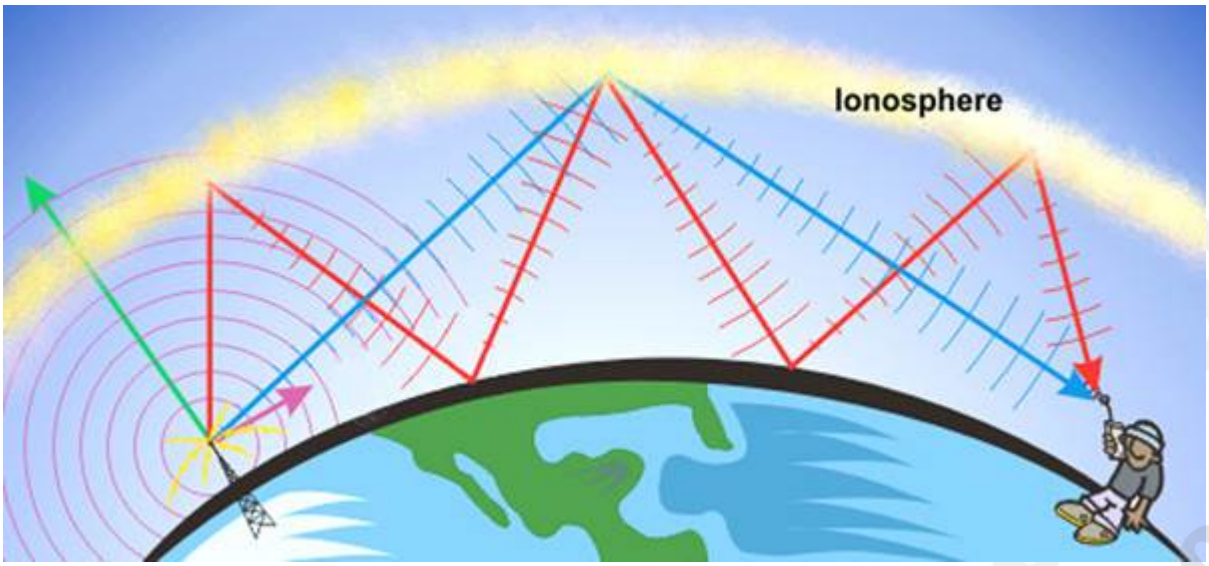
Statement Analysis:

Statement 1	**Statement 2**
Incorrect	**Incorrect**
Gases of the present atmosphere are the result of various geographical activities on earth.	Sun emits shortwave radiation. Earth reflects the radiations from Sun as long wave terrestrial radiations.

Q. 77) Solution (c)

Basic Information:

The ionosphere is a deep layer of electrically charged molecules and atoms (which are called ions) in the middle and upper mesosphere and the lower thermosphere, between about 60 and 400 kilometers (40 and 250 miles). The ionosphere is significant because it aids long-distance communication by reflecting radio waves back to Earth.



QUESTION 77.

Which of the following layers in earth's atmosphere helps long distance radio communications?

a) Troposphere
b) Stratosphere
c) Ionosphere
d) Mesosphere

Correct Answer: C
Your Answer: C

QUESTION 78.

