

VICTORIAN NURSING COUNCIL

3794.30

Nurses Act 1958

FIRST PROFESSIONAL EXAMINATION - GENERAL NURSE TRAINING

1st and 2nd December, 1965

ANATOMY, PHYSIOLOGY AND HYGIENE PAPER

Time allowed: Two hours and a half.

IMPORTANT: Read your questions very carefully.  
Answer only what is asked as no marks  
will be given for irrelevant material.  
Use relevant diagrams wherever possible.  
ALL questions to be answered.

1. (a) Name the fibrous membrane which covers the shaft of long bones and state its functions. (3 marks)  
(b) Where is compact bone tissue located? (1 mark)  
(c) List the functions of the skeleton. (4 marks)  
(d) What mineral salts are most abundant in bone tissue? (2 marks)  
(10 marks)
2. What are the following and what is their function?  
(a) Aldosterone.  
(b) Thromboplastin (thrombokinase).  
(c) Ptyalin.  
(d) Parathormone.  
(e) The intrinsic factor of Castle. (10 marks)
3. (a) What do you understand by internal respiration? (3 marks)  
(b) State the role of:  
(i) iron in the transport of oxygen in the blood; (1 mark)  
(ii) the phrenic nerve in respiration. (1 mark)  
(c) Where is the respiratory centre situated and by what is it stimulated? (2 marks)  
(d) Describe the structure and function of the pleura. (2 marks)  
(e) What is the function of the epiglottis? (1 mark)  
(10 marks)
4. Name and state the function of the lining tissue of each of the following:-  
(a) Stomach.  
(b) Fallopian Tube.  
(c) Ureter.  
(d) Nasal cavity.  
(e) Capsular ligament of synovial joints. (10 marks)
5. (a) What is the name of the sac which surrounds the heart? (1 mark)  
(b) What kind of tissue lines this sac? (1 mark)  
(c) Which of the heart chambers has the thickest wall? (1 mark)  
(d) What is the function of the chordae tendineae? (1 mark)  
(e) Name the blood vessels which open into the right atrium. (2 marks)  
(f) How does the left atrioventricular heart valve differ from the right? (1 mark)  
(g) In what way do arterioles play an important part in the maintenance of blood pressure? (1 mark)  
(h) Name two factors of importance in maintaining the return of venous blood from the lower extremities. (2 marks)  
(10 marks)

## Anatomy, Physiology and Hygiene continued:

6. (a) Water is an important substance to the human body. From what sources is it obtained and what are its uses in the body? (5 marks)  
 (b) How many calories are provided by 2 grammes of carbohydrate? (1 mark)  
 (c) Why are fats desirable as constituents in the diet? (4 marks)
- (10 marks)
7. (a) What is the correct anatomical term used in reference to:-  
 (i) the ring of arteries at the base of the brain;  
 (ii) the fold of dura mater in the longitudinal fissure;  
 (iii) the endocrine gland at the base of the brain;  
 (iv) the network of blood vessels which secretes cerebrospinal fluid.  
 (v) the portion of the brain which is concerned with balance and equilibrium? (5 marks)
- (b) Name the cranial nerves which are involved in the following:-  
 (i) slowing of the heart rate;  
 (ii) listening to the radio;  
 (iii) watching television. (3 marks)
- (c) Define and give one (1) example of reflex action. (2 marks)
- (10 marks)
8. (a) What effect does strong emotion, such as rage or fear, have on the digestive processes? (1 mark)  
 (b) Name the pancreatic enzymes and state their actions. (3 marks)  
 (c) Draw a clearly labelled diagram of the large intestine and state its functions. (6 marks)
- (10 marks)
9. (a) Draw and label a diagram of the internal organs of the reproductive system in the female. (5 marks)  
 (b) Name the ovarian hormones and outline their function. (4 marks)  
 (c) Which gland stimulates production of these hormones? (1 mark)
- (10 marks)
10. (a) How does the skin perform the following functions:-  
 (i) regulation of body temperature; (5 marks)  
 (ii) protection; (2 marks)  
 (iii) formation of Vitamin D? (1 mark)
- (b) In what layer of the skin are the sweat glands found? (1 mark)  
 (c) In what part of the body are the sweat glands most numerous? (1 mark)
- (10 marks)