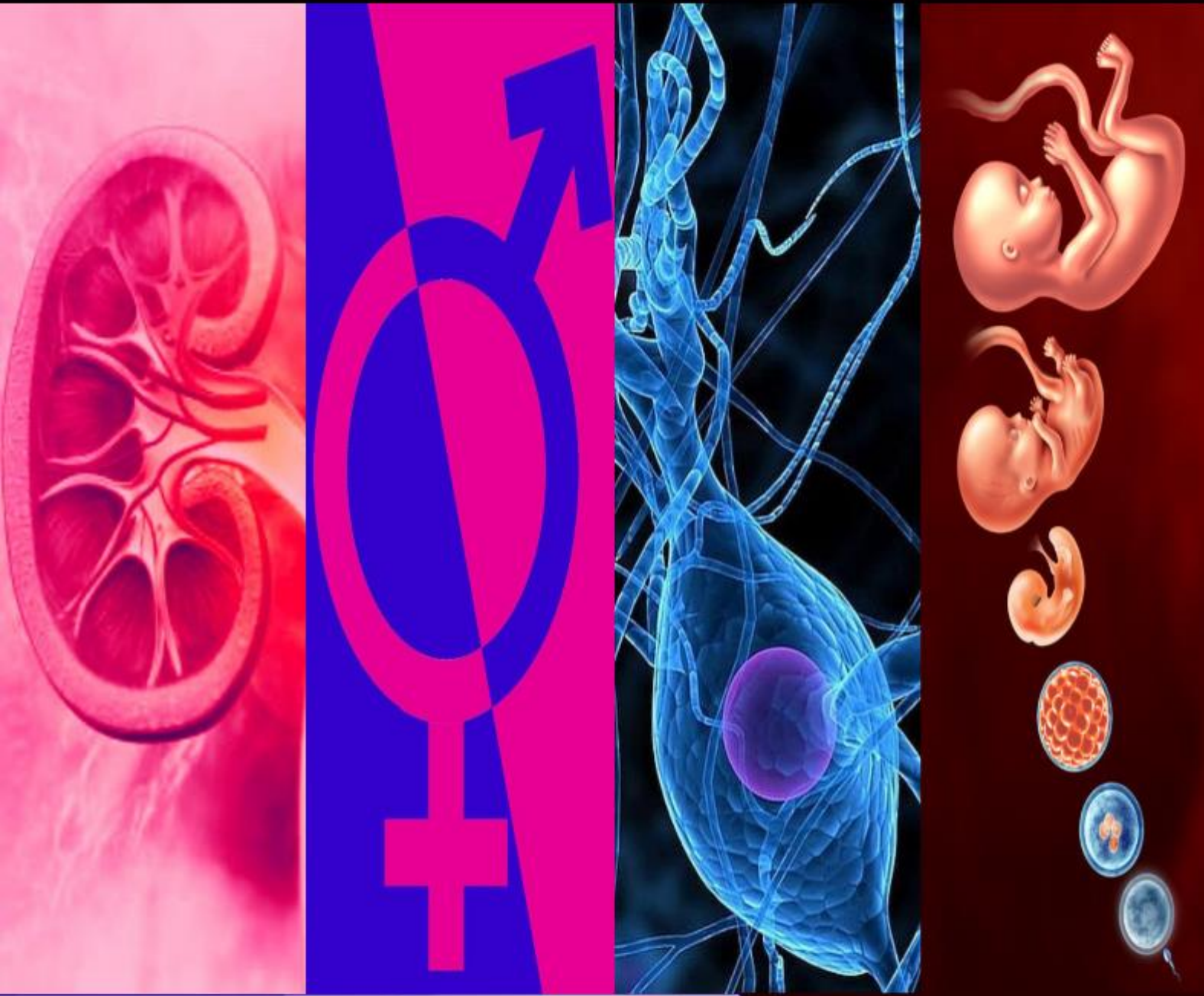


# HATAHET ANATOMY



Final Material **Questions**

Lecture: 14-24

Pages: 33      Questions: 206

# هذا العمل إهداء،،،

لحبيبتي و سيدتي و مربيتي أمي سمر حفظها الله و جعلني قرة عينها

لوالدي محمد (أبو فراس) رحمه الله و غفر له ذنبه

لسندي و شقيقي و أخي فارس حتاحت

لجدي و جدتي رحمهم الله و غفر لهم

لأستاذي الراقى الذي زرع فيّ حب التشريح الدكتور راشد الجومرد رحمه الله

لكل صاحب و أخ و عزيز

لكل طالب علم في هذا الوطن

لكل من كان سبباً في حصولي على هذا المقعد في هذه الكلية

تم بحمد الله إنجاز هذا الملف في يوم الجمعة، الرابع عشر من شهر ذي الحجة لسنة 1445 هجري الموافق للواحد و العشرين من حزيران من عام 2024 ميلادي