Arrange the following in ascending order in terms of their "ALBEDO" value

1. Clouds
2. Snow
3. Forest
4. Charcoal
5. Deserts

Choose the correct code

a) 4-3-5-1-2

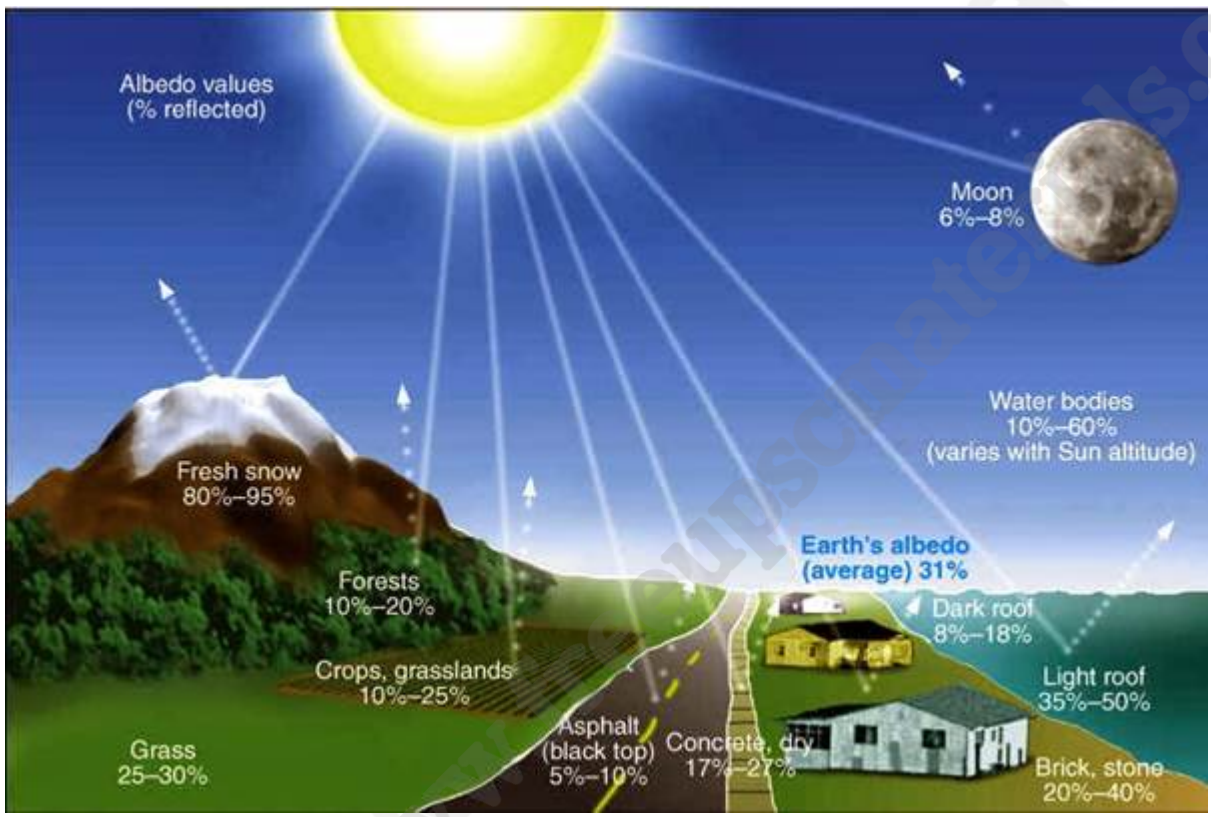
b) 4-3-5-2-1
c) 2-1-5-3-4
d) 2-1-5-4-3

Correct Answer: A
Your Answer: C
Explanation

Solution (a)

Basic Information:

The term albedo refers to the overall reflectivity of an object or surface, usually described as a percentage the higher the albedo, the greater the amount of radiation reflected. Snow, for example, has a very high albedo (as much as 95 percent), whereas a dark surface, such as dense forest cover, can have an albedo as low as 14 percent.



QUESTION 79.

Isotherms are lines of constant or equal temperatures. With respect to Isotherms consider the following statements:

1. Widely spaced isotherms indicate a small change in temperature over distance and closely spaced isotherms indicate large changes in temperature.

2. The isotherms are more linear (straight across) in the Southern hemisphere. Isotherms bend much more between seasons in the Northern Hemisphere than in the Southern Hemisphere.

Which of the statements given above is/are correct?

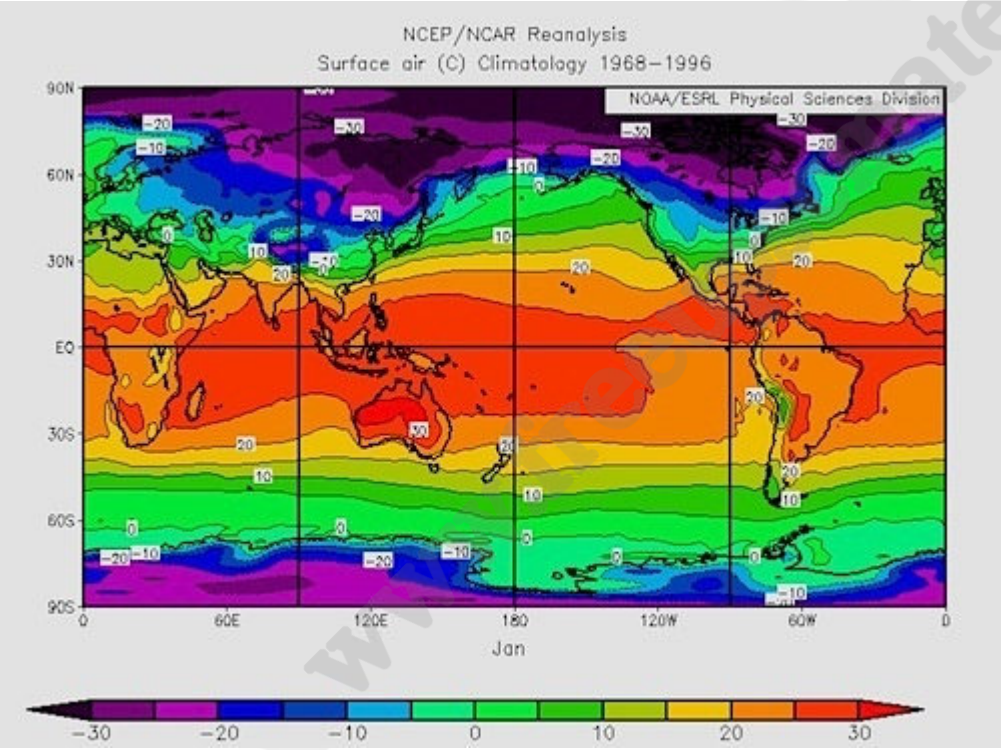
a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: C
Your Answer: C
Explanation

Solution (c)

Basic Information:

Isotherms, lines connecting points of equal air temperature are used to map the geographic pattern of temperature across the earth's surface. The spacing of isotherms depicts the temperature gradient across a portion of the Earth's surface. Widely spaced isotherms indicate a small change in temperature over distance and closely spaced isotherms indicate large changes in temperature.



