



SRI SHANMUGHA COLLEGE OF NURSING FOR WOMEN

Approved by Government of Tamilnadu & TNNMC. Approved by Indian Nursing Council, New Delhi
Affiliated to The Tamilnadu Dr. M.G.R Medical University, Chennai

Sankari- Tiruchengode Main Road, Pullipalayam, Morur (Po), Sankari(Tk), Salem (dt), Tamilnadu, Pin- 637304
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2.5.4 The Institution provides opportunities to students for midcourse improvement of performance through specific interventions



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Retest Answer papers



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APP-ANATOMY AND APP-PHYSIOLOGY- RETEST

S.NO	STUDENT NAME	IA MARKRS	RE TEST MARKS
1	Brundha S	32	39
2	Haripriya G	30	40
3	Jenny marx S	31	38
4	Nivetha B	25	38
5	Nithyasri S	28	38
6	Santhiya S	28	40
7	Sivajothi M	31	42
8	Sandhiya C	25	40
9	Yogitha M	27	38


PRINCIPAL

Prof. SHEELAVATHI N., PH.D

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SRI SHANMUGHA COLLEGE OF
NURSING FOR WOMEN

PULLIPALAYAM MORUR P.O 637 304

SANKAGIRI (TK) SALEM (DT) T.M.

Anatomy

M. Sirajothi
B. Sc. Nursing 1 Year
12/12/2022

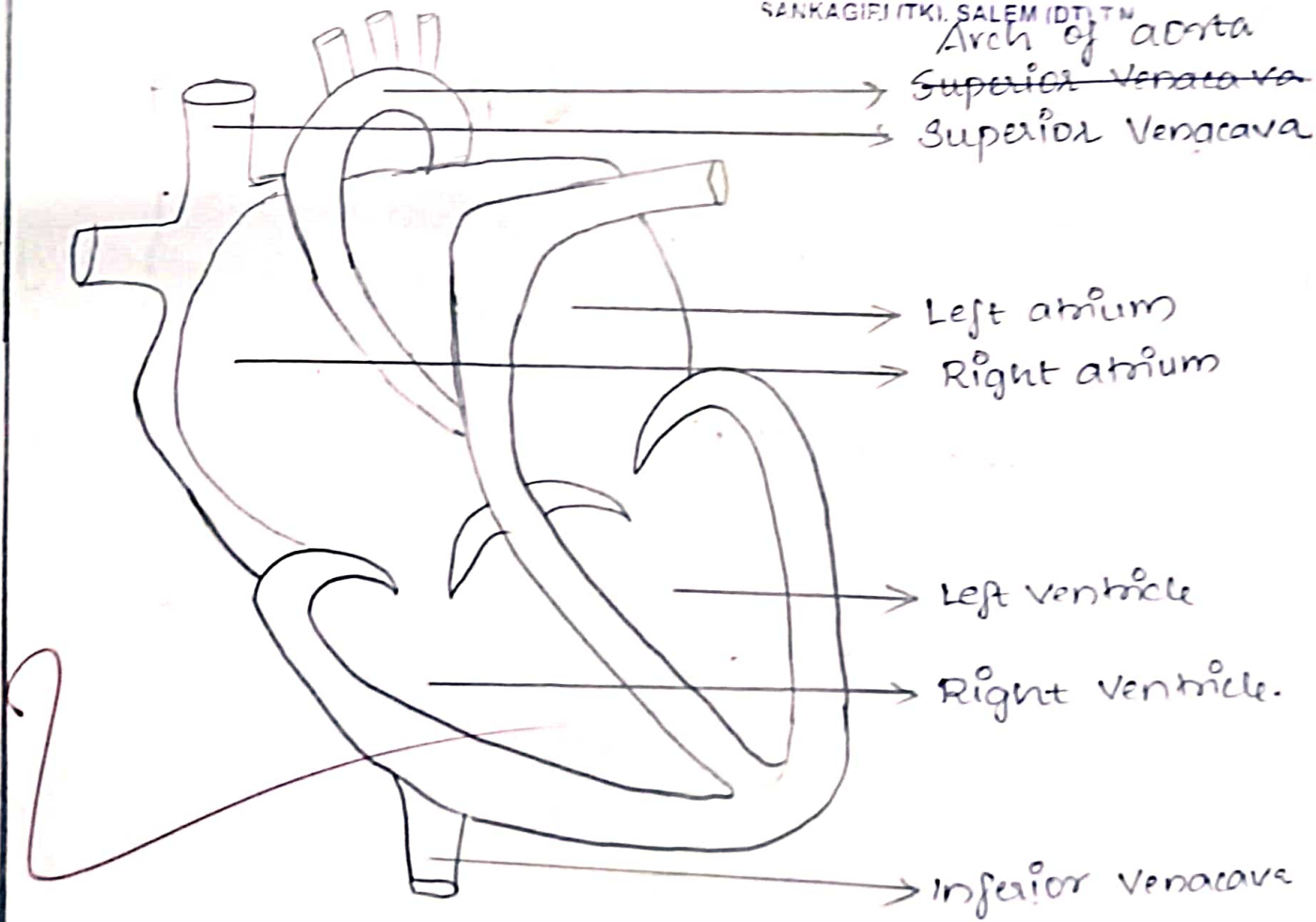
I

1. Arch of Aorta ✓
2. Radial Nerve ✓
3. 12 ✓
4. Sternocleidomastoid ✓
5. Carotid artery ✓
6. L₃ ✓

19
37

Total 31
75

II



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CHAMBERS OF HEART

- > Right atrium
- > Left atrium
- > Right ventricle
- > Left ventricle

LAYERS OF HEART

- > Pericardium
- > Myocardium
- > Endocardium.