يُمنع بيع هذا الملف بأي ثمن بل يُستحب نشره لكل من يستفيد منه

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\* Pages numbers are according to the PDF, not the actual papers numbering

## Digestive system (1) & (2)

1) the small intestine has an increased surface area due to the presence of all of the following, except:

- A. Villi of mucosa
- B. microvilli of absorptive cells
- C. All of the listed
- D. Circular folds (Plicae circulares)

2) The largest fatty fold of the peritoneum is considered to be the:

- A. Greater omentum
- B. Mesentery
- C. Mesocolon
- D. Falciform ligament

3) The sigmoid colon extends from the left iliac fossa and slightly descends to the level of:

- A. S1
- B. L1
- C. L2
- D. S3

4) All of the following statements are TRUE about the tongue, except:

- A. all the muscles of the tongue are innervated by the hypoglossal nerve CN-XII
- B. the base of the tongue is where the lingual tonsil is located
- C. the muscles of the tongue that change the position of tongue are the extrinsic muscles
- D. the insertion of all the muscles of the tongue is the tongue itself

5) the salivary duct that opens near the 2nd maxillary molar tooth is

- A. Stensen's duct
- B. Parotid duct
- C. Wharton's duct
- D. Sublingual duct
- E. Two answers are correct

6) How many deciduous teeth are there?

- A. 8 on each quadrant
- B. 20
- C. 32
- D. It varies from person to person

7) All of the following about the mesentery are TRUE, except:

- A. it is the largest peritoneal fold
- B. it connects both ileum and jejunum to the anterior abdominal wall
- C. it contains the vessels and nerves that innervate both ileum and jejunum
- D. it connects both jejunum and ileum to the posterior abdominal wall
- E. all answers are correct



8) A 6-year-old boy was brought to a nutrition clinic, his parents said that their son suffers from stomachache caused by very spicy food that **he couldn't taste on the sides of his tongue**, after diagnosing the boy, the doctor there discharged him and didn't give any medications; this is because:

- A. the boy suffers from a syndrome and his food must be monitored
- B. the boy was born with Ankyloglossia so his taste buds are disabled
- C. the boy's foliate papillae don't even have taste buds normally
- D. they shot the boy to death :)

\*\*\*Studying the diagram below to answer the questions 9-10:

9) The duct at the ! is called:

- A. Accessory pancreatic duct
- B. Cystic duct
- C. Rivinus' duct
- D. Santorini's duct

10) The name of the sphincter at the ? is:

- A. Sphincter of Oddi
- B. Cardiac sphincter
- C. Pyloric sphincter
- D. Ileocecal sphincter

11) The pancreas contains all of the following regions, except a:

- A. Head
- B. Tail
- C. Antrum
- D. Body

12) It is nearly impossible to find any food in the jejunum after death, hence the name "Fasting tube"; this is because:

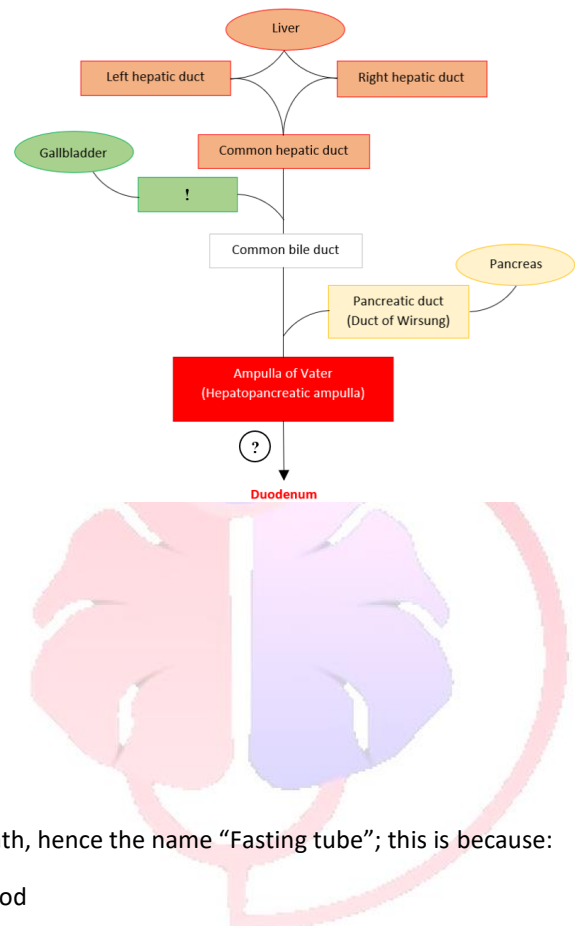
- A. it has a lot of HCL-secreting glands that completely digest the food
- B. it rapidly absorbs the food so no remnants will be found
- C. it is the shortest part of the small intestine
- D. its massive peristaltic movements moves chyme so quickly out of the jejunum

13) Which of the following is a retroperitoneal organ?

