

Seat Number

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GG - 301

**A) Regional Geography of USA  
(New)(231)**

P. Pages : 1

Time : Three Hours

Max. Marks : 80

**Instructions to Candidates :**

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. All questions carry equal marks.
5. Attempt **any four** questions.
6. Use of map stencils is allowed.

1. Describe in brief the major physiographic regions of U.S.A.
2. Discuss the types of soils in U.S.A.
3. Give importance and distribution of Iron-ore in U.S.A.
4. Write a geographical account of Natural vegetation in U.S.A.
5. Explain the Political and economic relationship between India and U.S.A.
6. Describe the climatic regions of U.S.A. in detail.
7. Write notes on **any two**.
  - a) Water resources in U.S.A.
  - b) Problems and prospects of agriculture in U.S.A.
  - c) Cotton belt of U.S.A.

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Seat Number

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**Gg - 201**  
**Geographical Thoughts**  
**(121)**

P. Pages : 1

Time : Three Hours

Max. Marks : 80

**Instructions to Candidates :**

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any four** questions.
5. All questions carry equal marks.
6. Use of map stencils are allowed.

1. Explain the contribution of Roman's role in geography.
2. Describe the contribution of Von Humboldt and Carl Ritter in development of modern geographical thoughts.
3. Discuss the role of models in geography.
4. Write an essay on natural selection and struggle for existence and random variation in science of geography.
5. Explain the dualism between physical geography and human geography.
6. Explain the application of GIS in different field of geography.
7. Write notes on **any two**.
  - a) Quantitative Revolution.
  - b) Application of satellite for weather forecasting.
  - c) Recent concepts in geomorphology.

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Seat Number

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कडा - 016



**Gg - 302**  
**Environmental Geography**  
**(New) (233)**

P. Pages : 1

Time : Three Hours

Max. Marks : 80

**Instructions to Candidates :**

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any four** questions.
5. All questions carry equal marks.
6. Use of map stencils is allowed.

1. Give an account of different approaches to the study of environmental geography. 20
2. What is meant by ecosystem? Describe the various components of ecosystem? 20
3. Define biodiversity. Explain the need and methods of conservation of biodiversity. 20
4. Explain the causes and effects of deforestation and suggest the remedial measures to control the problem of deforestation. 20
5. Assess the need and importance of environmental planning and management. 20
6. Discuss in brief the various Environmental Acts in India. 20
7. Write notes on **any two**. 20
  - a) Scope of environmental geography.
  - b) Mineral cycling in ecosystem.
  - c) Effect of climatic changes on human health.

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Seat Number

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Gg - 202

## Social and Cultural Geography (122)

P. Pages : 1

Time : Three Hours

Max. Marks : 80

### Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any four** questions.
5. All questions carry equal marks.
6. Use of map stencil is allowed.

1. Explain the cultural landscape with suitable examples.
2. What is culture system? Explain the cultural system in detail.
3. Define pattern, process and concept of space in social Geography.
4. Briefly discuss the Griffith Taylor's Theory,
5. Write a geographical essay on origin of agriculture.
6. Discuss on social and cultural Geography is a branch of Human Geography.
7. Write short notes **any two**.
  - a) Social Environment.
  - b) Migration
  - c) Urbanization and social change.

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Seat Number

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Gg - 102

## Principles of Population and Settlement Geography (112)

P. Pages : 1

Time : Three Hours

Max. Marks : 80

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any four** questions.
5. All questions carry equal marks.
6. Use of map stencils is allowed.

1. Describe various approaches to the study of population geography.
2. Explain various sources of population data.
3. Critically examine Malthus's Theory of population.
4. Define Rural and urban settlements. Explain the nature and scope of settlement geography.
5. What is migration? Give various causes and consequences of migration.
6. Critically examine Christaller's theory of central place.
7. Write notes on **any two**.
  - a) Over and under population.
  - b) Rank size Rule.
  - c) Hinterland and urban field.

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Seat Number

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Gg - 403

## A) Research Methodology (New)

P. Pages : 1

Time : Three Hours

Max. Marks : 80

### Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **only four** questions.
5. All questions carry equal marks.
6. Use of map stencils is allowed.

1. a) What do you mean by research? Explain the significance of research. 10  
b) Explain the Basic types of research. 10
2. a) What is research problem? 10  
b) Define Hypothesis and state important characteristics of usable Hypothesis. 10
3. a) Explain the meaning of research design. 10  
b) Discuss research process. 10
4. a). What is census survey and sample survey. 10  
b) Explain the steps in sampling design. 10
5. a) Write note on collection of primary data. 10  
b) Distinguish between questionnaire and schedules. 10
6. a) Discuss processing operations in data analysis. 10  
b) Explain steps in writing report. 10
7. a) Write short notes on **any two**. 20  
i) Types of Reports. ii) Statistics in research. iii) Case study method.

