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GEOGRAPHY

Solved Papers with Explanation

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UNIVERSITY GRANTS COMMISSION

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NET SYLLABUS

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Unit I - Geomorphology
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UNIT-I Geomorphology

Continental Drift, Plate Tectonics, Endogenetic and Exogenetic forces. Denudation and Weathering, Geomorphic Cycle (Davis and Penck), Theories and Process of Slope Development, Earth Movements (seismicity, folding, faulting and vulcanicity), Landform Occurrence and Causes of Geomorphic Hazards (earthquakes, volcanoes, landslides and avalanches)

UNIT –II Climatology

Composition and Structure of Atmosphere; Insolation, Heat Budget of Earth, Temperature, Pressure and Winds, Atmospheric Circulation (air-masses, fronts and upper air circulation, cyclones and anticyclones (tropical and temperate), Climatic Classification of Koppen & Thornthwaite, ENSO Events (El Nino, La Nina and Southern Oscillations), Meteorological Hazards and Disasters (Cyclones, Thunderstorms, Tornadoes, Hailstorms, Heat and Cold waves Drought and Cloudburst , Glacial Lake Outburst (GLOF), Climate Change: Evidences and Causes of Climatic Change in the past, Human impact on Global Climate.

UNIT-III Oceanography

Relief of Oceans, Composition: Temperature, Density and Salinity, Circulation: Warm and Cold Currents, Waves, Tides, Sea Level Changes, Hazards: Tsunami and Cyclone

UNIT –IV Geography of Environment

Components: Ecosystem (Geographic Classification) and Human Ecology, Functions: Trophic Levels, Energy Flows, Cycles (geo-chemical, carbon, nitrogen and oxygen), Food Chain, Food Web and Ecological Pyramid, Human Interaction and Impacts, Environmental Ethics and Deep Ecology, Environmental Hazards and Disasters (Global Warming, Urban Heat Island, Atmospheric Pollution, Water Pollution, Land Degradation), National Programmes and Policies: Legal Framework, Environmental Policy, International Treaties, International Programmes and Polices (Brundtland Commission, Kyoto Protocol, Agenda 21, Sustainable Development Goals, Paris Agreement)

UNIT –V Population and Settlement

Geography Population

Geography Sources of population data (census, sample surveys and vital statistics, data reliability and errors). World Population Distribution (measures, patterns and determinants), World Population Growth (prehistoric to modern period). Demographic Transition, Theories of Population Growth (Malthus, Sadler, and Ricardo). Fertility and Mortality Analysis (indices, determinants and world patterns). Migration (types, causes and consequences and models), Population Composition and Characteristics (age, sex, rural-urban, occupational structure and educational levels), Population Policies in Developed and Developing Countries.

Settlement Geography

Rural Settlements (types, patterns and distribution), Contemporary Problems of Rural Settlements (rural-urban migration; land use changes; land acquisition and transactions), Theories of Origin of Towns (Gordon Childe, Henri Pirenne, Lewis Mumford), Characteristics and Processes of Urbanization in Developed and Developing Countries (factors of urban growth, trends of urbanisation, size, structure and functions of urban areas). Urban Systems (the law of the primate city and rank size rule) Central Place Theories (Christaller and Losch), Internal Structure of the City, Models of Urban Land Use (Burgess, Harris and Ullman , and Hoyt), Concepts of Megacities, Global Cities and Edge Cities, Changing Urban Forms (peri-urban areas, rural-urban fringe, suburban , ring and satellite towns), Social Segregation in the City, Urban Social Area Analysis, Manifestation of Poverty in the City (slums, informal sector growth, crime and social exclusion).

Unit–VI: Geography of Economic Activities and Regional Development

Economic Geography

Factors affecting spatial organisation of economic activities (primary, secondary, tertiary and quarternary), Natural Resources (classification, distribution and associated problems), Natural Resources Management. World Energy Crises in Developed and Developing Countries.

Agricultural Geography

Land capability classification and Land Use Planning, Cropping Pattern: Methods of delineating crop combination regions (Weaver, Doi and Rafiullah), Crop diversification, Von Thunen's Model of Land Use Planning. Measurement and Determinants of Agricultural Productivity, Regional variations in Agricultural Productivity, Agricultural Systems of the World.

Industrial Geography

Classification of Industries, Factors of Industrial Location; Theories of Industrial Location (A. Weber, E. M. Hoover, August Losch, A. Pred and D. M. Smith). World Industrial Regions, Impact of Globalisation on manufacturing sector in Less Developed Countries, Tourism Industry, World distribution and growth of Information And Communication Technology (ICT) and Knowledge Production (Education and R & D) Industries.

Geography of Transport and Trade

Theories and Models of spatial interaction (Edward Ullman and M. E. Hurst) Measures and Indices of connectivity and accessibility; Spatial Flow Models: Gravity Model and its variants, World Trade Organisation, Globalisation and Liberalisation and World Trade Patterns. Problems and Prospects of Inter and Intra Regional Cooperation and Trade.

Regional Development

Typology of Regions, Formal and Fictional Regions, World Regional Disparities, Theories of Regional Development(Albert O. Hirschman, Gunnar Myrdal, John Friedman, Dependency theory of Underdevelopment, Global Economic Blocks, Regional Development and Social Movements in India

Unit – VII: Cultural, Social and Political Geography

Cultural and Social Geography

Concept of Culture, Cultural Complexes, Areas and Region, Cultural Heritage, Cultural Ecology. Cultural Convergence, Social Structure and Processes, Social Well-being and Quality of Life, Social Exclusion, Spatial distribution of social groups in India (Tribe, Caste, Religion and Language), Environment and Human Health, Diseases Ecology, Nutritional Status (etiological conditions, classification and spatial and seasonal distributional patterns with special reference to India) Health Care Planning and Policies in India, Medical Tourism in India.

Political Geography

Boundaries and Frontiers (with special reference to India), Heartland and Rimland Theories. Trends and Developments in Political Geography, Geography of Federalism, Electoral Reforms in India, Determinants of Electoral Behaviour, Geopolitics of Climate Change, Geopolitics of World Resources, Geo-politics of India Ocean, Regional Organisations of Cooperation (SAARC, ASEAN, OPEC, EU). Neopolitics of World Natural Resources.

Unit VIII: Geographic Thought

Contributions of Greek, Roman, Arab, Chinese and Indian Scholars, Contributions of Geographers (Bernhardus Varenius, Immanuel Kant, Alexander von Humboldt, Carl Ritter, Scheafer & Hartshorne), Impact of Darwinian Theory on Geographical Thought. Contemporary trends in Indian Geography: Cartography, Thematic and Methodological contributions. Major Geographic Traditions (Earth Science, manenvironment relationship, area studies and spatial analysis), Dualisms in Geographic Studies (physical vs. human, regional vs. systematic, qualitative vs. quantitative, ideographic vs. nomothetic), Paradigm Shift, Perspectives in Geography (Positivism, Behaviouralism, Humanism, Structuralism, Feminism and Postmodernism).

