Q.1) Consider the following statements about "Peninsular Rivers":

1. The Peninsular Rivers have shorter and deeper courses as compared to their Himalayan counterparts.
2. They are characterized by absence of meanders.

Which of the above statements is/are *NOT* correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 and 2

Q.1) Solution (a)

Note: Incorrect statements are asked in the question.

Basic Information:

- Peninsula Rivers are much older than the Himalayan Rivers.
- They are non-perennial/seasonal rivers with a maximum discharge in the rainy season.
- The main water divide in peninsular rivers is formed by the Western Ghats.
- The peninsular rivers have reached mature stage and have almost reached their base level.
- The rivers are characterized by broad and shallow valleys.
- The river banks have gentle slopes except for a limited tract where faulting forms steep sides.
- The east flowing rivers like the Mahanadi, the Godavari, the Krishna and the Cauvery draining into the Bay of Bengal make deltas at their mouths.
- But the west flowing rivers like Narmada and Tapi as well as those originating from the Western Ghats and falling in the Arabian Sea form estuaries in place of deltas.

Statement Analysis:

Statement 1	**Statement 2**
Incorrect	**Correct**
The Peninsular Rivers have **shorter** and	Reasons for absence of meandering of

shallower courses as compared to their Himalayan counterparts.	rivers are twofold, primarily the river flows over **hard rock** and secondly most of the rivers are in **youth stage**.

Q.2) With reference to Monsoon, consider the following statements:

1. Spatial distribution of rainfall is largely governed by relief or topography.
2. Amount of rainfall in different parts is related to the continentality effect.

Which of the above statements is/are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 and 2

Q.2) Solution (c)

Basic Information:

Generally, across the world, the monsoons are experienced in the tropical area roughly between 20° N and 20° S.

The climate of India is described as the '**monsoon'** type. In Asia, this type of climate is found mainly in the south and the southeast.

Out of a total of 4 seasonal divisions of India, monsoon occupy 2 divisions:

- **The southwest monsoon season:** Rainfall received from the southwest monsoons is seasonal in character, which occurs between June and September.
- **The retreating monsoon season:** The months of October and November are known for retreating monsoons.

Statement Analysis:

Statement 1	Statement 2
Correct	**Correct**

Spatial distribution of rainfall is largely governed by **relief or topography**. For instance, the windward side of the Western Ghats registers a rainfall of over 250 cm while the leeward side receives much less rainfall. Again, the heavy rainfall in the north-eastern states can be attributed to their hill ranges and the Eastern Himalayas. Rainfall ranges from 20 cm in western Rajasthan to more than 400 cm in certain parts of Western Ghats and North-East India. Less rainfall in the Rajasthan is because the South-West monsoon winds coming from the Arabian Sea are parallel to the Aravali range there.	The monsoon rainfall has a **declining** trend with **increasing distance from the sea**. **Continentality:** It refers to a climatic effect that emerges because of the different range of temperature that exists at places lying in the interior of the continent away from the moderating influence of the sea and the places that are located near the continent.

Q.3) Consider the following statements:

1. Pranhita is the largest tributary of Godavari.
2. Unlike Deccan Rivers it flows in south direction.
3. Kaleshwaram Lift Irrigation Project of Andhra Pradesh starts at the confluence point of Pranhita River and Godavari River.

Which of the above statements is/are correct?

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

Q.3) Solution (a)

Statement Analysis:

Statement 1	Statement 2	Statement 3
Correct	**Correct**	**Incorrect**
Pranahita river is the **largest**	Unlike Deccan Rivers it flows in	Kaleshwaram Lift Irrigation

tributary of the Godavari river covering about **34%** of its drainage basin.	south direction.	Project of **Telangana** starts at the confluence point of Pranhita River and Godavari River.

Q.4) Consider the following statements:

1. Kerala has bimodal pattern of rainfall.
2. Diurnal range of temperature is low during Retreating monsoon season.

Which of the above statements is/are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 and 2

Q.4) Solution (a)

Basic Information:

Diurnal range of temperature:

- The difference between the **daily maximum** and **minimum temperature** is called Diurnal range of temperature.
- Changes in this kind of temperature have multiple possible causes (cloud cover, urban heat, land-use change, aerosols, water vapour and greenhouse gases).
- In the Thar Desert, the day temperature may rise to 50ºC and drop down to near 15°C the same night, whereas, there is hardly any difference in day and night temperatures in other places like Karnataka and Maharashtra.

Retreating Monsoon

- During the months of October-November, the south-west monsoon winds become weaker and start to retreat from the skies of North India. This phase of the monsoon is known as the retreating monsoon.
- With the onset of retreating monsoon, skies become clearer and clouds disappear. The disappearance of clouds makes the climate of various places hotter gradually.

Severe tropical cyclones emerge from the Bay of Bengal. The month of October-November is prone to severe cyclones.

Statement Analysis:

Statement 1	Statement 2
Correct	**Incorrect**
Kerala has bimodal pattern of rainfall i.e. it receives rainfall from both south-west monsoon and retreating monsoon.	Diurnal range of temperature is **high** during Retreating monsoon season. **October Heat**: The retreating southwest monsoon season is marked by clear skies and a rise in temperature. Owing to the conditions of high temperature and humidity, the weather becomes rather oppressive. This is commonly known as the 'October heat'. The day is hot but the nights are cool hence, the **diurnal range of temperature is high**.

Q.5) Which of the following pairs is/are correctly matched?

