Graduation examination PRACTICAL questions.

1. Solve the task on a maneuvering plotting sheet, fill in the table.
   $C_o = 15^0$ $V_o = 20$
   Target-1 $B_1 = 0^0$ $D_1 = 10$
   Target-2 $B_1 = 45^0$ $D_1 = 10$
   Target-1 $B_2 = 0^0$ $D_2 = 8$
   Target-2 $B_2 = 44^0$ $D_2 = 8$

2. Solve the task on a maneuvering plotting sheet, fill in the table.
   $C_o = 45^0$ $V_o = 15$
   Target-1 $B_1 = 10^0$ $D_1 = 9$
   Target-2 $B_1 = 45^0$ $D_1 = 8$
   Target-1 $B_2 = 10^0$ $D_2 = 7.5$
   Target-2 $B_2 = 46^0$ $D_2 = 6$

3. Solve the task on a maneuvering plotting sheet, fill in the table.
   $C_o = 340^0$ $V_o = 15$
   Target-1 $B_1 = 15^0$ $D_1 = 10$
   Target-2 $B_1 = 310^0$ $D_1 = 11$
   Target-1 $B_2 = 15^0$ $D_2 = 8$
   Target-2 $B_2 = 310^0$ $D_2 = 9$

4. Solve the task on a maneuvering plotting sheet, fill in the table.
   $C_o = 90^0$ $V_o = 15$
   Target-1 $B_1 = 180^0$ $D_1 = 9$
   Target-2 $B_1 = 110^0$ $D_1 = 11$
   Target-1 $B_2 = 178^0$ $D_2 = 7$
   Target-2 $B_2 = 108^0$ $D_2 = 9$

5. Solve the task on a maneuvering plotting sheet, fill in the table.
   $C_o = 90^0$ $V_o = 15$
   Target-1 $B_1 = 180^0$ $D_1 = 9$
   Target-2 $B_1 = 110^0$ $D_1 = 11$
   Target-1 $B_2 = 178^0$ $D_2 = 7$
   Target-2 $B_2 = 108^0$ $D_2 = 9$

6. Solve the task on a maneuvering plotting sheet, fill in the table.
   $C_o = 270^0$ $V_o = 15$
   Target-1 $B_1 = 180^0$ $D_1 = 3$
   Target-2 $B_1 = 290^0$ $D_1 = 9$
   Target-1 $B_2 = 180^0$ $D_2 = 3$
   Target-2 $B_2 = 290^0$ $D_2 = 6.5$

7. Solve the task on a maneuvering plotting sheet, fill in the table.
   $C_o = 320^0$ $V_o = 20$
   Target-1 $B_1 = 220^0$ $D_1 = 10$

Target-2 $B_1=340^0$ $D_1=9.5$
Target-1 $B_2=220^0$ $D_2=10$
Target-2 $B_2=341^0$ $D_2=7.5$

8. Solve the task on a maneuvering plotting sheet, fill in the table.
$C_o=0^0$ $V_o=20$
Target-1 $B_1=90^0$ $D_1=2.5$
Target-2 $B_1=45^0$ $D_1=8$
Target-1 $B_2=90^0$ $D_2=2.5$
Target-2 $B_2=45^0$ $D_2=6$

9. Solve the task on a maneuvering plotting sheet, fill in the table.
$C_o=30^0$ $V_o=25$
Target-1 $B_1=120^0$ $D_1=2.5$
Target-2 $B_1=310^0$ $D_1=10$
Target-1 $B_2=120^0$ $D_2=2.5$
Target-2 $B_2=310^0$ $D_2=8$

10. Solve the task on a maneuvering plotting sheet, fill in the table.
$C_o=270^0$ $V_o=20$
Target-1 $B_1=180^0$ $D_1=2.5$
Target-2 $B_1=0^0$ $D_1=2.5$
Target-1 $B_2=180^0$ $D_2=2.5$
Target-2 $B_2=0^0$ $D_2=2.5$