BLOOD SUPPLY OF HEART

It is the branch of right coronary artery vein drains into the coronary sinuses

- The heart equal size about 12cm long 9cm.
- 250g in adult, 300g in adult males.
- Apex is directly anteriorly, base is posteriorly.

VALVES OF HEART

- Bicuspid Valve
- Tricuspid Valve

* The right atrium receives 3 veins

- Superior Vena Cava
- Inferior Vena Cava
- Coronary sinus


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Placenta.

- * Placenta is the product seen in the uterus.
- * It contains nutrients and O_2 to the mother to foetus.
- * Many nutrients and waste products are given and release from the mother to foetus.
- * Two types of hormones seen:
 - peptide hormone.
 - steroid hormone.

3. Layers of skin.

- Dermis
- Hypodermis
- Epidermis

Dermis

The middle layer of skin.

Hypodermis

The innermost layer of skin

Epidermis

It is composed of layers of squamous epithelium cells.

Coronary Artery.

Vessels that supply oxygenated blood to the heart muscle.

CONDUCTING SYSTEM

Sinoatrial node - Specialized cells of the heart that initiate the heart beat.

Atrioventricular Node - A relay between atria and ventricles.

Bundle of His - Specialized cells at the superior interventricular septum that receive nerve impulses from the atrioventricular node.

IV

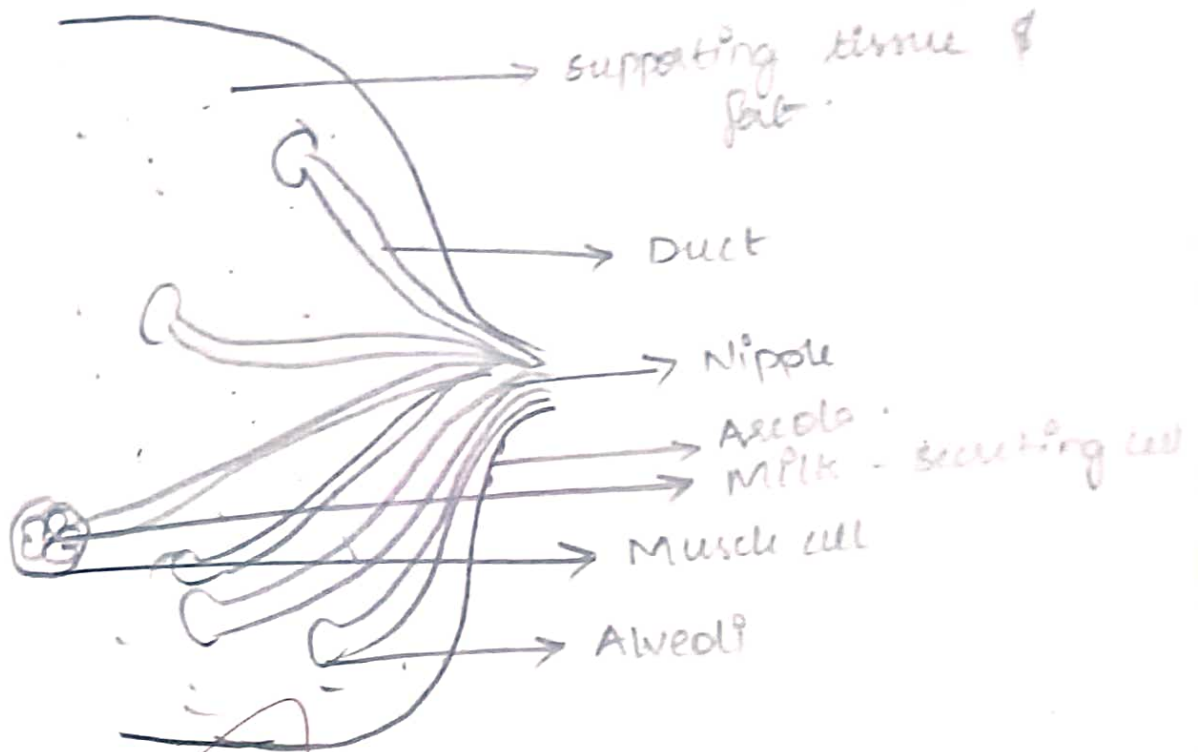
1. Neuroglia:

* Neuroglia of the PNS completely surround axons and cell bodies. The two types of glial cells are the glial cells and Schwann cells.

* Schwann cells contain myelin sheath around axons.