1. Inconsequent River: Godavari
2. Subsequent River: Son
3. Consequent River: Kali

Select the correct pair(s) using the codes given below:

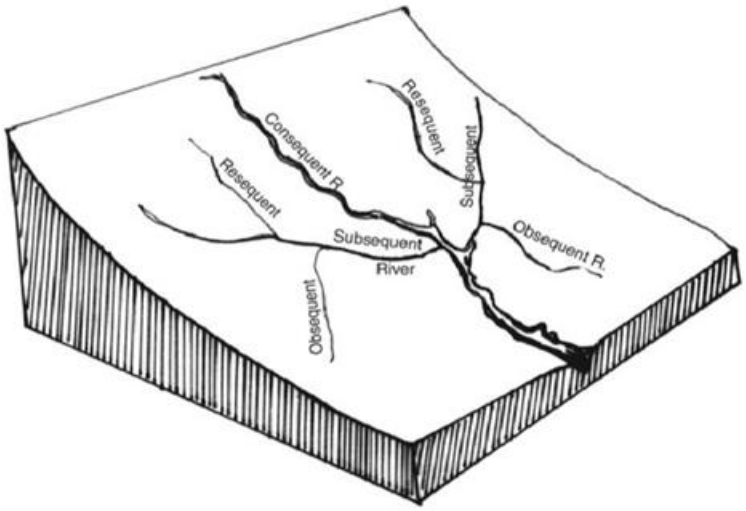
a) 1 only
b) 2 only
c) 3 only
d) 1 and 2 only

Q.5) Solution (b)

Basic Information:

Concordant/Accordant Drainage: The pattern of drainage which arises from and closely follows the trends of the underlying strata is called concordant drainage.

- **Consequent Streams:** Those streams whose courses are the direct consequence of the initial topography are called consequent streams.
- **Subsequent Streams:** These are developed after the master consequent.
- **Obsequent streams:** These flow in opposite direction to the master consequent.
- **Resequent Streams:** A resequent stream flows in the same direction as that of the initial consequent stream, but which develops in response to a new base level formed due to inversion of relief.



Inconsequent or Antecedent River: The river that existed before upheaval of Himalayas. E.g. Sutlej, **Kali**, Arun, Tista, Kosi, Brahmaputra etc.

Consequent Rivers: Peninsular rivers- **Godavar**i, Krishna, Kaveri etc.

Subsequent Rivers: Chmbal, Ken, Betwa, Tons, **Son**.

Q.6) Which among the following climate types is/are not found in India?

1. Cold steppe
2. Polar frost
3. Cold desert
4. Tropical savannah

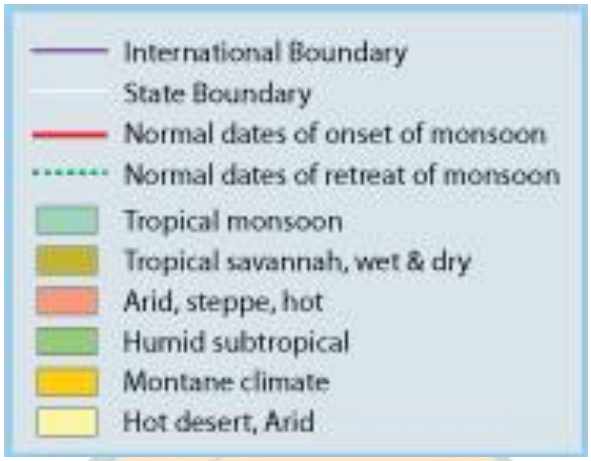
Select the correct options from below:

a) 1 only
b) 2 only
c) 4 only
d) All the above climate types are found in India

Q.6) Solution (d)

Basic Information:

The climatic types present in India.



The montane type of climate includes the following:

Q.7) Consider the following statements about India's climate:

1. Climate in South India is generally hotter and extremely humid than that of North India.
2. Generally, the southern half of the nation doesn't experience temperatures below 10 °C in winter.

Which of the following statements is/are correct?

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

Q.7) Solution (c)

Basic Information:

- The climate of India comprises of a wide range of weather conditions across a vast geographic scale and varied topography, making generalizations difficult.
- Climate in South India is generally hotter and extremely humid than that of North India.
- South India is more humid due to nearby coasts. Southern half of the nation don't experience temperatures below 10 °C (50 °F) in winter, and the temperature usually tends to exceed 40 °C (104 °F) during summer.

Statement Analysis:

Statement 1	Statement 2
Correct	**Correct**
Sothern India closer to the equator, therefore is hotter.	Since southern India is closer to the equator, less extremities in the climate is observed.

Q.8) Arrange the following events of India's climatic history in a chronological order:

1. Mild climate favourable for hosting high-biomass ecosystems, underscored by India's vast coal reserves.
2. Creation of the Thar Desert.
3. Latest major ice age experienced by the Indian landmass.

Select the correct option from below:

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

Q.8) Solution (c)

Basic Information:

- India merged into the southern super continent Gondwana, a process beginning some 550–500 Ma. During the Late Paleozoic, Gondwana extended from a point at or near

the South Pole to near the equator, where the Indian craton (stable continental crust) was positioned, resulting in a mild climate favorable to hosting high-biomass ecosystems.

- This is underscored by India's vast coal reserves—much of it from the late Paleozoic sedimentary sequence—the fourth-largest reserves in the world.
- The Quaternary Glaciation / Quaternary Ice Age started about 2.58 million years ago at the beginning of the Quaternary Period when the spread of ice sheets in the Northern Hemisphere began.
- More recently, in the Holocene epoch (4,800–6,300 years ago), parts of what is now the Thar Desert were wet enough to support perennial lakes; researchers have proposed that this was due to much higher winter precipitation, which coincided with stronger monsoons, later the Thar became dry and got converted into a desert.

Q.9) Which of the following statements about cloudbursts is *incorrect*?

a) A cloudburst is an extreme amount of precipitation in a short period of time, sometimes accompanied by hail and thunder.
b) Rainfall rate equal to or greater than 100 millimetres per hour over an area of approximately 20-30km^2.
c) They are caused due to both orographic upliftment and/or rapid convective upliftment.
d) Cloudbursts are common in the Gangetic plains during monsoon season.

Q.9) Solution (d)

Basic information:

- Cloudbursts in and around the southern rim of the Indian Himalayas are elusive in terms of their position and time of occurrences.
- Most of the reported cloudbursts are in the interior of the Himalayas and hence their observation itself is limited.
- The principal understanding of the cloudburst is associated with sudden heavy deluge of precipitation in very less time interval over a very small area.
- Except this understanding and India Meteorology Department (IMD) definition of N100 mm/h precipitation over a geographical region of approximately 20–30 km2 , nothing much else is known about these events
- Most of the cloudburst events are seen occurring in the elevation range of 1000 m to 2500 m within the valley folds of the southern rim of the Indian Himalayas. Apart from some of the large scale flow shown by few of the studies, it is found that cloudburst

events are convectively triggered followed by orographically locked systems. These intertwined mechanisms lead cloudburst events to form. Amiss of any one of these mechanisms will not lead the cloudburst mechanism to form.

