

UNIVERSITY OF KALYANI EXAMINATION

QUESTION PAPERS

Paper I (New Syllabus) 2017

Geotectonics

1. Answer any three of the following: 1x3=03

a) What do you understand by solar system? b) Who propounded Nebular hypothesis? c) What is Geological clock? d) What is 'asteroid'? e) Define Panthalassa.

2. Answer any five of the following: 1x5=05

a) What is collision hypothesis? b) What do you understand by 'big ban. c) What is nappe? d) What do you mean by dip and strike? e) Distinguish between monoclinical and isoclinal folds. f) Differentiate fault scraps from fault line scraps. g) What is Richter scale? h) Mention diastrophic force and resulted movements

3. Answer any two of the following: 6x2=12

a) Make a schematic presentation of different types of plate margin b) Mention the nature of three main types of seismic wave . c) Explain the concept of isostasy propounded by Hayford.

4. Answer any one of the following: 10x1=10

a) Account for the mechanisms of volcanism with a brief description of extensive volcanic topography. b) Give an outline of geological tie scale mentioning eras, epoch, periods and duration.

GROUP- B

Geomorphology

1. Answer any two of the following: 1x2x=02

a) What is base level? b) What is meant by ergs? c) What is snow line? d) How karst window is formed?

2. Answer any two of the following: 2x2=4

a) What is meant by anthropogenic weathering? b) Differentiate Alluvial fan from alluvial cone. c) What is basket of egg topography? d) Distinguish between Yardang and Inselberg.

3. Answer any four of the following: 6x4=24

a) Give a classification of mass wasting. b) Explain the geomorphic expressions of uniclinal structure c) Give an account of different types of fluvial erosion. d) Describe the marine depositional landforms. e) Elucidate the influence of lithology on landforms with suitable diagrams. f) Highlight the major landforms of karst topography.

4. Answer any one of the following: 10x1=10

a) Write an account on scope content and development of Geomorphology. b) Give a critical account of the views put forward by Davis and Penck on landscape evaluation.

2017

(Old Syllabus)

1. Answer any three of the following: 1x3=03

a) What is nappe? b) What is polar wandering? c) What is Panthalassa? d) What is Milky way? e) What is tensional force?

2. Answer any five of the following: 1x5=05

a) What is paleomagnetism? b) Mention the principles of Daly's isostatic hypothesis of anticroots. c) What is 'Jig saw fit? d) What is Laurasia? e) Distinguish between plate margin and plate boundary. f) What is fissure eruption? g) What is isostatic equilibrium? h) Define strike and dip.

3. Answer any two of the following: 6x2=12

a) Distinguish between normal and reverse fault with suitable example. b) Mention the major drawbacks of Wegner's continental drift theory. c) Explain the Planetesimal Hypothesis for the origin of the earth.

4. Answer any one of the following:10x1=10

- b) Discuss the major characteristics of Mesozoic and Cenozoic Eras. b) Explain the origin of Himalayan mountains with reference to plate tectonic theory.

GROUP- B

Geomorphology

1. Answer any two of the following:1x2=02

What is lithology? b) What is denudation? c) What is 'stream piracy'? d) What is snow line?

2. Answer any two of the following:2x2=04

a) Define applied geomorphology. b) Differentiate corrasion from corrosion c) What is hydration? d) Distinguish between spit and tombolo.

3. Answer any four of the following:6x4=24

a) Explain the major mechanical weathering processes that dominate in arid environment. b) Illustrate the interruptions of normal cycle of erosion. c) Discuss the major landforms produced by glacial erosion. d) Describe the landforms produced by glacio-fluvial deposits. e) Explain the formation of different types of sand dunes. f) Identify the negatives aspects of Davisian normal cycle of erosion.

4. Answer any one of the following:

a) Discuss the development of drainage and landforms in a region of uniclinal structure. b) Describe the major erosional landforms produced by aeolian process.

GROUP- A (2016)

Geotectonics: 35

1. Answer any three of the following: 1x3=03

a) What is nebula? b) What do you mean by eras? c) What is level of composition? d) Define Pangaea e) Distinguish between 'Joint' and 'fault'.

2. Answer any five of the following: 1x5=05

a) Mention any four Identifying criticisms of the Tidal Hypothesis of Jeans and Jeffreys on Origin of the earth. b) Mention the preceding and succeeding periods of Pliocene period. c) Highlight any four major objections to plate tectonics. d) Distinguish between 'plate boundaries' and 'plate margins' g) What is fault line scrap. h) Name any two methods of rock dating.

3. Answer any two of the following: 6x2=12

a) A little of the earth's topography is older than Tertiary'-Explain. b) Explain in brief the evidences in favors of 'Continental Drift' theory as propounded by A. Wegener and mention the forces responsible for drifting the continents and oceans. c) How does thrust fault form?

4. Answer any one of the following: 10x1=10

a) Explain orogenesis with reference to Plate Tectonic Theory. b) Make a comprehensive study

GROUP- B

Geomorphology

5. Answer any two of the following: 1x2=02

a) What is 'tor'? b) Distinguish between 'Alluvial fan' and 'Alluvial cone'? c) What is chute-cut off? d) Define 'fjords'.

6. Answer any two of the following: 2x2=04

a) What do you understand by 'Dynamic Equilibrium Concept'? b) Mention any two identifying criticism of the Erosion cycle concept of W.M.Davis. c) Distinguish between 'bergschrund' and 'crevasse''. d) What is 'incised meander'?

7. Answer any four of the following: 6x4=24

- a) Discuss the development of drainage in a folded structure. b) Explain fluvial processes and give two examples of landforms created by fluvial erosion. c) Briefly outline the important landforms develop by rejuvenation of river. d) Describe the landforms produced by the marine erosion. e) Highlight the view of the erosion cycle of W. Penk. f) Identify the favorable conditions for the development of karst landscape.

8. Answer any one of the following: 10x1=10

- a) Discuss the landforms develop by glacial deposition. b) Explain the type of weathering and the resultant landforms.

GROUP- A (2015)

Geotectonics

1. Answer any three of the following: 1x3=03

- a) Who propounded the 'planetesimal' hypothesis? b) What is down warping? c) What is recumbent fold? d) Mention the number of major lithospheric plates. e) Define palaeomagnetism.

2. Answer any five of the following: 1x5=05

- a) What do you understand by 'Mohorovicic discontinuity'? b) What is meant by 'plane of compensation'? c) What is 'conservative plate margin'? d) What do you understand by 'epeirogenic movement'? e) Differentiate 'anticlinorium' from 'synclinorium'. f) How are nappes formed? g) Distinguish between tensional and compressional forces in orogeny. h) Differentiate fault scarp from fault line scarp.

3. Answer any two of the following: 6x2=12

- a) Narrate the fundamental differences between the views put forwarded by Airy and Pratt on isostasy. b) Illustrate the formation of normal, reverse and strike- slip faults. c) Make a schematic presentation of Geological Time Scale.

4. Answer any one of the following: 10x1=10

- a) Critically evaluate the major theories on origin of the earth. b) Highlight the supportive evidences in favor of Wegener's Continental Drift theory.

GROUP- B

Geomorphology

1. Answer any two of the following:1x2=02

- a) What is 'Knick Point'? b) What is 'rock creep'? c) Name the author of 'Die Morphologische Analyse'. d) What is 'panplain'?

2. Answer any two of the following: 2x2=04

- a) What do you understand by 'trio of Devis'? b) What is 'inversion of relief'? c) Differentiate Cuesta from Hogback. d) What do you understand by 'incised meander'?

3. Answer any four of the following: 6x4=24

- a) Elucidate geomorphic importance of various type of Weathering. b) Explain river capture through head ward erosion. c) Classify moraines with suitable diagrams. d) Discuss the formation of shoreline of emergence and shoreline of submergence with examples. e) Describe the formation of barchans and seif dunes. f) Illustrate the mode of formation of stalactites and stalagmites.

