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(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2021/2022

ACADEMIC YEAR

FIRST YEAR SECOND TRIMESTER

MAIN EXAMINATION

FOR BACHELOR OF SCIENCE IN NURSING DEGREE

COURSE CODE: NUR 121

COURSE TITLE: HUMAN ANATOMY II

DATE: 25/04/2022

TIME: 09.00AM

INSTRUCTIONS TO CANDIDATES

Answer ALL Section one (1) MULTIPLE CHOICE QUESTIONS and ALL Section two (2) SHORT ANSWER QUESTIONS and any one (1) section THREE (3) LONG ANSWER QUESTION.

TIME: 3 Hours

This paper consists of 10 printed pages. Please Turn Over 

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PART ONE: MULTIPLE CHOICE QUESTIONS (ANSWER ALL)

1. The following statements concerning structures in the intercostal space are correct EXCEPT which?

(A). The anterior intercostal arteries of the upper six intercostal spaces are branches of the internal thoracic artery.

(B). The intercostal nerves travel forward in an intercostal space between the internal intercostal and innermost intercostal muscles.

(C). The intercostal blood vessels and nerves are positioned in the order of vein, nerve, and artery from superior to inferior in a subcostal groove.

(D). The lower five intercostal nerves supply sensory innervation to the skin of the lateral thoracic and anterior abdominal walls.

2. To pass a needle into the pleural space (cavity) in the midaxillary line, the following structures will have to be pierced EXCEPT which?

(A). Internal intercostal muscle.

(B). Levatores costarum.

(C). External intercostal muscle.

(D). Parietal pleura.

3. The parietal pleura

(A). Is sensitive only to sensation of stretch.

(B). Is separated from the pleural space by endothoracic fascia.

(C). Is sensitive to the sensation of pain and touch.

(D). Receives its sensory innervation from the autonomic nervous system.

4. The left vagus nerve passes through which opening in the diaphragm

(A). Aortic.

(B). Esophageal.

(C). Caval.

(D). Azygos.

5. Which one of the following ribs is classified as "true" rib?

(A). 7th rib.

(B). 8th rib.

(C). 9th rib.

(D). 10th rib.

6. The sternal angle (angle of Louis) is located at the level of the lower border of the following thoracic vertebra

(A). 2nd.

(B). 3rd.

(C). 4th.

(D). 5th.

7. The following statements concerning the trachea are true EXCEPT which?

(A). It lies anterior to the oesophagus in the superior mediastinum.

(B). In deep respiration, the carina may descend as far as the level of the 6th thoracic vertebra.

(C). The left principal bronchus is wider than the right principal brochus.

(D). The arch of the aorta lies on its anterior and left sides in the superior mediastinum.

8. The anterior surface of the heart is formed by the following structures EXCEPT which?

(A). Right ventricle.

(B). Right atrium.

(C). Left ventricle.

(D). Left atrium.

9. In a posteroanterior radiograph of the thorax, the following structures form the left margin of the heart shadow EXCEPT which?

(A). Left auricle.

(B). Pulmonary trunk.

(C). Superior vena cava.

(D). Arch of the aorta.

10. The following statements concerning the lungs are correct EXCEPT which?

(A). Inhaled foreign bodies most frequently enter the right lung.

(B). The left lung is in direct contact with the arch of the aorta and the descending thoracic aorta.

(C). There are no lymph nodes within the lungs.

(D). The costodiaphragmatic recesses are lined with parietal pleura.

11. The following structures form the walls of the inguinal canal EXCEPT

(A). The conjoined tendon.

(B). The aponeurosis of the external oblique muscle.

(C). The internal oblique muscle.

(D). The lacunar ligament.

12. Which of the statements below concerning the spermatic cord is FALSE?

(A). It extends from the deep inguinal ring to the scrotum.

(B). It contains the testicular artery.

(C). It is covered by five layers of spermatic fascia.

(D). It contains the pampiniform plexus.

13. The following statements concerning indirect inguinal hernia are true EXCEPT

(A). It is the most common form of abdominal hernia.

(B). The neck of the hernia sac lies medial to the inferior epigastric artery.

(C). The sac is the remains of the processus vaginalis.

(D). The hernial sac can extend into the scrotum.

14. In passing a needle into the cavity of the tunica vaginalis in the scrotum, which structure is not pierced

(A). Skin.

(B). Dartos muscle and Colles's fascia.

(C). Tunica albuginea.

(D). Internal spermatic fascia.

15. The appendix is located in which region on the anterior abdominal wall

(A). Right upper quadrant.

(B). Left lower quadrant.

(C). Right lower quadrant.

(D). None of the above.

16. External spermatic fascia is most closely associated with

(A). External oblique.

(B). Internal oblique.

(C). Fascia transversalis.

(D). Gubernaculum.

17. Which group of lymph nodes drain the testis?

- (A). Anterior axillary lymph nodes.
- (B). Para-aortic or lumbar lymph nodes.
- (C). Superficial inguinal lymph nodes.
- (D). External iliac nodes.