- However, cloudbursts are infrequent as they occur only via orographic lift or occasionally when a warm air parcel mixes with cooler air, resulting in sudden condensation.

Q.10) Consider the following statements about the summer season India:

1. The summer season in India begins from the month of March and continues till the month of May
2. During this season, thunder storms known as 'kalbaisakhi' hit the states of West Bengal and Assam.
3. An elongated high-pressure area develops from Thar Desert to the Chotanagpur plateau towards the end of May.
4. There is common occurrence of dust storm during mid to late summer season.

Which of the following statements is/are *incorrect*?

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

Q.10) Solution (b)

Basic Information:

- During the summer season, there is overall increase in temperature e.g. the temperature of Northern plains is between 42 to 45°C and in the Deccan plateau between 35 to 38°C.
- An elongated **low-pressure** area develops from Thar Desert (in North-West) to Patna and Chotanagpur plateau (in East and South-East) towards the end of May. From this low-pressure belt, the circulation of air begins.
- In the Northern and North-Westem plain, there is occurrence of a local wind; 'Loo'- a gusty, hot and dry wind.
- In the Northern India, there is common occurrence of dust storm in May.
- During this season, thunder storms known as 'kalbaisakhi' hit the states of West Bengal and Assam. These thunder storms are accompanied by heavy rainfall. It also rains in coastal Kerala and Karnataka. These showers are known as 'Mango showers' as they help in the early ripening of mangoes.

Statement Analysis:

Note: *incorrect statements are asked.*

Statement 1	Statement 2	Statement 3	Statement 4
Correct	**Correct**	**Incorrect**	**Correct**
Duration of summer season is from March till May.	Kalbaisakhis are intense thunderstorms, they help in bringing the temperature down and provide relief during summers.	Intense heating during summer causes build-up of a low pressure.	Dust storms are common during summers.

Q.11) With reference to Indian Ocean Dipole (IOD), consider the following statements:

1. Positive IOD can bring good rains to India despite El Nino year.
2. During positive IOD eastern equatorial Indian Ocean off Sumatra becomes colder than normal.

Which of the above statements is/are correct?

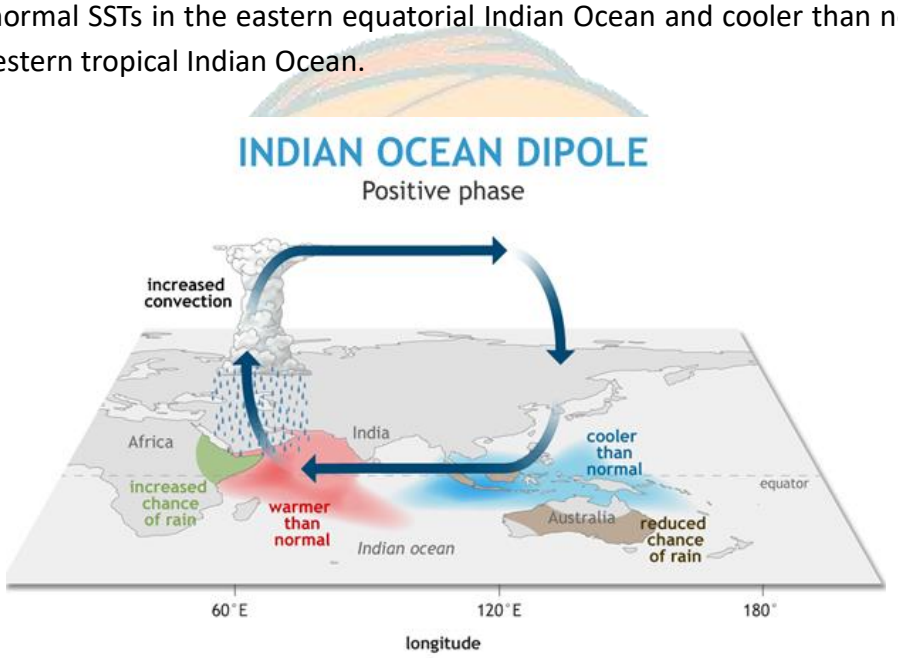
a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 and 2

Q.11) Solution (c)

Basic Information:

- The **Indian Ocean Dipole** - often called the "**Indian Niño**" because of its similarity to its Pacific equivalent - refers to the difference in sea-surface temperatures in opposite parts of the Indian Ocean.
- This temperature difference results into **pressure difference** which results in flowing of winds between eastern and western parts of Indian Ocean.

- Temperatures in the eastern part of the ocean oscillate between warm and cold compared with the western part, cycling through phases referred to as "**positive**", "**neutral**" and "**negative**".
- A '**positive IOD'** or **simply 'IOD'** is associated with cooler than normal sea-surface temperatures in the eastern equatorial Indian Ocean and warmer than normal sea-surface temperatures in the western tropical Indian Ocean.
- The opposite phenomenon is called a '**negative IOD'**, and is characterised by warmer than normal SSTs in the eastern equatorial Indian Ocean and cooler than normal SSTs in the western tropical Indian Ocean.



Statement Analysis:

Statement 1	Statement 2
Correct	**Correct**
It was demonstrated that a positive IOD index often negated the effect of ENSO, resulting in increased Monsoon rains in several ENSO years like the 1983, 1994 and 1997.	A 'positive IOD' is associated with cooler than normal sea-surface temperatures in the eastern equatorial Indian Ocean and warmer than normal sea-surface temperatures in the western tropical Indian Ocean.

Q.12) Which of the following best describes the term 'isohyet'?

a) A line on a map connecting points that have the same average percentage of cloudiness.
b) A line on a diagram or map connecting points relating to the same time or equal times.
c) A line on a map connecting points having the same amount of rainfall in a given period.
d) A line on a map or chart connecting points of equal wind speed.

Q.12) Solution (c)

Explanation:

Isoneph: A line on a map connecting points that have the same average percentage of cloudiness.

Isochrone: A line on a diagram or map connecting points relating to the same time or equal times.

