

**DIRECTORATE SENIOR CURRICULUM MANAGEMENT (SEN-FET)**

**HOME SCHOOLING SELF-STUDY WORKSHEET**

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| **SUBJECT** | Nautical Science | **GRADE** | 12 | **DATE** | 9/4/20 |
| **TOPIC** | Practical Chartwork | **TERM 1**  **REVISION** | X | **TERM 2 CONTENT** | X |
| **TIME ALLOCATION** | 40min | **TIPS TO KEEP HEALTHY**  1. **WASH YOUR HANDS** thoroughly with soap and water for at least 20 seconds. Alternatively, use hand sanitizer with an alcohol content of at least 60%.  2. **PRACTICE SOCIAL DISTANCING** – keep a distance of 1m away from other people.  3. **PRACTISE GOOD RESPIRATORY HYGIENE**: cough or sneeze into your elbow or tissue and dispose of the tissue immediately after use.  4. **TRY NOT TO TOUCH YOUR FACE.** The virus can be transferred from your hands to your nose, mouth and eyes. It can then enter your body and make you sick.  5. **STAY AT HOME.** | | | |
| **INSTRUCTIONS** | This worksheet is to be completed in your MRTE exercise/activity book.  All work done on the chart must be done lightly using a 2B pencil.  Courses and bearings and corrections must be calculated to the nearest ½° and plotted to a similar accuracy.  Variation of 17° W is applicable where required.  Scientific calculators may be used.  Nautical tables may be used. |

**QUESTION 4**

4.1 The draught of your vessel is 2,62 m and you are required to navigate through Knysna Heads with a minimum chart depth of 2,5 m.

What is the earliest time on a rising tide on the afternoon of Tuesday 25 December 2007 that your vessel may transit with an under-keel clearance of 1,5 m? (16)

4.2 During which phases of the moon do the following occur?

4.2.1 Spring tide (2)

4.2.2 Neap tide (2)

**[20]**

**QUESTION 5**

5.1 Describe the characteristics of Kaap Hangklip Lighthouse (Lat 34° 32,2' S Long 018° 49,7' E). (5)

5.2 Cape Point Lighthouse is observed bearing 000° (T) × 6,0M. What characteristics would this light show from this position? (5)

5.3 Select a safe anchorage position in Table Bay for a container vessel carrying hazardous cargo and a deep draught of 13 m.

Mark the position on the Chart SAN 3002 provided, and write down on your Answer Book the bearing and range off the Main Breakwater Lt.

(Fl. G. 2s 5M). (7)

5.4 How many metres are there in one nautical mile? (2)

5.5 If a ship at anchor is 9 cables away from a buoy, how far is this in nautical miles? (1)

**[20]**