APPENDIX IV.

Catechism on the Theory of Rifle Fire and General Knowledge.

- 1. How many forces act upon a bullet in its flight? Name them and show their direction.
- 2. Explain by diagram the path of a bullet when the axis of the barrel is held in a horizontal position.
- 3. Define "giving elevation," and show by a diagram how this is carried out.
- 4. How high above the target should the axis of the barrel be pointed to allow a Mark VI. bullet to hit the target at 100, 200, 500 and 1000, yards?
- 5. Draw a trajectory diagram showing line of sight, line of departure, trajectory, line of fire, culminating point and dangerous space.
- 6. Why are sights used, and how would marksmanship be affected if sights were eliminated?
- 7. Explain what is meant by a "minute of angle," and how does this vary according to length of range?
- 8. What is the fine adjustment scale for, and how is it used?
- 9. Demonstrate the elevation adjustment necessary to correct a shot 30 inches low at the 500-yard range.
- 10. What is a "Vernier Scale," and how is it operated? Where is the Vernier Scale located on the Mark III. Ross Rifle?
- 11. Demonstrate the adjustment necessary to correct a shot 30 inches out at 9 o'clock when firing on the 500-yard range.
- 12. Demonstrate the adjustment necessary to correct a shot which is 24 inches to the right and 30 inches low when firing at the 600-yard range.
- Explain the Battle Sight and the Long Range Sight of the Mark III. Ross Rifle, and when they are to be used.
- 14. Draw diagrams illustrating what is seen when looking through an open sight, an aperture sight, and a battle sight alligned on a bullseye target.
- 15. Which is the easiest aiming sight, the open or the aperture sight, and why?