Instructions:

1. Answer all questions in section A and any other 2 questions in Section B.

2. Candidates are advised not to write on the question paper

3. Candidates must hand in their answer booklets to the invigilator while in the examination room
SECTION A  

Answer all questions in this section (30 marks)

1. State three use of epidemiology (3 marks)

2. Name the scientist who made the following contribution (3 marks)

<table>
<thead>
<tr>
<th>Contribution</th>
<th>Name of the scientist</th>
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<tbody>
<tr>
<td>I  Demonstrate that micro organism causes disease and vaccine could be used for disease control</td>
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<tr>
<td>Ii Demonstrated cholera could transmitted through contaminated water</td>
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<tr>
<td>Iii Invented vaccine against small pox</td>
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</tbody>
</table>

3. In 2015 the number of new case of sexually transmitted infection (STI) was 29 among the men aged 40-44 years in Homa Bay County. The person years of following was 41532 among that group of people. What is the incidence rate of STI + among those people? (4 marks)

4. Define the following terms as used in epidemiology (3 marks)
   i. virulence
   ii. susceptible
   iii. infectious disease

5. Explain briefly two types of population in epidemiology (2 marks)

6. Explain four factors that influencing the decrease of prevalence (3 marks)

7. Distinguish between the following terms (3 mark)
   i. incidence and prevalence
   ii. illness and sickness
   iii. Rate and ratio

8. Explain three causation theories of diseases (3 marks)

9. State three condition under which herd immunity best function (3 marks)

10. State three factors which influence the development of disease (3 marks)
SECTION B Answer any two Questions (30 Marks)

11. Briefly discuss different types of epidemics outbreak that are common in human population (15 marks)

12. i) Discuss the Advantages and disadvantage of the following source of health data (10 marks)
   (a) Health survey
   (b) Hospital health records

   ii) Explain the four factors that determine the human health (5 marks)

13. Discuss the levels of prevention under the following; primordial, primary, secondary and tertiary prevention. (15 marks)

14. Hypertension is one of the non-communicable disease discuss it under the following (15 marks)
   a) Cause
   b) Sign and symptom
   c) Prevention
   d) Predisposal
   e) Epidemiology