Class XI

ANNUAL Examination (2024-25)

Geography

Set A

Time : 3 Hours Maximum marks:70

SOLUTION

SECTION A

Q1 The most popular argument regarding the origin of the universe is the? 1

a. Small bank theory
b. Big bang theory
c. Little bang theory
d. Circle bang theory

Q2 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below. 1

Assertion (A): The most easily available solid earth material is surface rock or the rocks we get from mining areas

Reason (R): Gold mines in South Africa are as deep as 3 - 4 km. Going beyond this depth is not possible as it is very hot at this depth.

Options:

A. **Both (A) and (R) are true but (R) is not the correct explanation of (A).**

B. Both (A) and (R) are true and (R) is the correct explanation of (A).

C. Both (A) and (R) are incorrect.

D. (A) is correct but (R) is incorrect

Q3 Which of the following statements are correct related to rural marketing Convectional Current Theory? Choose the correct option 1

i. Arthur Holmes in 1930s discussed the possibility of convection currents operating in the mantle portion
ii. These currents are generated due to radioactive elements causing thermal differences in the mantle portion.
iii. Holmes argued that there exists a system of such currents in the entire mantle portion
iv. This was an attempt to provide an explanation to the issue of pace, on the basis of which contemporary scientists agreed on the continental drift theory.

Options:

A. i, ii, iv

B. i, iii, iv

C. ii, iii, iv

D**. i, ii, iii**

Q4 Which one of the following is incorrectly matched 1

List 1 Name of ocean current	List 2 Temperature of ocean current
A Gulf stream	1 Warm
B Labrador	2 Cold
C North Atlantic Drift	3 Warm
D West Wind Drift	**4 Warm**

Q5 What is Pedology? 1

a) Study of animals
b) Study of soil
c) Study of rocks
d) Study of volcanoes

Q6 What is degassing? 1

a) Gases coming out of volcanoes
b) Gases leading to pollution
c) The process through which the gases were outpoured from the interior of earth
d) The process through which the gases joined interior of earth

Q7 The Mantle extends to a depth of? 1

a) 2900 km
b) 2700 km
c) 3200 km
d) 1230 km

Q8 Which of the following statements are incorrect related to rural Mid-Oceanic Ridges? Choose the incorrect option 1

i. This forms an interconnected chain of mountain system within the ocean
ii. It is the longest mountain-chain on the surface of the earth though submerged under the oceanic water
iii. It is characterised by a central drift system at the crest
iv. The rift system at the crest is the zone of intense earthquake activity

Options:

A. i, iv

B. i, iii, iv

C. **iii, iv**

D. i, ii, iii

Q9 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below. 1

Assertion (A): The Himalayas along with other Peninsular mountains are young, weak and flexible in their geological structure unlike the rigid and stable Peninsular Block

Reason (R): They are still subjected to the interplay of exogenic and endogenic forces, resulting in the development of faults, folds and thrust plains

Options:

A. **Both (A) and (R) are true but (R) is not the correct explanation of (A).**

B. Both (A) and (R) are true and (R) is the correct explanation of (A

C. Both (A) and (R) are incorrect.

D. (A) is correct but (R) is incorrect.

Q10 Match the following: 1

Bioreserve	Place
A Nilgiri	1 Assam
B Nanda Devi	2 Meghalya
C Nokrek	3 Uttrakhand
D Manas	4 Keala

a) A1,B3,C2,D4
b) A1,B3,C2,D 4
c) A3,D4,C1,D2
d) A4,B3,C2,D1

Q11 Identify the statement that is NOT true with regard to Hot weather season? 1

I. The hot weather season in south India is mild and not so intense as found in north India
II. The Peninsular situation of south India with moderating effect of the oceans keeps the temperatures lower than that prevailing in north India

III. In May, the heat belt moves further southern part of India, temperatures around 48°C are not uncommon.
IV. April, May and June are the months of summer in north India

Options:

A. Statement I and IV

B. Only II

C. **Only III**

D. Statement IV

Q12 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below. 1

Assertion (A): The Ravi is another important tributary of the Indus. It rises west of the Rohtang pass in the Kullu hills of Himachal Pradesh

Reason (R): Before entering Pakistan and joining the Chenab near Sarai Sidhu, it drains the area lying between the southeastern part of the Pir Panjal and the Dhauladhar ranges

