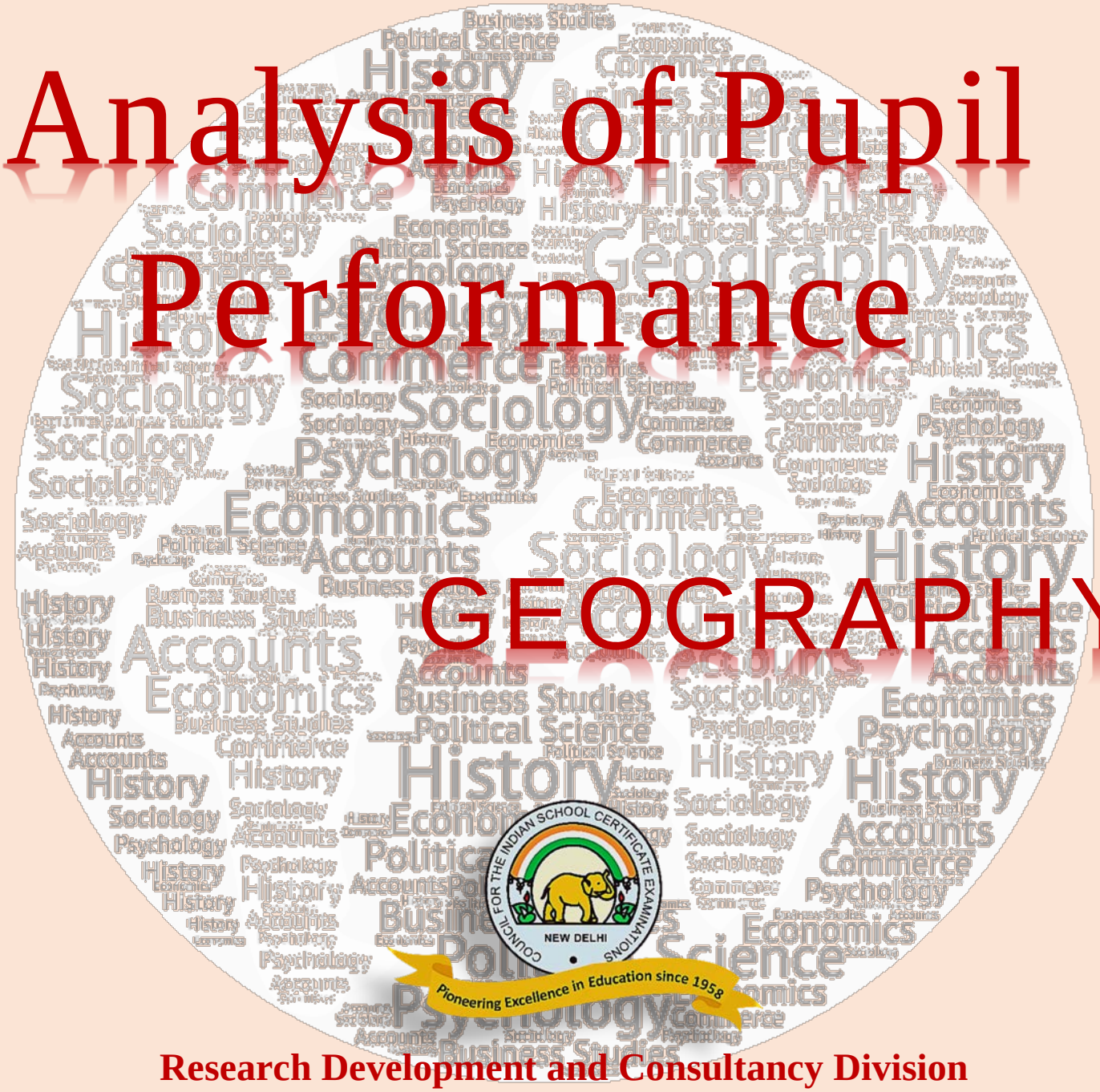
Year 2019 Examination

ISC

Analysis of Pupil Performance

GEOGRAPHY



Research Development and Consultancy Division

Council for the Indian School Certificate Examinations

New Delhi

Year 2019

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FOREWORD

This document of the Analysis of Pupils' Performance at the ISC Year 12 and ICSE Year 10 Examination is one of its kind. It has grown and evolved over the years to provide feedback to schools in terms of the strengths and weaknesses of the candidates in handling the examinations.

We commend the work of Mrs. Shilpi Gupta (Deputy Head) of the Research Development and Consultancy Division (RDCD) of the Council and her team, who have painstakingly prepared this analysis. We are grateful to the examiners who have contributed through their comments on the performance of the candidates under examination as well as for their suggestions to teachers and students for the effective transaction of the syllabus.

We hope the schools will find this document useful. We invite comments from schools on its utility and quality.

Gerry Arathoon
Chief Executive & Secretary

October 2019

PREFACE

The Council has been involved in the preparation of the ICSE and ISC Analysis of Pupil Performance documents since the year 1994. Over these years, these documents have facilitated the teaching-learning process by providing subject/ paper wise feedback to teachers regarding performance of students at the ICSE and ISC Examinations. With the aim of ensuring wider accessibility to all stakeholders, from the year 2014, the ICSE and the ISC documents have been made available on the Council's website www.cisce.org.

The documents include a detailed qualitative analysis of the performance of students in different subjects which comprises of examiners' comments on common errors made by candidates, topics found difficult or confusing, marking scheme for each question and suggestions for teachers/ candidates.

In addition to a detailed qualitative analysis, the Analysis of Pupil Performance documents for the Examination Year 2019 also have a component of a detailed quantitative analysis. For each subject dealt with in the document, both at the ICSE and the ISC levels, a detailed statistical analysis has been done, which has been presented in a simple user-friendly manner.

It is hoped that this document will not only enable teachers to understand how their students have performed with respect to other students who appeared for the ICSE/ISC Year 2019 Examinations, but also provide information on how they have performed within the Region or State, their performance as compared to other Regions or States, etc. It will also help develop a better understanding of the assessment/ evaluation process. This will help teachers in guiding their students more effectively and comprehensively so that students prepare for the ICSE/ ISC Examinations, with a better understanding of what is required from them.

The Analysis of Pupil Performance document for ICSE for the Examination Year 2019 covers the following subjects: English (English Language, Literature in English), Hindi, History, Civics and Geography (History and Civics, Geography), Mathematics, Science (Physics, Chemistry, Biology), Commercial Studies, Economics, Computer Applications, Economic Applications, Commercial Applications.

Subjects covered in the ISC Analysis of Pupil Performance document for the Year 2019 include English (English Language and Literature in English), Hindi, Elective English, Physics (Theory), Chemistry (Theory), Biology (Theory), Mathematics, Computer Science, History, Political Science, Geography, Sociology, Psychology, Economics, Commerce, Accounts and Business Studies.

I would like to acknowledge the contribution of all the ICSE and the ISC examiners who have been an integral part of this exercise, whose valuable inputs have helped put this document together.

I would also like to thank the RDCD team of Dr. M.K. Gandhi, Dr. Manika Sharma, Mrs. Roshni George and Mrs. Mansi Guleria who have done a commendable job in preparing this document.

Shilpi Gupta
Deputy Head - RDCD

October 2019

CONTENTS

INTRODUCTION

This document aims to provide a comprehensive picture of the performance of candidates in the subject. It comprises of two sections, which provide Quantitative and Qualitative analysis results in terms of performance of candidates in the subject for the ISC Year 2019 Examination. The details of the Quantitative and the Qualitative analysis are given below.

Quantitative Analysis

This section provides a detailed statistical analysis of the following:

- Overall Performance of candidates in the subject (Statistics at a Glance)
- State wise Performance of Candidates
- Gender wise comparison of Overall Performance
- Region wise comparison of Performance
- Comparison of Region wise performance on the basis of Gender
- Comparison of performance in different Mark Ranges and comparison on the basis of Gender for the top and bottom ranges
- Comparison of performance in different Grade categories and comparison on the basis of Gender for the top and bottom grades

The data has been presented in the form of means, frequencies and bar graphs.

Understanding the tables

Each of the comparison tables shows N (Number of candidates), Mean Marks obtained, Standard Errors and t-values with the level of significance. For t-test, mean values compared with their standard errors indicate whether an observed difference is likely to be a true difference or whether it has occurred by chance. The t-test has been applied using a confidence level of 95%, which means that if a difference is marked as ‘statistically significant’ (with * mark, refer to t-value column of the table), the probability of the difference occurring by chance is less than 5%. In other words, we are 95% confident that the difference between the two values is true.

t-test has been used to observe significant differences in the performance of boys and girls, gender wise differences within regions (North, East, South and West), gender wise differences within marks ranges (Top and bottom ranges) and gender wise differences within grades awarded (Grade 1 and Grade 9) at the ISC Year 2019 Examination.

The analysed data has been depicted in a simple and user-friendly manner.

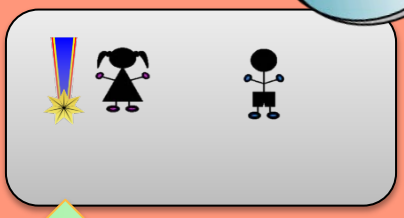
Given below is an example showing the comparison tables used in this section and the manner in which they should be interpreted.

Comparison on the basis of Gender

Gender	N	Mean	SE	t-value
Girls	2,538	66.1	0.29	11.91*
Boys	1,051	60.1	0.42	

*Significant at 0.05 level

Girls performed significantly better than boys.



