6 SEM TDC GGR M 1

2 0 1 8

(May)

GEOGRAPHY

(Major)

Course : 601

(Map Projection and Cartographic Methods)

Full Marks : 48

Pass Marks : 19/14

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

1. Answer the following as directed : 1×6=6

 (a) In which group of projections, the light is placed at infinity so that all the rays may be normal to the tangent plane?

 (b) Simple conical projection with one standard parallel is quite unsuitable for large areas.

 (Write True *or* False)

(c) The term 'change-point (CP)' is associated with plane table / prismatic compass / Dumpy's level / theodolite survey.

(Choose the correct answer)

(d) The difference between fore-bearing and back-bearing in compass survey should be ____ .

(Fill in the blank)

(e) A polar orbiting satellite moves around the earth in East-West direction.

(Write True or False)

(f) The visible band in electromagnetic spectrum ranges from $0.4\,\mu m$ to ____ .

(Fill in the blank)

2. Answer the following questions (within **100** words each) : $4 \times 3 = 12$

(a) Write on the utilities of Bonne's conical projection mentioning its properties.

(b) Describe the intersection method of plane-table surveying with necessary diagram.

(c) Write a note on sun synchronous orbit.

(Continued)

UNIT—I

(Map Projection)

3. Define map projection. Which map projections will you select to show the areas under Rubber Cultivation in the world? Justify your selection. Derive the formula to construct the graticule for the projection.

2+1+1+6=10

Or

Define map projection. What are the bases of classification of map projection? Discuss various choices of map projections. 1+4+5=10

UNIT—II

(Cartography)

4. What is a closed traverse survey? In conducting a closed traverse survey, the following field book was recorded. Calculate the included angles of the traverse :

2+1+3½+3½=10

Line	Bearing	
	Fore	Back
AB	107°15′	287°15′
BC	22°	202°
CD	281°30′	101°30′
DE	189°15′	9°15′
EA	124°45′	304°45′

Or

What is levelling? Write one advantage and disadvantage each of Dumpy level. Determine the elevation of Y from the following table when the assumed datum at X is 50 meters :

2+2+6=10

Levelling staff station	Back sight	Fore sight
X	2·655	—
A	3·150	0·855
B	0·755	1·405
C	1·700	2·255
Y	—	1·850

UNIT—III

(**Modern Cartographic Method**)

5. What is remote-sensing? Explain the basic components of remote-sensing. Why is it important for geographical studies?   2+6+2=10

Or

Write short notes and their geographical importance of the following (any *two*) :   5×2=10

(a) GIS

(b) GPS

(c) Aerial Photograph

★ ★ ★