



11



THE OPEN UNIVERSITY OF SRI LANKA  
FACULTY OF HEALTH SCIENCES  
DEPARTMENT OF BASIC SCIENCES  
ACADEMIC YEAR 2019/2020 – SEMESTER I

BACHELOR OF PHARMACY HONOURS  
BSU3431 - HUMAN PHYSIOLOGY – LEVEL 3  
CONTINUOUS ASSESSMENT II (NBT II)

DURATION: 1½ HOURS

DATE: 17<sup>th</sup> MARCH 2020

TIME: 11.00 AM – 12.30 PM

REGISTRATION NO: .....

**IMPORTANT INSTRUCTIONS/ INFORMATIONS TO CANDIDATES**

- This question paper consists of 11 pages with 20 Multiple Choice Questions (Part A) and 04 Structured Essay Questions (Part B).
- Write your Registration Number in the space provided.
- Answer ALL questions.
- **Multiple Choice Questions (Part A):** Indicate answers in the answer sheet provided by placing a cross (X) in **INK** in the relevant cage. (Answers in pencil will **NOT** be marked)
- **Structured Essay Questions (Part B):** Write answers within the space provided.
- Do not remove any page/part of this question paper from the examination hall.
- Mobile phones and any other electronic equipment are **NOT** allowed. Leave them outside.
- Please fill the address sheet (See the last page).

BACHELOR OF PHARMACY HONOURS  
BSU3431 - HUMAN PHYSIOLOGY- LEVEL3  
CONTINUOUS ASSESSMENT II (NBT II)

REGISTRATION NO: .....

ANSWER SHEET FOR PART A

Q. No.	(a)	(b)	(c)	(d)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

REGISTRATION NO: .....

---

**Part A – Multiple Choice Questions**

*(20 marks)*

---

Choose the most suitable / best answer and indicate with a 'X' in the answer sheet provided.

1. Mechanical digestion of food occurs by
  - a) acids in the stomach
  - b) chewing in the mouth
  - c) lipase in the small intestine
  - d) bile in the gall bladder
  
2. Gastrin is
  - a) an enzyme
  - b) a neurotransmitter
  - c) a hormone
  - d) an acid
  
3. Fat digestion occurs as a function of
  - a) bile
  - b) amylase
  - c) peptidases
  - d) hydrochloric acid
  
4. A component of gastric juice is
  - a) sodium bicarbonate
  - b) bile
  - c) hydrochloric acid
  - d) insulin
  
5. A substance which completely reabsorbed in the renal tubules of a healthy individual includes
  - a) urea
  - b) water
  - c) sodium ions
  - d) glucose

6. Water reabsorption in the nephron occurs by
- facilitated diffusion
  - osmosis
  - active transport
  - simple diffusion
7. Which one of the following is correct regarding the formation of urine?
- The descending limb of loop of Henle is permeable to water
  - Tubular secretion occurs in the loop of Henle
  - Glomerular filtration is a selective process
  - Presence of ADH increases the volume of urine
8. A substance secreted in renal tubule which includes
- glucose
  - sodium ions
  - penicillin
  - amino acids
9. The best example for a positive feedback effect is
- blood sugar regulation
  - normal parturition (labour)
  - thermoregulation
  - blood pressure regulation
10. Basal metabolic rate is regulated by
- adrenocorticotropin
  - insulin
  - cortisol
  - thyroxin
11. Regulation of the blood glucose level is the main function of
- aldosterone
  - insulin
  - cortisol
  - epinephrine

12. A peptide hormone includes
- a) oestrogen
  - b) cortisol
  - c) growth hormone
  - d) testosterone
13. A hormone used to detect pregnancy is
- a) prolactin
  - b) human chorionic gonadotropin
  - c) follicular stimulating hormone
  - d) luteinizing hormone
14. Which one of the following cell/structure is correctly matched with its product?
- a) Sertoli cells – Testosterone
  - b) Uterus – Oxytocin
  - c) Corpus luteum – Luteinizing hormone
  - d) Ovaries – Estrogen
15. A hormone produced by the placenta is
- a) progesterone
  - b) follicular stimulating hormone
  - c) prolactin
  - d) luteinizing hormone
16. Which one of the following is **correct** regarding the ovarian cycle?
- a) Developing follicles produce follicle stimulating hormone
  - b) High blood level of progesterone causes the ovulation
  - c) Follicular stimulating hormone stimulates follicular development
  - d) Progesterone inhibits the endometrial development
17. Gray matter of brain consists of
- a) axons of neurones
  - b) cell bodies of neurones
  - c) Schwann cells
  - d) axon terminals

