

Entrance Test for

00464

Ph.D. (GEOGRAPHY) Programme - 2016

Time : 3 hours

Maximum Marks : 100

Note :

1. *The question paper consists of two sections. Section A covers questions related to the subject of Geography whereas Section B covers questions related to research methods.*
 2. *Each section has two parts. Part A consists of 25 questions which are compulsory and Part B consists of 10 Short Questions. Answer any five out of 10.*
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SECTION - A
GEOGRAPHY
PART - A

Note : All questions are compulsory. Each question carries one mark.

25x1=25

1. Which one of the following is the correct chronological order of mountain building ?

- (1) Pre-cambrian - Caledonian - Hercynian - Alpine
- (2) Pre-cambrian - Hercynian - Caledonian - Alpine
- (3) Alpine - Pre-cambrian - Hercynian - Caledonian
- (4) Alpine - Caledonian - Pre-cambrian - Hercynian

2. Consider the following statements :

- (i) Spring tide is caused when the sun, the moon, and the earth are almost in the same line.
- (ii) Neap tides are caused at the time of Syzygy.
- (iii) The height of the neap tide is generally 20% lower than the normal tide.
- (iv) The position of conjunction and opposition take place during the new moon and full moon respectively.

Which of the statements given above is/are correct ?

- (1) (i), (ii), (iii) and (iv)
- (2) (i), (iii) and (iv)
- (3) (ii), (iii) and (iv)
- (4) (i) only

3. Match the following :

- | | |
|----------------|------------------------------------|
| (a) Isoneph | (i) Equal rainfall |
| (b) Isohel | (ii) Equal degree of wind velocity |
| (c) Isokinetic | (iii) Equal sunshine |
| (d) Isohyte | (iv) Equal cloudiness |

(a) (b) (c) (d)

- (1) (iv) (iii) (ii) (i)
- (2) (iv) (ii) (iii) (i)
- (3) (iii) (iv) (i) (ii)
- (4) (iii) (i) (ii) (iv)

4. Match the following concepts and their propounders :

- | | |
|---------------------------|--------------------------|
| (a) Probabilism | (i) Taylor |
| (b) Possibilism | (ii) Spate |
| (c) Pragmatic Possibilism | (iii) Vidal de la Blache |
| (d) Neo-Determinism | (iv) Tatham |

(a) (b) (c) (d)

- (1) (i) (ii) (iii) (iv)
- (2) (ii) (iv) (i) (iii)
- (3) (iii) (i) (ii) (iv)
- (4) (ii) (iii) (i) (iv)

5. "Most migrants travel short distances and that with increasing distance the numbers of migrants decrease." Who gave this statement ?

- (1) Ravenstein (2) Zelinsky (3) G.K. Zipf (4) Lee

6. Which one of the following substances has the highest albedo ?

- (1) Calm water (2) Fresh snow
(3) Glacier ice (4) Old compact snow

7. Some ports are situated at a junction with other sea borne routes. Which one of the following port does not belong to this category ?

- (1) Port Said (2) London Port
(3) Port at the Head of Suez Canal (4) Singapore

8. Consider the following statements :

- (i) Tsunami is an ocean wave produce by the event at the sea, like earthquakes, landslide or volcanic eruption.
(ii) Tsunami is also known as tidal waves.
(iii) A Tsunami is not a single wave but a series of waves generated by the geological changes near or below the ocean floor.

Which of the statements given above is/are correct ?

- (1) (i), (ii) and (iii) (2) (i) and (ii)
(3) (i) and (iii) (4) (i) only

9. Match the following :

- (a) $K = 3$ (i) Administrative Principle
(b) $K = 4$ (ii) Marketing Principle
(c) $K = 7$ (iii) Transport Principle

(a) (b) (c)

- (1) (iii) (i) (ii)
(2) (ii) (iii) (i)
(3) (i) (ii) (iii)
(4) (iii) (ii) (i)

10. Which one of the following is a 'positive checks' according to Malthus ?

- (1) Adultery (2) Moral restraint
(3) Poverty (4) Abortion

11. Local disturbances during the summer season is known by different names in different parts of the country. Which one of the following pair is **not** correct ?
- (1) Andhi - Uttar Pradesh
 (2) Kal Baisakhi - West Bengal
 (3) Loo - North Western India
 (4) Mango Showers - Odisha
12. Loxodrome is related to :
- (1) Bonnes' Projection
 (2) Mercator Projection
 (3) Mollweidde Projection
 (4) Cylindrical Equal Area Projection
13. On a map which among the following scales is considered to be the large one ?
- (1) 1 : 200, 000 (2) 1 : 500, 000
 (3) 1 : 100, 000 (4) 1 : 10, 000
14. During the rainy season, particularly, in July and August, there are Breaks in the Monsoon due to :
- (1) Formation in Tibetan High Pressure
 (2) Collapse in Tibetan High Pressure
 (3) Weakness in ITCZ belt
 (4) Formation of Australian cold current
15. When the overturning of fold has gone on to such an extent that there is no symmetry at all, the plane of the axis forms a flat angle and one side of the lies parallel over the other. This is called :
- (1) Over-Fold (2) Recumbent Fold
 (3) Asymmetrical Fold (4) One Limb Vertical Fold
16. Consider the following statements :
- (i) Primary waves also called as longitudinal waves.
 (ii) Secondary waves are also called transverse waves.
 (iii) The surface waves cover the longest distances of all the seismic waves.
 (iv) L waves moves faster than S waves and these are the most violent and destructive.
- Which of the statements given above is/are **not** correct ?
- (1) (i), (ii), (iii) and (iv) (2) (ii) and (iii)
 (3) (iv) only (4) (iii) only