Isohyet: A line on a map connecting points having the same amount of rainfall in a given period.

Isotach: A line on a map or chart connecting points of equal wind speed.

Q.13) Which of the following are correctly matched?

Rivers	Confluence Location
1. Dhauliganga and Alaknanda	Vishnuprayag
2. Alaknanda and Bhagirathi	Devprayag
3. Alaknanda and Mandakini	Kedarnath
4. Alaknanda and Ganga	Rudraprayag

Select the correct option using the codes given below:

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

Q.13) Solution (a)

Explanation:

Rivers	Confluence Location
Dhauliganga and Alaknanda	Vishnuprayag
Alaknanda and Bhagirathi	Devprayag
Alaknanda and Mandakini	Rudraprayag
Alaknanda and Ganga	Kedarnath

Q.14) With reference to "rivers of Goa", consider the following statements:

1. Mandovi is the longestriver of Goa.
2. Zuari is also known as the lifeline of Goa.
3. Terekhol forms boundary between Maharashtra and Goa.

Which of the above statements is/are correct?

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

Q.14) Solution (d)

Explanation:

Zuari:

- Longest river of Goa
- Originates at Hemad-Barshem in the Western Ghats
- Zuari and Madovi rivers form the backbone of Goa's agriculture
- Cumbahyem Canal links the two rivers
- Vaco da Gama city is located at its mouth

Mandovi:

- Also known as Mahadeyi or Mahadei
- Lifeline of Goa
- It originates at Bhimgad in the Belgaum district of Karnataka
- Falls: Dudhsagar Falls, Varapoha Falls
- Cities: Panaji, Old Goa

Terekhol:

- In its upper reaches it is known as the Banda River and in the lower reaches as the Tiracol.
- It forms the boundary between Sindhudurg district of Maharashtra state and North Goa district of Goa state for some distance.

Q.15) Consider the following statements:

1. Catchment area is the smallest unit of a drainage basin.
2. Catchment area of Krishna is larger than that of Brahmaputra in India.

Which of the above statements is/are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 and 2

Q.15) Solution (b)

Basic Information:

The Class XI NCERT textbook on Indian Physical Geography uses **drainage basin** for the **whole river system**, along with all the **tributaries of that particular river.** Drainage basin is larger in size.

Watershed, according to it, is much **smaller**. It is the area **drained by smaller rivulets** through gullies and rills and several such watersheds combine to form the larger drainage basin of a single river.

Command area is more of an economic term. It is the area 'served' (in terms of irrigation, mostly) by a particular reservoir/ dam or irrigation project.

Name of river	Catchment areas (Sq kms)
Ganga	861452
Indus (In India)	321289
Brahmaputra	194413
Mahanadi	141589
Godavari	312812
Cauvery	81155

Krishna	258948
Narmada	98795
Tapi	65145

Statement Analysis:

Statement 1	Statement 2
Incorrect	**Correct**
Watershed is the smallest unit of a drainage basin.	Kindly refer to the table.

Q.16) Which of the following factors affect the Indian climate?

1. Sea-surface temperatures across the central and east-central Equatorial Pacific.
2. North-easterly jet stream
3. Presence of Himalayas in the north.

Select the correct option from below:

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

Q.16) Solution (b)

Basic information:

The Climate in India is affected by following factors:

I. Latitude
II. Himalaya Mountains
III. Altitude

IV. Distance from the sea
V. Geographical limits like western disturbances, conditions in the regions surrounding India, Conditions over the ocean.
VI. Jet Streams.

El Niño is a complex weather pattern resulting from variations in ocean temperatures in the Equatorial Pacific region along South America. The term El Niño refers to the large-scale ocean-atmosphere climate interaction linked to a **periodic warming in sea surface temperatures across the central and east-central Equatorial Pacific**.

The system involves oceanic and atmospheric phenomena with the appearance of warm currents off the coast of Peru in the eastern pacific and affects weather in many places including India.

Statement Analysis:

Statement 1	Statement 2	Statement 3
Correct	**Correct**	**Correct**
This phenomenon is nothing but El Nino.	North-easterly jet stream helps bringing monsoon winds to the Indian landmass.	Presence of Himalayas makes climate of north India fairly warm. It also helps in monsoon rains.

Q.17) With respect to western disturbances, consider the following statements:

1. It brings sudden winter rain to the north-western parts of the Indian subcontinent.
2. It is a non-monsoonal precipitation pattern driven by the easterlies.
3. Western disturbances are usually associated with cloudy sky and higher night temperatures
4. When they move across northwest India before the onset of monsoon, a temporary advancement of monsoon current appears over the region.

Which of the following statements is/are correct?

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

d) 1 and 3 only

Q.17) Solution (a)

Basic information:

- A western disturbance is an extra-tropical storm originating in the Mediterranean region that brings sudden winter rain to the north-western parts of the Indian subcontinent. It is a non-monsoonal precipitation pattern driven by the westerlies. The moisture in these storms usually originates over the Mediterranean Sea, the Caspian Sea and the Black Sea.
- The disturbance moves towards the Indian subcontinent until the Himalayas inhibits its development, upon which the depression rapidly weakens. The western disturbances are embedded in the mid-latitude subtropical westerly jet stream.
- Western disturbances, specifically the ones in winter, bring moderate to heavy rain in low-lying areas and heavy snow to mountainous areas of the Indian Subcontinent. They are the cause of most winter and post-monsoon season rainfall across northwest India. Precipitation during the winter season has great importance in agriculture, particularly for the rabi crops. Wheat among them is one of the most important crops, which helps to meet India's food security. **An average of four to five western disturbances form during the winter season**. The rainfall distribution and amount varies with every western disturbance.
- When western disturbances move across northwest India before the onset of monsoon, a temporary advancement of monsoon current appears over the region.

Statement Analysis:

Statement 1	Statement 2	Statement 3	Statement 4
Correct	**Incorrect**	**Correct**	**Correct**
A western disturbance is an extra-tropical storm originating in the Mediterranean region that brings sudden winter rain to the north-western parts of the Indian subcontinent	Western disturbances are driven by the westerlies.	Presence of clouds prevent radiational loss of heat.	Presence of low pressure area pulls the monsoon winds towards the Indian landmass.