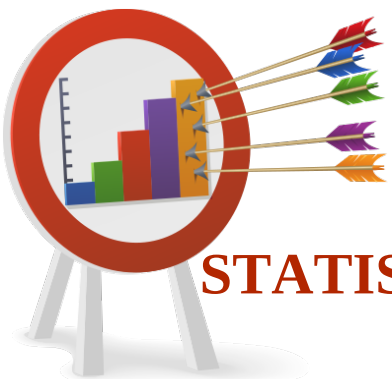
The table shows comparison between the performances of boys and girls in a particular subject. The t-value of 11.91 is significant at 0.05 level (mentioned below the table) with a mean of girls as 66.1 and that of boys as 60.1. It means that there is significant difference between the performance of boys and girls in the subject. The probability of this difference occurring by chance is less than 5%. The mean value of girls is higher than that of boys. It can be interpreted that girls are performing significantly better than boys.

The results have also been depicted pictographically. In this case, the girls performed significantly better than the boys. This is depicted by the girl with a medal.

Qualitative Analysis

The purpose of the qualitative analysis is to provide insights into how candidates have performed in individual questions set in the question paper. This section is based on inputs provided by examiners from examination centres across the country. It comprises of question wise feedback on the performance of candidates in the form of *Comments of Examiners* on the common errors made by candidates along with *Suggestions for Teachers* to rectify/ reduce these errors. The *Marking Scheme* for each question has also been provided to help teachers understand the criteria used for marking. Topics in the question paper that were generally found to be difficult or confusing by candidates, have also been listed down, along with general suggestions for candidates on how to prepare for the examination/ perform better in the examination.

QUANTITATIVE ANALYSIS



STATISTICS AT A GLANCE

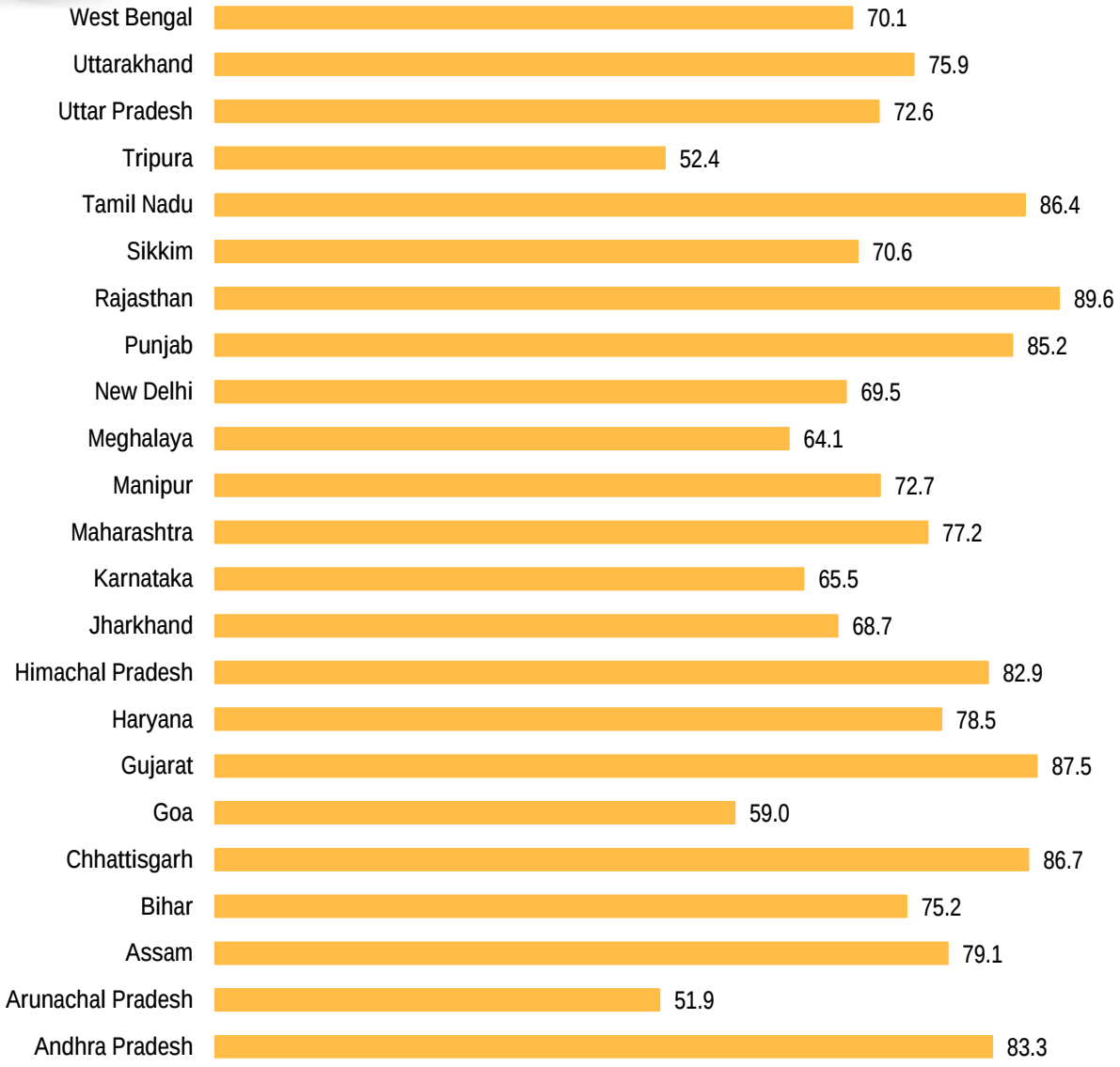
Total Number of Candidates: 4,309

Mean Marks: 70.1

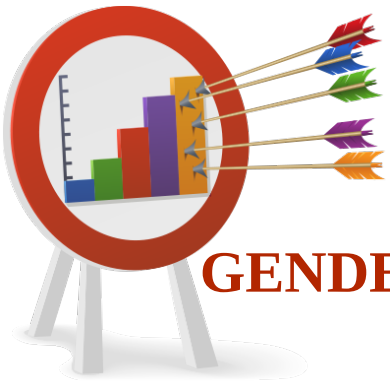
Highest Marks: 100

Lowest Marks: 08

PERFORMANCE (STATE-WISE)



The States of Rajasthan, Gujarat and Chhattisgarh secured highest mean marks.



GENDER-WISE COMPARISON

GIRLS

Mean Marks: 72.2

Number of Candidates: 2,961

BOYS

Mean Marks: 65.7

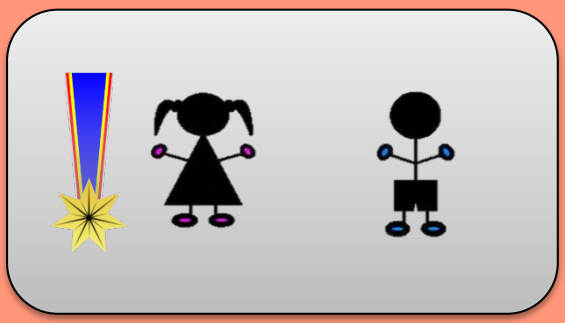
Number of Candidates: 1,348

Comparison on the basis of Gender

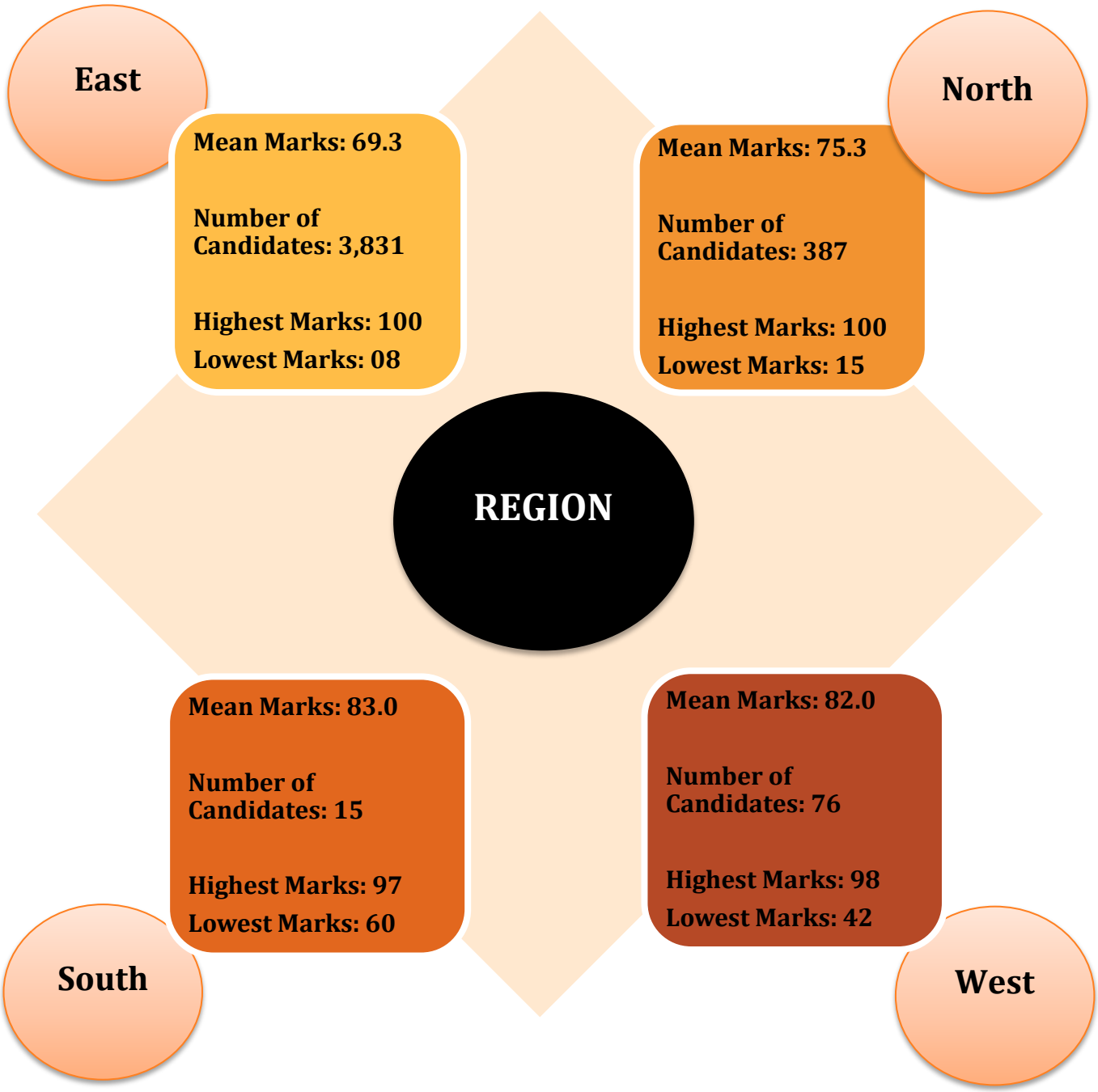
Gender	N	Mean	SE	t-value
Girls	2,961	72.2	0.27	13.14*
Boys	1,348	65.7	0.41	