Options:

A. **Both (A) and (R) are true but (R) is not the correct explanation of (A).**

B. Both (A) and (R) are true and (R) is the correct explanation of (A

C. Both (A) and (R) are incorrect.

D. (A) is correct but (R) is incorrect

Q13 Marusthali are found in? 1

a) Islands
b) Desert
c) Mountains
d) Plateaus

Q14 Wild Life Act was enacted in which year? 1

a) 1975
b) 1973
c) 1972
d) 1971

Q15 Loo feature is found in which weather season? 1

a) Cold weather season
b) Advancing monsoon season
c) Retreating monsoon season

d) Hot weather season

Q16 ‘Namami Gange Programme was launched in which year? 1

a) 1975
b) 2015
c) 2014
d) 1999

SECTION B

Q18 “It was, therefore, logical to perceive geography as the study of areal differentiation”. Justify the statement 3

A number of phenomena are similar and many are dissimilar. It was, therefore, logical to perceive geography as the study of areal differentiation. Thus, geography was perceived to study all those phenomena which vary over space. Geographers do not study only the variations in the phenomena over the earth’s surface (space) but also study the associations with the other factors which cause these variations. For example, cropping patterns differ from region to region but this variation in cropping pattern, as a phenomenon, is related to variations in soils, climates, demands in the market, capacity of the farmer to invest and technological inputs available to her/him

Q19 How can we measure earthquakes? Explain 3

he 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, an Italian seismologist. The intensity scale takes into account the visible damage caused by the event. The range of intensity scale is from 1-12

Q20 Briefly explain the characteristics of Troposphere 3

The troposphere is the lowermost layer of the atmosphere. Its average height is 13 km and extends roughly to a height of 8 km near the poles and about 18 km at the equator. Thickness of the troposphere is greatest at the equator because heat is transported to great heights by strong convectional currents. This layer contains dust particles and water vapour. All changes

in climate and weather take place in this layer. The temperature in this layer decreases at the rate of 1°C for every 165m of height. This is the most important layer for all biological activity

Q21 How is Neap tide different from spring tide? 3

Spring tides : The position of both the sun and the moon in relation to the earth has direct bearing on tide height. 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. Neap tides : 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.

Q22 How is the Indo Ganga plain formed? 3

The third geological division of India comprises the plains formed by the river Indus, the Ganga and the Brahmaputra. Originally, it was a geo-synclinal depression which attained its maximum development during the third phase of the Himalayan mountain formation approximately about 64 million years ago. Since then, it has been gradually filled by the sediments brought by the Himalayan and Peninsular rivers. Average depth of alluvial deposits in these plains ranges from 1,000-2,000 m.

Q23 Give a brief description of Tropical Thorn forest 3

Tropical thorn forests occur in the areas which receive rainfall less than 50 cm. These consist of a variety of grasses and shrubs. It includes semi-arid areas of south west Punjab, Haryana, Rajasthan, Gujarat, Madhya Pradesh and Uttar Pradesh. In these forests, plants remain leafless for most part of the year and give an expression of scrub vegetation. Important species found are babool, ber, and wild date palm, khair, neem, khejri, palas, etc. Tussocky grass grows upto a height of 2 m as the under growth

SECTION C

Q24 How does climate and Time affect soil formation? 5

Climate is an important active factor in soil formation.

The climatic elements involved in soil development are : (i) moisture in terms of its intensity, frequency and duration of precipitation - evaporation and humidity; (ii) temperature in terms of seasonal and diurnal variations. Precipitation gives soil its moisture content which makes the chemical and biological activities possible. Excess of water helps in the downward transportation of soil components through the soil (eluviation) and deposits the same down below (illuviation). In climates like wet equatorial rainy areas with high rainfall, not only calcium, sodium, magnesium, potassium etc. but also a major part of silica is removed from the soil. Removal of silica from the soil is known as desilication. In dry climates, because of high temperature, evaporation exceeds precipitation and hence ground water is brought up to the surface by capillary action and in the process the water evaporates leaving behind salts in the soil. Such salts form into a crust in the soil known as hardpans. In tropical climates and in areas with intermediate precipitation conditions, calcium carbonate nodules (kanker) are formed. Temperature acts in two ways — increasing or reducing chemical and biological activity. Chemical activity is increased in higher temperatures, reduced in cooler temperatures (with an exception of carbonation) and stops in freezing conditions. That is why, tropical soils with higher temperatures show deeper profiles and in the frozen tundra regions soils contain largely mechanically broken materials.