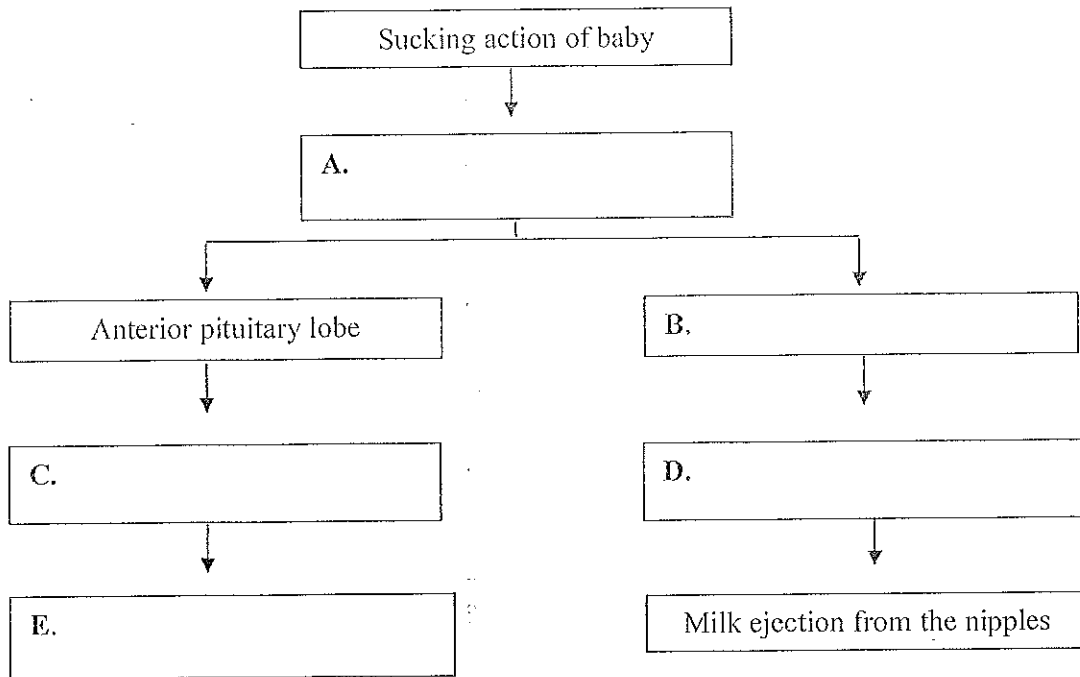
18. Which one of the following statement is correct regarding colour blindness?
- a) It is detected by ophthalmoscopy
  - b) It is a Y – linked disorder
  - c) Ishihara colour charts are used to test it
  - d) It affects females than males
19. Select the area of the eye which contains photoreceptors
- a) retina
  - b) lens
  - c) pupil
  - d) sclera
20. Which one of the following structure of the ear involved in hearing?
- a) tympanic membrane
  - b) semicircular canals
  - c) saccule
  - d) organ of Corti

**Part B – Structured Essay Questions**

*(80 marks)*

Write answers in the space provided.

1. a) Hormonal control of lactation (breast feeding) is given below. Name the components in A - E. (10 marks)



b) List **three (03)** gastro – intestinal changes in pregnancy. (6 marks)

- i. ....
- ii. ....
- iii. ....

c) List **two (02)** effects of menopause. (4 marks)

- i. ....
- ii. ....

2. a) List two (02) common thyroid disorders. (4 marks)

i. ....

ii. ....

b) List three (03) hormones that regulate calcium levels in the human body. (6 marks)

i. ....

ii. ....

iii. ....

c) Briefly describe the action of steroid and non – steroid hormones on their target cells. (10 marks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

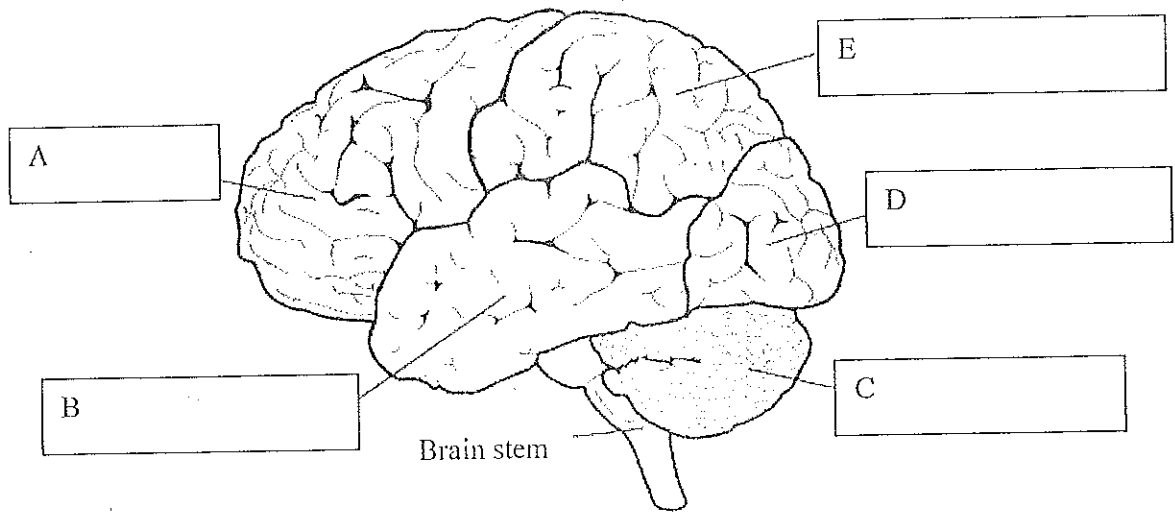
.....