We can certainly see the effect of differential heating of oceans and continents in the average January and July temperature maps depicted in the figures. The isotherms are more linear (straight across) in the Southern hemisphere. Isotherms bend much more between seasons in the Northern Hemisphere than in the Southern Hemisphere. The Southern hemisphere is more

uniformly water than the Northern hemisphere. Large landmasses in the Northern hemisphere cause isotherms to bend toward the equator in winter and poles in summer as they change their temperature much more than the water. Air temperatures over land fluctuate more because land changes its temperature much more rapidly than ocean water does. Thus they shift north and south much more over land through the year than they do over water.

Statement Analysis:

Statement 1	**Statement 2**
Correct	**Correct**
The spacing of isotherms depicts the temperature gradient	The Southern hemisphere is more uniformly water than the Northern hemisphere. Large landmasses in the Northern hemisphere cause isotherms to bend toward the equator in winter and poles in summer.

QUESTION 80.

Consider following statements about Coriolis Effect:

1. Coriolis effect changes the speed of the object along with the direction of movement.

2. Coriolis effect is proportional to the speed of the object.

Which of the statements given above is/are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: B
Your Answer: Unanswered
Explanation

Solution (b)

Basic Information:

Coriolis effect: It is a deflecting force experienced due to rotation of earth. Because of coriolis the air appears to turn towards its right in the northern hemisphere and towards its left in the southern hemisphere. The coriolis always acts in the perpendicular direction of the motion of air. It is zero at the equator and increases towards the poles.

The following are four basic points to remember about the Coriolis effect:

1. Regardless of the initial direction of motion, any freely moving object appears to deflect to the right in the Northern Hemisphere and to the left in the Southern Hemisphere.

2. The apparent deflection is strongest at the poles and decreases progressively toward the equator, where the deflection is zero.

3. The Coriolis effect is proportional to the speed of the object, and so a fast-moving object is deflected more than a slower one.

4. The Coriolis effect influences direction of movement only; it does not change the speed of an object.

Statement Analysis:

Statement 1	**Statement 2**
Incorrect	**Correct**
Coriolis effect only influences direction	The Coriolis effect is proportional to the speed of the object, and so a fast-moving object is deflected more than a slower one.

QUESTION 81.

The term “petrology” is associated with –

a) science of study of soils
b) science of study of planets
c) science of rock study of rocks
d) science of study of earth's crust

Correct Answer: C
Your Answer: C
Explanation

Solution (c)

Basic Information:

A petrologist studies rocks in all their aspects viz., mineral composition, texture, structure, origin, occurrence, alteration and relationship with other rocks.

QUESTION 82.

With respect to Chinook winds consider the following statements?

1. It occurs in North America.

2. It is dry and warm and occurs on the leeward side of the mountain due to adiabatic warming.

3. It is called Snow-Eater by local people.

4. It hastens the growth of crops and fruits and thaws the snow covered pastures.

Choose the correct statements

a) 1 and 2
b) 1, 2 and 3
c) 1, 3 and 4
d) 1, 2, 3 and 4

Correct Answer: D
Your Answer: B
Explanation

Solution (d)

Basic Information:

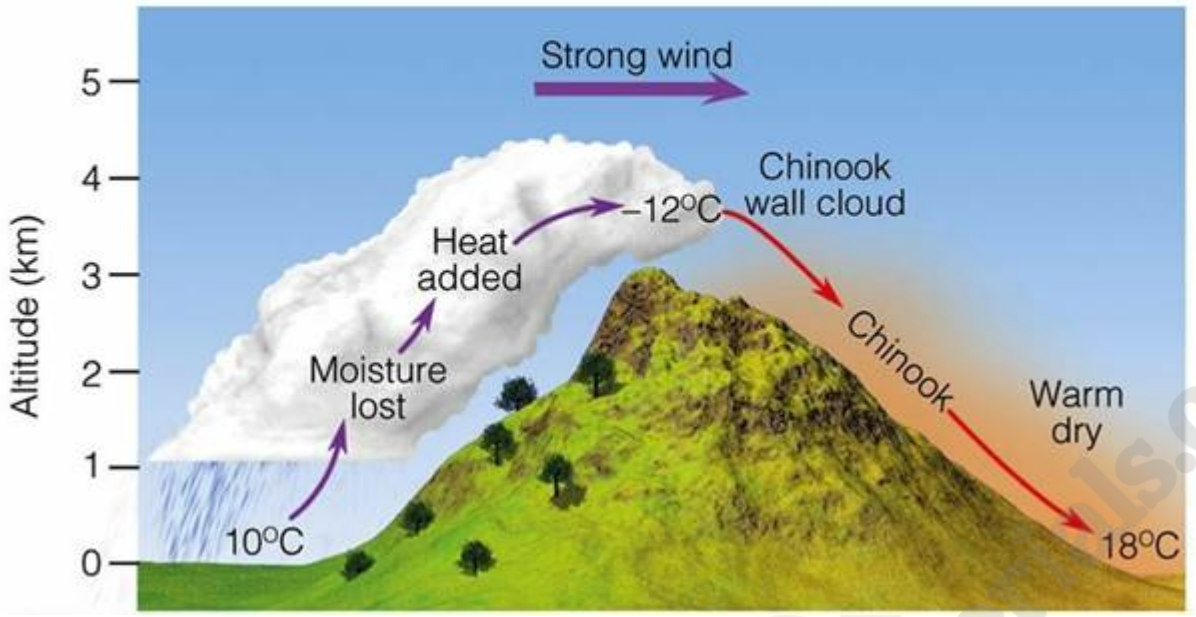
· The Chinook is a föhn wind, a rain shadow wind which results from the subsequent adiabatic warming of air which has dropped most of its moisture on windward slopes (orographic lift). As a consequence of the different adiabatic rates of moist and dry air, the air on the leeward slopes becomes warmer than equivalent elevations on the windward slopes.