* Glial cells contain exchange between neuronal cell bodies and interstitial cells.

* The astrocytes and microglia is the main part of the Neuroglia.



The production of milk by the mammary glands is called lactation. Many lymphatic vessels and lymph nodes are found within the lobes. Antibodies against general infections are deposited into the milk by the mammary gland's lymphatic system.

1. Ventricles of Brain

- lateral ventricle
- Third ventricle
- Fourth ventricle.

- Ventricles are continuous cavity in various parts of brain
- lateral ventricle cavity of each ventricle cerebral hemisphere.

- Fourth ventricle is cavity of hindbrain, midbrain.
- CSF circulation is the ventricles and subarachnoid space provides nourishment to the components of brain.
- The space b/w the brain and spinal cord is CSF
- CSF contain Pressure and O_2 .

2. Vermiform Appendix.

- It is the organ seen in the digestive system.
- The long caecum it help for the functioning of Appendix.
- It help to destroy the microbes and inject microbes from the Appendix.
- It is the part of the Appendix, seen in the lower portion of the the stomach.

PHYSIOLOGY

I

1. Regulation of body temperature
2. Control
3. Water balance
4. Electrolytes
5. Megaloblastic anemia
6. Simple cuboidal epithelium
7. Osmoregulation



II

Injury is a form of trauma caused by external forces to cause infection cause in other uncontrolled group of infection.

2 types of injury -

1. Local injury
2. Systemic

Local injury

It is the form of injury to a body. It includes laceration, infection, agents like gun, various chemicals, etc.

Acute injury

The response caused by an individual as a result of organic stimulus is known as acute injury. 2 types

- Injured cells
- Injured part

III

1. Glomerular Filtration

Glomerular filtration is a process involved in the formation of urine. in this;

→ The glomerular filtration takes place in the glomerular capillaries and glomerulus.

→ The ^{smaller} ~~larger~~ molecules filtered through the capillaries, but the larger molecules and some plasma proteins will not filtered through it, because they are too small or the pores are small to pass the substance.

→ Filtration takes place b/w there is a pressure difference.

→ The hydrostatic pressure in glomerulus, which is opposed by the osmotic pressure in blood. which all acts as together.

$$7.3 \text{ kPa} - (4 + 2) = 1.3 \text{ kPa}$$

2. Functions of Saliva

Saliva is the part of digestive system.

Saliva contains;

→ Milder salts

→ Water.

→ Electrolytes.

→ Salivary amylase.

→ Antimicrobial substances.

Saliva functioning in many roles in the digestive system.

- ⇒ Clearing the mouth.
- ⇒ Lubricating the mouth.
- ⇒ Warming and humidification.
- ⇒ Makes the rough food into swallowable form and easy Swallowing and rapid digestion.

3. C.S.F

Cerebrospinal fluid.

- * Helps as a Cushion.
- * Nutrient exchange.
- * Situating b/w Brain and Spinal Cord.
- * Gas exchange.
- * Shock absorber.

Surya

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PHYSIOLOGY

M. Sivajothi
B.Sc Nursing 1 Year
2/1/2022

I

1. Regulating the body temperature.
2. Infs.
3. Total lung capacity.
4. Fibronectin.
5. Megaloblastic anemia.
6. Simple columnar epithelium.
7. Oesophagus.

$\frac{27}{38}$

$\frac{42}{75}$

IV

1.

Peristalsis

Peristalsis is a wavelike movement through mouth. It gives the easy swallowing and speed movement of food through the throat and rapidly reaches into the stomach.

3.

Placenta

Placenta is an interface structure between the mother and the foetus, and it allows the transfer of certain substances across their circulatory system.

Functions of placenta

- ⇒ Placental functions include exchange of substances, protection to the foetus and maintenance of pregnancy.
- ⇒ Exchange of nutrients and wastes.
- ⇒ Maintenance of pregnancy.

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- ⇒ Secreting hormones during pregnancy;
 - * Human chorionic gonadotrophin.
 - * oestrogen.
 - * progesteron.

⇒ Helps in fetal adaptations.

2.

Acromegaly

It means 'large extremities' - this occurs in adults when there is excessive GH secretion, usually from a pituitary tumour after ossification is complete.