Unit IX: Geographical Techniques

Sources of Geographic Information and Data (spatial and non-spatial), Types of Maps, Techniques of Map Making (Choropleth, Isarithmic, Dasymetric, Chorochromatic, Flow Maps) Data Representation on Maps (Pie diagrams, Bar diagrams and Line Graph, GIS Database (raster and vector data formats and attribute data formats). Functions of GIS (conversion, editing and analysis), Digital Elevation Model (DEM), Georeferencing (coordinate system and map projections and Datum), GIS Applications (thematic cartography, spatial decision support system), Basics of Remote Sensing (Electromagnetic Spectrum, Sensors and Platforms, Resolution and Types, Elements of Air Photo and Satellite Image Interpretation and Photogrammetry), Types of Aerial Photographs, Digital Image Processing: Developments in Remote Sensing Technology and Big Data Sharing and its applications in Natural Resources Management in India, GPS Components (space, ground control and receiver segments) and Applications, Applications of Measures of Central Tendency, Dispersion and Inequalities, Sampling, Sampling Procedure and Hypothesis Testing (chi square test, t test, ANOVA), Time Series Analysis, Correlation and Regression Analysis, Measurement of Indices, Making Indicators Scale Free, Computation of Composite Index, Principal Component Analysis and Cluster Analysis, Morphometric Analysis: Ordering of Streams, Bifurcation Ratio, Drainage Density and Drainage Frequency, Basin Circularity Ratio and Form Factor, Profiles, Slope Analysis, Clinographic Curve, Hypsographic Curve and Altimetric Frequency Graph.

Unit – X: Geography of India

Major Physiographic Regions and their Characteristics; Drainage System (Himalayan and Peninsular), Climate: Seasonal Weather Characteristics, Climatic Divisions, Indian Monsoon (mechanism and characteristics), Jet Streams and Himalayan Cryosphere, Types and Distribution of Natural Resources: Soil, Vegetation, Water, Mineral and Marine Resources. Population Characteristics (spatial patterns of distribution), Growth and Composition (rural-urban, age, sex, occupational, educational, ethnic and religious), Determinants of Population, Population Policies in India, Agriculture (Production, Productivity and Yield of Major Food Crops), Major Crop Regions, Regional Variations in Agricultural Development, Environmental, Technological and Institutional Factors affecting Indian Agriculture; Agro-Climatic Zones, Green Revolution, Food Security and Right to Food. Industrial Development since Independence, Industrial Regions and their characteristics, Industrial Policies in India. Development and Patterns of Transport Networks (railways, roadways, waterways, airways and pipelines), Internal and External Trade (trend, composition and directions), Regional Development Planning in India, Globalisation and its impact on Indian Economy, Natural Disasters in India (Earthquake, Drought, Flood, Cyclone, Tsunami, Himalayan Highland Hazards and Disasters.)

UGC NET/JRF EXAM, June, 2012

Geography

WITH EXPLANATION PAPER-II

1. The normal cycle of erosion is associated with
(a) Marine Erosion (b) Wind Erosion
(c) River Erosion (d) Glacial Erosion

Ans: (c) The cycle of erosion by fluvial processes (running waters or rivers) is called the normal cycle of erosion because of the fact that fluvial processes are most widespread (covering most part of the globe) and most significant geomorphic agent.
W.M. Davis first gave fluvial cycle of erosion.

2. Which among the following is one of the forces responsible for continental drift according to Wegner?
(a) Tidal force
(b) Convection currents
(c) Tensional force
(d) Compressional force

Ans: (a) Alfred Wegener suggested continental Drift Theory in the 1920's.
According to Continental Drift Theory there existed one big landmass which he called as Pangaea which was covered by one big ocean called Panthalassa.
A sea called Tethys divided the Pangaea into two huge landmasses: Laurentia (Laurasia) to the north and Gondwanaland to the south of Tethys.
Drift started around 200 million years ago (Mesozoic Era, Triassic Period, Late Triassic Epoch), and the continents began to break up and drift away from one another.

3. Match List-I with List-II and select the correct answer using the codes given below:

List – I	List – II
I. Kettle	1. Small mountain lake occupying a cirque
II. Tarn	2. Low winding glacio–Alluvial ridge
III. Esker	3. Oval or elliptical hill of glacial till
IV. Drumlin	4. Deep depression usually situated along the moraine belt

Codes:

	I	II	III	IV
(a)	4	3	2	1
(b)	2	4	1	3
(c)	4	1	2	3
(d)	3	4	2	1

Ans: (c)

List – I	List – II
I. Kettle	1. Deep depression usually situated along the moraine belt
II. Tarn	2. Small mountain lake occupying a cirque
III. Esker	3. Low winding glacio – Alluvial ridge
IV. Drumlin	4. Oval or elliptical hill of glacial till

4. Most of the details of world's topography belongs to the
(a) Pre-Cambrian era (b) Paleozoic era
(c) Mesozoic era (d) Cenozoic era

Ans: (d) Most of the details of world topography belongs to Cenozoic Era which extends from (66 Million year ago until today) Cenozoic means 'recent life'. Cenozoic Era are split into even smaller parts known as epochs. i.e.

Era	Period	Epoch
Cenozoic	Quaternary	Holocene (10,000 year to today) Pleistocene (2.6 million to 10,000 year)
	Paleogene	Pliocene (5-2.6 Million year ago) Miocene (23-5 MYA) Oligocene (34-23 MYA) Eocene (56-34 MYA) Paleocene (66-56 MYA)

- Most of the present topographies belongs to period of recent upliftment because those mountains which form earlier or found in residual/relict state.

Note-: Himalaya started forming due to northward movement and collision of Indian plate with Eurasian plate in Eocene period. Second upheaval in Himalaya which causes the formation of Middle Himalaya are taken during 'Miocene period' around 25 to 30 MYA. Third upheaval which causes the formation of Shiwalik occurred during Pliocene period

5. Match List-I with List-II and select the correct answer using the codes given below:

List – I (Rivers)	List – II (Tributaries)
a. Krishna	1. Chambal
b. Brahmaputra	2. Indravati
c. Godavari	3. Tista
d. Yamuna	4. Bhima

Codes:

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

Ans: (a)

List – I (Rivers)	List – II (Tributaries)
a. Krishna	1. Bhīma
b. Brahmaputra	2. Tista
c. Godavari	3. Indrāvati
d. Yamuna	4. Chambal

6. Air movement in the troposphere is caused by

(a) Solar wind (b) Convective current
(c) Gravitational force (d) Air pressure

Ans: (b) In troposphere, the uneven heating of the regions of the troposphere by the sun (the sun warms the air at the equator more than the air at the poles)causes convection currents, large-scale patterns of winds that move heat and moisture around the globe. As air rises, expands, and cools, water vapor condenses and clouds develop.
So, Air movement in the troposphere is caused by convective currents.

7. The unit of air pressure measurement is

(a) Degree (b) Isobars
(c) Metres per second (d) Hecta Pascal

Ans: (d) Hectopascal is a 100 times multiple of the Pascal, which is the SI unit for pressure. The hectopascal is the international unit for measuring atmospheric or barometric pressure. 1 hectopascal equals 100 Pascal.
Due to its low value the hectopascal is ideal for use as a measure of atmospheric pressure and other low gas pressures such as air flow differentials in air conditioning systems or wind tunnels.