4. Answer any one of the following: 10x1=10

- a) Write an account on scope, content and development of geomorphology. b) Make a graphical presentation of Davisian model of normal cycle of erosion highlighting its basic postulate.

2014

Group-A

1) Answer any three from the following. **1x3=3**

a) Who propounded tidal hypothesis to the origin of the earth? b) What is Panthalasa? c) What is hanging wall? d) What do you understand by Graben? e) What is Isoclinal fold?

2) Answer any five of the following. **2X5=10**

a) State the basis of the nebular hypothesis of Kant. b) What do you understand by regional level of compensation? c) Distinguish between endogenetic and exogenesis force. d) What do you understand by eperiogenic movement? e) Differentiate between recumbent and overturned fold. f) What is meant by anticlinorium? g) Distinguish between Dip & strike. h) What is over thrust fault?

3. Answer any two of the following. **6x2=12**

a) Name the period with time span under the Palaeozoic era. b) Explain the basic assumption of the plate tectonic theory. c) What for isostasy related to the law of compensation not to law of flotation-Elucidate?

4. Answer any one of the following. **10x1=10**

a) Explain the evolution of earth reference to its life form in Pre-Cambrian, Palaeozoic, Mesozoic and Cainozoic era. b) Physically evaluate the concept of isostasy forwarded by Sir Airy.

Group-B

5. Answer any two of the following. **1x2=2**

a) What is salt weathering? b) What is endrumf? c) What is sand blasting? d) What is fjord?

6. Answer any two of the following. **2x2=4**

a) What do you understand by bad land topography? b) Differentiate between positive and negative changes in sea level. c) Classify delta on the basis of shape. d) Distinguish between stalactite and stalagmite.

7. Answer any four of the following: **6x4=24**

a) Explain the drainage pattern in the folded structure. b) Elucidate the concept of erosion after L.C.King. c) Highlight the critically the different model of cycle of erosion. d) Explain the development of glacio fluvial landform. e) Describe the landform produced by marine erosion. f) Highlight the essential condition for the development Karst topography.

8. Answer any one of the following: **10x1=10**

a) Describe the process of aeolian action and resulting landforms. b) Explain the type of chemical weathering and resulting landforms.

2013

Group-A

1) Answer any three from the following: **1x3=3**

a) What do you mean by level of compensation in isostasy? b) Define Pangaea? c) What is Paleozoic Era? d) Define isoclinal fold? e) What is meant by oblique slip fault?

2) Answer any six of the following: **2x6=12**

a) Briefly discuss the Nebular Hypothesis. b) State the difference between geological era and epoch. c) Briefly state the significant points of Airy's theory. d) Define plunge fold. e) Distinguish between plate boundary and plate margin. f) Differentiate epeirogenic from orogenic movements. g) What do you understand by nappe? h) What is black hole?

3. Answer any two of the following: **6x2=12**

a) Discuss the Planetesimal Hypothesis of the origin of the earth. b) Give a comparative account of the concepts of isostasy as put forward by Hayford and Vening Meinesz. c) Explain the evidences of the Continental Drift Theory.

4. Answer any one of the following: **10x1=10**

a) Give an account of the Geological Time Scale of the earth stressing upon the significant geological events. b) Elucidate the theory of plate tectonics with emphasis upon the mountain building.

Group-B

5. Answer any two of the following:

1x2=2

a) Define hogback. b) What is dart cracking? c) What do you mean by resequent river? d) What do you mean by drumlin? k

2. Answer any two of the following:

1x2=2

a) Differentiate hydration from hydrolysis. b) Explain briefly the development of alluvial fans. c) What is meant by pediplain? d) State the importance of long shore drift.

6. Answer any four of the following:

6x4=24

a) Trace the development of geomorphology as a subject. b) Explain the development of drainage systems on uniclinal structures. c) Explain the development of paired terraces with suitable diagrams. d) Describe the landform elucidated by wind deposition. e) Analyse the landforms developed due to marine erosion. f) Elucidate the cycle of erosion of Davis.

17. Answer any one of the following:

10x1=10

a) Discuss in detail the model of landform evolution as stated by Penck with suitable diagrams. b) Elucidate the development of landforms due to Karst process with suitable diagrams.

2012

1) Answer any four from the following.

1x4=4

a) What do you mean by Quaternary period in geological time scale? b) What is the drainage pattern in regions of faulted structure?

c) Who is the propounder of 'Continental Drift Theory'? d) What is the type of structure responsible for 'Inversion of relief'? e) Define 'plate margin'. f) What is river terrace?

2) Answer any six of the following.

2x6=12

a) What do you mean by 'Inselberg'? b) Explain hog back. c) Specify the formation of residual hills. d) Mention the effects of divergent plates. e) Explain the formation of playa lakes. f) Give Indian examples of aeolian landscape. g) What do you mean by young fold mountain? h) Elucidate the formation of spit. i) What do you understand by parallel retreat of slope? j) What do you know about the modern theory of origin of the earth?

3. Answer any three of the following:

6x3=18

a) Analyse the landforms of glacial erosion. b) Highlight the process of marine deposition. c) Describe with suitable sketches the superficial landforms produced by solution in karst environment. d) Analyse the landforms produced by solution in karst environment. d) Analyse the land forms associated with floodplains. e) Distinguish between the concept of airy and Pratt on isostasy.

4. Answer any three of the following:

10x3=30

a) Discuss the King's contribution in evolution of landforms with diagrams. b) Differentiate epeirogenic from orogenic movements with special reference to the fold and faults. c) Discuss the scope and content of geomorphology. d) Elaborate the influence of either lithology or structure on landforms. e) Describe the different processes of mechanical weathering under cold and dry climatic environments.

Soil Geography: 35 GROUP- A (2017) New Syllabus

1. Answer any three of the following: 1x3=3

a) Define Pedology. b) What is humus? c) Define soil air? d) Define pedon. e) What is wilting water?

2. Answer any five of the following: 1x5=5

a) What is solonchak? b) Define soil Ph c) Differentiate eluviation from illuviation. d) Why saline soil is alkaline in nature? e) What is laterisation? f) What is meant by the term histosols? g) State the characteristics of the 'B' horizon of soil. h) What are the basic characteristics of azonal soils?

3. Answer any two of the following: 6x2=12

a) Explain in processes of podzol soil formation. b) Illustrate the types of soil erosion common in the humid tropics. c) Outline the distribution of zonal soils.

4. Answer any one of the following:10x1=10

a) Elaborate different measures of soil conservation. b) Explain the effects of soil texture and soil structure on plant growth.

GROUP- B

(Biogeography:40)

5. Answer any two of the following:1x2=02

a) What is ecotone? b) What is ecosystem? c) Define habitat. d) What is energy pyramid?

6. Answer any two of the following:2x2=04

a) What is climax vegetation? b) What is species diversity? c) Define food web. d) Differentiate Biome from Biotope.

7. Answer any four of the following:6x4=24

a) Illustrate the flow of energy in a lake ecosystem. b) Outline the scope of Biogeography. c) Explain moisture as the controlling factor in the distribution of plant over the globe. d) Account for the life forms of tropical grassland. e) Elaborate the biogeographic characteristics of the tropical desert biome. f) Illustrate the mechanism of carbon cycle in the biosphere.

8. Answer any one of the following:10x1=10

a) Elaborate the needs for conservation of biodiversity. b) Diagrammatically represent the model of energy flow in ecosystem.

Soil Geography: 35 GROUP- A (2017) OLD SYLLABUS

1. Answer any three of the following: 1x3=3

a) Define soil. b) What is soil moisture? c) What do you mean by soil reaction? d) What is humus e) What is meant by soil horizon?

