

you will all know how much time there was to spare. And those of you who have done such district nursing will know how difficult it is to shed one's outdoor clothing when once one's hands are soiled and work progressing rapidly. My gloves had to come off of necessity. At the first opportunity my coat was flung off. But my veil! Sensible district nurses wear caps, but foolish district nurses wear veils!!! I couldn't spare another tick to take that off and in the meanwhile? Ugh! The question is not 'what was the matter,' it is 'What wasn't the matter?' Suffice it to say that that experience left me with a little more sense.

THE STATE EXAMINATION : PRELIMINARY

ANATOMY

Give a brief account of the spinal column and its contents.

THE spinal column is built up of 33 irregular bones, the vertebrae. Each vertebra consists of a disc-shaped body lying to the front, from which an arch of bone juts backwards, enclosing a space which forms the spinal canal. The arch gives off three processes, for muscle attachment; one spinous process, projecting backwards immediately under the skin; two transverse processes, one on either side.

The vertebrae lie one above the other, forming a continuous column, with a cavity, the spinal canal, running throughout its length. Their bodies are joined by thick pads of cartilage, the intervertebral discs. The arches are notched so that openings are formed between the bones on either side for the exit of the spinal nerves.

The vertebrae are divided into :—

(1) Seven cervical vertebrae, the smallest, which run down the neck, forming a slight forward curve. The first two, the atlas and the axis, are peculiar. The atlas consists of a ring of bone and carries sockets, which receive the occipital condyles, forming the joint by which the head nods. The axis carries the odontoid process, which passes through the atlas, forming a pivot on which the atlas turns, permitting rotating of the head.

(2) Twelve dorsal vertebrae running down the back of the thorax, forming a backward curve, and carrying the ribs.

(3) Five lumbar vertebrae, the largest, running down the back of the abdomen, forming a forward curve.

(4) Five sacral vertebrae, fused to form one bone, the sacrum, which, curving backwards, forms the back wall of the pelvis.

(5) Four coccygeal vertebrae, fused to form one bone, the coccyx, remnants of the tail.

The column contains :—(a) spinal cord; (b) roots of the spinal nerves; (c) meninges; (d) cerebro-spinal fluid.

The spinal cord is a cylinder of nervous tissue, continuous with the brain above. It hangs in the canal, extending to the level of the second lumbar vertebra, where it ends in a bunch of nerves, the cauda equina. It consists of

white matter (motor and sensory nerve fibres) on the surface and grey matter (motor and sensory nerve-cells) in the centre. It gives off 31 pairs of mixed nerves, which pass out between the vertebræ, to supply the tissues. Each nerve arises by two roots—an anterior root of motor-fibres arising from the motor-cells of the cord, and a posterior root of sensory-fibres running in to the cord.

The meninges enclose the cord and are continuous with the three coverings of the brain—the dura mater, a tough protective outer covering; the arachnoid, a delicate membrane between dura and pia mater, containing the cerebro-spinal fluid, a watery secretion surrounding the cord, forming a water-bed in which it rests; the pia mater, a delicate membrane covering the surface of the cord, carrying the blood-vessels which nourish it.

PHYSIOLOGY

Give the position and a short account of the functions of the peritoneum, the ear-drum (membrana tympani), the ureter.

The peritoneum consists of two layers of serous membrane, the outer or parietal layer, the inner or visceral layer. The parietal layer lines the abdomen and partially covers the pelvic organs, dipping into the pelvis to cover the upper surface of the bladder, uterus, Fallopian tubes, ovaries and upper part of the rectum. The visceral layer is continuous with the parietal, which is reflected to form it. It covers all the abdominal organs, except the kidneys, attaching them to the abdominal wall and to one another, forming many ligaments and folds.

Functions :—

(1) Provides a smooth serum-secreting covering, so that the organs cause no friction by their activities.

(2) Supports the abdominal organs, its folds forming ligaments by which they are suspended in the cavity.

(3) Its folds carry and protect the nerves and blood-vessels supplying these organs.

(4) Keeps the intestines warm by means of the omentum, a fold of peritoneum, carrying fat, which hangs apron-like from the lower border of the stomach.

The ear-drum is a sheet of membrane separating the external auditory canal from the middle-ear, completely blocking its inner extremity.

Function :—Transmits the vibrations of air in the external auditory canal to the ossicles attached to it.

The ureter runs from the pelvis of the kidney to the bladder, passing down the back of the abdomen, behind the peritoneum, entering the pelvis and running across the pelvic floor to enter the base of the bladder from behind.

Function :—It conveys the urine from kidney to bladder, propelling it by peristaltic action.

Blocks of salt were once used by the Chinese for paying taxes.

Clay tablets from ancient Babylonia and Assyria show that banking transactions, not very different from those of the present time, were carried on four or five thousand years ago. Cheques and notes were made of clay, which was then hardened.