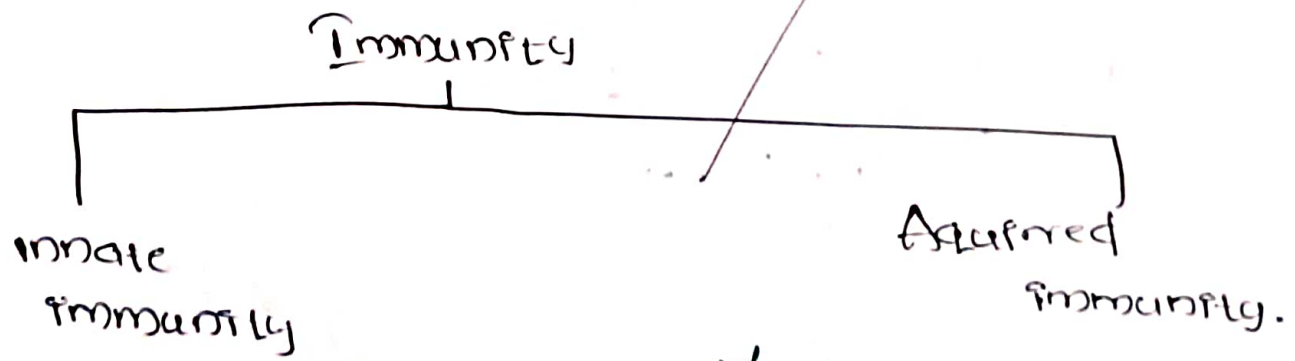
Clinical features

- ⇒ Bones become thickened.
- ⇒ Tissues thickening.

II

Immunity

The body's first line of baseline of defense is its collections of non-specific innate defences, including phagocytes such as macrophages. If these are overwhelmed, activation of the powerful immunity.



Innate Immunity

This is a collection of cells, defensive chemicals and physical barriers that protect against an enormous range of infections and harmful chemical and are present at birth, hence the term 'innate'.

Specific Immunity / Acquired Immunity

Acquired immunity can be considered the body's second line of defense, activated when required by the innate defence system or by the presence of microbes or microbial products in body tissue.

Lymphocytes

⇒ They make up 20% - 30% of circulating white blood cells but at any one time most of them are found in lymphoid and other tissues than in the blood stream. They include neutral killer cells: T-cells and B-cells. They are responsible for immunity and are produced in the bone marrow and some lymphoid tissues although T-cells migrate to the thymus gland for final maturation.

T-cells

The hormone thymosin, produced by the thymus gland promotes T-cell maturation, which leads to the formation of fully specialised, mature, functional cells. It's important to recognize only one

type of antigen, and during its subsequent exposure through the body will react to no other antigen.

B-cells

B-cells are both produced and matured in the bone marrow. They produce antibodies, proteins that are designed to bind to and destroy antigens. As with T-cells, each B-cell targets one specific antigen and produces antibodies targeted against that antigen alone. B-cells provide antibody-mediated immunity.

Cytotoxic T-cells

These directly inactivate any cells carrying antigens. They attach themselves to the target cell and release powerful toxins, which are very effective because the two cells are so close together.

Helper T-cells

These are essential not only for cell-mediated immunity, but also for antibody-mediated immunity. Their central role in immunity is emphasised in situations where they are destroyed, as by the human immunodeficiency virus.

Memory B-cells

Like memory T-cells, these cells remain in the body long after the initial episode has been

- Counter with the same antigen by stimulating the production of antibody - Secreting plasma cells.

Memory T-cells

These long-lived cells survive after the threat has been neutralised and provide cell-mediated immunity by responding rapidly to another encounter with the same antigen.

III

2.

Saliva

Saliva is the combined secretions from the salivary glands and the small mucus-secreting glands of the oral mucosa. About 1.5 L Saliva is produced daily.

It contains;

→ Water.

→ Mineral salts.

→ Salivary Amylase.

→ Anti Microbial Substances.

Secretion of Saliva

It's secretion controlled by the autonomic nervous system.

Parasympathetic stimulation results in secretion of watery saliva with a low content of enzymes. And other organic substances.

Sympathetic stimulation causes saliva with a low content. Rich in organic substances.

Functions of Saliva.

1 → Chemical digestion of Polysaccharides.

Saliva contains the enzyme Salivary amylase, which begins the breakdown of Complex Sugars, including Starches, reducing them to the disaccharide maltose.

The action of Salivary amylase takes place upto the stomach. Where the hydrochloric acid reduces its effect.

2 → Lubrication of Mouth.

Its high water content means that Saliva moistens and lubricates dry food into a semi-solid bolus, ready for Swallowing.

3 → Non-specific defence

Lyszyme and immunoglobulins present in Saliva help to combat invading microbes.

3. Cerebrospinal fluid

CSF Circulates constantly from the ventricles through the subarachnoid space around the brain and spinal cord. It is a clear, slightly alkaline fluid with a specific gravity.

It contains;

→ Water.

→ Dissolved gases and other substances

→ Mineral Salts.

→ Glucose.

→ Small amount of urea.

Functions of Cerebrospinal fluid

CSF supports and protects the brain and spinal cord by maintaining a constant pressure around these vital structures and by acting as a cushion or shock absorber b/w the brain and skull.

CSF keeps the brain and spinal cord moist and there may be exchange of nutrients and waste products b/w CSF and the interstitial fluid of the brain. It involves in the regulation of breathing.

1. Glomerular filtration rate

The volume of filtrate formed by each kidney in each minute is called the glomerular filtration rate.

→ A healthy adult the GFR is about 125 ml/min
or 180 litres

Factors influencing GFR

Hormones influencing their production.

Parathyroid hormone.

Secreted by the parathyroid glands, and together with the Calcitonin from the thyroid, regulates the reabsorption of calcium and phosphate to maintain normal blood calcium level and calcitonin factors it.