· The blackfoot people call it Snow Eater.

· It hastens the growth of crops and fruits and thaws the snow covered pastures.

Statement Analysis:

Statement 1	Statement 2	Statement 3	Statement 4
Correct	**Correct**	**Correct**	**Correct**
It appears in the rocky mountains	Dry , warm condition is due to adiabatic warming	It melts snow in hours	Helps growth due to warm nature.



QUESTION 83.

What are the favourable conditions for the development of Air Masses?

1. Large homogenous surface.

2. Uniform temperature and humidity.

3. Low wind speeds.

Choose the correct option:

a) 1 and 2
b) 2 and 3
c) 1, 2 and 3
d) None

Correct Answer: C
Your Answer: Unanswered
Explanation

Solution (c)

Explanation:

· An air mass is a distinctive, homogenous, body of air in terms of temperature, humidity and lapse rate that takes on the moisture and temperature characteristic of its source region. For example, if an air mass is formed over Canada it will be very cold and dry.

· Low wind speeds let air remain stationary long enough to take on the features of the source region, such as heat or cold.

· Air masses can extend thousands of kilometers across the surface of the Earth, and can reach from ground level to the stratosphere—16 kilometers (10 miles) into the atmosphere.

QUESTION 84.

Which among the following are the conditions favourable for development of tropical cyclones?

1. Sea temperature between 26-27 degree C.

2. Continuous supply of abundant warm and moist air.

3. Existence of strong tropical depression.

4. Presence of Coriolis force.

Choose the correct option:

a) 1, 2 and 4
b) 1, 2 and 3
c) 1, 3 and 4
d) 1 and 3

Correct Answer: A
Your Answer: A
Explanation

Solution (a)

Basic Information:

Tropical cyclones are a weather system of low pressure, originating in the tropics within a single air mass, but may move into temperate waters if water temperature is high enough to sustain it. Tropical cyclones get their energy from latent heat of condensation. The energy in an average hurricane may be equivalent to more than 10,000 atomic bombs the size of Nagasaki bomb.

Conditions conducive for tropical cyclone:

1. There should be continuous supply of abundant warm and moist air.

2. The sea temperature in lower latitude should be around 26-27 degree C.

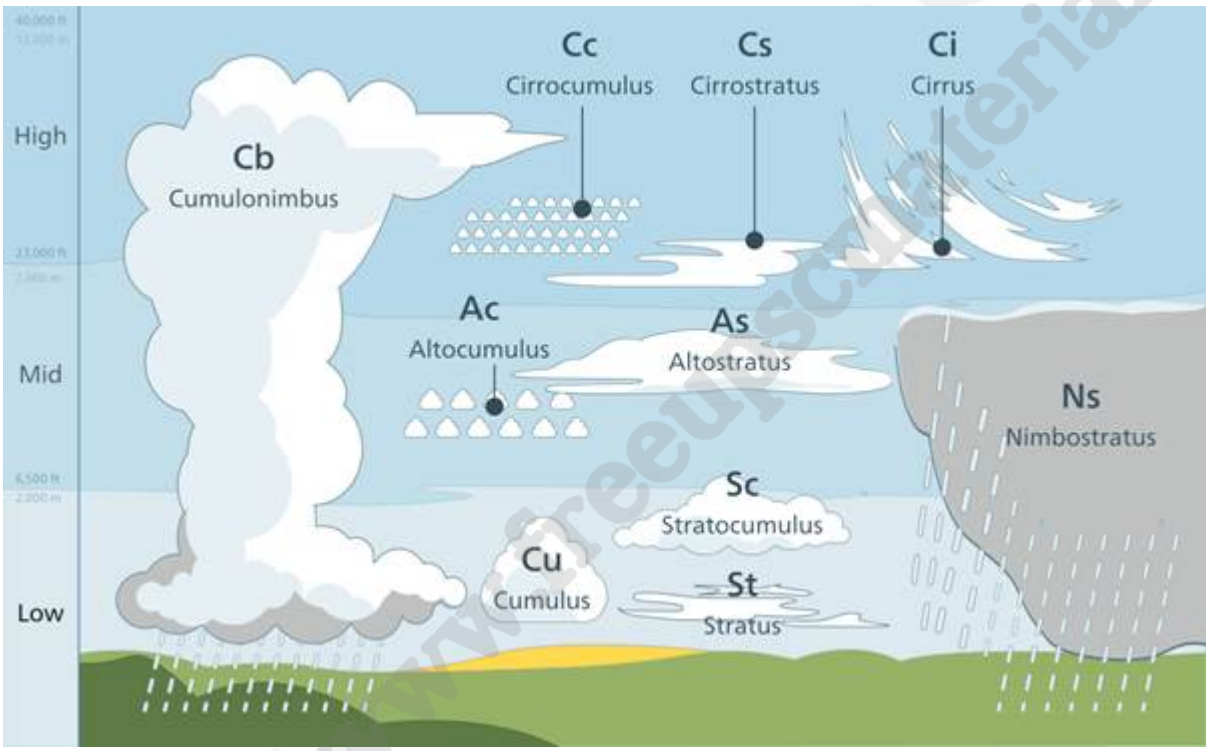
3. Existence of weak tropical depression.