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Seat Number

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Gg - 303

**Geographical Information System (New)**

(234)

P. Pages : 1

Time : Three Hours

Max. Marks : 80

## Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any four** questions.
5. All questions carry equal marks.
6. Use of Map stencil is allowed.

- |    |    |  |    |
|----|----|--|----|
| 1. | a) | What is GIS? Explain the potentials of GIS.                | 10 |
|    | b) | Define & explain applications of GIS in geography.         | 10 |
| 2. | a) | Explain the Hierarchical Raster structure.                 | 10 |
|    | b) | Give Comparison of Raster & vector data.                   | 10 |
| 3. | a) | What is Data Base Management system.                       | 10 |
|    | b) | Explain GIS data file management.                          | 10 |
| 4. | a) | Explain the methods of geospatial data analysis.           | 10 |
|    | b) | What is data base query? Explain vector based data query.  | 10 |
| 5. | a) | Explain overlay operation.                                 | 10 |
|    | b) | What is surface analysis explain in detail.                | 10 |
| 6. | a) | What is Co-ordinate system? Explain.                       | 10 |
|    | b) | What is map projection? Give classification of projection. | 10 |
| 7. |    | Write note on:   | 20 |
|    | a) | Geo-statistics.  |    |
|    | b) | Geo-visualization.   |    |

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Seat Number

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Gg - 403

## A) Research Methodology (New)

P. Pages : 1

Time : Three Hours

Max. Marks : 80

### Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **only four** questions.
5. All questions carry equal marks.
6. Use of map stencils is allowed.

1. a) What do you mean by research? Explain the significance of research. 10  
b) Explain the Basic types of research. 10
2. a) What is research problem? 10  
b) Define Hypothesis and state important characteristics of usable Hypothesis. 10
3. a) Explain the meaning of research design. 10  
b) Discuss research process. 10
4. a) What is census survey and sample survey. 10  
b) Explain the steps in sampling design. 10
5. a) Write note on collection of primary data. 10  
b) Distinguish between questionnaire and schedules. 10
6. a) Discuss processing operations in data analysis. 10  
b) Explain steps in writing report. 10
7. a) Write short notes on **any two**. 20  
i) Types of Reports. ii) Statistics in research. iii) Case study method.

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Seat Number

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**Gg - 103**  
**Principles of Climatology**  
**(113)**

P. Pages : 1

Time : Three Hours

Max. Marks : 80

## Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any four** questions.
5. All questions carry equal marks.
6. Use of map stencils is allowed.

- |    |  |    |
|----|--|----|
| 1. | Define climatology. Explain nature and scope of climatology.       | 20 |
| 2. | Define atmosphere. Explain composition of atmosphere.              | 20 |
| 3. | Describe the factors affecting on the distribution of temperature. | 20 |
| 4. | What is pressure gradient? Explain the types of winds.             | 20 |
| 5. | Define air mass and classify them on the basis of source region.   | 20 |
| 6. | Critically examine Koppens classification of climate.              | 20 |
| 7. | Write notes on <b>any two</b> .                                    | 20 |
|    | a) Inversion of temperature.                                       |    |
|    | b) Tropical cyclone.   |    |
|    | c) Types of rainfall.  |    |

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Seat Number

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Gg - 304

## Watershed Management & Planning (New) (235)

P. Pages : 1

Time : Three Hours

Max. Marks : 80

### Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any four** questions.
5. All question carry equal marks.
6. Use of map stencils is allowed.

1. Explain the concept of watershed and give the significance of watershed development.
2. Explain Terrain analysis in detail.
3. What is groundwater ? Explain recharge and discharge of groundwater.
4. Illustrate the Strahler's ruggedness index and hypsometric integral.
5. Describe evaporation and infiltration in detail.
6. Explain various types of surveys for watershed development.
7. Write notes on **any two**.
  - a) Application of GIS softwares in watershed management.
  - b) Basin morphology.
  - c) Interlinking of rivers.

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Seat Number

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Gg - 204

**Geo -Statistical Methods**

(125)

P. Pages : 2

Time : Three Hours

Max. Marks : 80

## Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any four** questions.
5. All questions carry equal marks.
6. Use of calculator and statistical table is allowed.

1. The average daily procurement of milk by village society is 900 liters with a standard deviation of 100 liters. Find out the proportions of societies. 20
- i) Procuring the milk between 900 liters to 1100 liters per day.
  - ii) More than 1100 liters.
  - iii) Between 700 to 900 liters.
  - iv) Between 500 to 700 liters.