2. Answer any five of the following: 1x5=5

a) What is pH scale? b) What do you mean by base exchange? c) What is podzol hardpan? d) Distinguish between eluviation and illuviation. e) What is truncated profile? f) What do you mean by decalcification? g) Define ped. h) What do you mean by soil monolith?

3. Answer any two of the following: 6x2=12

a) Explain in brief the impact of soil acidity on plant growth. b) Highlight the characteristic of zonal soils. c) 'Rainfall is one of the major determining factor of soil erosion'-Justify the statement.

4. Answer any one of the following: 10x1=10

a) Briefly describe the physical properties of soil with necessary illustration. b) Discuss in brief the different methods of soil conservation.

GROUP- B

(Biogeography:40)

5. Answer any two of the following:1x2=02

a) What is energy flow? b) What is meant by 'food chain'? c) Define ecosystem. d) Define biome.

6. Answer any two of the following: 2x2=04

a) What is GPP? b) Define heterotrophs. c) What is energy pyramid? d) Name the major Temperate grassland.

7. Answer any four of the following: 6x4=24

a) Discuss in brief the signification of energy flow in ecosystem. b) Assess the ecological importance of tropical rainforest biome. c) Explain the role of decomposer in ecosystem. d) Explain the mechanism of

nitrogen cycle. e) Mention the type of plant species in boreal forest biome. f) Enumerate the basic characteristics of biosphere.

8. Answer any one of the following: 10x1=10

a) Discuss environmental characteristics of temperate grassland biome and mention the present day modification biome. b) Interpret the relationship between world distribution of temperature and precipitation and distribution of the world biome.

GROUP- A (2016)

Soil Geography: 35

1. Answer any three of the following: 1x3=03

a) Define regolith. b) What is ped? c) What is capillary action? d) What is manurization? e) What is solum?

2. Answer any five of the following: 1x5=5

a) Distinguish between humus and organic matter. b) What is soil porosity? c) Differentiate Soil horizon from Soil profile. d) What is hygroscopic water? e) What is field capacity? f) Mention two characters of 'O' horizon. g) Distinguish between cohesion and adhesion. h) What is Soil taxonomy?

3. Answer any two of the following: 6x2=12

a) State the factors responsible for development of intrazonal soils with specific example. b) Write the formation of soil catena. c) Explain the formation of laterite soil.

4. Answer any one of the following:

b) Analysis the factors soil erosion in humid tropics. b) Discuss the impact of Ph on plant growth.

GROUP- B (Biogeography, 40)

5. Answer any two of the following: 1x2=02

a) What is ecological niche? b) What is biomass? c) Define ecology. d) Define nutrient cycle.

6. Answer any two of the following: 2x2=04

a) What is invests species? b) What is ecological succession? c) Distinguish between autecology and synecology. d) What is tropic level?

7. Answer any four of the following: 6x4=24

a) Discuss the main characteristics of biosphere. b) Bring out the human influences on carbon and nitrogen cycle. c) State the nature of energy flow in Savana ecosystem. d) Explain the ecosystem homeostatic. e) Describe the major threats to the Amazon Rainforest Biome.

8. Answer any one of the following: 10x1=10

a) Discuss the landforms develop by glacial deposition. b) Explain the type of weathering and the resultant landforms.

GROUP- A (2015)

Soil Geography

1. Answer any three questions: 1x3=03

a) Define Soil. b) What is pedogenesis? c) What is soil air? d) What is humus? e) What is soil solution?

2. Answer any five questions: 1x5=05

a) What is transported soil? b) Differentiate eluviation from illuviation. c) What is salinization? d) In which climatic region does laterization take place? e) What is mull humus? f) Distinguish between soil texture and soil structure. g) What is wilting water? h) What is solonchak?

3. Answer any two questions: 6x2=12

a) Assess the role of vegetation in soil formation. b) Highlight the characteristics of azonal soils. c) Bring out the factors responsible for variation in soil colour.

4. Answer any one question: 1x10=10

- a) Establish the relationship between soil moisture and plant growth. b) Elaborate the measures suitable for conservation of soils in arid region.

GROUP – B

Biogeography

1. Answer any two questions: 1x2=02

- a) Define biosphere. b) What is ecotone? c) Define habitat. d) Define climax community.

2. Answer any two questions: 2x2=04

- a) Define biosphere. b) Differentiate food chain from food web. c) What is gross primary productivity? d) What is biomass pyramid?

3. Answer any four questions: 6x4=24

- a) Explain the mechanism of carbon cycle. b) Outline the characteristics of energy flow in a lake ecosystem. c) Highlight the significance of decomposers in ecosystem function. d) Illustrate the food web of estuarine ecosystem. e) Outline the location extant and life forms of the boreal forest biomes. f) Enumerate the basic characteristics of a community.

4. Answer any one question: 10x1=10

- a) Correlate the distribution of the world biomes with global distribution of precipitation. b) Outline the geographic extension of the tropical grassland biomes and explain their common tropic structure.

2014

GROUP-A (Soil Geography) 35 Marks

1. Answer any three of the following. 1x3=3

- a) What is solum? b) What do you understand by soil horizon? c) What is pedon? d) What is soil complex? e) What is soil reaction?

2. Answer any five of the following questions: 2x5=10

- a) Define residual soil. b) What do you understand by soil profile. c) Mention the significance of C horizon in soil. d) What do you mean by pH scale? e) Define soil structure. f) What is salinization? h) What do you mean by available soil water?

3. Answer any two of the following questions. 6x2=12

- a) Assess the importance of organic matter in soil. b) Distinguish between factors and processes of soil formation. c) Specify the chemical properties of soil.

4. Answer any one of the following question. 10x1=10

- a) Explain the types and factors of soil erosion active in humid tropics. b) Establish the relationship between soil texture and soil moisture.

GROUP-B (Biogeography) 40 Marks

5. Answer any two of the following questions. 1x2=2

- a) Define biogeography. b) What is primary productivity? c) Define biome. d) What is omnivore?

6. Answer any two of the following questions. 2x2=4

- a) What do you understand by ecological pyramid? b) What is tropic structure? c) Define net productivity. d) Define biogeochemical cycle.

7. Answer four of the following questions. 6x4=24

- a) Distinguish between population and community. b) Outline the structure and function of an ecosystem. c) 'Flow of energy in ecosystem is unidirectional but movement of material is cyclic' elucidate. d) Outline the mechanism of nitrogen cycle. e) Specify the distribution of major biomes of the world. f) Enumerate the importance of biosphere in the sustains of life.

8. Answer any one of the following questions. 10x1=10

a) Highlight the linkage between food web and food chain. Illustrate the pathways and characteristics of the detritus food chain'. b) Delineate the locational specificity and characteristics life forms of the tropical rainforest biome.

2013

GROUP-A (Soil geography) 35 marks

1. Answer any three of the following. 1x3=3

a) What is sheet erosion? b) Define soil taxonomy? c) What is soil texture? d) What is wilting point? e) What is pedalfer soil?

2. Answer any five of the following questions: 2x5=10

a) Define C: N ratio. b) State the significance of organic matter. b) What is B horizon called Zone of illuviation? d) What is soil reaction? e) Why is chernozem soil very fertile? f) What is intrazonal soil? h) What is humus?

3. Answer any two of the following questions. 6x2=12

a) Describe an ideal soil profile with diagram. b) Explain the measures of soil conservation. c) Explain the concept of azonal soil with example.

4. Answer any one of the following question. 10x1=10

a) Why is laterite called azonal soil. Illustrate its formation and development of profile. b) Discuss the physical properties of soil.

GROUP-B (Biogeography)

5. Answer any two of the following questions. 1x2=2

a) Define ecotone. b) What is food chain? C) What is biomass? d) What is food web?

6. Answer any two of the following questions. 2x2=4

a) Delimit the Boreal biome? b) What is carbon cycle? C) What is ecosystem? d) Distinguish between epiphyte and parasite.