4. There should be presence of coriolis force.

Q. 85) Solution (b)

Basic Information:

Type of Clouds	Height	Examples
High Altitude	Above 20,000ft from land surface	Cirrus, Cirrostratus, Cirrocumulus
Middle Altitude	6500-20000 ft	Altostratus, Altocumulus
Low Altitude	Upto 6500 ft	Stratus, Stratocumulus, Nimbostratus



QUESTION 85.

Which of the following clouds are considered as low altitude clouds?

1. Stratus

2. Altostratus

3. Nimbostratus

4. Stratocumulus

5. Altocumulus

Choose the correct option:

a) 1, 4 and 5
b) 1, 3 and 4
c) 1, 3 and 5
d) 1, 2, 3, 4 and 5

Correct Answer: B
Your Answer: Unanswered

QUESTION 86.

Consider the following pairs:

1. Isohel : : imaginary line passing through places having the same height from the sea level.

2. Isohypse : : imaginary line passing through places of same duration of sunshine.

3. Isonephs : : Imaginary line passing through places having the same mean cloudiness over a certain period.

4. Isohaline : : line joining points of equal salinity in an aquatic system.

Which of the above pairs are correctly matched?

a) 1, 2 and 4
b) 2 and 3
c) 3 and 4
d) 1, 2, 3 and 4

Correct Answer: C
Your Answer: C
Explanation

Solution (c)

Basic Information :

Isohyet	line on a map joining the places on the earth's surface having equal rainfall.

Isobar	line on a map connecting points having the same atmospheric pressure at a given time or on average over a given period.
Isotherm	line on a map connecting points having the same temperature at a given time or on average over a given period.
Isobath	imaginary line or a line on a map or chart that connects all points having the same depth below a water surface (as of an ocean, sea, or lake)
Isohel	imaginary line on a map passing through places of same duration of sunshine.
Isohypse	imaginary line passing through places having the same height from the sea level.
Isonephs	imaginary line passing through places having same mean cloudiness over a certain period.
Isohaline	line on a map joining points of equal salinity in an aquatic system.

QUESTION 87.

Equator passes through which of the following countries?

1. Egypt

2. Ecuador

3. Maldives

4. Congo

5. Brazil

Choose the correct option:

a) 1, 2 and 3
b) 1, 3, 4 and 5
c) 1, 2, 4 and 5
d) 2, 3, 4 and 5

Correct Answer: D
Your Answer: D

Explanation

Solution (d)

Basic Information:

Equator	Tropic of cancer	Tropic of Capricorn	Prime Meridian
Ecuador, Columbia, Brazil, Gabon, Congo, Democratic republic of Congo, Kenya, Somalia, Maldives, Indonesia, Kiribati	Mexico, Bahamas, Niger, Algeria, Mauritania, Egypt, Libya, Mali, Sahara, Myanmar, Omen, Bangladesh, India, Saudi Arabia, China, UAE, Taiwan	Argentina, Brazil, Chile Paraguay, Namibia, Botswana, South Africa, Mozambique, Madagascar, Australia	UK, Spain, France, Ghana, Algeria, Mali, Togo, Burkina Faso, Antarctica

QUESTION 88.

The term 'Guyots' is associated with –

a) Flat topped seamounts.
b) Low islands found in tropical oceans.
c) Deep valleys found in oceans.
d) Ridge at the bottom of the sea.

Correct Answer: A
Your Answer: A
Explanation

Solution (a)

Explanation:

Guyots are flat topped seamounts in oceans showing evidences of gradual subsidence through stages to become flat topped submerged mountains. It is estimated that more than 10,000 seamounts and guyots exist in the Pacific Ocean alone.

QUESTION 89.

With respect to 'Upwelling' consider the following statements:

1. Upwelling brings deeper, colder nutrient rich water to the surface.

2. Upwelling occurs only in coastal areas.

3. The zones of upwelling are productive zones for fishing.

Which of the statements given above is/are correct?

