# 2021

## GEOGRAPHY — HONOURS

### Paper : CC-2

### (Cartographic Techniques)

### Full Marks : 50

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words
as far as practicable.*

**[Use of Calculator allowed.]**

### Category - A

Answer ***any five*** questions (each within **50** words). 2×5

1. Define Vernier Constant.

2. What do you mean by a developable surface in map projection?

3. Why are graphical scales in a map necessary?

4. Frame a statement scale in metric system when the given Representative Fraction is 1 : 5,00,000.

5. What are Cadastral maps?

6. Given points $P(x_1, y_1)$ and $Q(x_2, y_2)$. Find the distance $PQ$ using an explanatory diagram.

7. Show with the help of a diagram how co-ordinate signs are positive (+) and negative (–) in the four quadrants.

### Category - B

Answer ***any four*** questions (each within **150** words). 5×4

8. Why is a diagonal scale considered to be more accurate than a plain graphical scale?

9. What are the properties of UTM projection?

10. What do you understand by the term orthomorphism? Name a cylindrical and a zenithal projection where this property is maintained.

11. What is a standard parallel? How is it selected?

**Please Turn Over**

**12.** Convert the following Whole Circle Bearings into Reduced Quadrantal bearings :

(a) 267°42′

(b) 87°18′

(c) 326°25′

(d) 100°42′.

**13.** Distinguish between Azimuth and Magnetic bearings with suitable examples.

### Category - C

Answer *any two* questions (each within **500** words).

**14.** What is Loxodrome? What is the utility of the Equatorial scale in the Mercator's projection? Point out the major advantages and disadvantages of Mercator's projection.                2+4+4

**15.** Explain with the help of diagrams the differences between spheroid, ellipsoid and geoid. What is a volume symbol? Give an example. Where and why is a volume symbol used?                6+1+1+2

**16.** Classify map projections with examples on the basis of methods of projection.                10

**17.** Define scale. What are the different methods of representing scale? Explain the merits and demerits of different types of graphical scale.                2+3+5

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