7. Answer four of the following questions. 6x4=24

a) Why is nitrogen cycle called bio-geochemical cycle? b) What do you know about the concept of community in biogeography? c) 'Describe the tropical grassland biome. d) Describe the biotic characteristics of equatorial rainforest biome. e) Bring out the life forms of tropical desert biome. f) Describe the tropic structure with suitable examples.

8. Answer any one of the following questions. 10x1=10

a) Describe in detail the nature of biosphere. b) Discuss the flow of energy in the ecosystem with suitable illustrations.

2012

GROUP-A (Soil geography) 35 marks

1. Answer any three of the following. 1x3=3

a) Define soil profile. b) What is soil acidity? c) What is leaching?

GROUP-B

d) What do you mean by biome? e) Define biogeochemical cycle. f) What is ecosystem?

2. Answer any six of the following questions. 2x6=12

a) What is the importance of soil moisture? b) Define calcification. c) What is organic matter ? d) State the characteristics of 'A' horizon. e) What do you mean by hygroscopic moisture? f) Define tropic structure. h) Define the meaning of population in biogeography. i) What is unidirectional flow of energy in ecosystem? j) What is euphotic zone?

3. Answer any three of the following questions. 6x3=18

- a) Name three azonal soils and their principal characteristics. b) Give an account of the composition of soil. c) Distinguish between terrestrial and marine ecosystem. d) Illustrate desert ecosystem mentioning its principal characteristics. e) Explain food chain taking example from tropical grass land.

4. Answer any three of the following question. 10x3=30

- a) Describe a podsol profile and label its horizons and sub-horizon in a diagram. b) What do you mean by zonal soils? How do they differ from intrazonal soils. c) Describe the life forms of boreal biome. d) Discuss the process of laterisation. e) Elucidate biogeochemical cycle of carbon with a suitable diagram.

Climatology-2014

Group-A

Full Marks 50

1. Answer any two questions 1x2=2

- a). Define insolation. b) What is latent heat of condensation? c) What is meant by 'precipitation effectiveness'? d) What is Airmass?

B. Answer any five questions 2x5=10

- a) Define heat budget. b) What is Jet Stream? c) What is Coriolis force? d) What are the characteristics of Koppen's Aw climate? e) Why does a tropical cyclone tend to dissipate after its landfall? f) Differentiate dry adiabatic lapse rate from wet adiabatic lapse rate. g) State the two principal characteristics of the tropopause?

3. Answer any three questions from the following. 6x3=18

- a) Narrate the major factors affecting insolation.
b) Examine the role of jet streams in regulating lower atmospheric circulation.
c) Describe in brief the horizontal distribution of temperature with suitable diagram.
d) Elaborate the salient features of Indian monsoon.
e) Narrate the major forms of precipitation.

4. Answer any two questions 10x2=20

- a) Explain the thermal structure of different vertical structure of atmosphere.
b) Enumerate the origin and structure of a tropical cyclone.
c) Give an account on the Ice Crystal Theory of precipitation.
d) Critically examine the Koppen's scheme of classifying world climate.

Climatology-2013

Group-A

Full Marks 50

1. Answer any two questions 1x2=2

- a). Define Normal Lapse rate. b) What is solar constant? c) What is meant by Drizzle? d). What is dew point?

B. Answer any five questions 2x5=10

- a) Differentiate diffusion from scattering. b) What is adiabatic change of temperature? c) What is relative humidity? d) What is meant by atmospheric window? e) What is evapotranspiration? f) Mention any two characteristics of ITCZ? g) Define noctilucent cloud.

3. Answer any three questions from the following. 6x3=18

- a) Discuss the modification of air masses.
b) Describe the major characteristics of Typhoons.
c) Explain the mechanism of precipitation in a warm cloud.
d) Discuss the different form of condensation.
e) Explain the relationship between pressure gradient and wind direction

4. Answer any two questions 10x2=20

- a) Explain the relationship between pressure belts and planetary winds.
- b) Give a systematic classification of air masses and discuss the characteristics of polar air masses.
- c) Illustrate the origin and life cycle of temperate cyclones.
- d) Discuss the scheme of classifying world climatic types as devised by Thornthwaite.

Climatology-2012

Group-A

Full Marks 50

1. Answer any four questions 2x4=8

- a) What is albedo? b) What is inter-tropical convergence? c) What is MONEX? d). Distinguish between Scattering from reflection. e) What are the characteristics of an airmass. f) Define the term frontogenesis and frontolysis.

B. Answer any three questions 1x3=3

- a) Define latent heat of condensation. b) What is sublimation? c) What is warm front? d) Give an expression of mixing ratio?

3. Answer any two questions from the following. 10x2=20

- a) Discuss the structure of the atmosphere.
- b) Describe the scheme of classifying world climatic type as divided by Koppen.
- c) Explain the rain drop formation in a cloud.

4. Answer any two questions 6x2=12

- a) How does the earth sun relationship dominate insolation.
- b) Explain the phenomenon of sudden out bursting of Indian monsoon.
- c) Define Jet Streams. Mention the impact of Jet Streams on world climate.

Climatology-2011

Group-A

Full Marks 50

1. Answer any four questions 2x4=8

- a) What is Anabatic wind? b) Define Tropopause. c) Why do pilots prefer to fly through Stratosphere? d). Define thermal efficiency. e) What is heat engine? f) Distinguish between D and E climate.

B. Answer any three questions 1x3=3

- a) What is the significance of de Candolle vegetation map? b) What is meant by burst of monsoon? c) Who is the proponent of collision coalescence theory? d) By which name tropical cyclone is known in West Bengal?

3. Answer any two questions from the following. 10x2=20

- a) How is the heat budget of atmosphere maintained?
- b) Explain the origin of Indian monsoon under the influence of jet streams.
- c) Compare and contrast the mechanisms of tropical and mid-latitude cyclones.

4. Answer any two questions 6x2=12

- a) Distinguish between thermal efficiency and precipitation effectiveness.
- b) Discuss the salient features of the different atmospheric layers.
- c) Discuss the process and forms of condensation.

Hydrology 2012

Group-B

3. Answer any two of the following questions : 2x2=4

- a) How does porosity differ from permeability? b) What is perched ground water? c) What do you mean by pressure head and elevation head of ground water ? d) State the Darcy law.

4. Answer any two of the following questions: 1x1=1

a) What is the unit of measuring infiltration rate? b) At which temperature does hygroscopic moisture leave soil?

7. Answer any one of the following questions: 10x1=10

a) What are the necessities of hydrological knowledge in geographical studies?.

b) Describe the different modes of occurrence of ground water.

8. Answer any two of the following questions: 6x1=6

a) Explain the factors that regulate sub-surface water flow.

b) Describe the roles played by surface run-off.

Hydrology 2013

Group-B

5. Answer any three of the following questions : 1x3=3

a) Define percolation. b) What is an aquiclude? c) What is vadose water? d) What is meant by piezometric surface? e) Define hydraulic gradient.

6. Answer any three of the following questions: 2x3=6

a) Distinguish between surface runoff and sub-surface runoff. b) What is meant by confined aquifer belt? c) What is ground water table? d) What is meant by wilting point? e) Define hydraulic conductivity.

7. Answer any one of the following questions : 6x1=6

a) Describe the major factors affecting infiltration.

b) Discuss the nature of ground water storage.

8. Answer any one of the following questions : 10x1=10

a) Discuss the scope and content of Hydrology.

b) Elucidate hydrological cycle mentioning its impact on water balance.

Hydrology 2014

Group-B

5. Answer any three of the following questions : 1x3=3

a) Define hydrology .b) What is co-efficient of run-off? c) What do you understand by phreatic surface? d) What is equi-potential line? e) Define ground water.