*Significant at 0.05 level

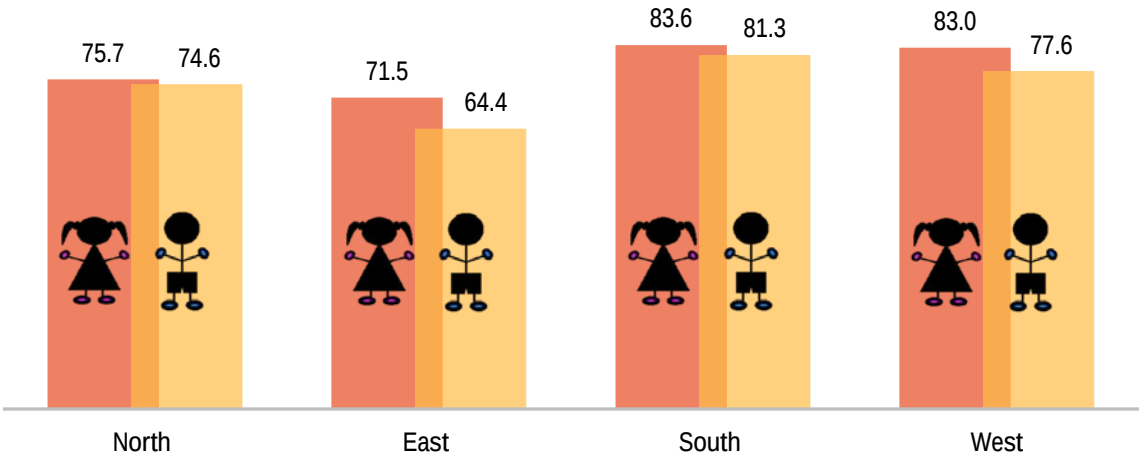
Girls performed significantly better than boys.



REGION-WISE COMPARISON



Mean Marks obtained by Boys and Girls-Region wise

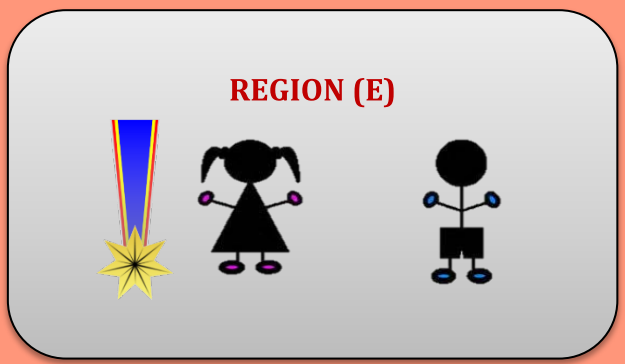


Comparison on the basis of Gender within Region

Region	Gender	N	Mean	SE	t-value
North (N)	Girls	249	75.7	0.94	0.72
	Boys	138	74.6	1.24	
East (E)	Girls	2,639	71.5	0.29	13.76*
	Boys	1,192	64.4	0.42	
South (S)	Girls	11	83.6	3.08	0.42
	Boys	4	81.3	4.73	
West (W)	Girls	62	83.0	1.66	1.16
	Boys	14	77.6	4.34	

*Significant at 0.05 level

The performance of girls was significantly better than that of boys in the eastern region. In other regions no significant difference was observed.



MARK RANGES : COMPARISON GENDER-WISE

Comparison on the basis of gender in top and bottom mark ranges

Marks Range	Gender	N	Mean	SE	t-value
Top Range (81-100)	Girls	969	88.9	0.17	2.86*
	Boys	243	87.9	0.32	
Bottom Range (0-20)	Girls	2	13.5	5.50	-0.27
	Boys	1	15.0	-	

*Significant at 0.05 level

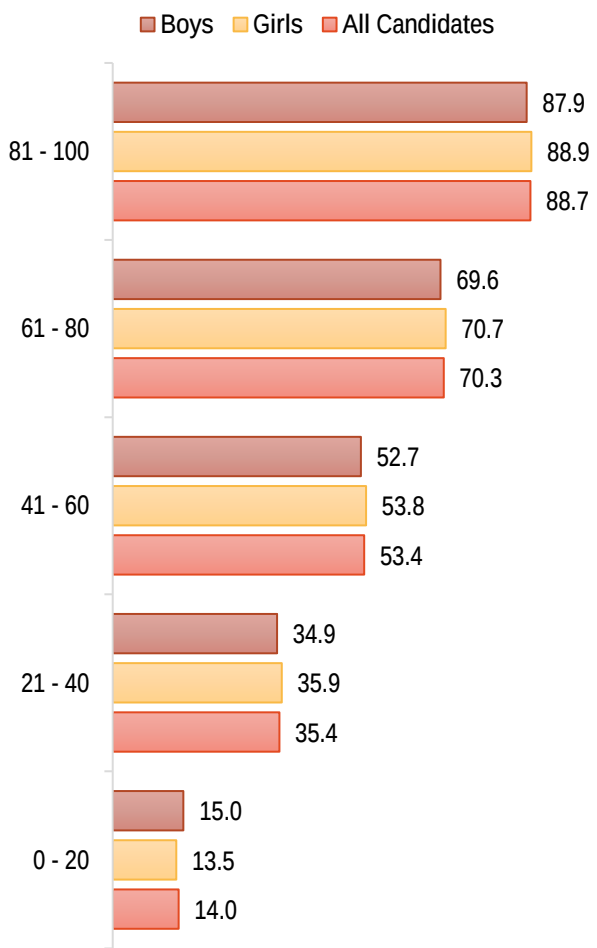
Marks Range (81-100)

Performance of girls was significantly better than the performance of boys .

Marks Range (81-100)

Marks Range (0-20)

No significant difference was found in the performance of girls and boys in the bottom marks range.

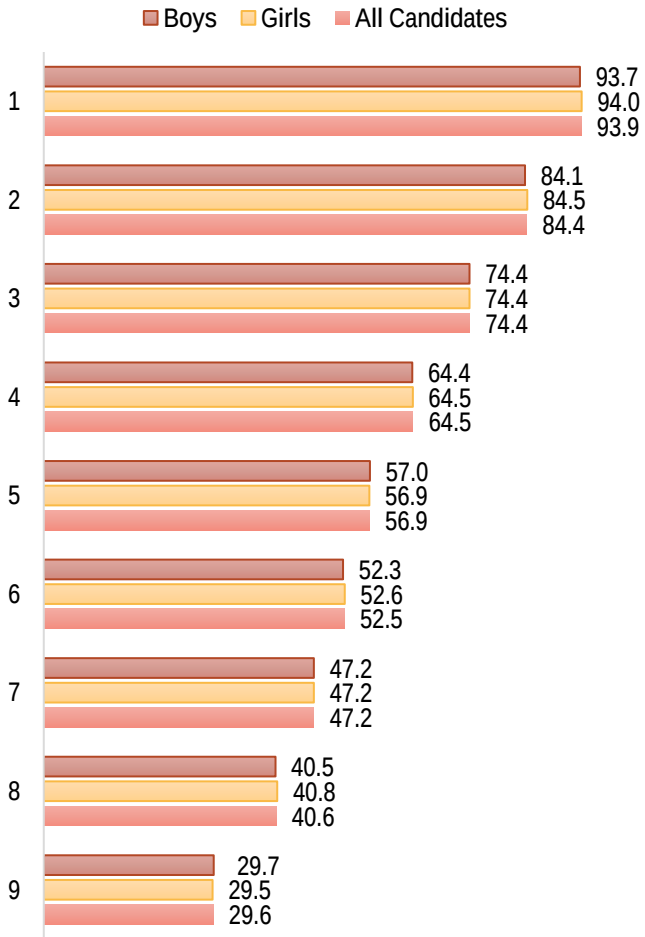


GRADES AWARDED : COMPARISON GENDER-WISE

Comparison on the basis of gender in Grade 1 and Grade 9

Grades	Gender	N	Mean	SE	t-value
Grade 1	Girls	427	94.0	0.14	0.84
	Boys	86	93.7	0.32	
Grade 9	Girls	19	29.5	1.48	-0.12
	Boys	25	29.7	0.93	

No significant difference was observed between the average performance of girls and boys.