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Antibiotic Resistance

It is caused by the presence of antibiotics which is increased the permeability of the drug. Considered viruses and collecting ducts to women, a woman membership.

Govt

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Andromy

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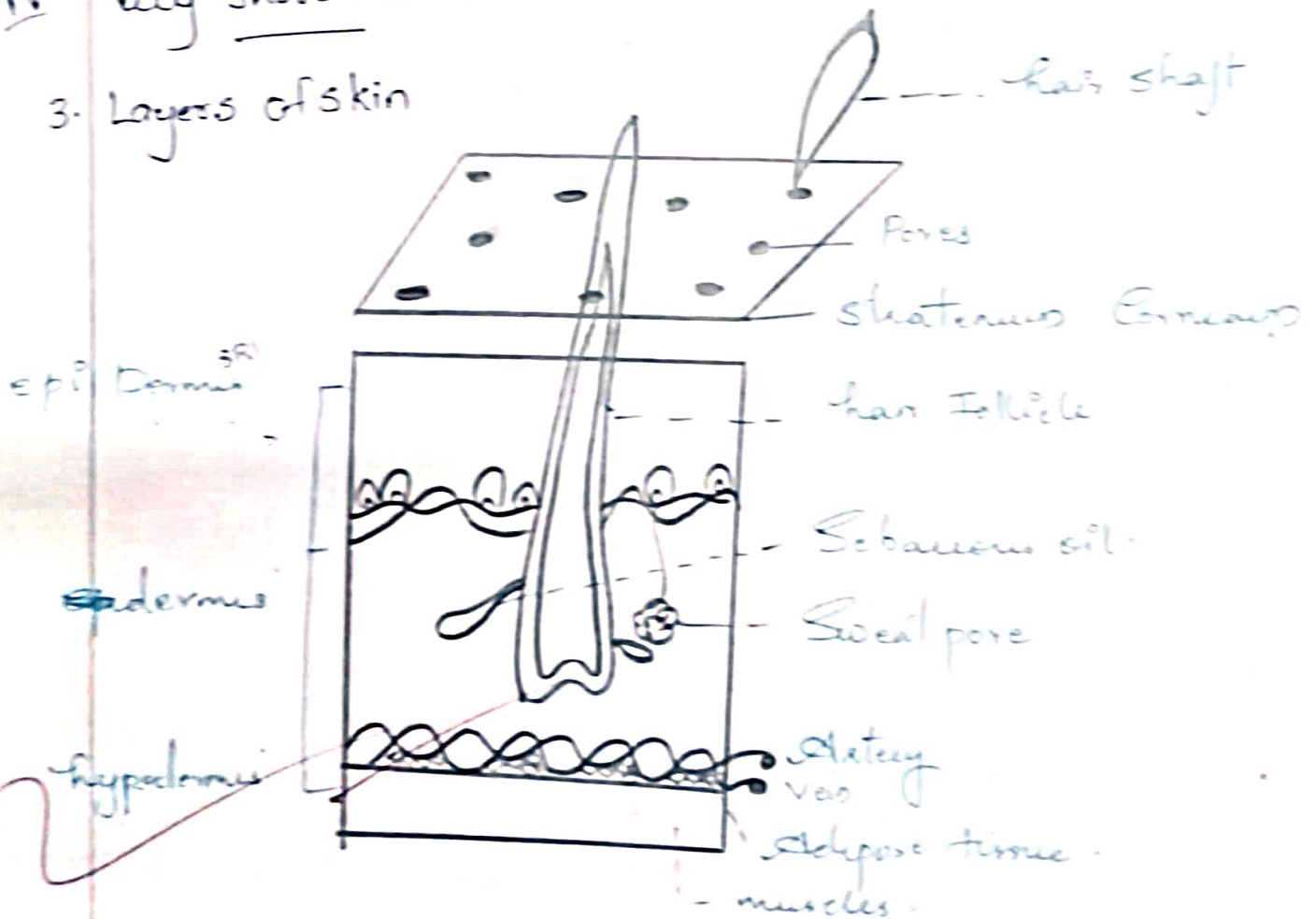
I Multiple Choice Questions

1. Arch of Aorta ✓
2. Radial Nerve ✓
3. 12 ✓
4. Sternocleidomastoid muscle ✓
5. Carotid artery ✓
6. S₂ ✓



II Very short answers

3. Layers of skin



Layers of skin



Epidermis

- * This is composed of stratified keratinised squamous epithelium.
- * There are no blood vessels or nerve endings in the epidermis but its deeper layers are bathed in interstitial fluid from the dermis, which provides oxygen and nutrients and drains away as lymph.
- * Hairs, secretions from sebaceous glands and ducts of sweat glands pass through the epidermis to reach the skin surface.

⇒ Dermis

- * The dermis is a tough and elastic layer.
- * It is formed from connective tissue.
- * The matrix contains collagen fibres interlaced with elastic fibres.