11. Solve the task on a maneuvering plotting sheet, fill in the table.
$C_o=210^0$ $V_o=25$
Target-1 $B_1=270^0$ $D_1=9$
Target-2 $B_1=215^0$ $D_1=9$
Target-1 $B_2=270^0$ $D_2=7.5$
Target-2 $B_2=214^0$ $D_2=7.5$

12. Solve the task on a maneuvering plotting sheet, fill in the table.
$C_o=350^0$ $V_o=20$
Target-1 $B_1=20^0$ $D_1=9.5$
Target-2 $B_1=0^0$ $D_1=9.5$
Target-1 $B_2=20^0$ $D_2=7.5$
Target-2 $B_2=0^0$ $D_2=7.5$

13. Solve the task on a maneuvering plotting sheet, fill in the table.
$C_o=250^0$ $V_н=15$
Target-1 $B_1=0^0$ $D_1=2$
Target-2 $B_1=180^0$ $D_1=2$
Target-1 $B_2=0^0$ $D_2=2$
Target-2 $B_2=180^0$ $D_2=2$

14. Solve the task on a maneuvering plotting sheet, fill in the table.
$C_o=270^0$ $V_o=15$

Target-1	$B_1=90^0$	$D_1=8$
Target-2	$B_1=330^0$	$D_1=8$
Target-1	$B_2=90^0$	$D_2=6$
Target-2	$B_2=330^0$	$D_2=6$

15. Solve the task on a maneuvering plotting sheet, fill in the table.

$C_o=340^0$	$V_o=20$	
Target-1	$B_1=270^0$	$D_1=9$
Target-2	$B_1=350^0$	$D_1=9$
Target-1	$B_2=270^0$	$D_2=7$
Target-2	$B_2=350^0$	$D_2=7$

16. Solve the exercise and plot graphically.

    GCC=350^0, ΔGC= -2,0^0, $\alpha=3^0$ starboard side , CMG_α=?

17. Solve the exercise and plot graphically.

    GCC=350^0, ΔGC= -2,0^0, $\alpha=3^0$ port side , CMG_α=?

18. Solve the exercise and plot graphically.

    $CMG_\alpha=170^0$, Δ GC = +2,0^0, $\alpha=4^0$ port side CC=?

19. Solve the exercise and plot graphically.

    $CMG_\alpha=185^0$, $\alpha=7,0^0$ port side TC =?

20. Solve the exercise and plot graphically.

    $CMG_\alpha=219^0$, Δ GC =+2,0^0, $\alpha=5,0^0$ port side TC=?

21. Solve the exercise and plot graphically.

    d=3.0˚ E, δ= 2.0ºE, TC =20º, MC=? Δ GC =?, CC_{MC}=?

22. Solve the exercise and plot graphically.

    d=4.0˚ W, δ= 3.0ºE, TC =200º, MC =? Δ GC =?, CC_{MC} =?

23. Solve the exercise and plot graphically.

    d=6.0˚ E, δ = 2.0ºW, TC =120º, MC =? Δ GC =?, CC_{MC} =?

24. Solve the exercise and plot graphically.

    d=4.0˚ W, δ = 3.0ºE, CC_{MC} =200º, MC =? Δ GC =?, TC =?

25. Solve the exercise and plot graphically.

    d=6.0˚ E, δ = 2.0ºW, CC_{MC} =120º, MC =? Δ GC =?, TC =?

26. Solve the exercise and plot graphically.

    d=5.0˚ W, δ = 2.0ºE, CC_{MC} =300, MC =? Δ GC =?, TC =?

27. Solve the exercise and plot graphically.

    d=2.0˚ W, δ = 2.0ºE, CC_{MC} =0º, MC =? Δ GC =?, TC =?

28. Solve the exercise and plot graphically.

    Wind 45º-17 m/s, α=7º, Current 225º- 2 knots, β=3º, CMG_C=130º

    TC =?

29. Solve the exercise and plot graphically.

    Wind 45º-14 m/s, α=5º, Current 225º- 2 knots, β=2º, CMG_C =120º

    TC =?

30. Solve the exercise and plot graphically.

    Wind 15º-10 m/s, α=3º, Current 75º- 3 knots, β=4º, CMG_C =140º

    TC =?

Prepared by H. Nabiyev