18. A 30-year old man was seen in the emergency department with a stab wound in the right inguinal region. Which of the following nerves supplies the skin of the inguinal region?

- (A). The 11th thoracic nerve.
- (B). The 10th thoracic nerve.
- (C). The 12th thoracic nerve.
- (D). The first lumbar nerve.

19. Pseudostratified ciliated epithelium lines which of the following organs?

- (A). Trachea.
- (B). Stomach.
- (C). Gallbladder.
- (D). Epididymis.

20. The endoderm will give rise to the

- (A). Stomach.
- (B). Spleen.
- (C). Adrenal medulla.
- (D). Pituitary gland.

21. The following statements concerning the pancreas are correct EXCEPT

- (A). The pancreas receives part of the arterial supply from the splenic artery.
- (B). The main pancreatic duct opens into the third part of the duodenum.
- (C). The uncinate process of the pancreas projects from the head of the pancreas.
- (D). The common bile duct lies posterior to the head of the pancreas.

22. The following statements concerning the ileum are true EXCEPT

- (A). The circular smooth muscle of the lower end of the ileum serves as a sphincter at the junction of the ileum and the cecum.
- (B). The branches of the superior mesenteric artery serving the ileum form more arcades than those serving the jejunum.
- (C). The plicae circulares are more prominent at the distal end of the ileum than in the jejunum.
- (D). Peyer's patches are present in the mucous membrane of the lower ileum along the antimesenteric border.

23. Which of the following veins does NOT form important portal-systemic anastomoses?

- (A). Esophageal branches of the left gastric vein and tributaries of the azygos veins.
- (B). Paraumbilical veins and superficial veins of the anterior abdominal wall.

- (C). Veins of the ascending and descending parts of the colon with the lumbar veins.
- (D). Superior rectal vein and inferior vena cava.

24. Which of the statements below about the ureters is INCORRECT?

- (A). Both ureters have three anatomic sites that are constricted.
- (B). Both ureters receive their blood supply from the testicular or ovarian arteries.
- (C). Both ureters are separated from the transverse processes of the lumbar vertebrae by the psoas muscles.
- (D). Both ureters pass anterior to the testicular or ovarian vessels.

25. The first sign of respiratory system formation is

- (A). Primitive foregut.
- (B). Tracheoesophageal septum.
- (D). Respiratory diverticulum.
- (D). Bronchial buds.

26. Oesophagus is lined by the following epithelium

- (A). Transitional.
- (B). Non-keratinizing stratified squamous.
- (C). Simple columnar.
- (D). Stratified ciliated columnar.

27. Which of the following organs is retroperitoneal?

- (A). Kidneys.
- (B). Jejunum.
- (C). Ileum.
- (D). Stomach.

28. The following statements concerning the pelvis are correct EXCEPT

- (A). The ilium, ischium, and pubis are three separate bones that fuse together to form the hip bone in the 25th year of life.
- (B). The platypelloid type of pelvis occurs in 2% of women.
- (C). External pelvic measurements have little practical importance in determining whether a disproportion between the size of the fetal head and the size of the pelvic inlet is likely.
- (D). The sacrum is shorter, wider, and flatter in the female than in the male.

29. Which of the following statements concerning the muscles and fascia in the pelvis is FALSE?

- (A). The levator ani muscle is innervated by the perineal branch of the fourth sacral nerve and from the perineal branch of the pudendal nerve.
- (B). In the pelvis, the fascia is divided into parietal and visceral layers.
- (C). Iliococcygeus muscle arises from a thickening of the obturator internus fascia.
- (D). The pelvic diaphragm is strong and has no openings.

30. Which of the statements concerning the origin of the following arteries is NOT correct?

- (A). The superior rectal artery is derived from the inferior mesenteric artery.
- (B). The ovarian artery is derived from the renal artery.
- (C). The uterine artery is derived from from the internal iliac artery.
- (D). The middle rectal artery is derived from internal iliac artery.

31. The urinary bladder is lined by

- (A). Pseudostratified columnar ciliated epithelium.
- (B). Simple cuboidal epithelium.
- (C). Transitional epithelium.
- (D). Simple squamous epithelium.

32. Which of the following is NOT part of the brainstem

- A. Medulla Oblangata
- B. Pons
- C. Cerebellum
- D. Midbrain

33. The embryonic foregut differentiates into all of the following EXCEPT

- (A). Ventral pancreas.
- (B). Gallbladder.
- (C). Stomach.
- (D). Jejunum.

34. The following statements concerning the uterus are correct EXCEPT

- (A). The fundus is part of the uterus above the openings of the uterine tubes.
- (B). The long axis of the uterus is usually bent anteriorly on the long axis of the vagina(anteversion).
- (C). The nerve supply of the uterus is from the inferior hypogastric plexuses.
- (D). The anterior surface of the cervix is completely covered with peritoneum.