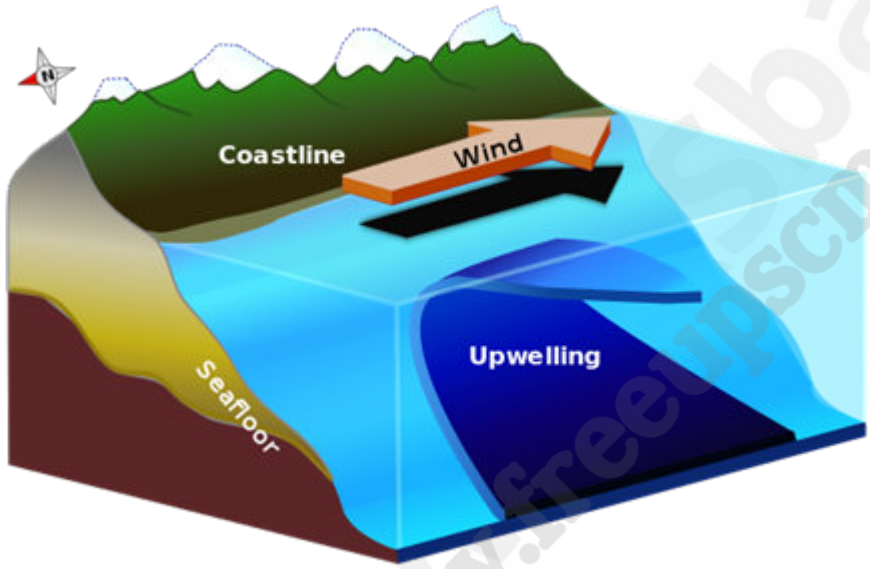
a) 1 and 2
b) 1 and 3
c) 2 and 3
d) 1, 2 and 3

Correct Answer: B
Your Answer: Unanswered
Explanation

Solution (b)

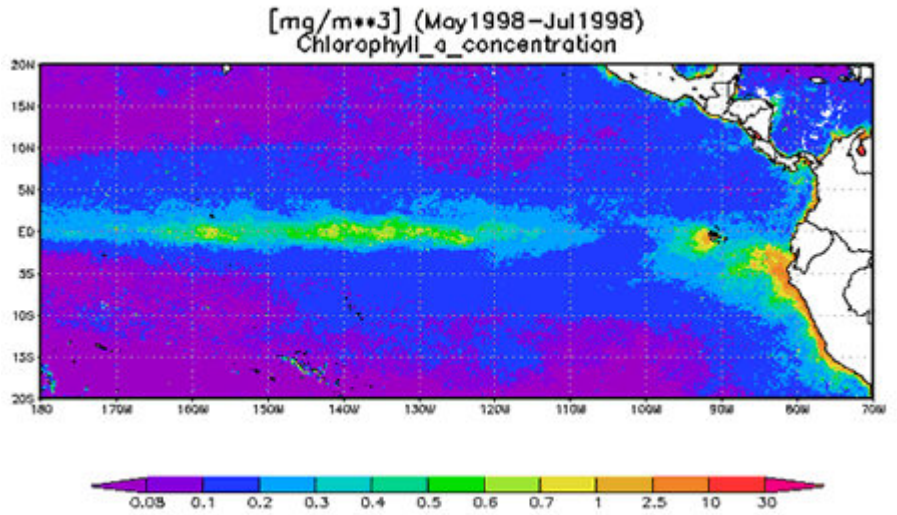
Basic Information:

Upwelling is an oceanographic phenomenon that involves wind-driven motion of dense, cooler, and usually nutrient-rich water towards the ocean surface, replacing the warmer, usually nutrient-depleted surface water. The nutrient-rich upwelled water stimulates the growth and reproduction of primary producers such as phytoplankton.



The increased availability of nutrients in upwelling regions results in high levels of primary production and thus fishery production.

There are at least five types of upwelling: coastal upwelling, large-scale wind-driven upwelling in the ocean interior, upwelling associated with eddies, topographically-associated upwelling, and broad-diffusive upwelling in the ocean interior including the upwelling at equatorial areas.



Upwelling in the equatorial areas

Statement Analysis:

Statement 1	Statement 2	Statement 3
Correct	**Incorrect**	**Correct**
When wind blows from land towards ocean the surface water is replaced by deeper, cold water which is rich in nutrient.	It occurs even at equator near inter tropical convergence zones.	World's best fishing zones are present in upwelling zones.

QUESTION 90.

Ocean salinity is influenced by which of the following agents/processes

1. Evaporation and precipitation
2. Water flow from river
3. Winds
4. Ocean currents
5. Presence of phytoplanktons

Choose the correct option

a) 1, 2, 3 and 4
b) 1, 2, 4 and 5
c) 1, 2 and 4
d) 1, 2, 3, 4 and 5

Correct Answer: A
Your Answer: D
Explanation

Solution (a)

Basic Information:

Ocean salinity is majorly decided by following factors.

(i) The salinity of water in the surface layer of oceans depends mainly on evaporation and precipitation.

(ii) Surface salinity is greatly influenced in coastal regions by the freshwater flow from rivers, and in polar regions by the processes of freezing and thawing of ice.

(iii) Wind, also influences the salinity of an area by transferring water to other areas.

(iv) The ocean currents contribute to the salinity variations. Salinity, temperature and density of water are interrelated. Hence, any change in the temperature or density influences the salinity of water in an area.

