

C

Reg. No. :

|  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|

**Question Paper Code: U6401**

B.E. / B.Tech. DEGREE EXAMINATION, APRIL / MAY 2025

Professional Elective

Civil Engineering

21UCEV407- HYDROGRAPHIC SURVEYING

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Which of the following doesn't describe the use of hydrographic surveying? CO1-U  
(a) Laying an Alignment (b) Making underground investigations  
(c) Nautical charts for navigation (d) Establishing mean sea level
2. The linear variable differential transformer transducer is CO1-U  
(a) Inductive transducer (b) Non-inductive transducer  
(c) Capacitive transducer (d) Resistive transducer
3. During which year the project on GPS was launched? CO1-U  
(a) 1970 (b) 1971 (c) 1972 (d) 1973
4. What is the reduced level of the sub-marine surface in terms of the adopted datum. CO1-U  
(a) Reduced sounding (b) Elevation (c) Datum Surface (d) Bench mark
5. What are the sources of sediments causing marine pollution? CO1-U  
(a) Deforestation (b) Soil erosion  
(c) Mining & Farming (d) All of the above

PART – B (5 x 3= 15 Marks)

6. What do you mean by tidal theory? CO1 U
7. What do you mean calibration in transducers? CO1 U
8. What do you mean Real-time kinematic (RTK). CO1 U

- |     |                                                  |       |
|-----|--------------------------------------------------|-------|
| 9.  | Differentiate between ground and track control.  | CO1 U |
| 10. | Why Marine Environmental Measurements is needed? | CO1 U |

PART – C (5 x 16= 80 Marks)

- |     |                                                                                     |        |      |
|-----|-------------------------------------------------------------------------------------|--------|------|
| 11. | (a) Explain about the Indian tides in detail.                                       | CO1- U | (16) |
|     | Or                                                                                  |        |      |
|     | (b) Interpret briefly about the various types of indian tides in detail.            | CO1- U | (16) |
| 12. | (a) Explore the causes, effects and preventive measures of echo sounders in detail. | CO1- U | (16) |
|     | Or                                                                                  |        |      |
|     | (b) Explain briefly about the Working principle of echo sounders in detail.         | CO1- U | (16) |
| 13. | (a) Enumerate various basic elements in concept of line and surface of position     | CO1- U | (16) |
|     | Or                                                                                  |        |      |
|     | (b) Construct the Horizontal positioning methods in detail.                         | CO1- U | (16) |
| 14. | (a) Explain the various projections in ground and track control in detail.          | CO1- U | (16) |
|     | Or                                                                                  |        |      |
|     | (b) Explain in detail about inshore hydrographic survey in detail.                  | CO1- U | (16) |
| 15. | (a) Explain in detail about the Methods of measuring and recording of currents.     | CO1- U | (16) |
|     | Or                                                                                  |        |      |
|     | (b) Explain briefly about composition of the sea bed.                               | CO1- U | (16) |