6. Answer any three of the following questions: 2x3=6

a) What do you mean by base flow run-off? b) Define hydrological cycle.? c)Distinguish between conductivity flow and diffusivity flow of infiltrating water? d) What is an aquifer? e) Differentiate permeability from transitivity.

7. Answer any one of the following questions: 6x1=6

a) Examine the relevance of hydrology in water management.

b) Account for different modes of occurrence of water in surface and near-surface zones of terrestrial earth.

8. Answer any one of the following questions: 10x1=10

a) Explain the mechanisms of ground water movement and storage.

b) Explain surface run-off with reference to the major factors controlling it.

Paper V 2012 RS & GIS

1) Answer any three of the following questions: 1x3=3

a) What is fiducial mark?

b) What is launching date of Resourcesat-2 satellite?

c) Which sensor of an Indian polar orbiting satellite has the coarsest spatial resolution?

d) What is the full form of WiFS?

2) Answer any four of the following questions: 2x4=8

a) What is atmospheric window?

- b) What is meant by PRN code in GPS positioning?
 c) What are the uses of vector buffers?
 d) Which type of satellite data is most suitable for flood hazard mapping?
 e) What are the major advantages of GPS positioning over conventional surveying techniques?
 f) What type of GIS data you would generate to determine urban encroachment?
- 3) Answer any one of the following questions: 6x2=12
 a) Explain how elevation of terrain points can be determined from aerial photos by the principal of parallax.
 b) Explain the principals of image encroachment using histogram stretching.
 c) Discuss the roles of signature separability and signature statistics in accuracy assessment of image classification.
- 4) Answer any two of the following questions: 10x2=20
 a) Explain the principles of supervised classification of multispectral satellite images.
 b) Discuss the relative advantages and disadvantages of using (i) an IRS LISS-3 multispectral image and (ii) a standard aerial photograph of same scale in the extraction of geographical information.
 c) Justify any five chosen GIS layers to evaluate the environmental impact of a new road to be constructed through a forested mountainous area.

Oceanography

1. Answer any one of the following questions : 1 x 1 = 1
 a) What is the volume of ocean water?
 b) What is the area of ocean surface?
2. Answer any two of the following questions : 2 x 2 = 4
 a) How does salinity control the freezing of sea water?
 b) Distinguish between ocean current and ocean wave.
 c) What are zooxanthellae?
3. Answer any one of the following questions : 6 x 1 = 6
 a) Discuss the bottom topography of the Atlantic Ocean in the light of plate tectonics.
 b) Mention the characteristics of vertical distribution of ocean temperature.
4. Answer any one of the following questions : 10 x 1 = 10
 a) Critically examine the theories of origin of coral reefs.
 b) Examine the factors controlling salinity of sea water.

2014
GEOGRAPHY HONOURS – V - Paper

Oceanography

Marks: 25

1. Answer any three of the following questions : 1 x 3 = 3
 a) What is 'diatom ooze'?
 b) Define 'barrier reef'.
 c) What is 'rip current'?
 d) Define 'neap tide'.
 e) What is isohaline?
2. Answer any three of the following questions : 2 X 3 = 6
 a) Mention any two factors influencing the salinity of seas.

- b) How does convection of ocean water affect the distribution of temperature?
 - c) How does atmospheric circulation control ocean currents in the Atlantic Ocean?
 - d) Why the water of Dead Sea is denser than water of other seas?
 - e) What is coral reef?
 - f) What is T-S Diagram?
3. Answer any one of the following questions : 6 x 1 = 6
- a) Discuss in brief the scope of Oceanography.
 - b) Briefly explain the Stand still theory of Murray in relation to the origin of coral reefs.
4. Answer any one of the following questions : 10 x 1 = 10
- a) Describe in detail the salient characteristics of the bottom relief of Pacific Ocean with special reference to the East Pacific rise.
 - b) Explain the effects of North-East monsoon current and West wind drift on the Indian Ocean currents.

SOCIAL, CULTURAL & POLITICAL GEOGRAPHY (PAPER-VII) 2017

1. Answer any seven of the following question: 1x7=7

- a) Define the term 'community'. b) What is diffusion? c) Who is 'Marang Buru'? d) What is meant by dispersed settlement? e) Who propounded the Multiple Nuclei Theory? g) Name a matriarchal tribe. h) What is meant by CD block? I) Who are the Mahadalits?

2. Define any six of the following terms: 2x6=12

- a) Ethnic neighbourhood b) Social justice c) Conurbation d) Acculturation e) Cultural realm f) Ekistics g) Cultural realm h) Social Area

3. Answer any three of the following question: 7x3=21

- a) Explain the concept of social stratification in the realm of Social Geography. b) Elucidate the concept of Cultural hearth with reference to recent shifts. c) Comment on changes in the way of life of the Jaraws. d) Assess the role of culture in shaping regional identity with suitable examples. E) Highlight the fundamentals of the Heartland theory.

4. Answer any four of the following question: 10x4=40

- a) Discuss the scope and content of Cultural Geography. b) Describe the habitat, economy and society of Todas. C) Elucidate how a site-situation analysis explains the immediate and apparent causes for rural settlement growth. d) Attempt a genetic classification of boundaries. e) Critically evaluate the concentric Zone Theory with reference to its applicability. f) Give an idea of administration of Indian territory under federal structure.

ECONOMIC GEOGRAPHY -2017 (PAPER-VIII)

1. Answer any seven of the following question: 1x7=7

- a) What is agro-forestry? b) Define economic activity. C) What is interculture? D) Give an example of anadromous fish? E) What is 'foot -loose Industry? F) What is mixed farming? G) Define critical isodapane. h) What is dry farming? i) Name a commercial fishing ground of Southern hemisphere.

2. Answer any six of the following question: 2x6=12

- a) What is commercial fishing? B) What is 'Down Stream Industry ? C) What is meant by 'Briefcase Farming? D) What is meant by red colour worker? E) What is Selva? F) What do you mean by Quaternary sector of economy? G) Mention two disadvantages of shifting cultivation.? H) Differentiate the pelagic fish from demarsal fish.

3. Answer any three of the following question: 7x3=21

- a) Highlight the problems of commercial fishing in tropical region. b) Explain the market demarcation in relation to zero demand following theory of Losch. c) Differentiate extensive farming from intensive farming. d) Elucidate the objectives and importance of social forestry. e) Briefly account for the development of Iron and Steel industry in Japan.

4. Answer any four of the following question: 10x4=40

a) Describe the scope and content of Economic Geography. B) Explain the linkage between major sectors of economy with suitable examples. C) Account for the development of paper industry in Canada. D) Mention the name of major commercial fishing zones and highlight their problems. E) Critically evaluate the Losch's Theory of Industrial location. F) Bring out the emerging issues of Iron and Steel industry of Japan.

REGIONAL GEOGRAPHY -2017 (PAPER-IX)

1. Answer any seven of the following question: 1x7=7

a) Define planning Region. B) Mention two methods of delineation of functional region. C) What is MGNREGS? D) What is Nor Westers? E) What is micro level planning? F) Name two important rivers which flow through North Bengal; to join Brahmaputra.? g) Name two places in West Bengal where the bituminous coal is found. H) Name two cash crop for which West Bengal occupies leading position. i) Mention the major places of tourism attraction ok vale of Kashmir vale.

2. Answer any six of the following question: 2x6=12

a) Differentiate transportation from communication. B) Define cultural region. C) What is mean by Khoai? D) Mention the height and lowest populated districts of West Bengal according to 2011 Census. F) Name two SEZS IN West Bengal. G) Define Rarh'. H) Give two examples of interstate planning region in India.

3. Answer any three of the following question: 7x3=21

a) Briefly describe the Darjeeling Hill region as a physiographic region of West Bengal. b) Distinguish between formal and functional region with examples. c) Briefly elucidate the major soil types of West Bengal. D) Assess then major achievement and failure of KMDA. E) Briefly account for the variability of agricultural development of West Bengal.