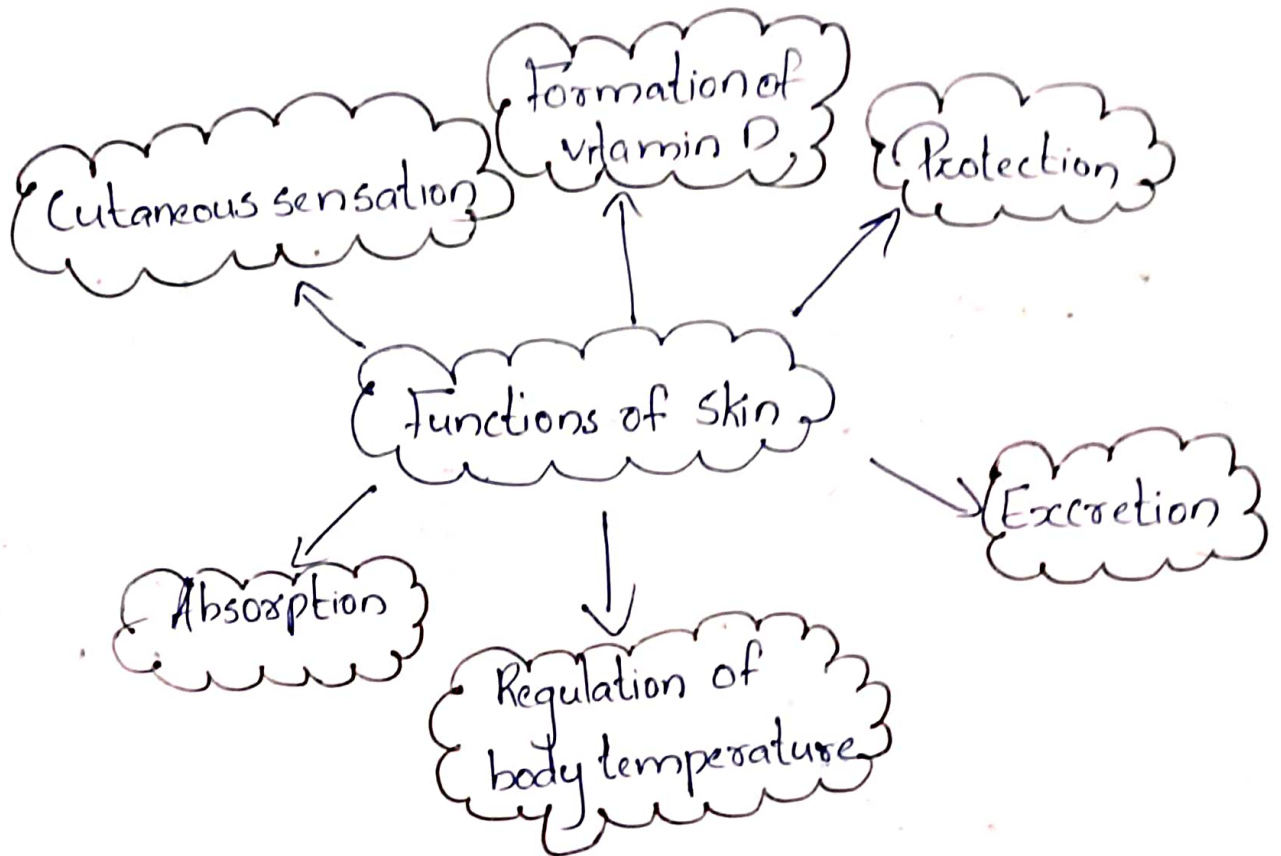
* Structures found in the dermis include:

- Small blood and lymph vessels.
- Sensory nerve endings.

Sm. • Sweat glands and their ducts.