8. Match List-I with List-II and select the correct answer using the codes given below:

	List – I	List – II
I.	Ferrel cell	1. Doldrums
II.	Hadley cell	2. Easterlies
III.	Polar cell	3. Westerlies
IV.	Intertropical convergence zone	4. Trade winds

Codes:

	I	II	III	IV
(a)	3	2	1	4
(b)	1	4	3	2
(c)	3	4	2	1
(d)	2	3	4	1

Ans: (c)

List – I	List – II
I. Ferrel cell	1. Westerlies
II. Hadley cell	2.Trade winds
III. Polar cell	3. Easterlies
IV. Intertropical convergence zone	4. Doldrums

9. Which one of the following is not a mechanism of energy transfer?

(a) Conduction (b) Advection
(c) Radiation (d) Ablation

Ans:(d) Ablation refers to all processes that remove mass from a glacier. Ablation zone—the part of the glacier where summer melting exceeds winter accumulation. This includes not only the total melting of the snow cover of the last winter but also a layer of glacier ice. A deficit of mass appears in that area. The zone lies at lower altitudes of the glacier surface.

10. Given below are the two statements, one labelled as Assertion (A) and other labelled as Reason (R).
Assertion (A): Stable air resists vertical movement and unstable air ascends freely because of its own buoyancy.
Reason (R): When stable air is forced aloft the clouds that form are widespread and have little vertical thickness.
In the context of the above two statements, which one of the following is correct?
(a) (A) is correct but (R) is wrong.
(b) (A) is wrong but (R) is correct.
(c) Both (A) and (R) are correct.
(d) Both (A) and (R) are wrong.

Ans: (c) The atmosphere is filled with air that exerts a buoyant force on any object. A hot air balloon rises and floats due to the buoyant force.
Stable air has a negative buoyancy. There is no tendency for air parcels to move vertically. Because the air parcel remains cooler or denser than the surrounding air, it will tend to resist any upward movement on its own and, if permitted, it will return to its original position.
When stable air is forced aloft the clouds that from are widespread i.e., Cumulous and they have little vertical thickness.

11. The cold current flowing along the coast of Chile and Peru is known as

(a) Agulhas (b) EL-Nino
(c) Humbolt (d) Canary

Ans: (c) The Humboldt Current, also called the Peru Current, is a cold, low-salinity ocean current that flows north along the western coast of South America. It is an eastern boundary current flowing in the direction of the equator, and extends 500–1,000 km (310–620 mi) offshore.

12. The average difference in the water level between high tide and low tide at a place is referred to as:

(a) Tidal bore (b) Tidal period
(c) Tidal range (d) Tidal wave

Ans: (c) The difference in height between the high tide and the low tide is called the tidal range.
The moon's gravitational pull generates something called the tidal force. The tidal force causes Earth—and its water—to bulge out on the side closest to the moon and the side farthest from the moon. These bulges of water are high tides.

13. Domestication of plants and animals was started in-

(a) Paleolithic period
(b) Mesolithic period
(c) Neolithic period
(d) Pre-Paleolithic period

Ans: (c) The first successful domestication of plants, as well as goats, cattle, and other animals which heralded the onset of the Neolithic Period occurred sometime before 9500 BCE. (The Neolithic Period occurred at different times around the world but is generally thought to have begun sometime between 10,000 and 8,000 BCE.)

14. Which one of the following pairs is not correctly matched?

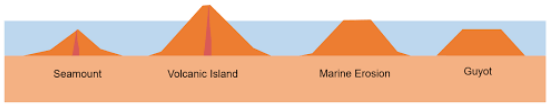
(a) Autotrophs: Take energy from inorganic sources and fix it into energy rich organic compound
(b) Heterotrophs: Obtain their energy from living organism
(c) Herbivores: Organisms that consume plants and animals
(d) Detrivores: Obtain their energy from dead organism

Ans: (c) A herbivore is an animal that gets its energy from eating plants, and only plants. Omnivores can also eat parts of plants, but generally only the fruits and vegetables produced by fruit-bearing plants. Many herbivores have special digestive systems that let them digest all kinds of plants, including grasses.
Herbivores need a lot of energy to stay alive. Many of them, like cows and sheep, eat all day long.

15. Flat topped sea mounts are known as

(a) Shoals (b) Reefs
(c) Guyots (d) Banks

Ans: (c) Guyots are seamounts that are undersea mountains Erosion by waves destroyed the top of the seamount resulting in a flattened shape. Due to the movement of the ocean floor away from oceanic ridges, the sea floor gradually sinks and the flattened guyots are submerged to become undersea flat-topped peaks.



16. Which one of the following pairs does not match correctly?

(a) P. Haggett : Geography : A modern synthesis
(b) P. E. James : All possible worlds
(c) G. P. Marsh : Explanation in Geography
(d) Abler, Adams & Gould: Spatial organization

Ans: (c) G. P. Marsh is considered to be America's first environmentalist. Over a hundred years ago he warned of our destructive ways in a remarkable book called Man and Nature; or, Physical Geography as Modified by Human Action. He was the first to raise concerns about the destructive impact of human activities on the environment. 'Explanation in Geography' book is written by David Harvey in 1973.

17. Which one of the following statements is not correct?

(a) The concept of areal differentiation is related with ideographic approach.
(b) The concept of areal differentiation is related with nomothetic approach.
(c) The exponent of the concept of areal differentiation was Richard Hartshorne.
(d) The concept of areal differentiation is related with chorology.

Ans: (b) Areal differentiation is one of the perspectives of human geography in which importance is given to the uniqueness of the geographical area rather than the standard model creation. The first technical word " Areal Differentiation" was mentioned by Hartshorne in his book " Nature of geography".
While, Nomothetic Approach concerned with establishing general laces based on the study of large groups of people, and the use of statistical technique to analyse data. So it's not related with Areal differentiation. 0

18. 'The same environment carries different meanings to people with different ways of living and culture'. This statement is related with the concept of

(a) Determinism
(b) Stop – and – go determinism
(c) Probabilism
(d) Possibilism

Ans: (d) The concept of Possibilism came as a reaction to environmental determinism. In environment determinism, the human was made as a passive element. Possibilism theory says the world is full of possibilities, it is up to man how they are using it and the Possiblistic view also supported the statement that 'The same environment carries different meanings to people with different ways of living and culture'

19. Who among the following emphasized on the behavioral environment in Geography?

(a) Burton (b) Gregory
(c) Kirk (d) Johnston

Ans: (c) Kirk has given the behavioral environment model that emphasizes on the importance of perception in human geography, the significance of subjective experience, and the potential of man as an active agent in the environment.
He asserted that in space and time the same information would have different meanings for people of different socio-economic, cultural and ethnic backgrounds living in same geographical environment.

20. Who defined Geography as human ecology?

(a) Schaefer (b) Hartshorne
(c) Richthofen (d) Barrows

Ans: (d) The doctrine of human ecology further strengthened by Barrows in 1922 when he emphasized that in geography human ecology is the guiding concept. In the words of Barrows (1923) – "Thus defined, geography is the science of human ecology.