PART I (30 Marks)

Answer **all** *questions.*

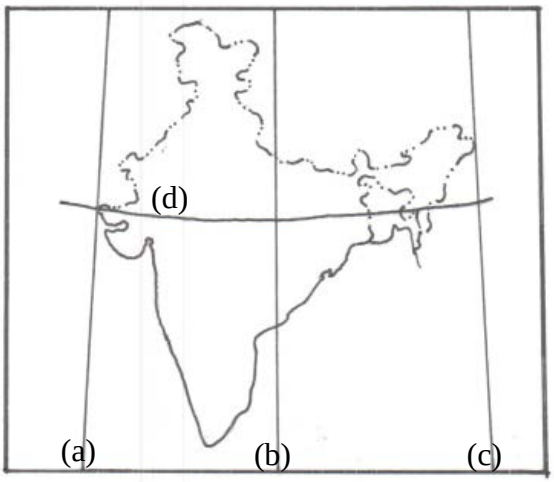
SECTION A

Question 1

[10 × 2]

(i) Why is the location of India in the Indian Ocean considered to be significant? Give *two* reasons.

(ii) With reference to the extent of India, write the angular values of the points marked as (a), (b), (c) and (d) in the map given below:



(iii) Name the *four* Indian geological eras in their chronological order.

(iv) Briefly explain *any two* factors responsible for the depletion of forests in India.

(v) Mention *any two* differences between the Bhabar and the Tarai regions.

(vi) Briefly explain the following terms:

(a) Physiological Density

(b) Conurbation

(vii) State *two* problems affecting the fishing industry in Bangladesh.

(viii) Name *one* mining centre for each of the following:

(a) Mica in Andhra Pradesh.

(b) Iron ore in Odisha.

(ix) Name the *two* terminals of the East-West corridor.

(x) What is an agro-based industry? Which is the largest agro-based industry in India?

Comments of Examiners

(i) Majority of the candidates mentioned only the trade routes, not realizing that the answer was to be written taking into consideration India's long coastline and thus they had to mention the ports, trade routes, which served as linkages between the east and the west coast, etc. A number of candidates missed out on key phrases like commanding trade routes / serves as a linkage / commands strategic position / dominates among littoral states. Several candidates did not explain the linkages between countries.

(ii) Many candidates omitted the degrees and minute symbols and the E & N letters for east and north. Some candidates wrote names like, Tropic of Cancer, Central Meridian, or India's latitudinal and longitudinal extent. A few candidates did not know the difference between 30', and ½ degree and 0·3 degrees.

(iii) Majority of the candidates did not maintain a chronological order. Some candidates got confused with Standard Geological Eras.

(iv) Many candidates wrote one-word answers like *deforestation* or *overpopulation*. Explanations were incomplete in some answer scripts.

(v) As regards the location of Bhabar, many candidates missed out on key words like foothills of the Shiwaliks. Several candidates either wrote the incorrect width of Bhabar or of Terai. A few candidates were confused between Bhabar/ Terai and Bhangar/Khadar.

(vi) (a) Most candidates did not write the key words like ratio/ proportion. Several candidates interchanged total population and net cultivated area.

Suggestions for teachers

- Explain clearly the location, that is, latitude and longitude of places, with their directions and values.
- Explain factors responsible for depletion of forests.
- Using maps and with the help of a flow chart, teach the distribution of commodities and resources as per the scope of the syllabus, highlighting in order of importance, from at least three leading states and three leading centers.
- Ensure that students know the difference among states, cities, centers, towns, districts etc.
- Teach the distinction between extent and corridor.
- Teach the different types of industries with examples, laying stress on their ranks and significance.
- Give adequate practice in sketching maps and make the students study the atlas on a regular basis.
- Insist on students writing answers in complete sentences and not as one-word answers.
- Train students to write differences in a tabular form with co-related points.
- Ensure that students learn all the definitions including the formulae.
- Make the students highlight the key words in the definitions.

(b)Most candidates confused the term *conurbation* with infill, urban sprawl or ribbon settlements. Several candidates did not write about towns growing and merging. Many candidates did not write the key phrase of continuous built up area.

- Explain concepts requiring analysis following the cause-effect technique.
- Ensure that the students understand the meaning of the word 'significance'.

(vii) Most of the candidates were unable to link tropical cyclones with hindrance in fishing. Several candidates got confused between preservation and conservation of fish and so were unable to clearly explain connection of tropical climate to preservation of fish. Some candidates, instead of seasonal flooding, wrote about siltation.

(viii) (a) Many candidates instead of naming the district, named a state or a centre.

(b) Many candidates, instead of Odisha, mentioned iron ore mining centres in Chhattisgarh and Jharkhand.

(ix) Several candidates, instead of naming terminal towns, named terminal states. Many candidates mixed up east-west corridor with north-south corridor.

(x) Majority of the candidates wrote a very vague and generalized meaning of an agro-based industry. A number of candidates did not know the difference between cotton industry and cotton textile industry. Several candidates did not mention the raw material related to the agricultural sector. Many candidates, instead of *cotton*, wrote *jute* as an example. Some candidates wrote about industries manufacturing goods for the agricultural sector and mentioned tractors as the industry.

MARKING SCHEME

Question 1

(i)	• Commanding trade route • Serves as a linkage between the countries on the eastern and western sides. • Opening of the Suez connects the countries of Europe and the developing countries of Asia. • Commands the strategic position in the World with respect to social and cultural interaction. • Dominates among the littoral states. • Longest coastline, therefore, a large number of ports • Principal entrepot • Accounts for India's distinct climate *(any two)*
(ii)	(a) 68°7′E (b) 82°30′E (c) 97°25′E (d) 23°30′N

(iii) The Indian geological eras are:

- Aryan
- Dravidian
- Purana
- Archean

(iv)

- Thoughtless and rapid exploitation of forests.
- Overgrazing
- Increasing demand of forest products.
- Urbanization
- Extension for agriculture
- Shifting cultivation
- Developmental Projects (e.g. dam construction)
- Forest fires *(any two)*

(v)

Bhabhar	Tarai
Lies along the foot of Shiwalik	Lies to the south of the Bhabhar
Composed of pebble studded rocks	Composed of finer alluvium
8 to 16 kms wide	20 to 30 kms wide
Does not suit agriculture	Reclaimed for agriculture
The streams disappear and flow underground	Streams remerge and give birth to marshy area

(any two)

(vi) (a) Physiological Density of the population – It is the ratio between the total population to the net cultivated area. **OR**

$$\frac{Total\ population}{net\ cultivated\ area}$$

(b) Conurbation –With the continuous growth of towns, some areas of the suburbs of the neighbouring towns may join to form a continuous urban area known as conurbation.

(vii) Problems affecting the fishing industry in Bangladesh:

- Tropical cyclones
- Small boats/ Lack of large boats
- Traditional method of fishing
- Tropical climate, therefore difficult for preservation
- Seasonal flooding *(any two)*

(viii) (a) Nellore district

(b) Keonjhar, Mayurbhanj, Sambalpur, Cuttack and Sundergarh *(any one)*

(ix) Porbandar (in Gujarat) and Silchar (in Assam)

(x)	An agro-based industry is the one that depends on the raw materials produced in the agricultural sector. Cotton Textile Industry is the largest agro based industry in India.

SECTION B

Question 2

[10]

On the outline map of India provided:

(a) Mark and name the northernmost point of the Indian Union.

(b) Mark and label the Nilgiri Hills.

(c) Shade and label the Gulf of Khambat.

(d) Trace the course and label the river Mahanadi.

(e) Show with a single arrow and name the wind that brings rain over the coast of Tamil Nadu, during winters.

(f) Locate with a dot and name the capital city of Rajasthan.

(g) Mark and name the Nathula Pass.

(h) Mark and name the oldest oil-field of India.

(i) Mark with a dot and name the major port of Andhra Pradesh.

(j) Mark and label the hinterland of Chennai.

Note: *All the map work, including legend (Index) should be done on the map sheet only.*

Comments of Examiners

(a) Many candidates were confused between Indira Col and Indira Point. Several candidates marked the northern most point (370) which did not coincide with the actual position of the Col.

(b) Most candidates marked Nilgiris over the Western Ghats or Eastern Ghats. Many candidates marked it in place of the Cardamom Hills in Kerala. Some candidates marked the hills as a triangle or a peak.

(c) Many candidates, instead of the Gulf of Khambat shaded the Gulf of Kuchh. Several candidates shaded it far out into the Arabian Sea.

(d) Most candidates marked the mouth in the Chilika Lake. Some candidates marked the source in Rajasthan or Gujarat.

(e) Many candidates drew the S.W. Monsoons. Some candidates drew the winds correctly but labelled them as the N.E. Trades or only N.E. winds. Some candidates drew the S.W. Monsoons over the Bay of Bengal. A few candidates marked the winds inland.