2. Obtain the regression equations Y on X and vice versa for the following data. 20

X	20	15	12	14	21	25	30
Y	02	04	06	08	10	12	14

3. The following table records the distribution of trees in a hill range in a eight directions. Test the hypothesis of 0.05 level of significance that there is no association between the direction and number of trees. 20

Directions	N	NE	S	SW	SE	E	NW	W
No. of trees	190	196	184	189	212	245	270	194

4. In an income census survey of a town the mean annual income per capita was found to be Rs. 2,000. After 10 years, a random sample of 25 persons gave the annual per capita income as Rs. 2100. With the standard deviation of Rs. 400. Can we conclude that the income in the city has significantly increased ? 20

5. Define population and sample. Examine the methods of restricted random sampling. 20
6. Quality ratings of four agricultural regions each with three observations are given in the following table. Test the data by one way ANOVA method and prove that the overall classification does not indicate significant difference from one region to another. 20

Quality ratings of agricultural regions

1	2	3	4
99	70	90	99
96	65	80	96
95	60	45	85

7. Write notes on any two. 20
- Nominal and ordinal scale.
  - One tailed and two tailed tests.
  - Characteristics of Binomial distribution.

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Seat Number

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Gg - 104

## Principles of Geomorphology

(114)

P. Pages : 1

Time : Three Hours

Max. Marks : 80

## Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any four** questions.
5. All questions carry equal marks.
6. Use of map stencils is allowed.

- |    |  |    |
|----|--|----|
| 1. | Explain the Nature & Scope of Geomorphology.                                     | 20 |
| 2. | Describe in briefly the continental Drift theory.                                | 20 |
| 3. | Explain in briefly the effects of plate movements.                               | 20 |
| 4. | Define mechanical weathering. Explain the factors of mechanical weathering.      | 20 |
| 5. | Define mass movement. Explain the types of mass movement.                        | 20 |
| 6. | What is Davisian Cycle of erosion? Explain the interruption of cycle of erosion. | 20 |
| 7. | Write notes on <b>any two</b> .  |    |
|    | a) Types of Glaciers.  | 10 |
|    | b) Palaeomagnetism.  | 10 |
|    | c) Process of wind erosion.  | 10 |

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Seat Number

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कडा-55

**Gg-203**  
**(B) Geoinformatics-II (Old)**  
**(244)**

**P.Pages: 1**

**Time: Three Hours**

**Total Marks: 80**

**Instructions to Candidates:**

1. Do not write anything on question paper except Seat No.
  2. Answer sheet should be written with black ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
  3. Students should note, no supplement will be provided.
  4. Attempt any four questions.
  5. All questions carry equal marks.
  6. Use of map stencils is allowed.
- 
1. a) Define the following terms 04
    - i) Non spatial data
    - ii) Query
  - b) Explain the following terms. 06
    - i) Topology
    - ii) Quad tree
  - c) Explain the potentials of GIS. 10
  2. a) Describe the following stands for. 04
    - i) SQL
    - ii) ILWIS
  - b) What are the objectives of GIS.? 06
  - c) Explain the elements of GIS. 10
  3. a) Write note on – “Logical relationship” 04
  - b) Explain the importance of management in GIS 06
  - c) Describe the maintenance and analysis of the non spatial data 10
  4. a) Define the concept of time & space 04
  - b) What are the types of error? 06
  - c) Explain the process of topology building 10
  5. a) Explain – Algebraic theory 04
  - b) Distinguish between layers & coverage 06
  - c) Explain the History of GIS. 10
  6. a) Define- Map Algebra 04
  - b) Write the characteristics of vector and raster data models. 06
  - c) Explain the advantages of database management system. 10
  7. a) What is Visualization of data? 04
  - b) What is digitalization? Explain the process of manual digitalization 06
  - c) State the process of floating attribute query. 10

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Seat Number

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**Gg - 101**  
**Principles of Economics Geography**  
**(1111)**

P. Pages : 2

Time : Three Hours

Max. Marks : 60

## Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any five** questions.
5. Figure to the right indicate full marks.
6. Use of map.stencils is allowed.

- |    |  |   |
|----|--|---|
| 1. | a) Account for the regional & principle approaches to the study of economic geography. | 6 |
|    | b) Explain in brief consumption as a basic economic process.                           | 6 |
| 2. | a) Describe the stages of economic development as stated by Rostow.                    | 6 |
|    | b) Assess the significance of labour as a factor of production.                        | 6 |
| 3. | a) Explain in brief the external economies of scale.                                   | 6 |
|    | b) State the importance of capital in economic activities.                             | 6 |
| 4. | a) Give the merits and demerits of railway transport.                                  | 6 |
|    | b) Explain in brief Myrdal's model of economic development.                            | 6 |
| 5. | a) Discuss the factors promoting international trade.                                  | 6 |



- b) Describe the problems of International trade. 6
6. a) Give a brief account of various measures of economic development. 12

OR

Critically examine Weber's theory of Industrial location.