4. Answer any four of the following question: 10x4=40

a) Bring out the salient characteristics of rivers of western plateau and Sunderban region of West Bengal. b) Discuss the regional identity of Assam valley region with reference to physiographic, soil and natural vegetation. Comment on the potentiality of tourism of this area. c) Explain the major factors for the concentration of jute industry in Gangetic West Bengal with its problems and prospect. d) Highlight the salient characteristics of major geological formations found in West Bengal. e) Briefly discuss about the major types of transport system of West Bengal and explain their comparative cost advantages. f) Critically analyze the growth, enlargement and function of National Capital Region as a planning region of India.

2016

SOCIAL, CULTURAL & POLITICAL GEOGRAPHY (PAPER-VII)

1. Answer any seven of the following question: 1x7=7

a) What is social Institution? b) What is Cultural Landscape? c)Name a festival of the Santhals? d)What is linear settlement? e) What is CBD? f)Give an example of Conurbation? g) Who propounded the Concentric Zone Theory? h)Who is considered as the Father of Political Geography? i) Give an example of Antecedent Political Boundary.

2. Define any six of the following terms: 2x6=12

a) Tribe b) Ghetto c) Megalopolis d) Cultural Heart e) Urban morphology f) Electoral Geography g) Frontier h) Clan

3. Answer any three of the following question: 7x3=21

a) Differentiate cultural Geography from social Geography. b) Highlight the salient feature of a matriarchal tribal society. c) Account for the economy of the Todas, d) Assess the relevance of Rimland theory. E) Elucidates the nature of administrative areas in Indian context.

4. Answer any four of the following question: 10x4=40

a) Discuss the scope and content of social geography. b) Describe the habitat, economy and society of Jarwas. C) Explain the spatial dimensions of class- caste conflicts affecting Indian society. d) Attempt a foundational classification on India's urban settlements. e) Critically evaluate the sector Theory with reference to its

applicability. f) Elucidate how the concept of Hearth land influenced the political Geography of the world in the first half of the 20th Century.

ECONOMIC GEOGRAPHY -2016 (PAPER-VIII)

1. Answer any seven of the following question: 1x7=7

a) What is aquaculture? B) What is crude oil? C) What is meant by White colour worker? D) What is SEZ? E) Define afforestation. F) What is Jhum? G) Give an example of Pelagic fish. h) What is subsistence farming? I) Define lumbering.

2. Answer any six of the following question: 2x6=12

a) What is meant by Domestication of plant. B) What is isodapane? C) Define social forestry. D) What is meant by nomadic herding? E) What is plantation? F) What is sedentary agriculture? G) What is truck farming? H) Differentiate Territory Sector from Quaternary Sector.

3. Answer any three of the following question: 7x3=21

a) Highlight the salient features of Mixed Farming. B) Discuss the assumptions made by von Thunen in his Landuse Model. C) State the significance of JFM. D) Differentiate the characteristics and utility between Tropical forest and temperate forest. E) Comment on the problems and prospects of the Haldia Petrochemical industry.

4. Answer any four of the following question: 10x4=40

a) Describe the scope and content of Economic Geography. B) Explain the linkage between major sectors of economy with suitable examples. C) Account for the development of paper industry in Canada. D) Mention the name of major commercial fishing zones and highlight their problems. E) Critically evaluate the Losch's Theory of Industrial location. F) Bring out the emerging issues of Iron and Steel industry of Japan.

REGIONAL GEOGRAPHY -2016 (PAPER-IX)

1. Answer any seven of the following question: 1x7=7

a) Define city Region. B) Delineate the Marusthali as a region. C) What is Macro region? D) Mention two indicators of regional imbalances. E) What is KMDA? F) What is multilevel Planning? g) Name the states of India which constitute national Capital Region. H) Name any one drainage basin western part of West Bengal. i) Mention the destiny of population of west Bengal according to Census 2011.

2. Answer any six of the following question: 2x6=12

a) Differentiate between Economic Region and planning Region. b) What are major types of nature vegetation found in West Bengal? c) Why DVC is considered as a planning region? D) What are the major objectives of regionalization? E) Give examples of two foot loose industries in West Bengal. f) What are the major minerals found in Chhotanagpur Plateau? g) Highlight two major geological formations found in West Bengal. h) Name two planning regions of Indian outside West Bengal.

3. Answer any three of the following question: 7x3=21

a) Briefly describe the climate Zones of West Bengal. b) Bring out the salient feature of Hooghly industrial region of west Bengal. c) What are the major approaches in Regional Planning? d) Explain the methods for delineating Formal regions. E) Assess the importance of forming of National Capital Region.

4. Answer any four of the following question: 10x4=40

a) Briefly discuss the regional identity of vale of Kashmir in terms of the physiography, soil and natural vegetation. B) Elucidate the techniques for delineating functional regions with examples. C) Present a critique of the performance of DVC in terms of its achievements and failures. D) Account for Regional Variation of population distribution in West Bengal and comment on role played by migration in this context. E) Give an outline of the major indicators of Regional imbalances in India. f) Examine the regional distribution of heavy industries in Chhotanagpur Plateau with reference to their locational factor.

2015

SOCIAL, CULTURAL & POLITICAL GEOGRAPHY (PAPER-VII)

1. Answer any seven of the following question: 1x7=7

a) Which tribes inhabit the Nilgiri hills? b) Define community? c) Which tribe has the matriarchal society? d) What is the smallest administrative unit in India? e) Name a mining town in eastern India f) What is the main occupation of Jarawa? g) Name an ancient settlement in Asia. h) Give two examples of cultural landscapes? i) Who first coined the term Megalopolis?

2. Define any six of the following terms: 2x6=12

a) Culture, b) Society, c) Habitat, d) Caste, e) C.B.D., f) Hierarchy, g) Metropolis, h) Primate City

3. Answer any three of the following questions: 7x3=21

a) Discuss the scope of cultural Geography. b) Distinguish between caste and tribe. c) Discuss the role of culture in the formation of society. d) Account for the boundary disputes of India with suitable examples. e) Discuss critically the Multiple Nuclei Theory of urban morphology.

4. Answer any four of the following questions: 10x4=40

a) Explain the relevance of political geography in the modern world. b) In what way are the Khasis a unique tribe? Discuss their life style, occupation and rituals. c) Discuss the salient features of cultural hearth. Differentiate cultural hearth from cultural realm. d) Classify rural settlements and give a brief account of each type with suitable examples. e) Discuss critically the concentric zone theory and comment on its applicability in India. f) What is the significance of boundaries and frontiers? How far are they relevant in resolving political unrest?

ECONOMIC GEOGRAPHY -2015 (PAPER-VIII)

1. Answer any seven of the following questions: 1x7=7

a) What is transhumance? b) What is kumari? c) What is oliculture? d) Define silviculture. e) What is meant by the term JFM? f) What is demersal fish? g) What is white collar work force? h) Define reforestation. i) What is monoculture?

2. Answer any six of the following questions: 2x6=12

a) Define economic geography. b) What is locational analysis in economic geography? c) What is special interaction in economic geography? d) Define mixed farming. e) Name two centres of iron and steel in Japan. f) Distinguish between gross value added materials and pure raw materials. g) Define secondary sector of economy. h) Give two examples of tertiary sector of economy.

3. Answer any three of the following questions: 7x3=21

a) Discuss the major characteristics of intensive subsistence agriculture. b) Highlight the geographical factors favourable for the development of commercial fishing in the North-east Atlantic region. c) Bring out the major objectives of social forestry. d) Mention Whittlesey's fivefold criteria comprising functioning forms of agriculture. e) Give an account of the favourable conditions for the development of paper industry in Canada.

