PORTEFEUILLE
DE COMPÉTENCES

NOM :
PRENOM :

A. Charbonnel

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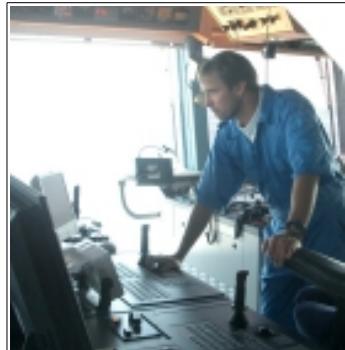
NOM :   *Prénom :*   *Année : 2017/2018*

Great Circles – operationnal abilities	**A**			**B**			**C**			**D**			**E**			**F**		
	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E+	E	E-	F+	F	F-
1. Calculate a difference of longitude																		
2. Calculate the great circle distance between two points																		
3. Calculate the vertex of a great circle																		
4. Calculate the gain between rhumb and great circle route																		
5. Plot the pace of a great circle track with the departure, arrival and vertex point on a mercator chart/graphic and on the terrestrial globe																		
6. Plot a series of rhumb lines on a Mercator chart/canvas to approximate a great circle route.																		
7. Determine the great circle distance using great circle charts or specific abacus.																		
8. Calculate the limits points of the great circle tracks on a composite sailing																		
9. Calculate the distance on a composite sailing																		
10. Plot a composite sailing on a graphic and mercator chart																		

A : able to do it perfectly at any time and to analyse its own error or the other's error
B : able to do it with minor error and/or with little time /or to analyse its error
C : able to do it, but with time or with reccurent errors

D : major error and theory too approximatevely known
E : unable to DO it or to obtain a realistic result but some theorical knowledge are presents
F: unable to DO it due to lacks in the theory

Celestial Navigation – Operationnal abilities	A			B			C			D			E			F		
	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E+	E	E-	F+	F	F-
1. Convert longitude into time.																		
2. Convert Local time, standard time and zone time to GMT and vice versa.																		
3. Calculate the zone time given longitude.																		
4. Use the nautical almanac to find all informations to perform celestial navigation, and especially : ◦ Corrections to be used to convert the the sextant altitude to observed altitude ◦ GHA,D for the celestial body ◦ Time of twilight, rising and setting of the sun and moon ◦ Time of meridian passage of the sun or moon ◦ Table to find the visibility of the planets ◦ Table for calculate the latitude at the polaris																		
5. Calculate the chronometer (or watch) error given a previous error and the daily rate.																		
6. Measure the sextant altitude of a celestial body																		
7. Measure the angular difference between two reference marks																		
8. Determine and apply the corrections to convert sextant altitudes to true/observed altitude of the sun.																		
9. Determine and apply the corrections to convert sextant altitudes to true/observed altitude of a star.																		
10. Determine and apply the corrections to convert sextant altitudes to true/observed altitude of the planet or the moon																		
11. Calculate the time of meridian passage of the sun and calculate the ship's latitude from the observed meridian altitude of the sun.																		

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Celestial Navigation – operationnal abilities	A			B			C			D			E			F		
	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E+	E	E-	F+	F	F-
12. Determine the latitude by means of the Pole Star.																		
13. Solve the navigational triangle using calculations (or a navigation table) and show all appropriate work.																		
14. Plot celestial lines of position on a Mercator projection or on a universal plotting sheet.																		
15. Calculate the times (ship's and GMT) of sunrise, sunset and twilight.																		
16. Determine the approximate azimuths and altitudes of the navigational stars and planets at twilight.																		
17. Calculate and plot the lines of position obtained from observations of several celestial bodies at twilight and thus find the boat's position.																		
18. Advance the LOP obtained from a sun sight to another LOP obtained from the sun at a later time and find the boat's position using a running fix (sun-run-sun).																		
19. Calculate the true bearing of a low altitude celestial body in order to determine the error and deviation of the compass.																		
20. Lock the starfinder at the sightseiing time																		
21. Identify a celestial body with the starfinder, knowing the altitude and azitmuth of it																		

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