



The British Sub-Aqua Club

FIRST CLASS DIVER

DIVING KNOWLEDGE EXAM March 2005

Name:

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.

4. One of your divers has signed up for the branch diving holiday on a hard boat in Devon. With a week to go she tells you she has just had her pregnancy confirmed. Outline your advice to her about taking part in the diving holiday?

5. What is an arterial gas embolism?

6. A member of your diving team is a diabetic who has been passed 'fit to dive'. What pre-dive checks would you expect this diver to carry out before each dive?

10. As slack water is quite short, how would you plan to minimise the effect of tidal flow during decompression?

11. When considering the decompression phase of the dive, what personal equipment would you advise divers to take on this dive?

12. What method would you plan for divers to indicate to the surface cover that they need more decompression gas?

17. How can a diver avoid confusion between a regulator for a “pony” cylinder and his/her main regulator?

18. Describe the appearance (labelling) of a Nitrox cylinder?

Dive planning and techniques

19. On a hardboat dive, list the diving issues that should be discussed and agreed with the skipper before setting off?

20. On a hardboat – list what the Dive Marshal should do before, and upon arrival at the dive site?

21. Draw a diagram of a drop bottle set up for use in an emergency.

22. What techniques can be used by a diver to avoid disturbing silt on a dive?

23. What differences will a scour make to a wreck dive plan?

24. What type of entry hole is ideal for ice diving?

After the ice dive what should you do with the hole you cut?

Weather & Seamanship

25. SOLAS V Regulations (Voyage Planning) defines what a boat handler must document before going to sea.

Give 4 specific examples of information to be included in a Voyage Plan?

26. Calculate the magnetic and compass bearing based upon the following information (Use the deviation card below)

True : 059°T

Variation : 3°55W 1993 (7'E)

Magnetic :

Deviation :

Compass :

Magnetic Course °	Deviation °
000	2W
015	2W
030	3W
045	3W
060	4W
075	3W
090	3W
105	3W
120	2W
135	1W
150	1W
165	1W
180	0
195	0
210	0
225	0
240	1E
255	2E
270	2E
285	3E
300	2E
315	1E
330	0
345	1W
360	2W

27. Name two types of fog and describe how they are formed?

28. A marine weather forecast states that the wind will be Beaufort force 6.

What is the descriptive term for this Beaufort rating and what is the predicted wind speed?

29. Draw the cardinal marks, showing the following

- Top marks
- Colours used
- Lights displayed

30. Lifejackets have various CE category ratings. Explain for each symbol below

a) The amount of buoyancy they would give a user

b) In what sea conditions they might be used.

