Independent Study Assignments

Tec 40

Tec 40 Knowledge Development One

Manual Supported Content

Study assignment: *Tec Deep Diver Manual*, pgs xi, pg xiii Your Obligations and Responsibilities, pg xiv Diver Accident Insurance, pg 1-9 including Tec Exercise 1.1. Disregard Tec Deep and Apprentice Tec Diver Certification Limits discussions. You may skip question 6 in the exercise.

Other Delivery Content, Tec 40-1

Study assignment: Tec 40 Handout 1

Other Delivery Content, Tec 40-2

Study assignment: Tec 40 Handout 2

Manual Supported Content

Study assignment: *Tec Deep Diver Manual,* pgs 84-87, Oxygen Compatibility Review, Manufacturer Warranties and Hyperoxic Gases

Manual Supported Content

Study assignment: *Tec Deep Diver Manual,* pgs 35-50, Gas Planning I, Tec Exercise 1.3

Other Delivery Content, Tec 40-3

Study assignment: Tec 40 Handout 3

Manual Supported Content

Study assignment: *Tec Deep Diver Manual,* pgs 51-54, Team Diving I, Tec Exercise 1.4

Manual Supported Content

Study assignment: *Tec Deep Diver Manual,* pgs 54-59, Techniques and Procedures I, Tec Exercise 1.5, pgs 107-109, Team Diving Gas Handling Considerations, Tec Exercise 2.4 questions 4-8, pgs 115-122, Techniques and Procedures III, Tec Exercise 2.5

Manual Supported Content

Study assignment: *Tec Deep Diver Manual,* pgs 60-64, Emergency Procedures I, Tec Exercise 1.6, pgs 123-129, Emergency Procedures II, Tec Exercise 2.6

Tec 40 Knowledge Review One

Please complete this review to hand in to your instructor. If there's something you don't understand, review the related material. If you still don't understand, be sure to have your instructor explain it to you.

1. Define "recreational diving", "technical diving", and explain what is not technical diving.

2. List six general risks and hazards that technical diving presents that either don't exist or aren't as severe in recreational diving.

3. What single statement sums up the difference between recreational and technical diving?

4. What are the goals of the Tec 40 course?

5. What are the limits of the Tec 40 certification?

6. What are the six characteristics of a responsible technical diver:

7. What should you do if you can't or won't accept the risks and responsibilities demanded by technical diving?

8. Describe the proper types, number, location and configuration within your rig of the following equipment components as to how your gear will look when worn.

Valves & Cylinders:

Right Regulator accessories:

Left Regulator accessories:

BCD and harness:

Instruments:

Cutting tools:

Pockets:

Clips:

9. List the three types of dive computer you can use for technical deep diving with air and enriched air, along with the advantages and disadvantages of each.

Standard Air Computer:

Enriched Air Computers:

Multigas Computers:

10. What are the recommended maximum oxygen partial pressures for technical deep diving?

11. Using the maximum depth formulas, what are the maximum depths and decompression depths for EANx48?

***(Metric)* if your SAC rate is 24 litres/min, how much gas volume do you need for 20 minutes at 30 metres? What would your total volume be with a reserve based on the rule of thirds?**

***(Imperial)* if you SAC rate is .8 cubic feet/min, how much gas volume do you need for 20 minutes at 90 feet? What would your total volume be with a reserve based on the rule of thirds?**

12. What are the signs and symptoms of CNS oxygen toxicity, and what's the primary way you avoid it?

13. What are the signs and symptoms of pulmonary oxygen toxicity, and what is the primary way to avoid it?

14. List your responsibilities as a team member when technical diving.

15. What is the rule regarding aborting a technical dive?

16. What is the primary hazard of diving negatively buoyant, and how do you manage this hazard?

17. What is the primary hazard of excessive positive buoyancy, and how do you manage this hazard?

18. Describe how to find the minimum weight and the minimum buoyancy you need for a technical deep dive.

19. How does a technical dive in a dry suit differ from a recreational dive in a dry suit? What's the recommended number of recreational dives in a dry suit that you should have before technical diving in one?

20. Describe the procedure for sharing gas with your long hose.

21. What are the emergency procedures for a massive regulator (second stage) free flow at depth?

22. What are the emergency procedures for a damaged doubles manifold at depth?

23. What is the over-riding mission of all technical dives?

24. How and why does "cutting corners" lead to accidents in technical diving?