QUESTION 91.

With respect to tides consider the following statements:

1. In spring tides, the position of the Sun, Moon and earth are in straight line.

2. In Neap tides, the Sun and Moon are at right angles to each other.

3. Spring tides occur twice in a month and neap tides occur four times in a month.

Choose the correct statements:

a) 1 only
b) 1 and 2
c) 1, 2 and 3
d) None

Correct Answer: B
Your Answer: B
Explanation

Solution (b)

Basic Information:

The periodical rise and fall of the sea level, once or twice a day, mainly due to the attraction of the sun and the moon, is called a tide

Based on the position of Sun, Moon and Earth tides are classified into spring and neap tide

Spring Tides:	**Neap Tides:**
When the sun, the moon and the earth are in a straight line, the height of the tide will be higher. These are called spring tides and they occur twice a month, one on full moon period and another during new moon period.	Normally, there is a seven day interval between the spring tides and neap tides. At this time the sun and moon are at right angles to each other and the forces of the sun and moon tend to counteract one another. The Moon's attraction, though more than twice as strong as the sun's, is diminished by the counteracting force of the sun's gravitational pull.

Statement Analysis:

Statement 1	**Statement 2**	**Statement 3**
Correct	**Correct**	**Incorrect**
In spring tides, the position of the Sun, Moon and earth are in straight line.	In Neap tides, the Sun and Moon are in perpendicular direction	Even neap tides occur twice in a month with a gap of seven days with spring tides.

QUESTION 92.

Which among the following are considered as primary forces that initiate the movement of ocean currents?

1. Heating by solar energy

2. Wind

3. Gravity

4. Coriolis force

Choose the correct option

a) 2 and 3

b) 2, 3 and 4
c) 1 and 2
d) 1, 2, 3 and 4

Correct Answer: D
Your Answer: D
Explanation

Solution (d)

Basic Information:

Ocean currents are like river flow in oceans. They represent a regular volume of water in a definite path and direction.

Ocean currents are influenced by two types of forces namely :

(i) primary forces that initiate the movement of water;

(ii) secondary forces that influence the currents to flow.

The primary forces that influence the currents are:

(i) heating by solar energy;

(ii) wind;

(iii) gravity;

(iv) coriolis force.

Heating by solar energy causes the water to expand. That is why, near the equator the ocean water is about 8 cm higher in level than in the middle latitudes. This causes a very slight gradient and water tends to flow down the slope.

Wind blowing on the surface of the ocean pushes the water to move. Friction between the wind and the water surface affects the movement of the water body in its course.

Gravity tends to pull the water down the pile and create gradient variation.

The Coriolis force intervenes and causes the water to move to the right in the northern hemisphere and to the left in the southern hemisphere.

QUESTION 93.

Consider the following statements with respect to the peninsular block of India:

1. Ancient gneiss and granites constitute a major part of the peninsular block.

2. The peninsula mostly consists of relict and residual mountains.

3. The river valleys in peninsular plateau are shallow with low gradients.

Which of the statements given above is/are correct?

a) 1 and 2
b) 1 and 3
c) 2 and 3
d) 1, 2 and 3

Correct Answer: D
Your Answer: Unanswered
Explanation

Solution (d)

Basic Information:

· Peninsular plateau is one of the oldest landforms on the earth. Since the Cambrian period it has been standing like a rigid block.

· It is a highly stable block composed of the Archean Gneiss and Schists.

· It consists of relict and residual mountains like Aravalli hills, Nallamala Hills, Javadi Hills, Veliconda Hills, palconda range, Mahendragiri hills etc.

· The river valleys are shallow with low gradients.

Statement Analysis:

Statement 1	**Statement 2**	**Statement 3**
Correct	**Correct**	**Correct**
Peninsular block composes of Archean gneiss and Schists	Aravalli hills, Nallamalla hills veliconda hills are examples of relict mountains	River valleys in Peninsular block are shallow and have low gradients.

QUESTION 94.

Which among the following landforms are associated with the youthful stage?

1. Gorges

2. Wide river valleys

3. Rapids

4. Waterfalls

5. Meanders

Choose the correct option

a) 1, 3 and 4
b) 1, 2, 3 and 4
c) 1, 3, 4 and 5
d) 1, 2, 3, 4 and 5

Correct Answer: A
Your Answer: B
Explanation

Solution (a)

Basic Information:

According to the Davis's Cycle of Erosion there are three stages in the landform development. Youth stage, Matured stage and old stage

Stage of Development	**Landforms**
Youth	V-shaped valleys, rapids, streams, gorges, waterfalls
Mature	Wide shaped valleys, meanders, Oxbow lakes, river capture
Old stage	Undulating plain, Peneplain

QUESTION 95.

With regard to 'Duns' or 'Doons' consider the following statements:

1. They are the result of folding when Eurasian plate collided with the Indian Plate

2. They lie between the Shivalik Hills and the Lesser Himalayas.

3. The Duns are deposited with coarse alluvium brought down by the Himalayan rivers.

Which of the statements given above is/are correct?

a) 1 and 2
b) 1 and 3
c) 2 and 3

d) 1, 2 and 3

Correct Answer: D
Your Answer: Unanswered
Explanation

Solution (d)

Basic Information:

· The Doon Valley lies between two intermittent ranges of the Himalayas, the Outer Himalayas (the Shivalik Hills) and the Lesser Himalayas, known locally as the Mussoorie Range.