Q.18) Consider the following statements about climate of "seven sister" states of India:

1. Nowhere in the region, there is heavy snow except in the higher parts of Arunachal Pradesh.
2. June is the rainiest month in these states.

Select the correct statement(s):

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

Q.18) Solution (c)

Basic Information:

- Lying very close to the Tropics, North-East India displays, to a large extent, the character of tropical climate, especially in the valleys.
- The region has a monsoon climate with heavy to very heavy rains, confined within four summer months from June to September. The southwest monsoon is the main source of rain, and **June is the rainiest month.**
- There are three seasons in the area, winter, summer and rainy season, though rainy season, as in the rest of India, coincides with summer months.
- There is a climatic contrast between the valleys and the mountainous region. While the mean January temperature in the valley region of Assam is around 16 °C, the temperatures in the mountainous region of Arunachal Pradesh and Nagaland hover around a maximum of 14 °C and a sub-zero minimum temperature.
- The summer temperatures in the plains vary between 30 and 33 °C, while the hills have a mean summer temperature of around 20 °C with a mean minimum of 15 °C.
- Nowhere in the region, there is heavy snow except in the higher parts of Arunachal Pradesh, like west Kameng and Tawang areas.
- No part of North-East India receives rainfall below 1,000 mm.
- Guwahati, being in the rain shadow of the Meghalaya plateau, receives only 1,717 mm of rain. About 90 % of the rain is received during the southwest summer monsoon, and June is by far the rainiest month.

- The hilly areas of the region receive 2,000–3,000 mm of rain, though places like Kohima in Nagaland and Imphal in Manipur, because of their being in the shadow of the mountains, receive less than 2,000 mm of rains.

Statement Analysis:

Statement 1	Statement 2
Correct	**Correct**
Heavy snow is present only in the higher reaches of Himalayas. Note: Sikkim is not included in the seven sister states.	June is by far the rainiest month.

Q.19) Consider the following statements about the Teesta river:

1. The Teesta originates from Pahunri mountain.
2. River Mahananda is a tributary to the Teesta river.

Select the *incorrect* statements:

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

Q.19) Solution (b)

Teesta River, is a 315 km long river that rises in the eastern Himalayas.

- It flows through the Indian states of Sikkim and West Bengal through Bangladesh and enters the Bay of Bengal.
- In India, it flows through Darjeeling district and the cities of Rangpo, Jalpaiguri and Mekhliganj. It joins the Jamuna River at Fulchhari in Bangladesh.

- The Teesta River originates from the Pahunri (or Teesta Kangse) glacier above 7,068 metres (23,189 ft), and flows southward through gorges and rapids in the Sikkim Himalaya.
- The Mahananda originates in the Himalayas: Paglajhora Falls on Mahaldiram Hill near Chimli, east of Kurseong in Darjeeling district at an elevation of 2,100 metres.
- It joins the Ganges at Godagiri in Nawabganj district in Bangladesh.

Statement Analysis:

Statement 1	Statement 2
Correct	**Correct**
Pauhunri is a mountain in the Eastern Himalayas. It is located on the border of Sikkim, India and Tibet and is situated about 75 km northeast of Kangchenjunga. It marks the origin of Teesta river	The Mahananda is a tributary of the Ganga river.

Q.20) Which of the following coasts of India is most vulnerable to tropical cyclones?

a) Coromandel coast
b) Malabar coast
c) Northern Circars
d) Utkal Coast

Q.20) Solution (d)

Basin Information:

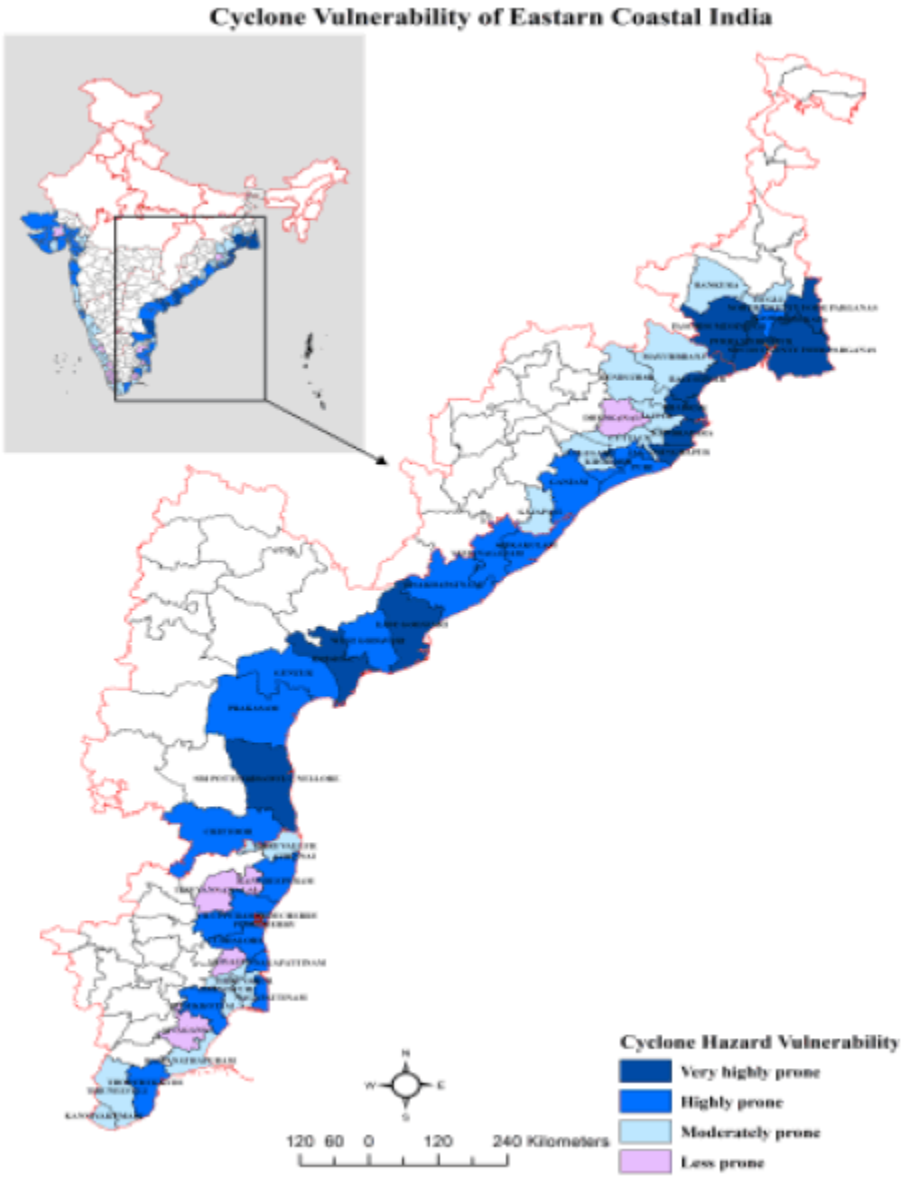
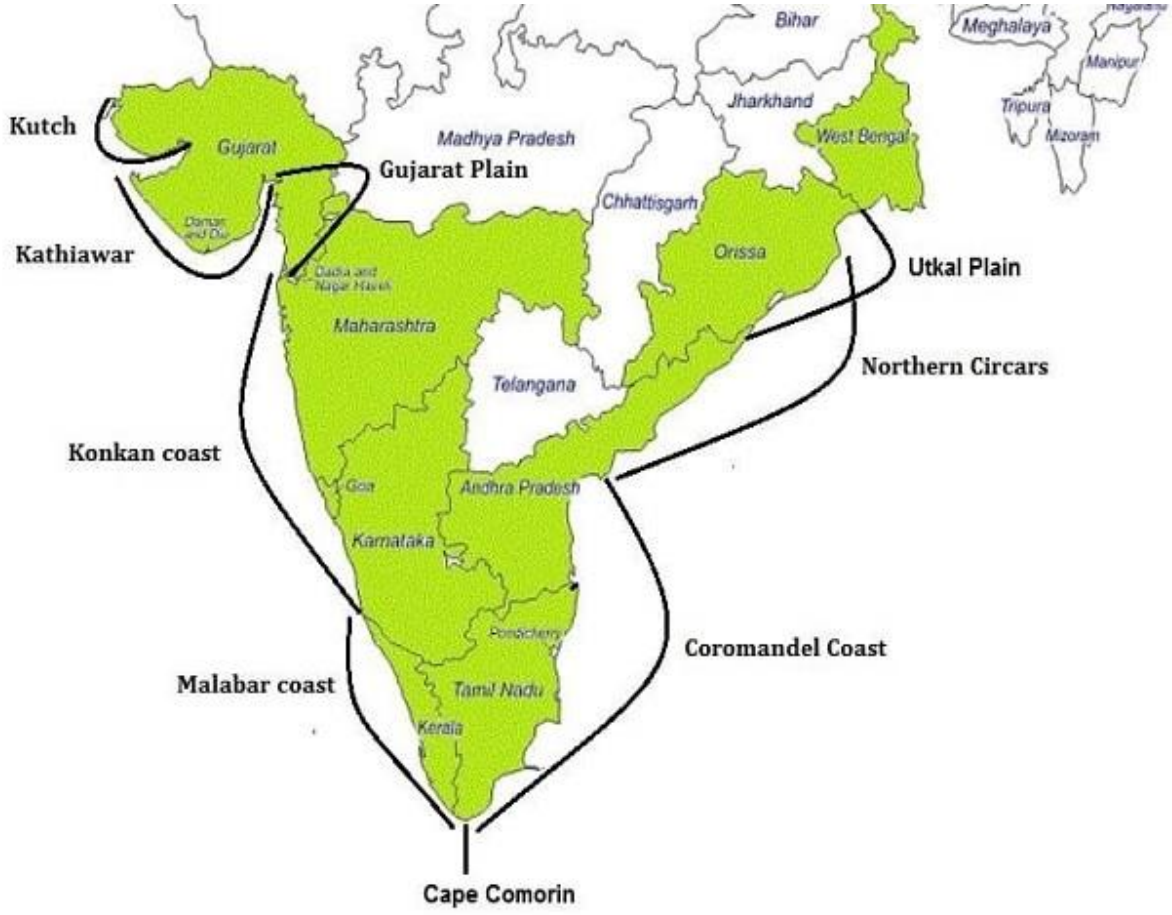


Figure 2: Cyclone vulnerability of Eastern Coastal India.

Nomenclature of coasts of India:



Q.21) Consider the following statements with respect to telemedicine service platforms of the Ministry of Health & Family Welfare.

1. eSanjeevani is a doctor to doctor telemedicine system, being implemented under the Ayushman Bharat Health and Wellness Centre (AB-HWCs) programme.
2. eSanjeevaniOPD was launched amid the Covid-19 pandemic to enable patient-to-doctor tele-consultations.
3. These platforms are developed by the Centre for Development of Advanced Computing (C-DAC).

Which of the statements given above is/are correct?

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

Q.21) Solution (d)

Statement 1	Statement 2	Statement 3
Correct	**Correct**	**Correct**
eSanjeevani is a doctor to doctor telemedicine system, being implemented under the Ayushman Bharat Health and Wellness Centre (AB-HWCs) programme. AB-HWCs are envisaged to be the platform for delivery of an expanded range of primary health care services closer to the communities. It seeks to connect all 1,50,000 HWCs using the hub-and-spoke model by December 2022.	**eSanjeevaniOPD was launched amid the Covid-19 pandemic to enable patient-to-doctor tele-consultations.** Offered at no cost, this e-health service has made it convenient for the people to avail of the health services without having to travel. It enables two-way interaction and even generates a prescription slip. It is hosting over 40 online Out Patient Department (OPD) services.	**Both the platforms have been developed by the Centre for Development of Advanced Computing (C-DAC)** which is the premier R&D organization of the Ministry of Electronics and Information Technology (MeitY) for carrying out R&D in IT, Electronics and associated areas.