21. Which one of the following metropolitan cities has registered the largest population in 2011 census?

(a) Chennai (b) Delhi
(c) Kolkata (d) Mumbai

Ans: (d) Mumbai is the following metropolitan city which has registered the largest population in 2011 Census. There are 53 urban agglomerations in India with a population of 1 million or more against 35 in 2001. Mumbai has population of more than 18 million.
Top 7 Metropolitan cities of India in terms of population
Mumbai – 18 Million population
Delhi – 16 Million population
Kolkata – 14 Million population
Chennai – 8.6 Million population
Bangalore – 8.5 Million population
Hyderabad – 7.6 Million population
Ahmedabad – 6.3 Million population
Note:- [The correct option according to commission is answer B]

22. Which of the following States in India is passing through the stage of Demographic Transition which entails low fertility and low mortality?

(a) Assam (b) Haryana
(c) Punjab (d) Tamil Nadu

Ans: (d) The demographic transition theory is a generalised description of the changing pattern of mortality, fertility and growth rates as societies move from one demographic regime to another.
There are four stages to the classical demographic transition model:
Stage 1: Pre-transition
Characterized by high birth rates, and high fluctuating death rates.
Stage 2: Early transition
During the early stages of the transition, the death rate begins to fall.
As birth rates remain high, the population starts to grow rapidly.
Stage 3: Late transition
Birth rates start to decline.
The rate of population growth decelerates.
Stage 4: Post-transition
Post-transitional societies are characterized by low birth and low death rates.
Population growth is negligible, or even enters a decline.
Tamil Nadu due to its effective population control policy and health control initiation recently entered in 4^{th} stage of Demographic transition.

23. Which one of the following is the important factor in Rural out – migration in India?

(a) Agricultural inefficiency
(b) Population growth
(c) Lack of Basic services in rural areas
(d) Unemployment

Ans: (d) The push factors of no job facilities, low salary, less income, drought, less medical and educational facilities are the push factors of the rural people from rural to urban migration.
In the world, three out of four people living in poverty and suffering from hunger live in rural areas. This data, released by FAO, emphasizes the extent of rural poverty, caused by factors such as lack of employment and opportunities, limited access to services and infrastructure.

24. The 'Range of a Good' refers to

(a) The maximum distance which people have to travel to purchase a good or service.
(b) The variety of goods available at a market place.
(c) The maximum demand to make the service or good viable.
(d) The maximum population necessary for survival of a function.

Ans: (a) Threshold is the minimum market (population or income) needed to bring about the selling of a particular good or service. Range is the maximum distance consumers are prepared to travel to acquire goods - at some point the cost or inconvenience will outweigh the need for the good.

25. The 'Administrative Principle' in Christaller's 'Central Place Theory' refers to

(a) K = 3 (b) K = 4
(c) K = 7 (d) K = 9

Ans: (c) Administrative Principle (K=7)
According to Christaller, the market areas of the smaller settlements are completely enclosed within the market area of the larger settlement. Since tributary areas cannot be split administratively, they must be allocated exclusively to a single higher-order place.

26. Which one of the following may be categorised as footloose industry?
(a) Cement (b) Ship building
(c) Electronic components (d) Cotton textile

Ans: (c) Footloose industries are those industries which are not dependent on any specific raw material, weight losing or otherwise. they depend on specific component parts which can be obtained anywhere. Such industries are generally non-polluting and produce in small quantity with small labour force. Thus, Electronic components here comes under footloose industry.

27. Gross Cultivated Area divided by Net Sown Area is known as
(a) Agricultural efficiency (b) Crop diversification
(c) Crop concentration (d) Crop intensity

Ans: (d) Gross Cultivated Area divided by Net Sown Area is known as Crop intensity
It refers to raising of a number of crops from the same field during one agricultural year; it can be expressed through a formula. Cropping Intensity = Gross Cropped Area/Net Sown Area x 100.
Gross cropped Area:- This represents the total area sown once and/or more than one in particular year i.e. the area is counted as many times as there are sowing in a year.
Net sown Area-: This represents the total area sown with crops and orchards. Area sown more than once in same year is counted only once.
India present cropping intensity is 136%.

28. The theory of least cost location was proposed by
(a) Losch (b) Isard
(c) Dicey (d) Weber

Ans: (d) Alfred Weber formulated the theory it was created to determine the location of manufacturing plants. The location could be different based on if the final product weighed more or less than the raw materials. According to the theory, plants will be located to maximize profits and minimize costs.

29. The intensive cultivation of vegetables, fruits and flowers in the periphery of cities in USA is called
(a) Truck farming (b) Factory farming
(c) Market gardening (d) Agri – farming

Ans: (a) Truck farming refers to the production of crops of some vegetables on an extensive scale in regions especially suited to their culture primarily for shipment to distant markets.
The major truck-farming areas are in California, Texas, Florida, along the Atlantic Coastal Plain, and in the Great Lakes area. Centers for specific crops vary with the season. Among the most important truck crops are tomatoes, lettuce, melons, beets, broccoli, celery, radishes, onions, cabbage, and strawberries.

30. Why are steel mills within Japan drawn to coastal locations?
(a) Nearness to iron ore reserves
B) Nearness to local markets
(c) Availability of cheap labour
(d) To minimize transportation cost for imported raw materials and steel exports

Ans: (d) Japan is the largest island country in East Asia and the 4th largest island nation of the world. Chronologically. Honshu, Hokkaido and kyushu are three largest Islands of Japan. Japan has few natural resources due to which it depends on the import of raw material for production of most of goods. As we know sea transport is the cheapest mode of transport that's why most of the raw material comes through sea ways in Japan and to minimize the transport cost, most of the Industries which use gross raw materials are located along coasts.

31. Which one of the following criteria is not used for the classification of human races?
(a) Eye (b) Nose
(c) Ear (d) Hair

Ans: (c) Humans are often defined by easily observable physical traits like skin and hair colour, hair form, characteristic features of nose, eyes, lips and face. In the beginning, only this criterion was used for the purpose of human taxonomy. Ears are not included in this.

32. Match the following tribes and their habitats:
a. Khirgiz 1. Central Asia
b. Yakuts 2. Siberia
c. Lapps 3. Scandinavia
d. Eskimos 4. Canada
Codes:
(a) a – 1, b – 3, c – 2, d – 4
(b) a – 4, b –2, c – 3, d – 1
(c) a – 2, b –1, c – 3, d – 4
(d) a – 1, b – 2, c – 3, d – 4

Ans: (d)
a. Khirgiz 1. Central Asia
b. Yakuts 2. Siberia
c. Lapps 3. Scandinavia
d. Eskimos 4. Canada

33. Which of the following statements is not true about a State?
(a) It has a territorial base.
(b) It always has a social or cultural base.
(c) It claims internal sovereignty.
(d) It claims sovereignty in external relations.

Ans: (b) The Montevideo Convention held in Uruguay in 1933 said that a region must meet four requirements to become a state; a permanent population, a defined territory, a government and the ability to form relations with other nation states.
- The state has territorial base with well defined boundaries that while the Nation's boundary can be transitional in nature.

- The state have the government which have the control over that particular territory and it also claims sovereignty i.e. freedom in decision making ability in both internal and external affairs.
- It is not compulsory that the state always have a social or cultural base for ex- Let's assumed the creation of a state on any newly discovered Island or any land.