4. Answer any four of the following questions: 10x4=40

a) Discuss the salient features of Mediterranean agriculture. b) Critically evaluate the industrial location theory postulated by Alfred Weber. c) Give an account of the growth and development of petrochemical industry in India. d) Bring out the emerging issues and trends of cotton textile industry in U.S.A. e) Explain the main factors responsible for large scale development of lumbering in temperate coniferous forests. f) Discuss the major characteristics of livestock rearing with suitable examples.

REGIONAL GEOGRAPHY -2015 (PAPER-IX)

1. Answer any seven of the following questions: 1x7=7

a) Define planning region? b) What is meant by regional disparity. c) Delineate Chotanagpur plateau? d) Where is Assam valley region situated? e) What is National Capital Region? f) What is local level planning? g) What is the full form of KMDA? h) Mention the total population of West Bengal according to the 2011 census. i) Define region.

2. Answer any six from the following questions: 2x6=12

a) Differentiate Formal region from Functional region. b) What are the major soil found in west Bengal? c) Distinguish between Macro Region and Micro region. d) Mention the two negative impact of DVC. E) Mention the objective of KMDA. F) What do you mean by basis of Regionalization? G) What are the main industries of Assam valley region? H) Define Hierarchy of region.

3. Answer any three from the following question: 7x3=21

a) Highlight the major indicators of Regional imbalances. B) Bring out the salient features of Marusthali both as a climatic and economic region. c) Describe in brief the concept of Regional Planning for rural development, d) Give a brief account of vegetation in West Bengal. e) Write a short note on economic resource of valley of Kashmir.

4. Answer any four from the following question: 10x4=40

a) Discuss the regional identity of Assam Valley Region in terms of physiography, soil and agriculture. B) Critically explain the nature and types of region. c) give a brief account of mineral resources and heavy industry in Chottonagpur plateau. D) Discuss the detail the problems and prospects of KMDA in West Bengal. e) Discuss the salient features of Micro level regional planning in India with example. F) Highlight the examples the impact of relief and drainage on Regionalisation in west Bengal.

2014

SOCIAL, CULTURAL & POLITICAL GEOGRAPHY (PAPER-VII)

1. Answer any seven of the following question: 1x7=7

a) Which tribes inhabit the Andaman Islands? b) Who is the profounder of Sector theory ? c) Which tribe has the patriarchal society ? d) Name the highest administrative unit in India. e) Name a pilgrim centre in Uttarakhand. f) What is the leader of the Santhal tribe called? g) Name the principle cultural hearth in Asia. h) What is the stipulated population of a mega city? i) Who first used the term Primate city?

2. Define any six of the following terms: 2x6=12

a) Primitive society, b) Community, c) Rural settlement, d) Tribe e) Zone of transition ,f) Decentralization g) Conurbation h) Boundary.

3. Answer any three of the following question: 7x3=21

a) Discuss the content of Social Geography. b) Distinguished between class and caste with example. c) Discuss the role of society in Cultural Development. d) Denote the relevance of Frontiers in the security of o nation. e) Examine critically the concentric zone theory of urban morphology.

4. Answer any four of the following question: 10x4=40

a) Why cultural geography is a significant branch of Human geography? Discuss. b) How the Todas are different from the other tribe of south India? Discuss with reference to their habitat, economy and society. c) Elaborate the concepts of cultural realms and discuss their salient features. d) Attempt a functional classification of urban settlements citing examples from India. e) Discuss critically the Multiple Nuclei Theory. How far is the theory applicable in Indian scenario? f) Discuss the theories of Heartland and Rimland. How far are they relevant in the present of globalization?

ECONOMIC GEOGRAPHY -2014 (PAPER-VIII)

1. Answer any seven of the following question: 1x7=7

a) What is agroforestry? b) Define 'economic sector'. c) What are sacred groves? d) What is the full form of GAIL? e) What is horticulture? f) Define nomadic herding. g) What is pelagic fish? h) What is pure raw material? i) What is primitive gathering?

2. Answer any six of the following question: 2x6=12

a) What is social forestry? b) Distinguish between afforestation and reforestation. c) What is livestock farming? d) What is meant by 'critical isodapane' ? e) What is economic rent? f) What is plantation agriculture ? g) Define tertiary sector of agriculture ? h) Name two centres of petrochemical industry in India.

3. Answer any three of the following question : 7x3=21

a) Out line the principle of forest management. b) Discuss the salient features of sifting cultivation with special reference to North-East India. c) Bring out the changing concept of economic geography in the era of globalisation. d) Give an account of the world distribution of commercial dairy farming. e) Discuss the major drawbacks for the development of commercial fishing in tropical oceans.

4. **Answer any four of the following question:** 10x4=40

a) Critically analyse Von-Thunen's Model with suitable diagrams. b) Discuss the industrial location theory postulated by Losch. c) Give an account of the growth and development of cotton textile industry in USA. d) Explain the factors favourable for the development of iron and steel industry in Japan. e) Differentiate intensive subsistence farming from extensive commercial farming. f) Explain the favourable conditions for the location of commercial fishing in the North-West Atlantic region.

REGIONAL GEOGRAPHY -2014 (PAPER-IX)

1. **Answer any seven of the following question :** 1x7=7

a) What is region? b) Define functional region. c) Where is Marusthali situated? d) Name two industries found in the Chottanagpur plateau. e) What do you mean by doon ? f) What is city region ? g) Define regionalisation. h) What type of vegetation is mainly found in Sundarbans ? i) Define macro region.

2. **Answer any six from the following question :** 2x6=12

a) Mention any two characteristics of formal region. b) Delimit Chottonagpur region. c) What is macro region? d) What do you mean by regional imbalance? e) Mention the objects of DVC. f) Specify areal coverage of KMDA region. g) What is protected forest? h) What do you mean by sun-shine industry?

3. **Answer any three from the following question:** 7x3=21

a) Describe the methods of delineation of physical region. b) Account for the factors favourable for tourism industry in the vale of Kashmir. c) Critically explain the concept of national capital region with reference to India. d) Highlight the salient features of regional disparities in India e) Discuss in detail the problems and prospects of DVC of India.

4. **Answer any four from the following question :** 10x4=40

a) Give a detailed regional account of Assam valley. b) Discuss the salient features of evolution of regional planning in India. c) Account for the regional disparities in India. d) Discuss the concept of planning regions of India with example. e) Bring out the relationship between soil and agriculture in west Bengal. illustrate your answer with suitable diagrams. f) Divide west Bengal into climatic regions and discuss their characteristics

SOCIAL, CULTURAL & POLITICAL GEOGRAPHY- 2013 (PAPER-VII)

1. **Answer any seven of the following question:** 1x7=7

a) Locate the habitat of Toda tribe. b) Who propounded the Multiple Nuclei theory? c) Which tribe is famous for ancestral worship? d) Name the smallest administrative unit in India. e) Which tribe is matriarchal? f) What is pivot area ? g) Give an example of port town in India. h) Who has used first term connurbation? i) Name a country belonging to the "Dry Realm".

2. **Define any six of the following:** 2x6=12

a) Cultural realm, b) Habitat, c) Morphology of towns ,d) Site ,e) Urbanisation ,f) C.B.D ,g) Society ,h) Metropolis

3. **Answer any three of the following question:** 7x3=21

a) Discuss the scope of Cultural Geography. b) Distinguish between Caste and Tribe. c) Discuss the role of community participation in a society. d) Comment on the nature of administrative areas in India. e) Make a critical appreciation of sector theory.

4. **Answer any four of the following question:** 10x4=40

a) Discuss the scope and content of Social Geography. b) How do the Santhal maintain their identity? Discuss with reference to their rituals and the way of life. c) Account for the origin of different cultural hearths and describe the salient features of one of them. d) Attempt a genetic classification of urban settlement with example. e) Discuss critically the concentric zone theory and comment on its applicability in India. f) Discuss with examples the importance and relevance of boundaries and frontiers in India.