17. The difference between joints and fault is :
- (1) A fracture in crustal rocks, when there is no movement whereas in fault there is a fracture and displacement due to the tensional movement.
 - (2) Both are formed due to tensional forces but fault have both compressive and tensional movements
 - (3) Warping in anticlines and synclines causes fractures which ultimately lead to fault whereas this does not occur in the joint formation process
 - (4) There is not much difference between the two

18. Which one of the following is **not** true as far as comparisons between Davis and Penck's concept on Cycle of Erosion is concerned ?
- (1) According to Davis erosion does not occur in the first stage whereas according to Penck erosion goes on in all the stages.
 - (2) According to Davis landscape is the contribution of geographical cycle whereas according to Penck landscape is the result of polygenetic process.
 - (3) Davis gave importance to geological basis in his concept on cycle of erosion whereas Penck did not give importance to geological basis in his concept of cycle of erosion.
 - (4) Davisian cycle of erosion consists of three stages whereas Pencks cycle of erosion consists of five stages.

19. Consider the following statements :
- (i) It occurs daily in the afternoon in the equatorial region.
 - (ii) It is accompanied by cloud thunder and lightning.
 - (iii) Convective rainfall in hot deserts is not regular but is irregular and sudden.
 - (iv) There is no convective rainfall in the temperate region.

Which of the statements given above is/are correct about Convectonal rainfall ?

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|-------------------------------|-------------------------|
| (1) (i), (ii), (iii) and (iv) | (2) (i), (ii) and (iii) |
| (3) (ii) and (iii) | (4) (i) only |

20. Which one of the following is **not** matched correctly ?

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|-------------------|---|------------------------|
| (1) Fringing Reef | : | Gulf of Mannar |
| (2) Barrier Reef | : | The Great Barrier Reef |
| (3) Atoll | : | Hawaiian Islands |
| (4) Coral Islands | : | Funfuti |

21. What is isodapane ?
- (1) A line joining places of an equal journey time to the same location.
 - (2) A line drawn about a source of raw material or a market where transport costs are equal.
 - (3) A line joining up places of equal transport cost for industrial production and delivery between the points where the raw materials are located and the markets.
 - (4) (1) and (2)
22. According to Von Thune's model, Zone II represents : World Agriculture :
- (1) Livestock farming
 - (2) Market gardening and milk production
 - (3) Crop farming
 - (4) Firewood and lumber production
23. Assertion (A) : India has crossed one billion marks in population size in 2001 Census.
- Reason (R) : A large number of populations in India are illiterate.
- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
 - (2) Both (A) and (R) are true and (R) is not the correct explanation of (A)
 - (3) (A) is true but (R) is false
 - (4) (A) is false but (R) is true
24. According to Zimmerman, as long as resources are not exploited, these are in the form of :
- | | |
|-------------------|---------------|
| (1) Neutral stuff | (2) Static |
| (3) Liability | (4) Potential |
25. The concept of crop combination region was enunciated by :
- | | |
|--------------------|-----------------|
| (1) L.D. Stamp | (2) Von Thunen |
| (3) D. Whittlessey | (4) J.C. Weaver |

PART - B

Note : Answer any five. Each question carries five marks.

5x5=25

1. Critically explain man-environment relationship.
2. Elaborate Quantitative Revolution in Geography.
3. Explain major physiographic divisions of India.

4. Explain the major industrial regions of India in relation to the natural resource base.
5. Concept and types of regions and methods of regionalization.
6. Explain the theory of cycle of erosion with reference to W.M. Davis and W. Penck.
7. What do you understand by continental drift ?
8. Explain the mechanism of Indian Monsoons.
9. Explain global warming and human ecosystem.
10. Explain the hydrological cycle.

SECTION - B
RESEARCH METHOD
PART - A

Note : All questions are compulsory. Each question carries one mark.