7. Write note on any two. 12
- i) Scope of economic geography.
  - ii) Growth poles.
  - iii) Merits of road transportation.

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Seat Number

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Gg - 102

## Principles of Population and Settlement Geography (1121)

P. Pages : 1

Time : Three Hours

Max. Marks : 60

### Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any five** questions.
5. All questions carry equal marks. Right figures shows the total marks.
6. Use of map stencil are allowed.

- |    |    |  |    |
|----|----|--|----|
| 1. | a) | Explain significance to study population geography.  | 6  |
|    | b) | Explain the approaches to study population geography.  | 6  |
| 2. | a) | Evaluate the relationship of sex ratio in India and Maharashtra.                               | 6  |
|    | b) | Explain the identical character of ancient world population.                                   | 6  |
| 3. | a) | Evaluate evolution of settlement geography.  | 6  |
|    | b) | Explain the rural settlement types according to site and situation.                            | 6  |
| 4. | a) | Explain in short the concept of urbanization   | 6  |
|    | b) | Explain the concept of Rurban center.  | 6  |
| 5. | a) | Differentiate between hinterland and urban fields.   | 6  |
|    | b) | Explain major nodal centers in Khandesh.   | 6  |
| 6. |    | Explain with suitable examples Ullman model of urban landuse.                                  | 12 |
|    |    | <b>OR</b>  |    |
|    |    | Explain factors influencing rural settlement pattern in Desh and Konkan region of Maharashtra. | 12 |
| 7. |    | Write notes on <b>any two</b> .  | 12 |
|    | a) | Source of population data.   |    |
|    | b) | Range and threshold.   |    |
|    | c) | Concept of under population.   |    |

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Seat Number

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**Gg - 103**  
**Principles of Climatology**  
**(1131)**

P. Pages : 1

Time : Three Hours

Max. Marks : 60

## Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
- 3: Students should note, no supplement will be provided.
4. Attempt **any five** questions.
5. All questions carry equal marks.
6. Use of map stencils is allowed.

- |    |      |   |    |
|----|------|---|----|
| 1. | a)   | Define climatology and discuss its nature.                      | 6  |
|    | b)   | Explain the sub-divisions of climatology.                       | 6  |
| 2. | a)   | Discuss the processes of heating and cooling of the atmosphere. | 6  |
|    | b)   | Explain the heat budget of the earth.                           | 6  |
| 3. | a)   | Distinguish between tropical and temperate cyclones.            | 6  |
|    | b)   | Discuss the factors affecting the distribution of temperature.  | 6  |
| 4. | a)   | Define Air mass and explain the classification of air masses.   | 6  |
|    | b)   | Explain the migration of pressure belts and its effect.         | 6  |
| 5. | a)   | Briefly explain the types of rainfall.                          | 6  |
|    | b)   | Write in brief the types of local winds.                        | 6  |
| 6. |      | Critically examine the Koppen's Classification of climate.      | 12 |
|    |      | <b>OR</b>   |    |
|    |      | Explain the factors affecting the intensity of insolation.      |    |
| 7. |      | Write notes on <b>any two</b> .                                 | 12 |
|    | i)   | Jet stream.   |    |
|    | ii)  | Instability of the atmosphere.                                  |    |
|    | iii) | Normal lapse rate.  |    |

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Seat Number

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Gg - 104

## Principles of Geomorphology (1141)

P. Pages : 2

Time : Three Hours

Max. Marks : 60

### Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any five** questions.
5. Figures to the right indicates full marks.
6. Use of map stencils is allowed.

- |    |    |   |   |
|----|----|---|---|
| 1. | a) | Which are the fundamental concepts of geomorphology? Describe any one of them.  | 6 |
|    | b) | Describe the motion of plates in different ways.  | 6 |
| 2. | a) | What are the factors responsible for weathering? Give the types of weathering and describe physical weathering in detail. | 6 |
|    | b) | Explain the terms of convex slope, concave slope, free face slope and constant slope.                                     | 6 |
| 3. | a) | Describe the processes of fluvial erosion and deposition.   | 6 |
|    | b) | How depositional features are produced in Karst region? Explain in detail.  | 6 |
| 4. | a) | Give major erosional features produced by glacial and explain with suitable diagram.                                      | 6 |
|    | b) | Describe the depositional features produced by wind.  | 6 |
| 5. | a) | Explain the factors affecting on erosion and describe how rapids and waterfalls are produced.                             | 6 |
|    | b) | Explain the Alen Wood's views of slope.   | 6 |

6. a) Explain the theory of Alfred Wegener with its supporting evidences. 6  
b) Discuss the cycle of erosion with its concept and criticism. 6
7. Write short note on any two.
- a) Types of mass wasting. 6  
b) Sea floor spreading. 6  
c) Types of moraine. 6

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