.....

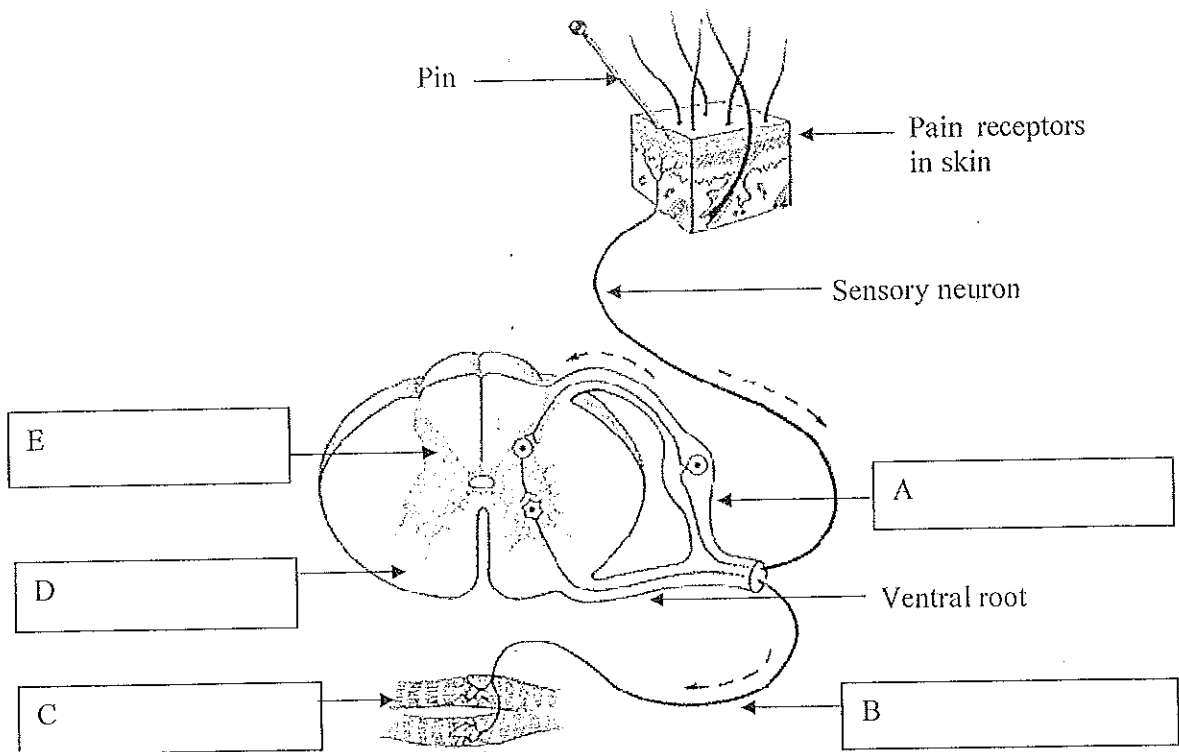
.....



3. a) Diagram of the human brain is given below. Name the lobe/region in A - E. (10 marks)



b) A cross section of a spinal cord is given below. Name the components in A - E. (10 marks)



4. a) List three (03) changes that occur during aging in the digestive system. (6 marks)

i. ....

ii. ....

b) List two (02) uses of lumbar puncture. (4 marks)

i. ....

ii. ....

c) A comparison of REM (Rapid Eye Movement) and NREM (Non – Rapid Eye Movement) sleep is given. Name the characteristics in i – x. (10 marks)

Characteristic feature	REM sleep	NREM sleep
Muscle tone	i	ii
Rapid eye movement	iii	iv
Body movement	v	vi
Blood pressure	vii	viii
Pulse rate	ix	x



Reg. No:.....

Name:.....

Address: .....

.....

.....

.....

.....