Time

Time is the third important controlling factor in soil formation. The length of time the soil forming processes operate, determines maturation of soils and profile development. A soil becomes mature when all soil-forming processes act for a sufficiently long time developing a profile. Soils developing from recently deposited alluvium or glacial till are considered young and they exhibit no horizons or only poorly developed horizons. No specific length of time in absolute terms can be fixed for soils to develop and mature

Q25 Name and explain the different local winds that affect an area 5

Local Winds Differences in the heating and cooling of earth surfaces and the cycles those develop daily or annually can create several common, local or regional winds.

Land and Sea Breezes

As explained earlier, the land and sea absorb and transfer heat differently. During the day the land heats up faster and becomes warmer than the sea. Therefore, over the land the air rises giving rise to a low pressure area, whereas the sea is relatively cool and the pressure over sea is relatively high. Thus, pressure gradient from sea to land is created and the wind blows from the sea to the land as the sea breeze. In the night the reversal of condition takes place. The land loses heat faster and is cooler than the sea. The pressure gradient is from the land to the sea and hence land breeze results

Mountain and Valley Winds

In mountainous regions, during the day the slopes get heated up and air moves upslope and to fill the resulting gap the air from the valley blows up the valley. This wind is known as the valley breeze. During the night the slopes get cooled and the dense air descends into the valley as the mountain wind. The cool air, of the high plateaus and ice fields draining into the valley is called katabatic wind. Another type of warm wind occurs on the leeward side of the mountain ranges. The moisture in these winds, while crossing the mountain ranges condense and precipitate. When it descends down the leeward side of the slope the dry air gets warmed up by adiabatic process. This dry air may melt the snow in a short time.

Q26 Does India need to have more than one standard time? If yes, why do you think so? 5

Q27 How are Andaban Nicobar islands different from Lakshdweep islands ? 5

The Bay of Bengal island groups consist of about 572 islands/islets. These are situated roughly between 6°°N-14°°N and 92°°E -94°°E. The two principal groups of islets include the Ritchie's archipelago and the Labrynth island. The entire group of island is divided into two broad categories – the Andaman in the north and the Nicobar in the south. They are separated by a waterbody which is called the Ten degree channel. It is believed that these islands are an elevated portion of submarine mountains. However, some smaller islands are volcanic in origin. Barren island, the only active volcano in India is also situated in the Nicobar islands.

The islands of the Arabian sea include Lakshadweep and Minicoy. These are scattered between 8°°N-12°°N and 71°°E -74°°E longitude. These islands are located at a distance of 220 km-440 km off the Kerala coast. The entire island group is built of coral deposits. There are approximately 36 islands of which 11 are inhabited. Minicoy is the largest island with an area of 453 sq. km. The entire group of islands is broadly divided by the Nine degree channel, north of which is the Amini Island and to the south of the Canannore Island. The Islands of this archipelago have storm beaches consisting of unconsolidated pebbles, shingles, cobbles and boulders on the eastern seaboard.

Q28 Examine in detail the resaons responsible for declining wildlife in India? 5

(i) Industrial and technological advancement

brought about a rapid increase in the

exploitation of forest resources.

(ii) More and more lands were cleared for

agriculture, human settlement, roads,

mining, reservoirs, etc.

(iii) Pressure on forests mounted due to

lopping for fodder and fuelwood and
removal of small timber by the local people.
(iv) Grazing by domestic cattle caused an
adverse effect on wildlife and its habitat.
(v) Hunting was taken up as a sport by the
elite and hundreds of wild animals were
killed in a single hunt. Now commercial
poaching is rampant.
(vi) Incidence of forest fire.

SECTION D

Q29 A On the political map of world name and mark the following: 5

a) Black sea
b) Brazilian Current
c) Mediterranean Sea
d) Alaska Current
e) Red Sea

Q29 B On the outline map of India name and mark the following: 5

a) Standard Meridian of India
b) Southern most point of main land India
c) Lakshadweep Island
d) Garo Hills
e) Western Ghats