• Erector pili muscles and sebaceous glands

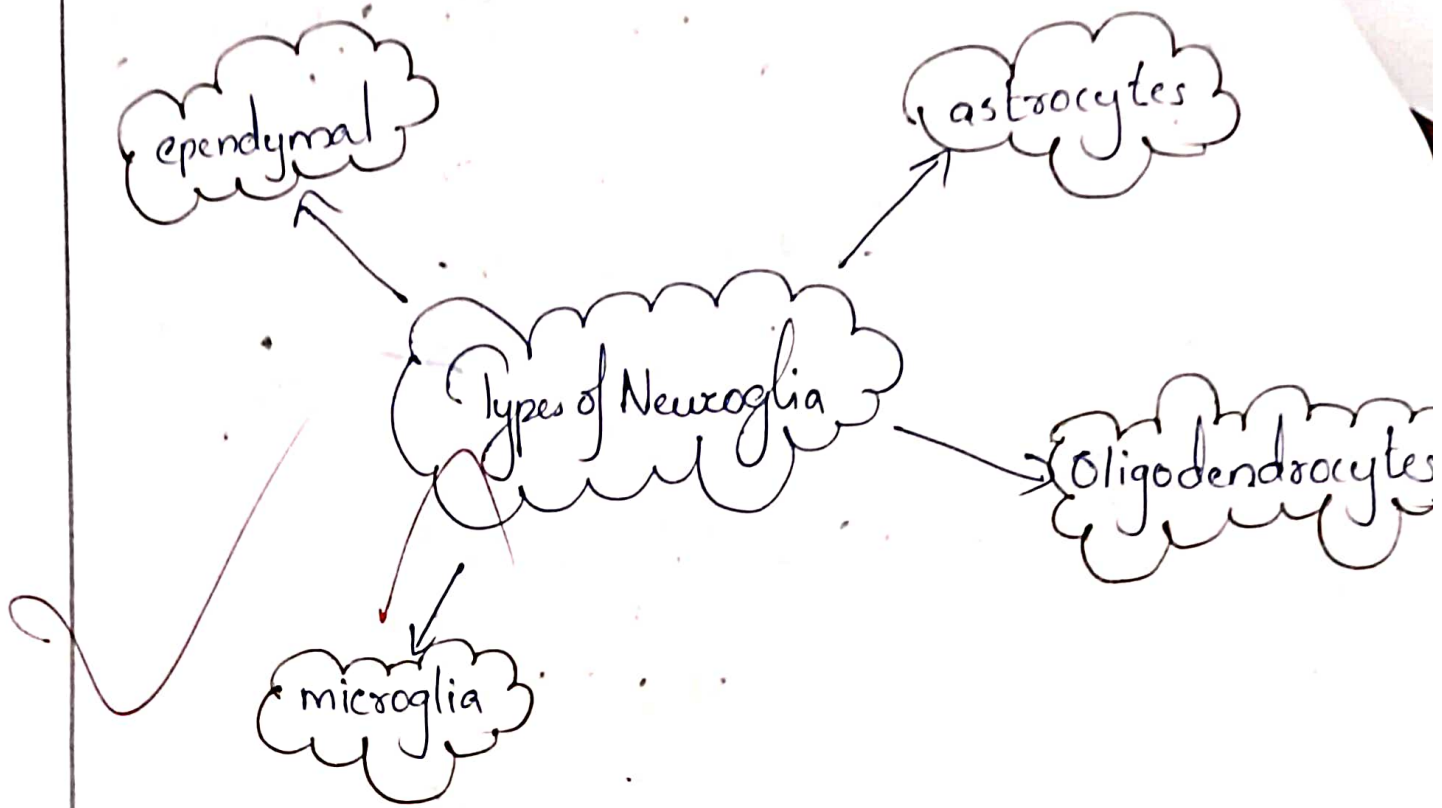
• Collagen fibres bind water and give the skin its tensile strength but as the ability declines with age, wrinkles develop.



2. Functions of Placenta

- * Placental functions include exchange of substances, protection to the foetus and maintenance of pregnancy.
- * Exchange of nutrients and wastes.
- * Maintenance of pregnancy
- * Secreting hormones during pregnancy;
 - Human chorionic gonadotrophin
 - Oestrogen
 - Progesteron
- * Helps in fetal adaptations