Q.22) The "Scheme for Financial Support to PPPs in Infrastructure" (Viability Gap Funding Scheme) was introduced by

a) Department of Expenditure
b) Department of Economic Affairs
c) Department of Disinvestment
d) Department of Financial Services

Q.22) Solution (b)

The Cabinet Committee on Economic Affairs has approved Continuation and Revamping of the Scheme for Financial Support to Public Private Partnerships (PPPs) in Infrastructure Viability Gap Funding (VGF) Scheme till 2024-25 with a total outlay of Rs. 8,100 crore.

The **Department of Economic Affairs**, **Ministry of Finance introduced "the Scheme for Financial Support to PPPs in Infrastructure" (Viability Gap Funding Scheme)** in 2006.

The revamped Scheme is mainly related to introduction of following two sub-schemes for mainstreaming private participation in social infrastructure:

Sub scheme–1

- This would cater to Social Sectors such as Waste Water Treatment, Water Supply, Solid Waste Management, Health and Education sectors etc.
- The projects eligible under this category should have at least 100% Operational Cost recovery.
- The Central Government will provide maximum of 30% of Total Project Cost (TPC) of the project as VGF and State Government/Sponsoring Central Ministry/Statutory Entity may provide additional support up to 30% of TPC.

Sub scheme–2

- This Sub scheme will support demonstration/pilot social sectors projects.
- The projects may be from Health and Education sectors where there is at least 50% Operational Cost recovery.
- In such projects, the Central Government and the State Governments together will provide up to 80% of capital expenditure and upto 50% of Operation & Maintenance (O&M) costs for the first five years.

Q.23) The Pampore region known for growing one of the spices is in which of the following State/UT?

a) Sikkim
b) Jammu and Kashmir
c) Arunachal Pradesh
d) Kerala

Q.23) Solution (b)

Saffron is a plant whose dried stigmas (thread-like parts of the flower) are used to make saffron spice. It is cultivated and harvested in the Karewa (highlands) of Jammu and Kashmir.

Pampore region, commonly known as Saffron bowl of Kashmir, is the main contributor to saffron production. Pampore Saffron Heritage of Kashmir is one of the Globally Important Agricultural Heritage systems (GIAHS) recognised sites in India.

The saffron bowl, which was so far confined to Kashmir, may soon expand to the North East of India. Plants which were transported from Kashmir to Sikkim, acclimatized there and are now flowering in Yangyang in the Southern part of Sikkim.

Q.24) With reference to Shanghai Cooperation Organization (SCO) consider the following statements:

1. It is a permanent intergovernmental political, economic and military organization.
2. The Heads of Government Council (HGC) is the highest decision-making body in the SCO.
3. All five central Asian countries are members of SCO.

Which of the statements given above is/are *NOT* correct?

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

Q.24) Solution (c)

Statement 1	Statement 2	Statement 3
Correct	**Incorrect**	**Incorrect**
Shanghai Cooperation Organization (SCO) is a permanent intergovernmental political, economic and military organization founded in	**Heads of State Council (HSC) is the highest decision-making body in the SCO.** Heads of Government Council (HGC) is SCO's second-highest body that deals with the	Currently, the SCO comprises 8 member states, namely India, Kazakhstan, China, Kyrgyzstan, Pakistan,

Shanghai in 2001. Regional development and security issues (terrorism, ethnic separatism and religious extremism) are its main focus. Russian and Mandarin are presently used as official and working languages in the SCO.	grouping's trade and economic agenda besides approving its annual budget. **Russian President chaired the 20th Summit of SCO Council of Heads of State**. India extended full support to observing the 20th anniversary of SCO in 2021 as the "SCO Year of Culture."	Russia, Tajikistan, and Uzbekistan. Afghanistan, Belarus, Iran and Mongolia are Observer states. **Turkmenistan, a central Asian country is not a member of SCO.**

Q.25) Recently seen in news Luhri Hydro Power Project is located on which of the following rivers?

a) Chenab
b) Jhelum
c) Sutlej
d) Beas

Q.25) Solution (c)

The cabinet has approved the Rs 1810 crore Investment Proposal of **210 MW Luhri Stage-I Hydro Power Project located on river Sutlej** which is situated in Shimla & Kullu districts of Himachal Pradesh.

It is being implemented by Satluj Jal Vidyut Nigam Limited (SJVNL) on Build-Own-Operate-Maintain (BOOM) basis with active support from Government of India and the State Government.

Q.26) Consider the following statements about variants of Polar Satellite Launch Vehicle (PSLV):

1. PSLV-DL has 4 strap-on boosters with 12 tonne propellant load on them.
2. PSLV-G uses 6 Hydroxyl-terminated polybutadiene (HTPB) based solid strap-on motors.
3. The Mars Orbiter Mission (MOM) and Chandrayaan 1 were launched using XL variant of the PSLV.

Which of the statements given above is/are correct?

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

Q.26) Solution (b)

Statement 1	Statement 2	Statement 3
Incorrect	**Correct**	**Correct**
PSLV-DL variant has only two strap-on boosters with 12 tonne propellant load on them. PSLV-C44 on 24 January 2019 was the first flight to use PSLV-DL variant of Polar Satellite Launch Vehicle. PSLV-C49 carrying EOS-01 on November 07, 2020 is the 2nd flight of PSLV in 'DL' configuration.	**PSLV-G uses 6 Hydroxyl-terminated polybutadiene (HTPB) based solid strap-on motors of 9 tonnes each** and PSLV-XL uses 6 extended strap-ons of 12 tonnes each, the PSLV-CA (core alone version) does not use any strap-on motors.	The Mars Orbiter Mission (MOM) and Chandrayaan 1 (2008) were launched using XL variant of the PSLV. PSLV in 'XL' configuration has 6 solid strap-on motors.

Q.27) The term Asian Premium, sometimes seen in news is a

a) Extra charge being collected by OPEC countries from Asian countries when selling oil
b) Aggregate domestic agriculture subsidy provided by Asian countries
c) Additional levy on Asian exports by the European Union
d) None of the above

Q.27) Solution (a)

Asian Premium is the extra charge being collected by OPEC countries from Asian countries when selling oil in comparison to western countries. India has been voicing its dissent against this practice.

It has its roots in the establishment of market oriented crude pricing in 1986.