25x1=25

1. When a frequency curve has two peaks, it is known as :
(1) Multimodal (2) Bimodal (3) Modal (4) Unimodal
2. The relationship between Mean, Median and Mode is generally calculated by :
(1) $\text{Mode} = \text{Mean} \pm 2(\text{Mean} - \text{Median})$
(2) $\text{Mode} = \text{Mean} \pm 4(\text{Mean} - \text{Median})$
(3) $\text{Mode} = \text{Mean} \pm 3(\text{Mean} - \text{Median})$
(4) $\text{Mode} = \text{Mean} \pm (\text{Mean} - \text{Median})$
3. Which one of the following is a relative measure of dispersion ?
(1) Mean deviation (2) Standard Deviation
(3) Variance (4) Coefficient of Variation
4. What type of correlation it depicts when the value is Zero ?
(1) Perfectly positively correlated (2) Perfectly negatively correlated
(3) No correlation (4) Weaker correlation

5. The mean of 200 values of an item is 50. Later on it was found that two values were misread as 50 and 10 instead of 150 and 110. What is the **correct** mean value ?
(1) 51 (2) 50 (3) 60 (4) 61
6. Which one of the following scale has a true zero ?
(1) Nominal (2) Ordinal (3) Interval (4) Ratio
7. Which one of the following is a secondary data ?
(1) Household survey conducted by a researcher
(2) Focussed group discussion
(3) Data collected from published and unpublished government records
(4) Telephonic interview
8. Which one of the following is not a characteristic of normal curve ?
(1) The normal curve is bell shaped
(2) Bimodal in appearance
(3) It is symmetrical about its centre and mean occupies the centre
(4) Its measures of central tendencies are identical so that mean, median and mode coincide
9. Which one of the sampling method is best suited when the population is composed of varied observation ?
(1) Cluster sampling (2) Systematic sampling
(3) Random Sampling (4) Stratified random sampling
10. Which one of the following is not a measure of inequality ?
(1) Lorenz Curve (2) Gini's Coefficient
(3) Index of dissimilarity (4) Nearest Neighbour Analysis
11. The father of GIS is :
(1) MF Goodchilde (2) Roger Tomlinson
(3) Jack Dangermond (4) Peter Burrough
12. Resolution of LISS IV data is :
(1) 23.5 meters (2) 76 meters (3) 5.6 meters (4) 1 meter
13. Minimum number of Satellites required for GPS is :
(1) One (2) Two (3) Three (4) Four

14. Scientists often come to understand phenomena through a process of insight, inferential processes that seems to leap from observations to explanatory conclusions with no conscious systematic reasoning plan. This form of reasoning is sometimes called :

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|---------------|-----------------------|
| (1) Inductive | (2) Deductive |
| (3) Abductive | (4) None of the above |

15. Empirical research is not :

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|----------------------|---------------------|
| (1) Purely narrative | (2) Field based |
| (3) Literature based | (4) Interview based |

16. Grid sampling is not used for :

- | | |
|----------------------|-----------------------|
| (1) Household survey | (2) Physical survey |
| (3) Employees survey | (4) Vegetation survey |

17. Nearest Neighbour Analysis is done for :

- (1) Hierarchical spacing of urban centres
- (2) Distribution of settlements
- (3) Interaction of urban centres
- (4) Migration pattern

18. Which one of the following is not an assumption behind qualitative mode of enquiry ?

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|-------------------------------------|--|
| (1) Reality is socially constructed | (2) Primacy of subject matter |
| (3) Insider's point of view | (4) Variables can be identified and measured |

19. Consider the following statements related to approaches of quantitative modes of enquiry :

- (i) Begins with hypotheses and theories
- (ii) Seeks pluralism and complexity
- (iii) Reduces data to numerical indices
- (iv) Abstract language in write-up

Which of the statements given above is/are correct ?

- | | |
|-------------------------------|-------------------------|
| (1) (i), (ii), (iii) and (iv) | (2) (i), (iii) and (iv) |
| (3) (ii), (iii) and (iv) | (4) (i) only |

20. Vector Data is :
- (1) Continuous (2) Discrete (3) Cellular (4) Simpler
21. A simplified representation of a portion of reality expressed in conceptual, physical, graphical or computational form is known as :
- (1) Theory (2) Model (3) Hypotheses (4) Variables
22. A self conscious scrutiny of oneself as a researcher is known as :
- (1) Introspection (2) Activism
(3) Reflexivity (4) Self Assessment
23. Which one of the following is not a purposive sampling ?
- (1) Snow ball sampling (2) Criterion sampling
(3) Convenience sampling (4) Systematic sampling
24. The philosophical approach to scientific knowledge known as positivism was founded by :
- (1) Auguste Comte (2) Karl Popper
(3) Isaac Newton (4) Thomas Kuhn
25. A research situation in which informations are in a position of influence relative to the researcher is known as :
- (1) Potentially exploitative power relation
(2) Asymmetrical power relation
(3) Reciprocal power relation
(4) Vary in different context and situation

PART - B

Note : Answer any five. Each question carries five marks.

5x5=25

1. What are different types of scales for data measurement ? Explain with suitable examples.
2. Explain the importance and types of sampling techniques.
3. What is Geographical Information System ? Explain the components of GIS.

4. Explain the applications of Remote Sensing, GIS and GPS in Geography.
5. Explain various data types and data source.
6. Explain the measurement techniques of regional disparity.
7. Explain in brief various techniques of data representation.
8. Describe in brief tools of data collection.
9. Elaborate various kinds map scales with their merits and demerits.
10. Explain map as a tool for geographical research with various types of maps.

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