35. Which of the following statements regarding the ductus(vas) deferens is INCORRECT?

- (A). It lies on the posterior surface of the prostate but is separated from it by the peritoneum.
- (B). It joins the duct of the seminal vesicle to form the ejaculatory duct.
- (C). It emerges from the deep inguinal ring and passes around the lateral margin of the inferior epigastric artery.
- (D). The terminal part is dilated to form the ampulla.

36. Which of the following statements is FALSE about the seminal vesicle?

- (A). The seminal vesicles are related posteriorly to the rectum and can be palpated through the rectal wall.
- (B). The seminal vesicles are two lobulated organs that store spermatozoa.
- (C). The upper ends of the seminal vesicles are covered by peritoneum.
- (D). The function of the seminal vesicles is to produce a secretion that is added to the seminal fluid.

37. Concerning the ovary which statement is NOT true?

- (A). The lymph drainage is into the para-aortic(lumbar) lymph nodes at the level of the first lumbar vertebra.
- (B). The round ligament of the ovary extends from the ovary to the upper end of the lateral wall of the body of the uterus.
- (C). The left ovarian artery is a branch of the left internal iliac artery.
- (D). The ovarian fossa is bounded above by the external iliac vessels and behind by the internal iliac vessels.

38. Regarding the small intestine

- (A). It is divided into two regions only: duodenum and jejunum.
- (B). The duodenum is its second part.
- (C). The jejunum is made up of the lower three fifths from the duodenojejunal junction.
- (D). Jejunum and ileum together measure about 6 meters long.

39. Concerning the large intestine, which of the following statements is NOT true?

- (A). It arches around and encloses the coils of the small intestine.
- (B). It tends to be more fixed than the small intestine.
- (C). It is the same length as the small intestine.
- (D). The descending colon occupies the left upper and lower quadrants.

40. Which of the following is NOT part of the anterior relations of the ascending colon?

- (A). Coils of small intestine.
- (B). Quadratus lumborum.
- (C). The greater omentum.
- (D). Anterior abdominal wall.

41. The following statements concerning the female urethra are correct EXCEPT

- (A). Its external orifice lies about 5 cm from the clitoris.
- (B). It lies immediately anterior to the vagina.
- (C). It is about 4 cm long.
- (D). It pierces the urogenital diaphragm.

42. Which of the following structures CANNOT be palpated by a vaginal examination?

- (A). Sigmoid colon.
- (B). Ureters.
- (C). Perineal body.
- (D). Iliopectineal line.

43. Which of the following structure does NOT pass posterior to the flexor retinaculum?

- (A). Median nerve.
- (B). Flexor pollicis longus tendon.
- (C). Ulnar nerve.
- (D). Anterior interosseous nerve.

44. Wrist drop results from damage to which nerve?

- (A). Median.

- (B). Radial.
- (C). Ulnar.
- (D). Axillary.

45. The axillary artery

- (A). Supplies the pectoral muscles via the superior thoracic artery.
- (B). Arises from the vertebral artery.
- (C). It is divided into 3 parts by teres major muscle.
- (D). It has no branches in its 3rd part.

46. Which of the following muscles is a flexor of the thigh?

- (A). Superior gemellus.
- (B). Adductor longus.
- (C). Gracilis.
- (D). Psoas.

47. The lateral rectus muscle of the eye is innervated by the

- (A). Optic nerve.
- (B). Trochlear nerve.
- (C). Abducent nerve.
- (D). Oculomotor nerve.

48. The vagus nerve leaves the skull through the

- (A). Occipital foramen.
- (B). Jugular foramen.
- (C). Inferior orbital fissure.
- (D). Foramen spinosum.

49. The seventh cervical vertebra is characterised by having

- (A). A large foramen transversarium.
- (B). A heart-shaped body.
- (C). The longest spinous process.
- (D). A massive body.

50. The spinal cord in the adult ends inferiorly at the level of the

- (A). L1 vertebra.
- (B). L5 vertebra.
- (C). L3 vertebra.
- (D). T12 vertebra.

PART TWO SHORT ANSWER QUESTIONS (SAQ) (ANSWER ALL QUESTIONS)

1. Enumerate the three(3) parts of sternum and give two(2) clinical importance of the sternum. (5 marks)
2. Name three(3) sites of ectopic pregnancy and state two(2) possible causes of fallopian tube obstruction. (5 marks)
3. Name five (5) contents of the spermatic cord. (5 marks)
4. During tapping of a scrotal hydrocele using a fine trocar and cannula, which anatomic structures are traversed? (5 marks).
5. List five(5) main functions of amniotic fluid. (5 marks)
6. Name four (4) functional layers in the wall of the jejunum giving one (1) difference between the small intestine and the large intestine histologically. (5 marks)

PART THREE LONG ANSWER QUESTIONS (SAQ) (ANSWER ONLY ONE)

1. Describe fetal circulation to include the flow of oxygenated blood from the placenta and through the liver and in the heart. Include a simple diagram. (20 marks).
2. Describe the formation, position, main branches and distributions of the brachial plexus. (20 Marks)