Q.28) With reference to Aatmanirbhar Bharat Rozgar Yojana consider the following statements:

1. It is aimed at incentivizing the creation of new employment opportunities during the Covid-19 economic recovery phase.
2. All new employee joining employment in any establishments with monthly wages less than Rs. 15,000 are eligible for incentives under the scheme.

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

Q.28) Solution (a)

Statement 1	Statement 2
Correct	**Incorrect**
Union Minister for Finance announced a new scheme of **Aatmanirbhar Bharat Rozgar Yojana to incentivize job creation during COVID-19 economic recovery phase**. Central Govt. will provide subsidy for two years in respect of new eligible employees. The scheme will be effective from October 1, 2020 and operational till 30th June 2021.	**Any new employee joining employment in EPFO registered establishments on monthly wages less than Rs.15,000** and EPF members drawing monthly wage of less than Rs.15,000 who exited from employment during COVID Pandemic from 1st March to 30th September, 2020 and is employed on or after 1st October, 2020 are targeted beneficiaries under the scheme.

Q.29) Which of the following vulture species of India are Critically Endangered (CR) as per IUCN Red list?

1. Long-billed Vulture

2. Red-headed Vulture
3. Himalayan Vulture
4. Oriental white-backed Vulture

Select the correct answer using the code given below:

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

Q.29) Solution (b)

Ministry Of Environment, Forests and Climate Change (MOEFCC) has launched Vulture Action Plan 2020-25.

Critically-endangered (CR) vulture species of India are: **Oriental white-backed Vulture**, **Long-billed Vulture** (Gyps Indicus), Slender-billed Vulture and **Red-headed Vulture**.

Egyptian Vulture is Endangered (EN).

Near threatened (NT) vulture species of India are: **Himalayan Vulture**, Bearded Vulture and Cinereous Vulture.

Q.30) With reference to Conference on Disarmament (CD) consider the following statements:

1. It is a multilateral disarmament forum established by the international community to negotiate arms control and disarmament agreements.
2. Under it the Fissile Material Cut-Off Treaty (FMCT) is being negotiated.

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

Q.30) Solution (c)

Statement 1	Statement 2
Correct	**Correct**
The **Conference on Disarmament (CD) is a multilateral disarmament forum established by the international community to negotiate arms control and disarmament agreements** based at the Palais des Nations in Geneva. The Conference was first established in 1979 as the Committee on Disarmament as the single multilateral disarmament negotiating forum of the international community.	**Fissile Material Cut-Off Treaty (FMCT) that is being negotiated in CD.** FMCT is a proposed international agreement that would prohibit the production of the two main components of nuclear weapons: highly-enriched uranium (HEU) and plutonium.

Directions for the following 1 (one) questions:

Read the following passage and answer the questions that follow each passage. Your answer to these questions should be based on passage only.

Our voyage was very prosperous, but I shall not trouble the reader with a journal of it. The captain called in at one or two ports and sent in his long-boat for provisions and fresh water, but I never went out of the ship still we came into the Downs, which was on the 3rd day of June, 1706, about nine months after my escape. I offered to leave my goods in security for payment of my freight, but the captain protested he would not receive one farthing. We took kind leave of each other, and I made him promise that he would come to see me at my house in Red riff. I hired a house and a guide for five shillings which I borrowed from the captain.

Q.31) On the voyage, the author

a) left the ship at intervals
b) was not able to leave the ship because it did not stop
c) never left the ship at all
d) never left the ship till they came into the Downs

Q.31) Solution (d)

Author has mentioned in third line of passage 'I never went out of the ship till we came into the Downs' So, statement of option D is clearly written and hence the obvious choice.

Q.32) A man spends 75% of his income and saves the remaining. His income increases by 20% and expenditure by 10%. The increase in savings is

a) 35%
b) 37(1/2)%
c) 50%
d) 60%

Q.32) Solution (c)

Let the income be Rs. 100

Then Expenditure = Rs. 75

∴ Saving = 100-75 = 25

New income = Rs. 120

New expenditure = 110% of 75 = 110/100 × 75 = 165/2 = Rs. 82.5

∴ New saving = 120-82.5 = Rs. 37.5

∴ Increase in saving = (37.5−25)/25 × 100

12.5/25 × 100 = 50%

Q.33) The sum of the radius and height of a cylinder is 42 cm. Its total surface area is 3,696 cm^2. What is the volume of a cylinder?

a) 17,428 cubic cm
b) 17,248 cubic cm
c) 17,244 cubic cm
d) 17,444 cubic cm

Q.33) Solution (b)

Total surface area of cylinder

$=>2\pi rh + 2\pi r^2 = 3,696$

$2\pi r(r + h) = 3,696$

$(r + h) = 42$

$2 \times 22/7 \times r \times 42 = 3,696$

$44 \times 6 \times r = 3,696$

$r = 14$ cm

$h = 42 - 14 = 28$ cm

Volume of the cylinder = $\pi r^2 h$

$= 22/7*14*14*28 = 17,248$ cm^3

Therefore, option b is correct.

Q.34) A solid sphere is melted and recast into a right circular cone with a base radius equal to the radius of the sphere. What is the ratio of the height and radius of the cone so formed?

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

Q.34) Solution (d)

Let the radius of solid sphere be r.

The volume of a sphere, $V_S = 4/3\ \pi r^3$

It is melted and recast into a right circular cone of radius r and height h.

The volume of a cone, $V_C = 1/3\ \pi r^2 h$

The same volume of material is used for recasting. Therefore,

$V_S = V_C$

$4/3\ \pi r^3 = 1/3\ \pi r^2 h$

$h = 4r$

h/r = 4

Q.35) In an examination, D scored 25 marks less than E. E scored 45 more marks than B. A scored 75 marks in an examination which are 10 more than B. C's score is 50 less than the maximum marks of the examination. What approximate percentage of marks did C score in the examination, if he gets 34 marks more than D?

a) 90.4
b) 70.4
c) 80.4
d) 60.4

Q.35) Solution (b)

Marks obtained by A =75

Marks obtained by B = 65

Marks obtained by E = 65+45=110

Marks obtained by D = 110-25 = 85

Marks obtained by C = 85+34 = 119

Maximum Marks = 119+50 = 169

Required percentage = (119/169)*100 = 70.4%