(f) Many candidates marked the dot for Jaipur over Gujarat or Rajasthan.

(g) Many candidates marked the Nathula Pass all along the Sikkim border, even up to Kanchenjunga. Some candidates marked it in the Kashmir region. A few candidates drew a very large symbol which was not on the border.

(h) Many candidates were unable to mark the oldest oil field correctly. Several candidates marked it in Mumbai High.

(i) The dot for the port made by many candidates did not touch the coast.

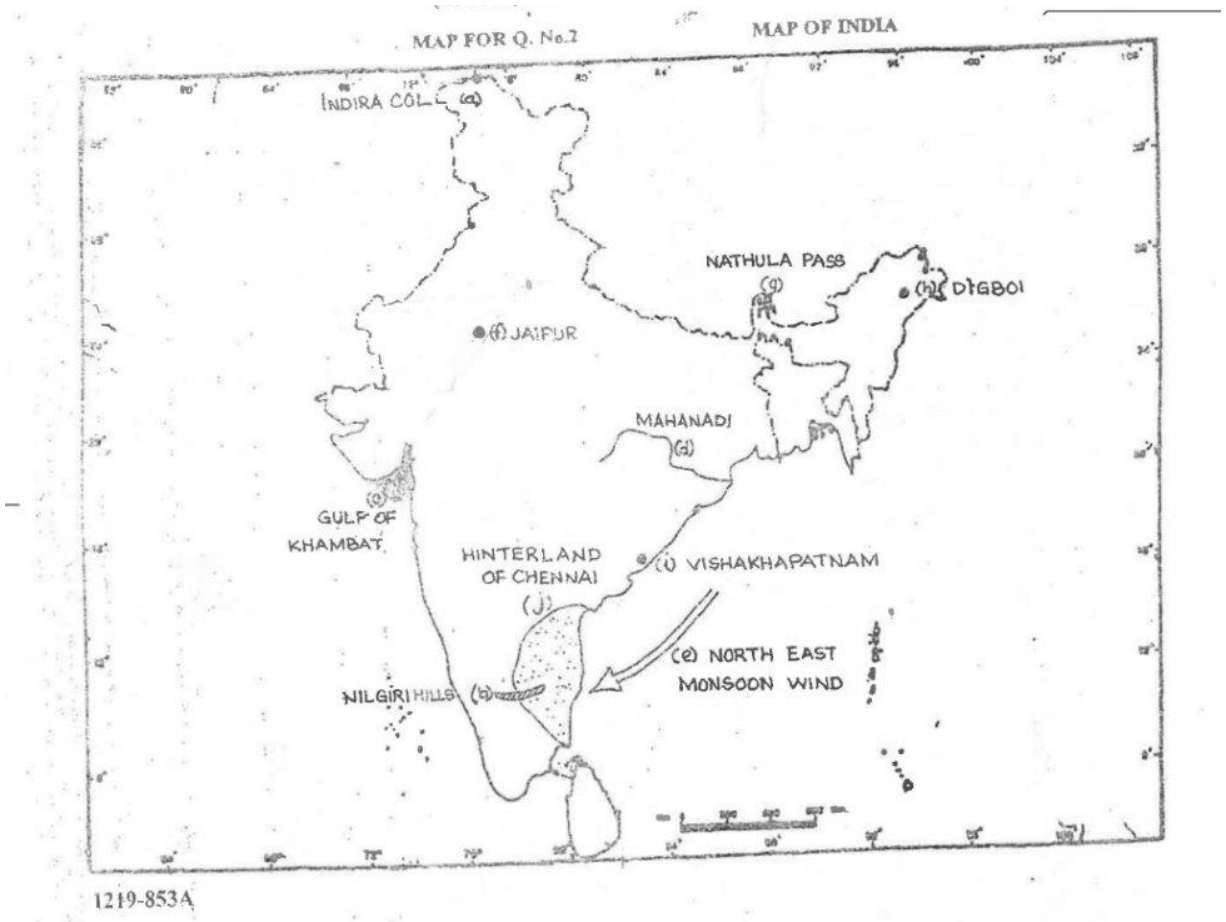
(j) Most candidates, for the hinterland of Chennai, either marked only Chennai city or shaded all of south India spilling into Kerala.

Suggestions for teachers

- Teach students the correct course of the river – its source, mouth and the important bends along it. Insist that the blue line drawn to show the course of a river must touch the coastline.
- Explain the concept of NE Monsoons and SW Monsoons. Ensure that the students know the names of all different winds relevant to India along with the seasons in which they are dominant. Emphasize on arrows being drawn correctly to show the direction of the winds.
- Tell students that as Vishakhapatnam is a port, the dot marking it should touch the coast. It should neither be inland, nor out into the sea.
- Teach students to mark out the hinterlands of all the ports in the syllabus.
- Insist that the names of places must be correctly spelt.
- Guide students to mark locations of cities, and peaks with the help of co-ordinates from the border and with reference to longitudes and latitudes on which they lie.
- Ensure that the size of the point symbols marked by the students is small so as not to cover a large area.
- Make it clear to the students that areas of seas, plateaus, etc. should not extend boundaries.
- Help the students to prepare topical or thematic maps. Advise students not to learn maps by looking at them but by drawing and practicing marking on them.

MARKING SCHEME

Question 2



PART II (40 Marks)

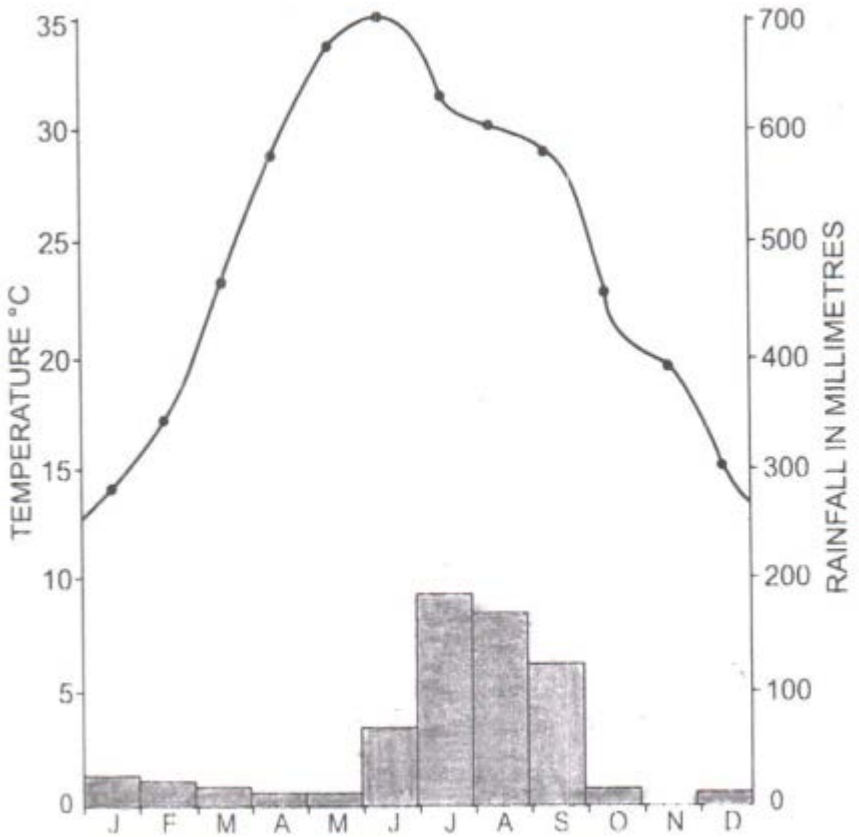
*Answer any **four** questions.*

Question 3

(a) Briefly explain the *geological evolution* of the Himalayas. **[3]**

(b) Explain giving *any two* reasons why the deltas of the river Mahanadi suffer from occasional floods. **[2]**

(c) Study the temperature and rainfall graph of station X given below and answer the questions that follow: **[3]**



(i) Is the location of station X inland or coastal?

(ii) What is the cause of sudden fall of temperature in July, even though it is a summer month?

(iii) Mention *one* main feature of the climate experienced by the station X.

(d) What is *Agro-forestry?* Mention *any two* benefits of Agro-forestry. **[2]**

Comments of Examiners

(a) Most candidates were unable to trace the sequence of events leading to the emergence of the Himalayas. Several candidates vaguely remembered names like Angaraland/ Gondwanaland/Indian Plate/ Eurasian Plate/ Tethys Sea. Many candidates named the physiographic divisions of the Himalayas without explaining the geological evolution.

(b) Most candidates were unable to write the correct answer to this question. Several candidates mentioned all the deltas along the east coast. Some candidates mentioned that it was only during the monsoons.

(c) (i) Most candidates were unable to read and analyse the graph. Many candidates mentioned a coastal location instead of an inland one.

(ii) Several candidates could not correlate the high rainfall with the falling temperature.

(iii) Many candidates mentioned the characteristic features of other types of climate, rather than of the climate experienced by the station specified in the question.

(d) Majority of the candidates were unable to define agro-forestry correctly. Most candidates mentioned that crops were cultivated in forests instead of writing that crops and trees were cultivated in close association, or on the same field.