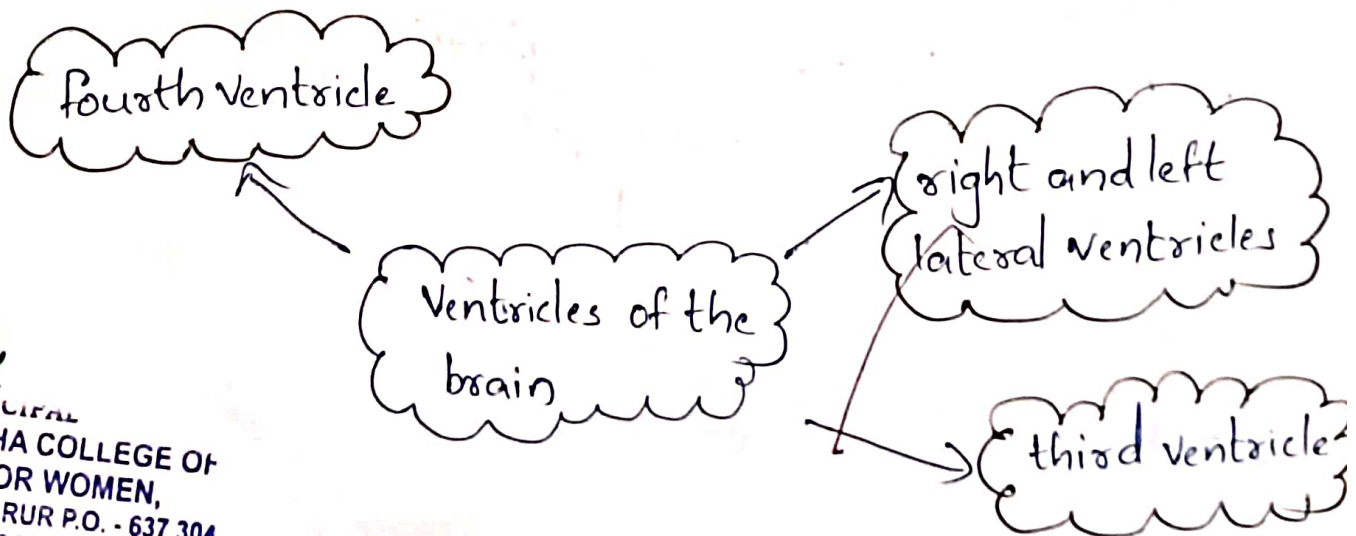
1. Neuroglia



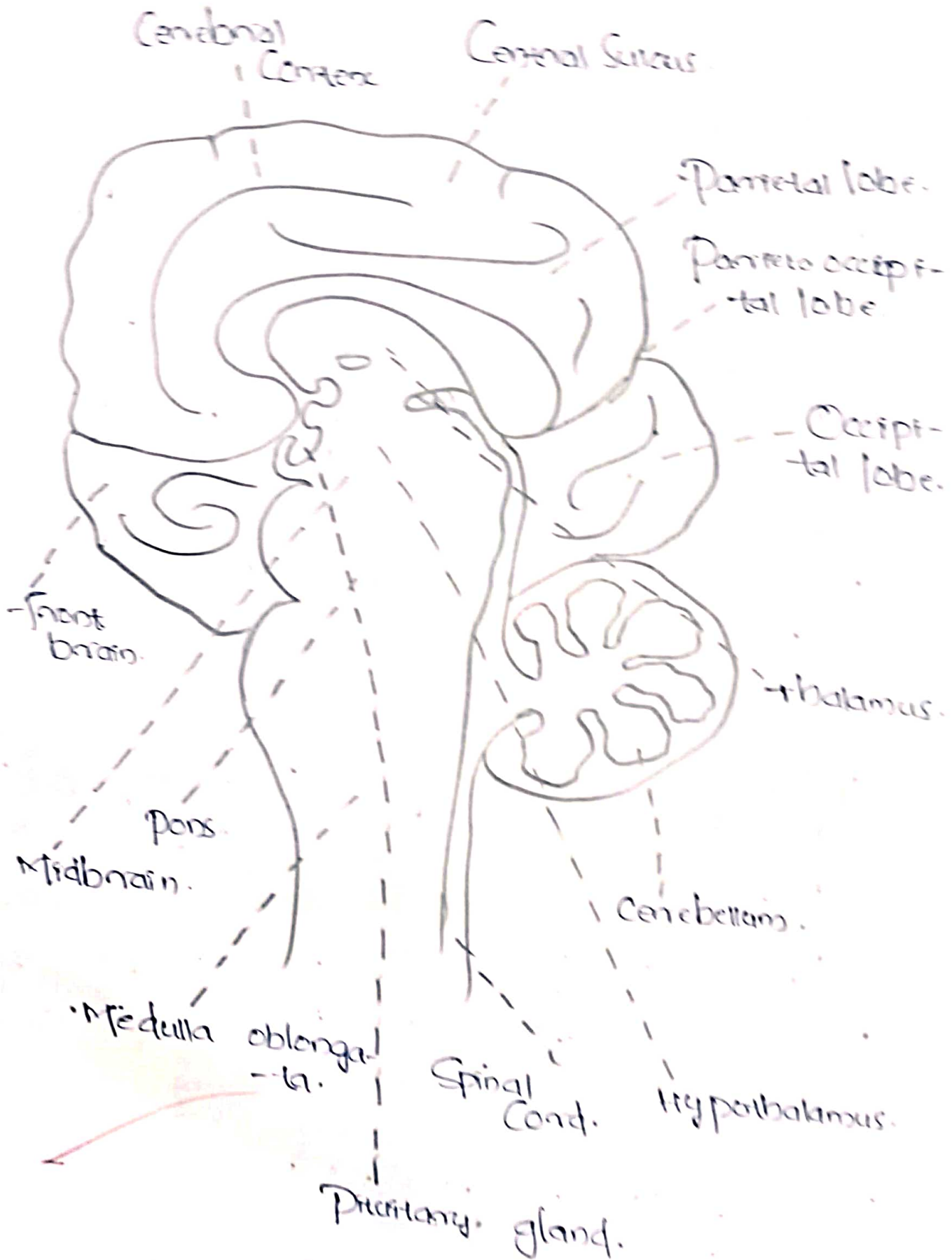
⇒ The neurones of the CNS are supported by non-excitabile glial cells, also called neuroglia.

III Short answers

1. Ventricles of the brain



Structure of Brain



⇒ Lateral Ventricles

- * These cavities lie within the cerebral hemispheres, one on each side of the median plane just below the corpus callosum.
- * They are separated by a narrow septum and lined with ciliated epithelium.
- * Each communicates with the third ventricle by an inter-ventricular foramen.

⇒ Third Ventricle

The third ventricle is a tube-shaped cavity situated below the lateral ventricles between the two parts of the thalamus.

- * It communicates with the fourth ventricle by a canal, the cerebral aqueduct.

⇒ Fourth Ventricle

* The fourth ventricle is a small diamond-shaped cavity lying below and behind the third ventricle, between the cerebellum and pons.

- * It is continuous below with the central canal of the spinal cord.
- * It allows passage of CSF into subarachnoid space through tiny foramina in its roof.

The appendix is a fine tube closed at one end

It opens from the caecum about 3 cm below the ileocaecal valve