

DIVE LEADER MOCK EXAM REVISION – M1

This is a mock paper with model answers for the questions and some extension activities for those who want to practice further questions of each type. The focus of this paper is calculations for dive planning and some basic revision.

You will need

Pencil, Eraser & Calculator
BSAC 88 Decompression Tables Levels 1-4
BSAC Nitrox tables

Calculations

In breathing gas calculations use 25 litres/minute for the normal breathing rate at the surface.
For CNS% calculations use the Oxygen Toxicity Table on p23 of the BSAC Nitrox Tables.
80% CNS is the maximum allowed dose – UPTDs is 180 in a rolling 24-hour period

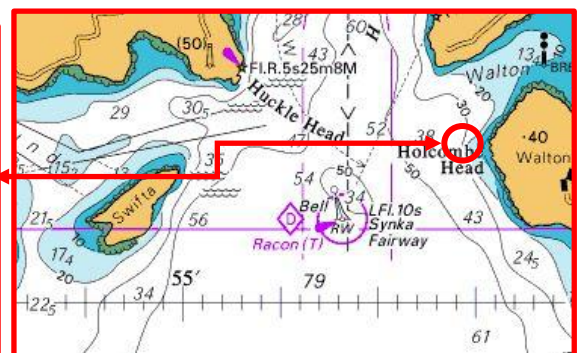
1. Using the following extract from a tide table, calculate the depth of water in meters at the nearest high water to noon, if the charted depth is 23.8m.

All times are GMT: Add 1 hour for BST 31 March to 27 October		
	Time	m
Jun	0440	1.3
4	1109	5.7
SA	1708	1.6
	2333	6.1

A: 25.2, B: 29.9, C: 24.4, D: 29.5, E: 27.6

2. You are planning a dive on or around slack water at Holcombe head.

Hours	Geographical Position	A	B	C	D
		46°20'5 N 5 50 OW	46°20'6 N 6 18-4W	46°11'2 N 5 43-2W	46°10'6 N 5 53-9W
Before High Water	Directions of streams (degrees)	-6	110	1-8 0-8	158
	Rates at spring tides (knots)	-5	108	1-0 0-5	153
	Rates at neap tides (knots)	-4	026	0-4 0-2	159
High Water		-3	297	1-4 0-7	154
		-2	278	2-0 1-1	165
		-1	274	1-7 0-8	173
		0	271	1-1 0-5	186
After High Water		+1	170	0-5 0-3	349
		+2	111	1-6 0-8	341
		+3	114	1-8 0-9	338
		+4	113	2-2 1-2	342
		+5	112	2-0 1-0	341
		+6	110	1-8 0-9	355



Using chart and tidal diamond, what is the optimum time to dive this site on a neap tide and what direction will the current be flowing and what speed ?

A: +1hr & 170 & 0.2kn, B: -4hr & 026 & 0.2kn, C: -4hr & 290 & 0.4kn, D: -6hr & 216 & 0.3kn, E: None are safe dives

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3. You are diving with an Ocean Diver using BSAC 88 Tables. You have just completed an 18m dive in the sea for 50 mins. The weather forecast gives atmospheric pressure of 990mb. You now plan to dive a quarry on the way home which is at a height of 400m. If you surface from your first dive at 10.10am, what time can you set off to the quarry and how long will you need to wait at the quarry to start your second dive, if you plan to dive to 15m for 27min?
- A: 10:55am, 3hrs. B: 11.10am, 2hrs 20min. C: 10:50am, 1hr 30min. D: 10:40am, 4hrs.
E: 11:40am, 90min
4. Use BSAC Nitrox Tables to work out the decompression stops required for the following two dives. Your first dive is to 30m, commencing the ascent after 47mins with an ascent time of 2 minutes to your first decompression stop, breathing Nitrox 32. Your second dive will be to 25m for 45 minutes dive time breathing Nitrox 36, 5 hours later.
5. Using the dive above, calculate the CNS and UPTDs for the above.

Answers