INSTRUCTIONS:

1. THERE ARE TWO SECTIONS IN THIS PAPER.
   i) SECTION I IS MULTIPLE CHOICE
   ii) SECTION II IS MATCHING
   iii) SECTION III IS SHORT ANSWERS

2. PLEASE ANSWER ALL SECTIONS
   i) SECTION I CARRIES 30 MARKS
   ii) SECTION II CARRIES 45 MARKS

3. USE ANSWER BOOK FOR ALL YOUR ANSWERS.

NB: PLEASE DO NOT OPEN YOUR QUESTION PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR.
SECTION I

A. MULTIPLE CHOICE (20 MARKS)

Please choose the most appropriate response and write it in your answer book. E.G. 1 = C

1. The study of hormones and endocrine organs is;
   A. Neurology
   B. Ophthalmoology
   C. Endocrinology
   D. Dermatology

2. The tympanic cavity is;
   A. Air filled cavity of the lungs
   B. Fluid filled cavity of the eye
   C. Fluid filled cavity of the heart
   D. Air filled cavity of the ear.

3. Blockage of the cerebro-spinal fluid in new born causes;
   A. Anacephaly
   B. Hydrocephaly
   C. Tumors
   D. Fever

4. The functional unit of the kidney is the;
   A. Neuron
   B. Neuphrone
   C. Glomerulus
   D. Bowman’s capsule

5. Grand Mal epilepsy is signified by;
   A. Loss of consciousness
   B. Incontinence of urine
   C. Paleness
   D. Both A and B

6. Stupor is;
   A. Fainting
   B. Syncope
   C. Semi-consciousness
   D. Coma
7. REM sleep is associated with:
   A. Difficulty to arouse
   B. Dreaming
   C. Easy arousal stage
   D. Flat EEG

8. This condition is a result of spinal trauma in the cervical region.
   A. Hemiplegia
   B. Paraplegia
   C. Quadriplegia
   D. Paralysis

9. This nerve controls the functioning of the heart, lungs, liver, kidney
   and stomach.
   A. Glossopharyngeal nerve
   B. Accessory nerve
   C. Abducens nerve
   D. Vagus nerve

10. Cholinergic fibers release
    A. Neurotransmitters
    B. Acetylcholine
    C. Adrenaline
    D. Atropine

11. The innermost layer of the meninges is the...
    A. Pia mater
    B. Dura mater
    C. Arachnoid mater
    D. Subcutaneous membrane

12. Hunger and thirst are regulated by:
    A. Cerebellum
    B. Medulla
    C. Hypothalamus
    D. Epithalamus
13. The most primitive diagnostic procedure to assess the functioning of the CNS is:
   A. Knee jerk
   B. MRI
   C. CT
   D. PET

14. Premature babies are kept in an incubator because:
   A. They are born before nine months.
   B. They are sensitive to cold
   C. Their hypothalamus is immature
   D. They have reached maximum brain weight.

15. The functions of the Thalamus is or are:
   A. Relay station
   B. Cross over bridge
   C. Proper routing to cortex and association area
   D. Both A and C.

16. Elderly people complain of constipation mainly because of:
   A. Decrease fluid intake
   B. Lack of exercises
   C. Eating processed food
   D. Decreased efficiency of the autonomic nervous system.

17. Which of these is not the function of the sympathetic division of the autonomic nervous system?
   A. Bronchodilator
   B. Heart rate of 90 beats/minute in adults
   C. Diarrhoea
   D. Depressed gastrointestinal activities.

18. Insufficient iodine in the body results in:
   A. Exothalmosis
   B. Weight loss
   C. Goiter
   D. Diabetes mellitus
**B. MATCHING**

Choose the most appropriate response from column 2 to the statement in column 1.

<table>
<thead>
<tr>
<th>COLUMN 1</th>
<th>COLUMN 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unmyelinated axon transfer their messages through.</td>
<td>A Saltatory conduction</td>
</tr>
<tr>
<td>2. Vagotomy is used to treat .... that do not respond to medication.</td>
<td>B. Artist</td>
</tr>
<tr>
<td>3. The gustatory and vestibular areas are in the...</td>
<td>C. Meningitis</td>
</tr>
<tr>
<td>4. The right hemisphere is dominant.</td>
<td>D. Ulcers</td>
</tr>
<tr>
<td>5. Myelinated axon transfer information through...</td>
<td>E. Microglia</td>
</tr>
<tr>
<td>6. Inflammation of the meninges</td>
<td>F. Schwan cells</td>
</tr>
<tr>
<td>7. It serves the muscles of the tongue</td>
<td>G. Continuous Conduction</td>
</tr>
<tr>
<td>8. Responsible for coordination of the body</td>
<td>H. Vagus nerve</td>
</tr>
<tr>
<td>9. Produce myelin sheath</td>
<td>I. Facial nerve</td>
</tr>
<tr>
<td>10. Digest bacteria in the CNS</td>
<td>J. Cerebellum</td>
</tr>
<tr>
<td></td>
<td>K. Insula</td>
</tr>
<tr>
<td></td>
<td>L. Trigeminal nerve</td>
</tr>
</tbody>
</table>
SECTION 2
SHORT ANSWER QUESTIONS

QUESTION 1 (20 MARKS)

1.1 Describe the difference between meiosis and mitosis. (10)
1.2 State ten functions of the hypothalamus. (10)

QUESTION 2 (25 MARKS)

2.1 Describe the functions of the E and the D division of the Autonomic Nervous system. (10)
2.2 State five normal characteristics of urine. (5)
2.3 With the aid of a diagram, describe the structural classification of neurons. (5)

2.4 TRUE AND FALSE

Answer the following question using true (T) or false (F) 5

Propagation of action potential is positively affected by which of the following factors?
   i. Myelin fiber.
   ii. Unmyelinated fibers
   iii. Large diameter of axon
   iv. Increase in temperature
   v. Decrease in temperature.