34. Which of the following languages does not belong to the Dravidian family?
(a) Sinhalese (b) Brahui
(c) Kannada (d) Malayalam

Ans: (a) The Dravidian languages are divided into South, South-Central, Central, and North groups; these groups are further organized into 24 subgroups. The four major literary languages—Telugu, Tamil, Malayalam, and Kannada—are recognized by the constitution of India. Brahui is also a Dravidian language.
While, Sinhalese language belongs to Indo-Aryan language family primarily spoken by Sinhalese people of Sri Lanka who make up the largest ethnic group of Island (Sri Lanka) numbering about 16 Million.

35. The habitat of the Toda tribe is
(a) Aravalli range (b) Siwalik range
(c) Kaimur range (d) Nilgiri hills

Ans: (d) Toda people are a Dravidian ethnic group who live in the Nilgiri Mountains of the Indian state of Tamil Nadu.
Nilgiri is the name given to a range of mountains spread across the borders among the states of Tamilnadu, Karnataka and Kerala. The Nilgiri hills are part of a larger mountain chain known as the Western Ghats. The district is contained mainly within the Nilgiri Mountains Range.

36. Which one of the following indicators is most commonly used to measure the economic development of a country?
(a) Infant mortality rate
(b) Availability of potable water
(c) Female literacy
(d) Gross National Product per capita

Ans: (d) Per capita gross domestic product (GDP) is a financial metric that breaks down a country's economic output per person and is calculated by dividing the GDP of a nation by its population.
Per capita GDP is a global measure for gauging the prosperity of nations and is used by economists to analyze the prosperity of a country based on its economic growth.
GNP = GDP + Net property income from Abroad
So, GNP per capita is commonly used to measure the economic development of the country.

37. Which of the following matches is not correct?
(a) Myrdal : Cumulative causation model
(b) Friedman : Core– periphery model
(c) Boudville : Transport model
(d) Frank : Dependency model

Ans: (c) The concept of Growth Centre however was proposed by Boudeville as a part of his studies in Minas Gerais (Iron ore mines- largest in Brazil).
Boudeville gave a regional character and a specific geographic content to Perroux's conception and transport model was not given by him.

38. Who among the following formalized the concept that there exists relationship between the spatial organisation and national development?
(a) Luten (b) Dickens
(c) Kuklinski (d) Friedmann

Ans: (d) Friedman gave the core-periphery model in 1963 in which he established the link between spatial organisation and regional development. In this theory he gave 4 stages in which he stated that core grows at the cost of peripheries in first stage and later in due to expansion of core, deconcentration in core areas are increasing and most of the Industries starts locating in periphery area causes development of peripheries also. Subsequently in last stage spatial inequalities are reduced subsequently.

39. Which of the following sequences of the stages of economic growth according to Rostow's model is correct?
(a) Traditional society, drive to maturity, take off, high mass consumption
(b) Traditional society, take off, drive to maturity, high mass consumption
(c) Traditional society, take off, high mass consumption, drive to maturity
(d) Traditional society, drive to maturity, high mass consumption, take off

Ans: (b) Rostow penned his classic Stages of Economic Growth in 1960, which presented five steps through which all countries must pass to become developed.
1) traditional society 2) preconditions to take-off
3) take-off 4) drive to maturity and
5) age of high mass consumption.

40. Which one of the following is a 'Formal' Region?
(a) Delhi metropolitan region
(b) Hyderabad – Secunderabad region
(c) Delhi – Jaipur – Agra Triangle
(d) Assam – Valley

Ans: (d) Formal regions- are areas that share a uniform attribute such as language, culture, or political organization. Formal regions boundaries are usually well defined and established ex- Gangetic plain region, Assam valley region etc.
Functional region/Nodal Region -
These regions are exist due to function. A functional region consists of the area surrounding a central node where the function happens Ex- Delhi metropolitan Region, etc.

41. Between 2001 and 2011, the sex-ratio (Females per thousand males) has
(a) increased by 5 to 10 (b) decreased by 5 to 10
(c) remained constant (d) increased by less than 5

Ans: (a) Between 2001 and 2011, the sex-ratio (Females per thousand males) has increased by 5 to 10. Sex ratio is used to describe the number of females per 1000 of males.
In 2001 sex ratio of India in 933 which later increased to 943 in 2011.

42. Match List-I with List-II and select the correct answer using the codes given below:

List – I (Mineral)	List – II (Mines)
a. Copper	1. Kudremukh
b. Iron ore	2. Balaghat
c. Manganese	3. Kodarma
d. Mica	4. Khetri

Codes:

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

Ans: (d)

List – I (Mineral)	List – II (Mines)
a. Copper	1.Khetri
b. Iron ore	2. Kudremukh
c. Manganese	3. Balaghat
d. Mica	4. Kodarma

43. In India, mangrove is the most important tree of
(a) Tropical moist deciduous forests
(b) Tidal forests
(c) Tropical dry deciduous forests
(d) Sub–tropical moist forests

Ans: (b) Mangrove forests, also called mangrove swamps, mangrove thickets or mangals, are productive wetlands that occur in coastal intertidal zones. There are about 80 different species of mangrove trees. All of these trees grow in areas with low-oxygen soil, where slow-moving waters allow fine sediments to accumulate that conditions mostly found along the coasts.

World– Wide Location Of Mangrove Forests

44. Which one of the following does not match correctly?
(a) Vishakhapatnam - Ship building
(b) Titlagarh – Railway equipment
(c) Bhadravati - Iron & Steel
(d) Pinjore – Machine Tools

Ans: (b) Titilagarh is a town and Municipality in Balangir district in the Indian state of Odisha. Balangiris famous as the cultural hub of Western Odisha, particularly for its indigenous tribe Kosali's folk art and dance, It is known for its temperate climate and many temples, parks, picnic spots, age-old buildings and the famous Sambalpuri cotton fabric.

45. In which of the following Decades, India experienced highest percentage of decadal growth?
(a) 1951-61 (b) 1961-71
(c) 1971-81 (d) 1981-91

Ans: (b) There are records that keep track of the increase and decrease in population. And it is called "decadal" as a decade consists of a period of 10 years. Thus, the decadal growth rate gives an overview of the total population growth in a particular decade.
India's decadal growth rate is highest during 1961-1971 i.e. 24.8% and from there on the decadal growth rates starts declining continuously .

46. Which one of the following is most appropriate for showing frequency distribution?
(a) Bar graph (b) Histogram
(c) Pie diagram (d) Line graph

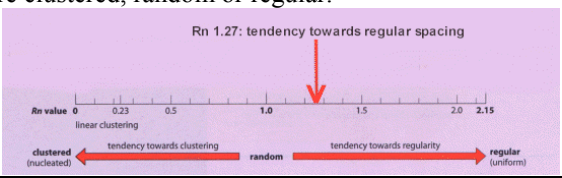
Ans: (b) A histogram is the most commonly used graph to show frequency distributions .It looks very much like a bar chart, but there are important differences between them. This helpful data collection and analysis tool is considered one of the seven basic quality tools.

47. Which one of the following is commonly used for computing the average value of river discharge?
(a) Arithmetic mean (b) Geometric mean
(c) Harmonic mean (d) Weighted mean

Ans: (b) The Geometric Mean (GM) is the average value or mean which signifies the central tendency of the set of numbers by finding the product of their values. Thus, geometric mean commonly used for computing the average value of river discharge.