Suggestions for teachers

- Explain clearly the geological evolution of mountains, making the students underline and sequentially number the relevant facts in order to help them to retain them. The topic can be reinforced with the help of diagrams.
- Give adequate practice in questions which require analysis of temperature/rainfall graphs. The graphs must be taught with reference to location and climate.
- Explain to students, the parameters based on which the climatic conditions and the location of a station is identified.
- Ensure that the students know the months during which different seasons are experienced.
- Teach seasons by first telling the students about the months, followed by their chief characteristic, features and finally the corresponding causes.

MARKING SCHEME

Question 3

(a) The geological evolution of the Himalayas:

- A young fold mountain of recent origin
- Remained submerged under Tethys as horizontal layers of rock under aquatic environment in the Geosyncline. Deposition of sediments.
- Emergence due to crustal warping caused by the thrusting of Indian plate against the Eurasian plate during the Tertiary period.
- Converging plates caused complex folding, faulting and igneous activities.
- Very unstable and is still rising.
- The entire crust has been divided into a number of plates.
- Himalayan ranges formed when the Indian plate was driven North-wards and pushed beneath the Eurasian Plate/Angara land
- With advance of the Indian Plate – the Tethys Sea started contracting and came closer.
- The Tethys Sea crust began to fracture.
- The sediments of the bed of the Tethys were folded and the present Himalayan ranges emerged.

(b) Reasons why the deltas of the Mahanadi suffer from occasional floods:

- There is large scale silting and consequently the river course changes.
- Large scale deforestation in the catchment area has added to the problem.
- Large number of tributaries add matter.

(c)

(i)	Inland
(ii)	Sudden onset of monsoon; cloud cover; reduced isolation
(iii)	Hot summer, cold winter, high annual range of temperature. Continental/ extreme climate/ Rain in winter due to western disturbances *(any one)*

(d) Agro forestry is the raising of agricultural crops and trees on the same land or in close association with one another.

Two benefits are:

- The farmer gets food/ fodder/ and timber from his land.
- It provides employment to the rural masses/ income
- The land gives maximum utility and waste patches are put to good use.
- Conservation of soil/water
- Can be used for reclamation of eroded and degraded land/ conservation of forests.

(any two)

Question 4

(a) (i) Define *index of concentration*. **[1]**

(ii) How is it useful in the study of population? **[1]**

(b) Differentiate between *natural growth of population* and *migratory growth of population*. **[2]**

(c) Explain why sex composition is an important demographic attribute of the population in India. **[2]**

(d) ***Figures* A** and **B** given below show two types of settlement patterns that have developed in India: **[2]**

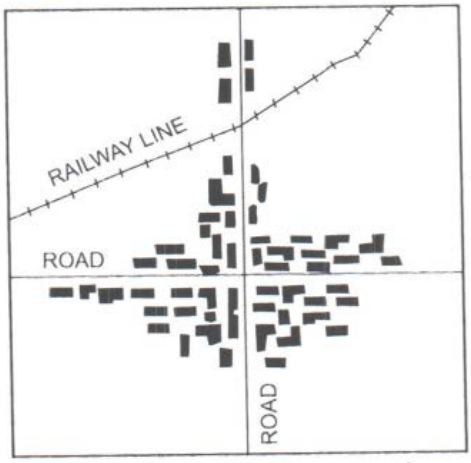


***Figure* A**

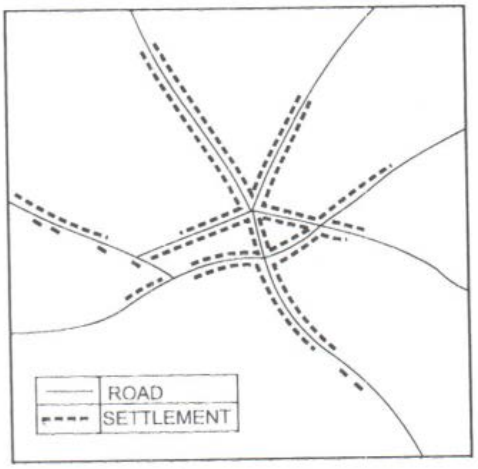


***Figure* B**

(i) Name the settlement patterns in ***Figures* A** and **B**.

(ii) State *one* characteristic feature of each of the settlement patterns.

(e) (i) What is *urbanisation?* **[1]**

(ii) What are the *two* main components of urbanisation? **[1]**

Comments of Examiners

(a) (i) Many candidates, instead of index of concentration, wrote about density of population. Some candidates wrote an incomplete definition with key words like ratio/proportion of population of the state not being mentioned. A few candidates did not mention about the index of concentration being expressed as a percentage.

(ii) Majority of the candidates were unable to explain that index of concentration was used for analysing the distribution of population.

(b) A number of candidates answered this part correctly. However, some candidates answered birth rate and positive growth rate instead of natural growth rate. Several candidates, for the migratory growth of population, wrote either an incomplete explanation or just the examples. Some candidates mistook migration for migratory growth.

(c) Most candidates, instead of the sex composition, wrote about sex ratio and the causes of the low sex ratio. Several candidates were unsure about the significance /importance of the demographic attributes.

(d)(i) Many candidates were unclear about compact and nucleated patterns.

(ii) Many candidates confused the star pattern with the linear pattern. Several candidates, who identified the rectangular pattern, were unable to describe the intersection of roads, while for the star pattern they did not write that the roads radiated from a common centre.

(e) Majority of the candidates were able to answer this part correctly.

Suggestions for teachers

- Ensure that students are clear about the difference between migration and migratory growth.
- Clearly explain the difference between birth rate and growth rate.
- Advise students to learn at least two significances of each demographic attribute.
- Teach the different settlement patterns with the help of diagrams. Make sure that the students are able to describe characteristic features of the different settlement patterns in two or three sentences.
- Explain the differences between the components and causes of urbanization.
- Explain the use of, or the significance of concepts and ideas.
- Ensure that students learn all the definitions including the formulae.
- Train students to write answers with complete reasoning.
- Train students to answer application-based questions.
- Dissuade students from resorting to selective study.

MARKING SCHEME

Question 4

(a)	(i)	Index of concentration: Index of concentration is the proportion of population living in each state or union territory to the total population of India. OR $\frac{Total\ no.of\ people\ in\ the\ state/UT}{Total\ population\ of\ India} \times 100$

	(ii)	It helps us to understand the uneven nature of distribution of population. Larger percentage indicates higher density of population and smaller percentage indicates sparse population
(b)	• Natural growth of Population – The difference between the natural birth rate and death rate is called the Natural growth of population. • Migratory growth of population – The growth of population caused by migration of people / Immigration-Outmigration/ Immigration- Emigration	
(c)	Sex composition is an important demographic attribute of the population in India because: • Separate data needed for various types of planning. • The balance affects social and economic relationship • Both sexes play contrasting and complimentary roles in society • Index of an economy and for regional analysis/ male, female, literacy size. • For understanding employment, consumption pattern and social needs of the community.	
(d)	(i)	A – Rectangular pattern B – Star like pattern
	(ii)	A – Developed at the meeting place of two roads/streets are either parallel or perpendicular. B – Streets radiate from a common centre.
(e)	(i)	Urbanisation: The process of the transformation/ change of society from a predominantly rural to a predominantly urban population.
	(ii)	Main components of urbanisation: • Increase in urban population • Increase in percentage engaged in non-agricultural activities/ services • Increase in percentage of modern facilities

Question 5

(a) Briefly explain *any two* adverse effects of *small and fragmented holdings* on agricultural productivity. **[2]**

(b) State *two* ways in which forest area in our country can be increased. **[2]**

(c) Mention *three* constraints explaining why *cultivable waste land* is not being used for cultivation at present. **[3]**

(d) In which *two* ways are *tube-wells* better than *ordinary wells* as a form of irrigation? **[2]**

(e) With reference to canal irrigation, name *one* canal in each of the following states: **[1]**

(i) Uttar Pradesh

(ii) Punjab

Comments of Examiners

(a) Many candidates, instead of *effects* of fragmentation, wrote its reasons. Some candidates wrote about the faulty laws of inheritance.

(b) Most candidates were unable to write about the forest protection policy. Many candidates were not quite sure of differences between terms like silviculture, afforestation and social forestry, as a result of which their answers were overlapping. Some candidates wrote only about planting trees.

(c) Many candidates did not understand the meaning of the word *constraints*. They confused cultivable waste land with barren, uncultivable waste land, hence mentioned land used for non-agricultural purposes. Some candidates mistook cultivable waste land for fallow land.

(d) Most candidates did not write key words like perennial/seasonal, large amounts of water could be lifted from great depths. Many candidates wrote only examples.

(e) (i) Many candidates interchanged *eastern* with *upper* for Yamuna canal and *upper* with *eastern* for Ganga canal.

(ii) Majority of the candidates mentioned incorrect names.

Suggestions for teachers

- Explain small and fragmented holdings through examples. Ensure that the students learn the causes, remedies and adverse effects of small and fragmented holdings on productivity.
- Advise students to learn at least three methods/ways to increase forest cover. Explain clearly the need to conserve forests.
- Ensure that the students understand that cultivable waste land, and barren and uncultivable waste are separate land use systems. Explain to the students the constraints of not being able to use the cultivable waste land for cultivation.
- Explain in a tabular form, the differences between primitive forms and modern methods of irrigation.

