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Question Paper Code: U1407

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2024

Professional Elective

Civil Engineering

21UCEV407- HYDROGRAPHIC SURVEYING

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (10 x 1 = 10 Marks)

1. What is length of the sounding rod or pole? CO1 -U
(a) 7-8 m (b) 5-8 m (c) 10-18 m (d) 15-18 m
2. Which among the following is the tide of minimum rise? CO1 -U
(a) Spring Tide (b) Low Tide (c) Ebb Tide (d) None of them
3. The process of measuring depth below the water surface is called _____ CO1 -U
(a) Sounding (b) Chaining (c) Traversing (d) Compass traversing
4. Thermistor is a transducer. Its temperature coefficient is CO1 -U
(a) Negative (b) Positive (c) Zero (d) None of these
5. During which year the project on GPS was launched? CO1 -U
(a) 1970 (b) 1971 (c) 1972 (d) 1973
6. Which among the following can be possessed by the horizontal control? CO1 -U
(a) Chaining (b) Triangulation (c) Theodolite (d) Compass
7. What is the use of station pointer in sounding? CO1 -U
(a) Ranging (b) fixing (c) plotting (d) sighting
8. What is the name of three armed protractor used for the plotting of sounding? CO1 -U
(a) Mini drafter (b) Junior drafter (c) Station pointer (d) Plotting scale

9. The time range of marine survey can be given as CO1 -U
 (a) 3-18 hrs (b) 2-8 hrs (c) 3-8 hrs (d) 13-18 hrs
10. What are the sources of pathogenic organism on marine pollution? CO1 -U
 (a) Sewage (b) Livestock waste (c) Both A & B (d) None of them

PART – B (5 x 2= 10 Marks)

11. What do you mean by nautical charts? CO1 -U
12. Differentiate between echo sounders and transducers.. CO1 -U
13. What do you mean Real-time kinematic (RTK). CO1 -U
14. Differentiate between ground and track control. CO1 -U
15. What are the roles of the hydrographic surveyor on different marine projects? CO1 -U

PART – C (5 x 16= 80 Marks)

16. (a) Interpret briefly about the various types of recording tide gauges. CO3 App (16)
 Or
 (b) Interpret briefly about the various types of vertical datums in detail. CO3 App (16)
17. (a) Explain briefly about the Working principle of echo sounders in detail. CO1 U (16)
 Or
 (b) Explain briefly about the depth data types-in detail. CO1 U (16)
18. (a) Interpret the concept of navigation using satellite positioning systems in detail. CO1 U (16)
 Or
 (b) Enumerate various components of Real-time kinematic (RTK) in detail. CO1 U (16)
19. (a) Explain the various practical soundings in inshore and coastal surveys in detail. CO1 U (16)
 Or
 (b) Explain the various projections in ground and track control in detail CO1 U (16)
20. (a) Explain briefly about composition of the sea bed. CO1 U (16)
 Or
 (b) Explain in detail about the Methods of measuring and recording of currents CO1 U (16)