48. Which one of the following Rn values shows the random pattern of point distribution?
(a) 0 (b) 1.0 (c) 1.35 (d) 2.14

Ans: (b) the search for order in settlement or other patterns in the landscape is the use of a technique known as nearest neighbour analysis. This attempts to measure the distributions according to whether they are clustered, random or regular.



49. Which one of the following sampling techniques is most suitable for selection of representative villages of an area with diversified geographical features?
(a) Systematic (b) Stratified – random
(c) Random (d) Clustered

Ans: (b) A stratified random sampling involves dividing the entire population into homogeneous groups called strata .A random sample from each stratum is taken in a number proportional to the stratum's size when compared to the population. These subsets of the strata are then pooled to form a random sample.

50. In which one of the following methods interpolation is used?
(a) Choroschematic (b) Chorochromatic
(c) Isopleth (d) Choropleth

Ans: (c) An isopleth is a map that uses lines or colors to indicate areas with similar regional aspects.
Interpolation is a mathematical process that estimates the value of a parameter at some intermediate location from known, explicitly located, values of that parameter. From a practical perspective, when drawing isopleths on a chart.

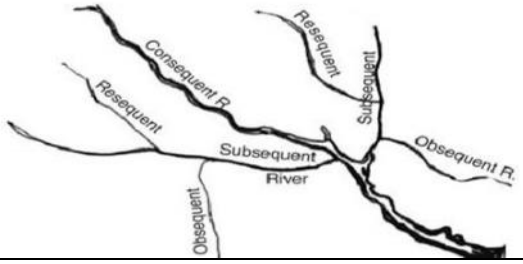
UGC NET/JRF Exam. June, 2012
Geography
With Explanation Paper-III

1. The valleys which drain in the same direction as the original consequent drainage but at the lower topographic levels and have developed with respect to new base levels are known as

(a) Resequent (b) Obsequent
(c) Insequent (d) Subsequent

Ans: (a) A resequent river flows in the same direction as that of the initial consequent drainage.

- Resequent rivers originate at a much later stage (hence they are called resequent) in comparison to the master consequent rivers.
- After the valley development of consequent and subsequent rivers, obsequent rivers may form at right angles to the subsequent rivers and flow opposite to the direction of flow of the original consequent river
- Insequent streams have an almost random drainage often forming dendritic patterns. These are typically tributaries and have developed by a headward erosion.
- A tributary stream that is formed by headward erosion along an underlying rock after the main drainage pattern (consequent river) has been established is known as a subsequent river.



2. The concept of 'base level erosion' was proposed by

(a) Davis (b) Malott
(c) Johnson (d) Powell

Ans: (d) A base level is the lower limit for an erosion process. The modern term was introduced by John Wesley Powell in 1875.
It is a limit below which a stream cannot erode. Upon entering a still body of water, a stream's velocity is checked and thus it loses its eroding power. Father of Geomorphology 'W.M. Davis' gave a cycle of erosion using running water as an agent.

3. Given below are the two statements, one labelled as Assertion (A) and the other labelled as Reason (R).

Assertion (A): The velocity of moving ice increases with steepness of slope of the area and thickness of glacial ice.

Reason (R): The velocity decreases to the sides owing to lesser depth of ice and friction against the valley walls and the bottom floor.

In the context of the above two statements, which one of the following is correct?

(a) Both (A) and (R) are true and (R) is the correct explanation of (A).
(b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
(c) (A) is true, but (R) is false.
(d) (A) is false, but (R) is true.

Ans: (b) Glaciers flow velocity and motion is controlled by several factors that is

- Ice geometry (thickness, steepness)
- Ice Properties (Temperature, Density)
- Valley geometry
- Bedrock conditions (Hard, soft, frozen or thawed bed)
- Sub glacial Hydrology
- Terminal environment (land, sea, ice shelf, sea ice) and
- Mass balance (rate of accumulation and Ablation)
- Greater the steepness or slope of valley higher the speed of glaciers and thickness of glacial ice is also positively related with velocity.
- As we move towards the sides of glaciers depth of ice decreases and friction from underground increases due to which glacier velocity decreases.

4. The normal cycle of erosion is associated with

(a) Marine erosion (b) Wind erosion
(c) River erosion (d) Glacial erosion

Ans: (c) The cycle of erosion by fluvial processes (running waters or rivers) is called normal cycle of erosion because of the fact that fluvial processes are most widespread (covering most parts of the globe) and most significant geomorphic agent. Still water also plays important roles in glacial and arid regions.

5. Which of the following groups of scholars stressed the role of lateral erosion by streams in the formation of pediments?

(a) Mc. Gee, Paige, Blackwelder
(b) Mc Gee, Blackwelder, Johnson
(c) Paige, Blackwelder, Johnson
(d) Paige, Johnson, Lawson

Ans: (c) G.K. Gilbert attributed the formation of pediments to lateral corrasion by streams. Later on S. Paige, Eliot Blackwelder, D.W. Johnson, Berkey, Morris etc. also advocated for lateral erosion by streams as powerful mechanism of pediment formation.
Several alluvial fans are formed on the lower segments of hill slopes. Gradually, the streams are graded and braided in the intermediate zone. Rock fans are formed in the intermediate zone due to lateral erosion by the steams. These rock fans gradually extend to become pediments.

6. Which of the following is not a topographic evidence of rejuvenation in landscape?

(a) Incised meanders (b) Structural benches
(c) Paired valley terraces (d) Multi-cyclic valley

Ans: (b) River rejuvenation involves a renewed period of vertical erosion to achieve a new and lower base level. The base level is the height or altitude to which the river flows before it either joins another river or reaches the sea.

River rejuvenation can lead to a number of changes in landscape. These include the formation of waterfalls and rapids, knick points, river terraces and incised meanders.

- While structural Benches are steep flat surfaces on either side of the present lowest valley floors are called terraces
- Benches or terraces formed due to differential erosion of alternate bands of hard and soft rock beds are called structural benches or terraces

7. Match list-I with list-II and select the correct answer from the codes given below:

List– I	**List – II**
(a) Loess	**(i) river deposit**
(b) Moraines	**(ii) glacial deposit**
(c) Gravels	**(iii) wind deposit**
(d) Silt	**(iv) marine deposit**

Codes :

	(a)	**(b)**	**(c)**	**(d)**
(A)	(i)	(ii)	(iv)	(iii)
(B)	(iii)	(ii)	(iv)	(i)
(C)	(iv)	(i)	(iii)	(ii)
(D)	(iii)	(iv)	(i)	(ii)

Ans: (b)

List – I	**List – II**
(a) Loess	(i) wind deposit
(b) Moraines	(ii) glacial deposit
(c) Gravels	(iii) marine deposit
(d) Silt	(iv) river deposit

8. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R).

Assertion (A): Ozone hole is observed only over Antartica.

Reason (R): Ozone depleting gases are present throughout the stratosphere.

In the context of the above two statements, which one of the following is correct?

(a) Both (A) and (R) are true.
(b) (A) is true and (R) is wrong.
(c) Both (A) and (R) are wrong.
(d) (A) is wrong, but (R) is true.

Ans: (d) The ozone holes are the areas to lower concentration of stratospheric ozone that form over the Antarctic and Arctic due to human activities so 'A' is wrong while. Ozone-depleting gases are present throughout the stratospheric ozone layer because they are transported great distances by atmospheric air motions. The very low temperatures of the Antarctic stratosphere create ice clouds called polar stratospheric clouds (PSCs).