MARKING SCHEME

Question 5

(a)	Adverse effects of small and fragmented holdings on agricultural productivity: • Time wasted in moving seeds/ manure/ implements/ modern machines/ tractors/ cattle from one land to another. • Difficulty of irrigation in small fragmented land. • Wastage of fertile agricultural land in providing boundaries. • Low productivity
(b)	Ways in which forest area in our country can be increased are: • There should be widespread tree plantation programmes like Van Mahotsav, Chipko movement and Silviculture and vigorous restrictions on reckless felling of trees or deforestation • Forest areas reclaimed for agriculture must be retired from cultivation and brought back under forests. (or the word Culturable waste) • Reclaiming marshy or barren land • Afforestation/Reforestation

	• Preventing overgrazing • Social Forestry Programmes • Prevention of shifting agriculture	
(c)	Three constraints why culturable (cultivable) waste is not being used for cultivation at present are: • Lack of water (soil moisture) • Salinity of soil (Reh, Usar, Banjar, Kallar, Bhur or Barren) • Alkalinity of soil • Soil erosion • Water logging/ canal irrigation/ overuse of water • Unfavourable physiographic position • Human neglect / faulty agricultural practices *(any three)*	
(d)	Tube-wells are better than an ordinary well as a form of irrigation: • Can irrigate large areas than ordinary well/ 10 times more or 2 hectares • Water can be lifted from greater depths/ water can be taken out by electrical motor or diesel engine • More reliable during drought/ perennial • Is an independent source of irrigation • Most suitable source and can be used by the farmer whenever crops need water. • Where canal irrigation is not available. • More efficient (can irrigate a larger area)	
(e)	(i)	Uttar Pradesh: upper Ganga canal / lower Ganga canal / Sharda canal / Eastern Yamuna canal, Agra canal, Betwa canal *(any one)*
	(ii)	Punjab: Upper Bari Doab canal / Sirhind canal / Bhakra canal / Bist-Doab canal *(any one)*

Question 6

(a) (i) What is *crop rotation?* **[3]**

(ii) Mention *two* reasons why crop rotation is necessary in India.

(b) What is the importance of *animal husbandry* in Indian agriculture? **[2]**

(c) Differentiate between *pelagic fish* and *demersal fish*. **[2]**

(d) Name the following: **[3]**

(i) A geothermal energy plant in Himachal Pradesh.

(ii) An offshore oilfield in the country.

(iii) The nuclear power station in Tamil Nadu.

Comments of Examiners

(a) (i) Many candidates did not explain the concept of the cultivation of crops on the same field one after the other. Some candidates were confused between crop rotation with crop combination.

(ii) Most candidates were unable to write two reasons.

(b) Many candidates, instead of importance of animal husbandry in Indian agriculture, wrote about agro-forestry or dairy farming.

(c) Most candidates interchanged coastal for surface waters (pelagic) and deep sea (demersal) for certain depth. Some candidates only gave examples of demersal or pelagic fishing. A few candidates wrote only the methods of catching fish.

(d) (i) Many candidates only wrote *Shimla* instead of *Manikaran*.

(ii) Several candidates, instead of Mumbai High, wrote either Maharashtra or Jamnagar.

(iii) A number of candidates gave examples from States other than Tamil Nadu or stated either Tarapore or Neyveli for Kalpakam.

Suggestions for teachers

- Clearly explain the definitions and purpose of agricultural practices.
- Explain why crop rotation is necessary in a country like India.
- Ensure that students learn the features/ reasons for crop rotation.
- Teach the students the current day farming practices such as mixed farming and animal husbandry as part of strategies under the second Green Revolution.
- Ensure that students are able to explain each strategy in two or three sentences.
- Clearly explain the difference between animal husbandry and agro-forestry.
- Train students to write differences between concepts in a tabular form, ensuring that the points of difference are co-related.
- Ensure that students learn the major power stations as per the scope of the syllabus.

MARKING SCHEME

Question 6

(a)	(i)	Crop rotation: Crops grown in succession one after another in the same field. OR Pulses or leguminous crops grown in rotation on the same land to regain soil fertility.
	(ii)	Reasons why crop rotation is necessary in India: • To keep land in good tilth • To help land regain its fertility • Judicious use of water in dry areas • To get additional crop and income • Utilising land resources • Judicious use of labour *(any two)*

(b)

1. Animal husbandry supplements the income of rural households, particularly in case of landless, small or marginal farmers.
2. It is a subsidiary occupation in semi-urban areas and in hilly and drought prone areas where crop output is low.
3. Provides a variety of products like milk, meat, etc.
4. Waste or cow dung can be used as Organic manure for crops or fuel or non- conventional source
5. Subsidiary occupation

(c) Differentiate between *pelagic fish* and *demersal fish*.

PELAGIC FISH	DEMERSAL FISH
• Small in size • Swims near the surface • Found in shoals • Migratory by habit	• Comparatively large in size • Prefer cool water and found at certain depth • Moves in small groups • Stationary – in small area

(any two)

(d)

(i) Plant at Manikaran

(ii) Mumbai High/ Alia Bet/ Bassein Basin/ Krishna Delta/ Godavari Delta

(iii) Kalpakam

Question 7

(a) Explain *two* factors that affect *inland waterways* in India. **[2]**

(b) Give reasons for the following: **[3]**

(i) There is a dense network of railways over the North Indian Plains.

(ii) Peninsular Plateau has a high proportion of metalled roads.

(iii) A good transport network promotes industrial development.

(c) Mention *one* advantage and *one* disadvantage of air transport. **[1]**

(d) Differentiate between *Telecommunication* and *Mass Communication*. **[2]**

(e) State *any two* ways in which radio can still be considered as a powerful means of mass communication in remote areas. **[2]**

Comments of Examiners

(a) Many candidates were confused between inland and coastal waterways. Several candidates did not write key words such as perennial, siltation.

(b) (i) Many candidates were unable to correlate flat terrain with ease in construction of roads and railways. Several candidates, for cultivation, instead of flatland or terrain, wrote fertile and soft soil.

(ii) Many candidates were unable to correlate hilly terrain as a hinderance to development of railways.

(iii) Most candidates were unable to relate transport with industrial development, that is, how transport is closely related to production, consumption and distribution as well as all other factors of production.

(c) Most candidates did not write key words like fastest, expensive. Many candidates wrote vague answers or one-word answers.

(d) Several candidates wrote only the definition of Telecommunication and Mass Communication.

(e) Most candidates missed out on the entertainment and news services provided by radio, mentioning only that a radio is cheap.

Suggestions for teachers

- Use a flow chart to teach the students, favourable conditions, advantages and disadvantages of each type of transport.
- Ensure that the candidates know the reasons for the presence/absence of the different types of transport.
- Give adequate practice to the students in answering application-based questions focusing on each physical division and the main types of transport.
- Ensure that students are well versed with the benefits and disadvantages of types of mass communication.
- Explain the importance of mass communication in rural and urban areas.
- Dissuade the students from writing one-word answers.
- Train students to write differences in in a tabular form with co-related points.

MARKING SCHEME

Question 7

(a)		Factors that affect inland waterways in India. • Regular flow of water/perennial • Silting of riverbed • Desilting of river bed is expensive • Presence of water fall, sharp bends in river course • Diversion of water for irrigation • Sufficient demand for waterways. *(any two)*
(b)	(i)	A dense network of railways over the North Indian Plain. • Flat land, therefore, more suitable for construction. • Dense population, therefore high demand. • Highly developed agriculture and industry. • Urbanisation/ large number of towns.

	(ii)	Peninsular Plateau has a high proportion of metalled roads: • Raw materials for building roads are abundantly available. • Hilly and plateau terrain hinders development of railways.
	(iii)	A good transport network forms the basic economic arteries which link production and consumption and production and distribution. OR Factors of production, carrying raw material and labour to factories. It serves as a life line of an economy and promotes industrial growth. Connects large number of industries and towns (urbanization)
(c)		Advantage and disadvantage of air transport: Advantages: Fastest, comfortable, remote access, difficult/ hilly terrain, helpful during calamities. Disadvantages: Expensive, mainly connects major cities, small tonnage, influenced by weather conditions/ storms/ fog/ heavy rain/clouds. *(any one from each)*
(d)		Tele Communication: • Device for communication at individual and mass level/or telephone/telex/mobile. • Linked with the advancement of electrical technology. • High speed message communication. • Receives message instantaneously Mass Communication: • Creates awareness among the masses/ Press and Print Media, Radio, T.V., Newspapers, journals, cinemas • Provides information and education as well as healthy environment. • Some means are dependent on transport
(e)		• In remote areas, in the absence of TV and Internet – Radio remains the important means/awareness/education • Introduction of FM service – has enhanced the role of radio. • Even today, community listening is in the villages. • The diversification of programmes aired, still makes radio a very popular means and only source of information/ advertisement and entertainment in rural areas.

Question 8

(a) Mention *two* reasons for the development of the *Bengaluru – Tamil Nadu Industrial Region*. **[2]**

(b) Give *three* reasons to explain the development of *sugar industry* in Maharashtra. **[3]**

(c) State *two* advantages that mini steel plants have over large integrated steel plants. **[2]**

(d) (i) Define *tourism.* **[1]**

(ii) State *any two* advantages of tourism in India. **[2]**

Comments of Examiners

(a) Most of the candidates named vague small industries instead of naming the main industries, therefore the reasons given for the development of the region were not as per the requirement of the question. Several candidates wrote vague factors like the availability of rainfall and water, nearness to the river Tungabhadra.

(b) Many candidates, instead of development of sugar industry, wrote about sugarcane farming. Several candidates, instead of factors which suited the localization of industries in Maharashtra, wrote general factors.

