

2024

SURVEYING-I

Full Marks: 100

Time: Three hours

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

Answer any five questions.

1. a) With suitable figure draw the different components of a metric chain. (4+6=10)
What are the different sources of error which may arise from a chain?
- b) What is local attraction? Explain the with suitable figure the different (4+6=10)
types of magnetic declination
2. a) Explain plane and geodetic survey. Write briefly the basic principles of (5+5=10)
survey.
- b) What is reciprocal levelling? How reciprocal levelling helps in survey? (4+6=10)
Explain.
3. a) What is field book? With suitable sketch, explain the differences between (4+6=10)
a single line and double line booking.
- b) Describe various methods of interpolating contour. (10)
4. a) What is the difference between bearings and angles? Explain with suitable (4+6=10)
figure the common systems of notation of bearings?
- b) What are the different types of levelling staff? State the merits and (10)
demerits of each.
5. a) What are the sources of errors in compass survey and what precautions (10)
will you take to eliminate them?
- b) Explain Height of instrument method and Rise and fall method in (5+5=10)
levelling.
6. (a) What is contour interval? Explain the factors which need to be considered (4+6=10)
for selecting a suitable contour interval.
- (b) Briefly explain the different methods of locating contour. (10)