The Earth's atmosphere is continuously stirred over the globe by winds. As a result, ozone-depleting gases get mixed throughout the atmosphere, including Antarctica, regardless of where they are emitted.

9. Which of the following types of clouds appears at the highest level in the sky?

(a) Alto – cumulus (b) Cirro-cumulus
(c) Cumulo-nimbus (d) Strato-cumulus

Ans: (b)

- High Clouds (16,500-45,000 feet) are termed as Cirrus. Cirrus clouds are delicate, feathery clouds that are made mostly of ice crystals.
- Mid-level Clouds (6,500-23,000 feet) Altocumulus , Altostratus , Nimbostratus
- Low Clouds (less than 6,500 feet) Cumulus, Stratus , cumulonimbus.

Note- High clouds have prefix 'cirrus'

10. Atmospheric temperature decreases with height in the troposphere because

(a) Air at higher altitude is less dense
(b) Solar radiation is less at higher level
(c) There are more atmospheric gases at higher altitudes
(d) The atmosphere is heated by radiation from the surface

Ans: (d) Troposphere is the lowest layer in the atmosphere and extends upwards about 16kms above sea level starting from the ground. It contains 75% of all air in the atmosphere. Generally, the temperature decreases with increase in height because the atmosphere distributes itself according to gravity. In the troposphere, the temperatures decrease with altitude. This is because the gas absorbs very little of the incoming solar radiation. Moreover, the ground absorbs this radiation and then heats the tropospheric air by conduction and convection.

11. Which one of the following pairs is not correctly matched?

(a) Foehn: Warm dry winds moving down the Alps
(b) Mistral: Cold wind blowing from Alps over France
(c) Santa Ana: Warm dry wind moving down Appalachian
(d) Bora: Cold winds experienced along the eastern coast of the Adriatic sea

Ans: (c) The National Weather Service defines Santa Ana winds as "Strong down slope winds that blow through the mountain passes in southern California. Foehn are warm dry winds moving down the Alps. Mistral are cold wind blowing from Alps over France. Bora is cold wind experienced along the eastern coast of the Adriatic sea.

12. Which one of the following gases is not a natural element of the atmosphere?

(a) Krepton (b) Argon
(c) Chloroflurocarbon (d) Water vapour

Ans: (c) Chlorofluorocarbons (CFCs) are anthropogenic compounds that have been released into the atmosphere since the 1930s through various applications such as air-conditioning, refrigeration, blowing agents in foams, insulations and packing materials, propellants in aerosol cans, and as solvents.

13. In Koppen's classification of climate, the symbol Aw refers to

(a) Tropical Savanna climate
(b) Monsoon climate
(c) Tropical Rainforest climate
(d) Steppe climate

Ans: (a) The Koppen climate classification is one of the most widely used climate classification systems. 'Aw' symbolizes Tropical wet and dry or savanna climate with the driest month having precipitation less than 60 mm.

14. The strongest winds in a hurricane are found in

(a) the eye of the hurricane
(b) the spiral bands of thunderstorm
(c) the eye wall of the hurricane
(d) the easterly waves

Ans: (c) The strongest winds in a northern hemisphere tropical cyclone is located in the eyewall and the right front quadrant of the tropical cyclone. Severe damage is usually the result when the eyewall of a hurricane, typhoon or cyclone passes over land.

15. Which one of the following characterizes paternoster lake?

(a) A lake of volcanic origin
(b) A shallow stretch of water separated from the sea
(c) A crescent shaped lake formed due to cut-off of a river meander
(d) Lake formed on glacial stairways

Ans: (d) Paternoster lakes occur in a series down a formerly glaciated valley in small basins scooped out by the glacier as it retreated. The name suggests a similarity to beads on a rosary, and the lakes are often connected to one another by streams that run between them and down the valley.

16. Thornthwaite's modified climatic classification is based on the concept of:

(a) Effective temperature
(b) Precipitation index
(c) Potential evapotranspiration
(d) Potential precipitation

Ans: (c) C.W. Thronthwaite gave the climatic classification for world Climate in 1933 later he modified his scheme of world climate classification in 1948. In which he gave the potential evapotranspiration concept and used empirical method for estimating potential evapotranspiration (PET). The equation only requires mean monthly air temperature and mean daily daylight hours for each month, which can be calculated from latitude.

17. Selva forests are

(a) Broad leaf evergreen forests
(b) Broad leaf deciduous forests
(c) Coniferous evergreen forests
(d) Coniferous deciduous forests

Ans: (a) Tropical forests are closed canopy forests growing within 28 degrees north or south of the equator. They are very wet places, receiving more than 200 cm rainfall per year, either seasonally or throughout the year.
Selva refers to tropical rainforests. It is normally the part of the Amazon basin and is found near the equator. In these forests, tall broad-leaved trees can be found. These forests are evergreen and the autumn season does not affect them.

18. The specific place of an organism in an ecosystem is called as:

(a) Niche (b) Autotroph
(c) Trophic level (d) Food Pyramid

Ans: (a) The term niche was coined by the naturalist Roswell Hill Johnson but it is first used by Joseph Grinnell in a research program in 1917.
Ecological Niche defined as the role of an organism in its particular ecosystem Grinnel stated that "Not two species can inhabit the same niche for a long time". Ecological Niche is an inclusive term that involves not only the physical space occupied by an organism but also its functional role in the community.
A species carves out a niche for itself in a habitat by being able to adapt and diverge from other species.

19. Which of the following is referred to as producer in marine ecosystem?

(a) Small fish (b) Fungi
(c) Zooplanktons (d) Phytoplankton

Ans: (d) A very diverse group of microorganisms known as phytoplankton perform the essential role of primary producers in the oceans, primarily producers are autotrophic. Thus, Phytoplankton harvest sunlight through photosynthesis and store it as chemical energy.

20. Saline soils are the results of

(a) Very high precipitation and leaching of the soil
(b) High rate of evaporation and very little leaching of the soil.
(c) High precipitation and very little leaching of the soil
(d) All the above

Ans: (b) Salinization is the result of the accumulation of salts and other substances from capillary rise of water from underground to the surface and causing accumulation of salts that bring by this water because of evaporation regarded as one of the major causes of desertification and therefore is a serious form of soil degradation.
Leaching of saline lands implies removal of excess salts from arable and subsurface soil horizons by flushing water; it is one of the main irrigated land salinity control methods.

21. "There is no holiday for vegetation – growth is rapid, uninterrupted and continuous." This statement applies to
(a) Taiga region (b) Monsoon region
(c) Mediterranean region (d) Rainy Tropics

Ans: (d) Rainforests have an abundance of plants and animals because rainforests are located in tropical regions, they receive a lot of sunlight.
Rainfall through the year, fertile soil because of rich humus content in soil mainly due to decomposition of dead organic matter, etc. Due to these factors plants growth is uninterrupted and continuous while other region have some limiting factor that allows the plants to grow only in particular season like in middle and higher latitude limiting factor is sunlight i.e., Plants mainly grows in summer season. Monsoon and Tropical forest's main limiting factor is amount of rainfall because of having rain in a particular season.

