



The British Sub-Aqua Club

# FIRST CLASS DIVER

DIVING KNOWLEDGE EXAM    October 2005

Name:

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Please read the following instructions carefully before you begin answering the questions.

- **Answer all 30 questions.** Write your answers in the spaces on the question paper. Please remember to put your name on the paper.
- Brief answers are possible for most questions. Answer as concisely as possible. Use diagrams where these help your answer or where they are asked for.
- There are 2 marks for each question.
- The time allowed is 60 minutes.
- Write all answers in ink, as clearly as possible.
- You may use a calculator but please show all calculations.
- You will need your own copy of the complete BS-AC'88 Tables, levels 1-4 and BSAC Nitrox Tables. No other reference material of any kind is allowed.
- All questions assume sea water (density 1.025 kg/litre) and the prevailing conditions in the United Kingdom unless otherwise stated.
- Please check your work very carefully. A mistake at an early stage of some questions may result in a series of wrong answers and a loss of marks.

Please note that the mark awarded by the examiners for your performance on this paper is final and under no circumstances can the examiners enter into any correspondence or discussion with you regarding this paper.

## Medical

1. Describe the contents of a Basic First Aid kit for offshore use - over 3 miles?
2. What is HPNS? What is its cause, its symptoms and how is it controlled?
3. Draw a diagram showing a PFO (Patent Foramen Ovale).

4. For how long can a healthy adult safely breathe 100% Oxygen at atmospheric pressure?

Explain your reasoning?

5. ConVENTID is an acronym used to remember the symptoms of which condition? What is that condition and describe the symptoms?

6. A diver surfaces with a severe cut on their forearm, which is bleeding profusely.

Describe the immediate rescue management and first aid required?



10. What is the maximum percentage of oxygen recommended for use by the BSAC on decompression stops and explain why it is not 100%?

11. Why might a build up of CO<sub>2</sub> in a diver lead to a higher risk of DCI?

12. Why does diving in cold water increase the risk of DCI?







22. A dive involves accelerated decompression of 20 minutes on Nitrox 80 at a depth of 6m. Assuming a breathing rate of 16litres/min, how many litres of this gas should be carried by the diver?
23. A group of 12 divers are planning a decompression dive on a wreck using a shotline with a decompression trapeze. The wreck has a short slack window and it has been suggested that disconnecting the trapeze would improve the comfort of the divers. What elements would you include in the set-up and brief to accomplish this safely?
24. The risk assessment for this wreck dive includes a failure of the diver's gas supply. As the dive marshal describe the precautions you would put into place to provide additional gas should this failure occur?



28. What lights and day marks are used to signify a vessel is engaged in underwater operations and has divers in the water? What should you do if you see a vessel displaying these marks?

29. What do preferred channel marker buoys look like and what do they signify?

30. Name or describe eight recognised distress at sea signals?