· It is bounded on all sides by mountains, with northern range running from Kalsi in the west to Muni Ki Reti in the east with Mussoorie at the centre in a semi-circular arc; and southern range running at south from Paonta Sahib in the west to Haridwar in the east.

· The valley also forms a watershed between the Yamuna and Ganges river systems.

Statement Analysis:

Statement 1	**Statement 2**	**Statement 3**
Correct	**Correct**	**Correct**
'Duns' or 'Doons' are part of the Himalayan orogeny	'Duns' or 'Doons' lie between two intermittent ranges of Himalayas.	The Yamuna and Ganga river systems are close by, therefore Duns are deposited with coarse alluvium brought down by these Himalayan rivers.

QUESTION 96.

Arunachal Himalayas has several ethnic tribal communities inhabiting the areas. Arrange them from west to east

1. Monpa

2. Mishmi

3. Abor

4. Nagas

5. Nyishi

Choose the correct code

a) 1-4-5-2-3
b) 1-4-5-3-2
c) 1-3-2-5-4
d) 1-3-2-4-5

Correct Answer: C
Your Answer: Unanswered
Explanation

Solution (c)

Explantion:

In the northeastern region the hills are named after the local ethnic tribes inhabiting the area. The major tribes inhabiting the area from west to east are Monpa, Abor, Mishmi, Nyishi and Nagas.

QUESTION 97.

The old and new alluvial deposits of the northern plains is called by which names respectively?

a) Khadar and Bhangar
b) Bhangar and Khadar
c) Bhabar and Tarai
d) Tarai and Khadar

Correct Answer: B
Your Answer: B
Explanation

Solution (b)

Basic Information:

· The northern plains are formed by the alluvial plains brought down by the rivers like Indus, ganga and Brahmaputra.

· The plains are divided into Bhabar, tarai and alluvial plains. The alluvial plains are further divided into Khadar (New deposits) and Bhangar (Old Deposits).

· Bhabar is a narrow belt ranging between 8-10 kms parallel to the Shiwalik Foothills at the break up of the slope.

· Tarai is marshy, swampy belt below the Bhabar belt.

· South of Tarai is the alluvial plains consisting of Old deposits (Bhangar) and new deposits (Khadar).

QUESTION 98.

With respect to Jet streams affecting the Indian weather, consider the following statements:

1. The western cyclonic disturbances which influence the north Indian climate originate over Mediterranean sea and are brought into India by the westerly jet streams.

2. The easterly jet streams steer the tropical depressions into India.

Which of the statements given above is/are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Correct Answer: C
Your Answer: C
Explanation

Solution (c)

Basic Information:

The western cyclonic disturbances enter India from the west during winter months. The decrease in the night temperature in northern India indicates the onset of the disturbances. The western cyclonic disturbances originate in Mediterranean sea and are steered towards indian subcontinent by the westerly jet stream.

The easterly jet stream active in the higher atmosphere steers the tropical depressions into India. The distribution of monsoon rainfall over Indian Subcontinent is greatly influenced by these depressions.

Statement Analysis:

Statement 1	**Statement 2**
Correct	**Correct**
The western cyclonic disturbances which influence the north Indian climate originate in Mediterranean and are steered by western jet streams.	Easterly jet streams steers tropical depressions towards Indian Subcontinent.

QUESTION 99.

Teak, Sal, Kusum, Tendu are the trees of which type of forests in India.

a) Evergreen Forests
b) Montane forests
c) Tropical thorn forests
d) Tropical deciduous forests

Correct Answer: D
Your Answer: Unanswered
Explanation

Solution (d)

Basic Information:

Type of Forest	Tree Types
Tropical Evergreen Forests	Rosewood, Mahogony, Aini, Ebony
Tropical Deciduous Forests	Tendu, mahua, harra, amla, kusum, teak, sal, shisham, sandalwood
Tropical Thorn Forests	Babool, ber, date palm, khair, neem, khejri, palas
Montane forests	Oak, chestnut, chir pine, deodar, chinar, walnut, silver firs, junipers, birch

QUESTION 100.

With respect to the Laterite Soils in India consider the following statements.

1. They develop in areas with high temperature and high rainfall.

2. They are the result of intense leaching.

3. They are best suitable for cultivation.

Which of the statements given above is/are correct?

a) 1 only
b) 2 only
c) 1 and 2
d) 1, 2 and 3

Correct Answer: C
Your Answer: C

Explanation

Solution (c)

Basic Information:

· Laterite soils develop in areas with high temperature and high rainfall.

· With rain, lime and silica are leached away and soils rich in iron-oxide and aluminium are left behind.

· Laterite soils are poor in organic matter, nitrogen, phosphate and calcium but excess in potash and iron-oxide.

· They are not suitable for cultivation.

· They are widely cut as bricks for use in house construction.