22. The largest variety of plants and animals is found in the
(a) Temperate forests (b) Monsoon forests
(c) Tropical forests (d) Tropical grassland

Ans: (c) Tropical rainforests support the greatest diversity of living organisms on Earth. Although they cover less than 2 percent of Earth's surface, rainforests house more than 50 percent of the plants and animals on Earth.
The Amazon jungle is the world's largest tropical rainforest. The forest covers the basin of the Amazon, the world's second longest river. The Amazon is home to the greatest variety of plants and animals on Earth. Tropical rainforests are often called the "lungs of the planet" as they draw in carbon dioxide and breathe out oxygen.

23. Which one of the following statements about salinity is not correct?
(a) Salinity is directly related to precipitation
(b) There exists a direct relationship between the rate of evaporation and salinity
(c) Low salinity is found near the mouth of a river
(d) The salinity is highest at the tropics and decreases towards poles and equator

Ans: (a) Generally, salinity decreases from Equator towards the pole but the highest salinity is seldom recorded near the Equator because high rainfall reduces the related proportion of salt. The highest salinity is observed between 20 to 40 degrees North latitude.
Soil Salinity causes include:
- dry climates and low precipitations when excessive salts are not flushed from the earth;
- high evaporation rate, which adds salts to the ground surface;
- poor drainage or waterlogging when salts are not washed due to a lack of water transportation;
- irrigation with salt-rich water, which amplifies salt content in earths;
- from geological deposits and penetration into groundwater.

24. The origin of the ocean currents is related to
(a) Gravitational force (b) Winds
(c) Salinity and density (d) All of the above

Ans: (d) Ocean currents can be caused by wind, density differences in water masses caused by temperature and salinity variations, gravity, and events such as earthquakes or storms. These currents move water masses through the deep ocean taking nutrients, oxygen, and heat with them.

25. Schaefer was in favour of:
(a) Exceptionalism
(b) Idiography
(c) Areal differentiation
(d) Scientific generalization

Ans: (d) Schaefer became an inaugural member of the Department of Geography at Iowa, in United States.
He is well known for his article in flagship American periodical, Annals, Association of American Geographers called "Exceptionalism in geography: A Methodological Examination" in 1953. It was a call for a scientific approach to geography based upon the search for geographical laws (the ultimate form of a scientific generalization). This further led to become an important cause for quantitative revolution.

26. Which of the following principles does not belong to logical positivism?
(a) Principle of causation (b) Structuralism
(c) Behaviourism (d) Functionalism

Ans: (c) According to logical positivism, there are only two sources of knowledge: logical reasoning and empirical experience. Whereas, the behavioral approach suggests that the keys to understanding development are observable behavior and external stimuli in the environment. Behaviorism is a theory of learning, and learning theories focus on how we are conditioned to respond to events or stimuli.

27. Which of the following matches is not correct?

	Author		**Book**
(A)	William Bunge	:	Theoretical Geography
(B)	David Harvey	:	Social Well being : A Spatial Perspective
(C)	David Smith	:	Human Geography: A Welfare Approach
(D)	R. Peet	:	Modern Geographical Thought

Ans: (b) Paul L. Knox authored the book - Social Well being: A Spatial Perspective.
The boundaries of social planning are very elastic. In its broadest sense, social planning is concerned with collective action taken to create better living conditions and a brighter future for individuals and groups viewed from this perspective. Thus, it becomes useful to adopt a specific focus to examine social planning and social planning issues.

28. The statement that "Egypt is the gift of the river Nile" is attributed to
(a) Aristotle (b) Herodotus
(c) Strabo (d) Seneca

Ans: (b) The Greek historian Herodotus called Egypt the "gift of the Nile", since the kingdom owed its survival to the annual flooding of the Nile and the resulting depositing of fertile silt.

29. Who among the following pleaded that history be treated geographically and geography be treated historically?
(a) Homer (b) Thales
(c) Hecataeus (d) Herodotus

Ans: (d) Herodotus was was also one of the pioneer geographers. He was a strong supporter of the idea that all history must be treated geographically and all geography must he treated historically. His work is an excellent example of historical geography.
He theorized the flow of the Nile, and was the first geographer to regard the Caspian as an inland sea, opposed to what his contemporaries considered an arm of the Northern Ocean. Herodotus divided the landmass of the world into three continents, Europe, Asia and Libya (Africa).

30. Who among the following Arab scholars made corrections to Ptolemy's book?
(a) Al-Masudi (b) Al-Idrisi
(c) Ibn-Khaldun (d) Ibn-Batuta

Ans: (b) Al-Idrisi (around 1099-1180 A.D.) contradicted and corrected many Greek ideas, including those put forth by Ptolemy. In his book on Geography (1154 A.D.), he corrected the Greek idea about the Indian Ocean being a closed sea.

31. Which one of the following is the philosophical basis of quantitative revolution?
(a) Existentialism (b) Idealism
(c) Phenomenology (d) Positivism

Ans: (d) Positivism is the philosophical basis of quantitative revolution. Positivism thought was developed by Auguste Comte. As per him, the development of social or individual thought happened in three phases. It is a philosophical thought, where assertions are validated by the use of logic, science, maths, facts etc.

32. The concept of paradigm was propounded by
(A) Kant (B) Peet
(C) Kuhn (D) Haggett

Ans: (c) The concept of Paradigm was propounded by Thomas Kuhn in his book 'The structure of scientific Revolution' (1962) he fundamentally argues that 'science' does not progress as a linear accumulation of new knowledge but undergoes periodic revolutions called paradigm shifts. A Paradigm is a universally recognizable scientific achievement that, for a time, provides model problems and solutions to a community of practitioners. It is a set of norms which tell a scientists how to think and behave and there is single Paradigm that all scientists accept uncritically.

33. Who among the following wanted to develop 'Universal Science' encompassing all aspects of knowledge?
(a) Humboldt (b) Ritter
(c) Recluse (d) Guyot

Ans: (a) Humboldt wanted to develop 'Universal Science' encompassing all aspects of knowledge. Humboldt and Ritter demonstrated the usefulness of Geography as a universal science. It studied not only one phenomenon but is interdisciplinary in nature and tried to study overall phenomenon together.

34. Who among the following geographers, focussed on man centered geography?
(a) W. H. Davis (b) Jefferson
(c) Semple (d) Huntington

Ans: (b) Jefferson during his geographical works was not influenced by the Darwinian paradigm of determinism, but favored the concept of 'indeterminism', attaching much importance to man's creative ability. Thus, he was opposed to Davis's assertion of 'environmental control and man's response'. E.C. Semple was also a environmental determinist as she quoted that "Man is the product of nature". Huntington is an climate determinist, that can be proved from his publication like "Climate and civilization (1915)", "Mainspring of civilization (1945)", etc.

35. Who, among the following, developed the concept of mental map?
(a) Downs and Stea
(b) Gould and White
(c) Saarinen
(d) Boulding and Hagerstrand

Ans: (b) Peter Gould and Rodney White have performed prominent analyses in the book "Mental Maps." This book is an investigation into people's spatial desires.
Mental maps are a mix of objective knowledge and subjective perceptions: precise knowledge about the location of geographic features as well as impressions of places, rough estimates of size and location, and a general sense of the connections between places.