ECONOMIC GEOGRAPHY -2013(PAPER-VIII)

1. **Answer any seven from the following question:** $1 \times 7 = 7$

a) Define quaternary sector of economy. b) Give two examples of impure raw materials. c) What is silviculture? d) Name two flow resources. e) What is the full form of JFM? f) Name two heavy industries. g) Mention two areas of cotton textile industry in USA. h) Name two iron and steel plants in Japan. i) What is 'Grand bank'?

2. **Answer any six from the following:** $2 \times 6 = 12$

a) What is a ubiquitous raw material? b) Define aquaculture. c) Name two commercial plants species of temperate deciduous forest. d) What is sifting cultivation? e) Define light industry. f) What is sustainable development? g) What is extensive farming? h) Mention two important characteristics of dry farming.

3. **Answer any three from the following question:** $7 \times 3 = 21$

a) 'Development of secondary sector is necessary for the economic growth of a country'-comment on the statement. b) Enumerate the salient features of lumbering in temperate forest. c) Explain critically the role of transport cost as the powerful determinant of location of industries. d) Outline the unique characteristics of Mediterranean agriculture. e) State briefly the causes for the development of commercial fishing in the temperate region.

4. **Answer any four from the following question:** $10 \times 4 = 40$

a) Account for the recent trend of scope and content of Economic Geography. b) Enumerate the features of extensive commercial grain farming stating the areas of concentration on maps. c) Discuss the growth and development of petrochemical industries in India. d) Explain the reasons behind the development of paper industry in Canada. Also highlight its distribution. e) Classify agriculture regions after Whittlesey. Mention the basis of classification. f) State the causes and consequences of deforestation.

REGIONAL GEOGRAPHY -2013 (PAPER-IX)

1. **Answer any seven from the following question:** $1 \times 7 = 7$

a) Define nodal region. b) What do you mean by National Capital Region ? c) What is micro region ? d) Specify planning region with example. e) Point out the freight corridor of West Bengal. f) Delineate Vale of Kashmir. g) What is Integrated Rural development? h) Mention the most important river of Marusthali. i) Why Chhotonagpur Region is called the storehouse of Mineral Resources in India?

2. **Answer any six from the following :** $2 \times 6 = 12$

a) Differentiate functional region from planning region. b) Give regions for Assam backwardness. c) Explain the connotation of the term 'Maruasthali'. d) What is local level planning? e) How and when KMDA came into being? f) Specify areal coverage of DVC region. g) Identify the Terai and Barind tracts of West Bengal. h) Highlight the importance of Haldia Port.

3. **Answer any three from the following question :** $7 \times 3 = 21$

a) Bring out the major indicators of regional imbalance. b) Account for the factors favourable for the tea plantation in Assam Valley. c) Highlight the salient features of rural-urban fringe with reference to KMDA. d) Give a short resume of vegetation in Southern West Bengal. e) Divide India into macro regions on the basis of physiography.

4. **Answer any four from the following question:** $10 \times 4 = 40$

a) Elucidate the planning perspectives of National Capital Region in brief. b) Bring out the regional individualities of Marusthali and mention the problems and prospects of the region. c) Establish a relationship among drainage, climate and soil in West Bengal. d) Discuss the major transportation problem in West Bengal and comment on prosperity of inland water ways. e) Bring out the characteristic features of Kashmir Valley Region. f) Identify the significance of communication and trace out the development of communication in West Bengal.

2012

SOCIAL , CULTURAL & POLITICAL GEOGRAPHY PAPER-VII

1. Answer any seven of the following question : 1X7=7

a) Mention the location of the habitat of Santhal tribe. b) Name the theory propounded by H. Hoyt. c) Mention the dominant occupation of the Todas. d) Name the smallest administrative unit in India. e) Give the example of a matriarchal tribe in India. f) Which zone identified as the commuter's zone in Burgess's Model ? g) Name any one eminent scholar who attempted the functional classification of towns in India. h) Name any two countries belonging to the Oriental Realm. i) Why is Mackinder famous for ?

2. Define any five of the following : 2x6=12

a) Class, b) Social group c) Heartland d) Boundary e) Community participation f) Frontier g) Urban.

3. Answer any three of the following question : 7x3=21

a) Mention the silent features of political geography. b) Distinguish between the site and situation of rural settlements. c) Explain the relationship between land ownership and class division in rural society of India. d) Give an outline of the structure of administrative areas in India. e) Make a critical appreciation of multiple nuclei model.

4. Answer any three of the following question : 10x3=40

a) How does caste segregation influence rural settlement patterns in India. b) Attempt a functional classification of settlement with examples. c) With reference to the Khasi tribe , discuss the tribal way of life in India. d) Discuss the Rimland theory with comments on its present relevance. e) Discuss the factors responsible for genesis of cultural areas.

ECONOMIC GEOGRAPHY-2012 (PAPER-VIII FULL MARKS-80

1. Answer any seven of the following question : 1x7=7

a) What is interculture ? b) What is agroforestry ? c) Give two examples of pure raw materials. d) Define tertiary sector of economy. e) What is economic rent? f) Define anadromous fish? g) Name two HYV paddy. h) What is CHIPKO? i) What is alloy-steel?

2. Answer any five of the following question : 2x6=12

a) Elaborate the term crop rotation. b) What is subsistence agriculture? c) What is 'isotim'? d) Identify the cropping pattern of Mediterranean agriculture. e) Classify types of plants found in tropical rainforest. f) Identify the causes of intensive crop cultivation in the region of intensive subsistence farming. g) Distinguish between primary and secondary activities with suitable example.

3. Answer any three of the following question : 7x3=21

a) 'Economic Geography in the study of resources'. justify the statement. b) Bring out the salient features of plantation agriculture. c) Critically evaluate the assumptions and criticisms of Weber's theory of industrial location. d) Outline the objective of social forestry. e) State the locational advantages of iron and steel industries in Japan.

4. Answer any three of the following question : 10x4=40

a) Critically analyse Profit Maximization theory of A. Losch. b) How far Von Thunen's model of land use is appropriate in the present context? give your views. c) Account for concentration of commercial fishing in temperate region. d) Explain the growth and development of cotton textile industry in USA with special

reference to its present trends. e) State the economic important of temperate evergreen forest with reference to its management perspectives.

REGIONAL GEOGRAPHY-2012 (PAPER-IX) FULL MARKS -80

1. Answer any seven of the following question :1x7=7

a) Define region . b) Name any two snow fed rivers of West Bengal .c) How is marusthali delineated ?e) Define planning region . f) What is karewas ? g) Which part of India belongs to NCR ? h) Why Duars is named so? i) Name any one biosphere reserve in West Bengal .

2. Define any five of the following :2x6=12

a) Highlight any two indicators of regional imbalance . b) Why is Chhotonagpur plateau enriched in with mineral resources ? c) Define micro region with example . d) Differentiate regional planning from regional imbalances . e) Why DVC is known as planning region ? f) Identify any two climatic differences in western and eastern West Bengal .g) Why is tea the chief crops in Assam valley ?

3. Answer any three of the following question :7x3=21

a) Discuss the methods of regional delineation. b) Examine the characteristics physical features of vale of Kashmir. c) Identify the problems associated with agricultural activities in Marusthali. D) Differentiate between formal and functional regions with suitable examples. e) Establish the relationship between climate and vegetation in different part of West Bengal.

4. Answer any three of the following question : 10x3=30

a) Identify the characteristic features of Damodar Valley Region .b) Account for the disparities in population district of West Bengal .c) Identify the major industries of West Bengal and analyse the locational characteristics of the agro-based industries. d) Bring out the salient features of economy in the Assam Valley Region. e) Give a brief account of development planning in KMDA region.