(c) Several candidates merely wrote the definitions of mini steel plants and integrated steel plants.

(d) (i) The key word *travelling* was missing in some answer scripts.

(ii) Many candidates, instead of the advantages of tourism, wrote its negative points.

Suggestions for teachers

- List out the major and the less important industries to enable students to learn easily the factors of localisation.
- Clearly explain the difference between sugarcane cultivation and the sugar industry. List and emphasize on the factors leading to the development of the sugar industry.
- Ensure that students learn about mini steel plants. Do a comparative study of mini steel plants and integrated steel plants.
- Ensure that students learn definitions of all-important terms with key words.
- Prepare a list of advantages or positive impacts of tourism for the students. Emphasize that advantages are economic in nature.

MARKING SCHEME

Question 8

(a)	Reasons for the development of the Bengaluru – Tamil Nadu Industrial Region: 1. In the heart of sugarcane/cotton growing area. 2. Many silk, sugar, leather, electronic industries/ cotton textile industry/ iron and steel, cement, HAL, HMT 3. Cheap skilled labour 4. Proximity to market 5. Favourable climate 6. Good connectivity 7. Petroleum refinery at Chennai with by-products for Petro-chemical industries 8. Cheap hydel power 9. MNC/Foreign investment *(any two)*
(b)	1. Tropical climate gives higher yield of sugarcane 2. Longer crushing season 3. Higher sucrose content

		4. Organised and cooperative units/sugar lobby 5. Better and modern technology 6. Lower transport cost/ mills are close to the field 7. Higher recovery 8. Better credit facilities *(any three)*
(c)		Advantages mini steel plants have over large integrated steel plants: 1. Unlike large ISP, MSP requires less capital investment/easy to construct 2. MSP uses electric furnace and induction furnace 3. They use scrap / sponge iron as a raw-material 4. Environment friendly/ save on coal/ do not cause pollution 5. Decentralised/ help in regional development/ creates employment 6. Located in areas far from ISP. Therefore, are able to meet local demand. 7. Short/lower gestation period.
(d)	(i)	Tourism involves travelling in relatively undisturbed or uncontaminated natural areas with specific objective of studying, admiring and enjoying, both natural and cultural aspects. It provides entertainment for some, or serves as a holiday, or is a means of understanding other people's way of life, culture and traditions.
	(ii)	1. Generates employment/ lending hand to local handicrafts 2. Earns foreign exchange 3. Cultural exchange/social benefits 4. Widens mental horizon 5. Promotes national integration/ international understanding/ provides a linkage with east-west 6. Improving infrastructure 7. Entertainment/recreation/ relaxation/ holiday *(any two)*

Question 9

(a) (i) What is a *Planning Region?* **[2]**

(ii) Mention *any two* characteristics of a planning region.

(b) Explain giving *two* reasons why there is a *need for planned development* for a country like India. **[2]**

(c) Mention *any two* factors which have influenced the development of the Electronic City of Bengaluru. **[2]**

(d) (i) What is *sericulture?* **[2]**

(ii) Name *two* main districts of Silk production in Chhattisgarh.

(e) With reference to Haldia port, answer the following: **[2]**

(i) Where is the port located?

(ii) State the need for the development of this port.

Comments of Examiners

(a) (i) Most candidates wrote a general explanation of planning region. Several candidates wrote incomplete explanations with no mention of key words.

(ii) Several candidates described different planning regions instead of their characteristics. Many candidates were unable to write the difference between flexible and fixed boundaries of a planning region.

(b) Most candidates were confused with the word *planned* and so were unable to relate the need for development as a requirement of the question. Many candidates wrote one-word answers like, poverty, over overpopulation. There was no correlation of a rapidly increasing population with pressure on natural resources in some answer scripts.

(c) Most candidates wrote very vague general factors like the availability of water and electricity, instead of specific reasons.

(d) (i)Several candidates wrote the importance of sericulture, instead of its definition with key-words like rearing of silk worms. Many candidates confused the term sericulture with silviculture. Some wrote about the rearing/cultivation of silk and not rearing of silkworms. A number of candidates wrote the complete process of production of silk.

(ii) Most candidates, instead of districts for silk production, wrote districts for iron ore.

(e) (i) Many candidates, instead of writing Haldi river, wrote either Haldia river or Hooghly river. Some candidates thought that 'downstream' is north of Kolkata.

(ii) Most of the candidates wrote a list of incorrect industries in Haldia. Some candidates wrote incorrect terms, such as 'depressurize', for reduction of traffic movement.

Suggestions for teachers

- Ask students to prepare a list of characteristics of the planning region and learn at least four of these characteristics.
- Explain the meanings of terms like the need and quest for development so that the students can comprehend the requirement of the question.
- Explain the reasons for the need for planned development.
- Clearly explain in detail, the specific reasons /factors necessary for the development of the Electronic City of Bengaluru.
- Emphasize that the definition of sericulture must include key words like silk worms.
- Teach the location of ports with the help of maps.
- Explain to the students the reasons for the development of Haldia port.
- Clarify terms like confluence, upstream, downstream.
- Ensure that students learn definitions of all-important terms with key words.
- Train the students to write a definition when asked for and not substitute it with an explanation.

MARKING SCHEME

Question 9

(a) (i) Planning Region:

- It is an aerial unit which is deemed fit for the purpose of regional planning and is a distinctive area in itself while being the part of a whole.
- A planning region is a self-created living organism having a lifeline which not only supports the life in the region but also radiates unifying forces that enable the region to be a unified regional space so as to facilitate the practice of regional planning.
- SEIMER: a planning region is a living organism in which the whole is related to parts in the same way as the parts are related to the whole.
- TAYLOR: a planning region is a unit of area which is distinguishable from another area by the display of some unifying characteristics of its own.
- A planning region is a distinguishable unit area due to its own characteristics and yet doesn't exist in isolation from the spatial whole.

(any one)

(ii) Characteristics of a planning region:

- Its size should be neither big nor small
- Its boundaries should be flexible
- Its shape should be contiguous and compact
- There should be natural cohesion
- It should have social harmony
- It should have economic harmony
- Functional unity
- Similarity of problem
- Regional consciousness
- Administrative convenience

(any two)

(b) Reasons why there is a *need for planned development* for a country like India.

- Increasing pressure of population on resources
- Growing demand for food
- Improving general standard of living
- Narrow down regional disparities
- Reconstruction of former colonies like India that have now become independent
- Decolonisation of a large number of countries and their consequent emergence as independent countries

(any two)

(c)	Factors which have influenced the development of the Electronic City of Bengaluru are: • It has large number of factories manufacturing electronic goods (any example) • Good connectivity • Located in the heart of peninsular plateau • Incentives by State and the Central Governments • Large investment from Indian and Multi-national companies. • Capital of Karnataka hence enjoy unique advantages. *(any two)*	
(d)	(i)	Sericulture: The rearing of silk worm for production of raw silk / sericulture or silk farming is the cultivation of silkworms to produce silk.
	(ii)	Bastar, Bilaspur, Surguja districts.
(e)	(i)	Location of the port: located at the confluence of river Hooghly and Haldi about 105 km downstream from Kolkata.
	(ii)	Need for the development of this port: • To release congestion at Kolkata Port. • To facilitate loading and unloading of large vessels that could not reach Kolkata port. • Silting of Kolkata port • Large ships cannot enter due to bends, bars and bores.

GENERAL COMMENTS

Topics found difficult by candidates

- Question 1(ii): Latitudinal and longitudinal values of location of India and other places.
- Question 1(iii): Naming the geological eras in chronological order.
- Question 3 (a): The geological evolution of the Himalayas.
- Question 3 (c): Analyzing climatic data from table/graph.
- Question 4 (a): Index of concentration and its usefulness.
- Question 4 (c): Significance of demographic attributes.
- Question 4 (e) (ii): Components of urbanization.
- Question 7 (c): Advantages and dis-advantages of air transport.
- Question 7 (d): Difference between Mass Communication and Tele-Communication.
- Question 8 (a): Reasons for development of Bengaluru- Tamil Nadu Industrial Region.
- Question 9 (a) (i): Definition of planning region.
- Question 9 (c): Factors influencing the Electronic City of Bengaluru.

Concepts in which candidates got confused

- Latitudinal and longitudinal location of India… angular and directional positions.
- Indian and standard geological eras in chronological order.
- Geosynclinals theory and the theory of plate tectonic sequence of the origin of the Himalayas.
- Sex ratio and significance of sex composition.
- Cultivable waste land and barren land.
- Adverse effects of small fragmented holdings.
- Definition and concept of crop rotation.
- Agro-based industry being cotton textile industry and not the cotton industry.
- Reasons for Maharashtra leading in sugar production.
- Need for planned development in India.

Suggestions for candidates

- Read the textbook thoroughly.
- Practice writing answers of reasoning questions.
- Do not write one-word answers.
- Learn key words, technical terms and definitions with examples.
- Study Unit 1 with the aid of maps, graphs and tables.
- Study physical geography with the help of atlas and maps.
- Regularly practice map work with the key/ index of the map made in the map itself.
- Clarify concepts by drawing maps and sketches.
- Always write differences between two concepts in a tabular form.
- Learn at least three examples, reasons, advantages and disadvantages of the concept.
- Practice solving previous years' ISC question papers.
- Follow the scope of the syllabus.
- Avoid selective study.