- A. Descending colon
- B. Ileum
- C. Sigmoid colon
- D. Transverse colon

14) The greater omentum extends between the:

- A. lesser curvature of the stomach and the posterior abdominal wall
- B. lesser curvature of the stomach and first 2 cm of the duodenum
- C. greater curvature of the stomach and transverse colon
- D. greater curvature of the stomach and lesser curvature of the stomach



15) All of the following are FALSE about Sublingual gland, except:

- A. It is one of the three minor salivary glands
- B. its associated duct is Wharton's duct
- C. it is the largest salivary gland
- D. located deep to the mandible

16) At both sides of the lingual frenulum there are 2 openings for

- A. Wharton's duct
- B. Rivinus' duct
- C. Wirsung's duct
- D. Santorini's duct

17) The tonsils that lie at each side of the oropharynx behind the oral cavity, between the two folds of soft palate:

- A. Tubal tonsils
- B. Palatine tonsils
- C. Pharyngeal tonsil
- D. Lingual tonsil

18) Digestion of which of the following would be affected the most in case of bile duct resection?

- A. Carbohydrates
- B. Lipids
- C. Proteins
- D. Nucleic acids

19) The greater curvature of the stomach is \_\_\_\_\_ compared to its lesser curvature.

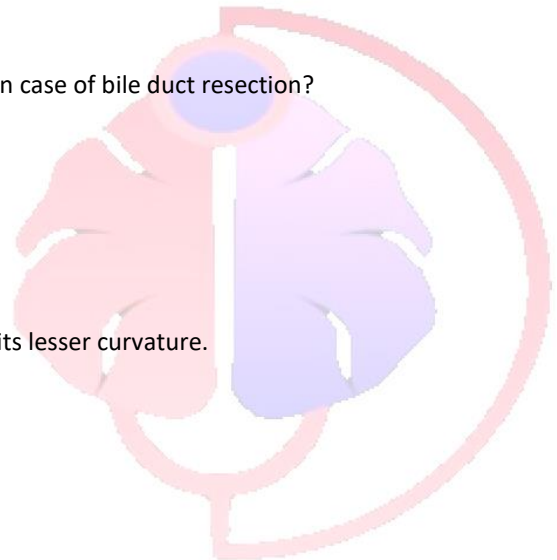
- A. Medial
- B. Lateral
- C. Anterior
- D. Posterior

20) In mastication, the relative roles of an incisor versus a molar are:

- A. cutting Vs tearing
- B. grinding Vs crushing
- C. tearing Vs Piercing
- D. cutting Vs grinding

21) Which of the following statements about the duodenum is FALSE?

- A. It receives chyme from the stomach
- B. It is the site of action of liver and pancreas secretions
- C. It is shorter than either the ileum or jejunum
- D. It is completely a retroperitoneal organ





22) Part of the oral cavity outside the teeth and enclosed by the lips and cheeks:

- A. Alveolar processes of mandible and maxilla
- B. Oral vestibule
- C. Soft palate
- D. Hard palate

23) The ligament that separates both right and left lobes of the liver is the:

- A. Falciform ligament
- B. Round ligament
- C. Coronary ligament
- D. Hepatocaval ligament

24) Mesocolon attaches all of the following parts of the large intestine, except for:

- A. Transverse colon
- B. Vermiform appendix
- C. Sigmoid colon
- D. Jejunum

25) Which of the following structures neither enters nor leaves the portal circulation?

- A. Renal vein
- B. Hepatic portal vein
- C. Bile duct
- D. Hepatic artery

#### Answers

1	2	3	4	5	6	7	8	9	10
C	B	D	A	E	B	E	C	B	A
11	12	13	14	15	16	17	18	19	20
C	D	D	C	B	B	B	B	B	D
21	22	23	24	25					
D	B	A	D	A					

# Male Reproductive System

1) Which of the following is a protective organ in the male?

- A. the prostate
- B. the testis
- C. the epididymis
- D. the penis

2) Choose the CORRECT statement of the following, the seminal vesicles:

- A. store sperm
- B. are glands that secrete most of the volume of the semen
- C. secrete digestive enzymes when cancerous
- D. empty into the epididymis

3) Sperm become motile and mature in the:

- A. Ductus deferens
- B. Epididymis
- C. Seminiferous tubules
- D. Prostate

4) One of the following structures is NOT found within the spermatic cord:

- A. Cremaster muscle
- B. Pampiniform plexus
- C. Dartos muscle
- D. Testicular artery

5) The ductus deferens passes through a deep inferomedial ring then a superficial superolateral ring.

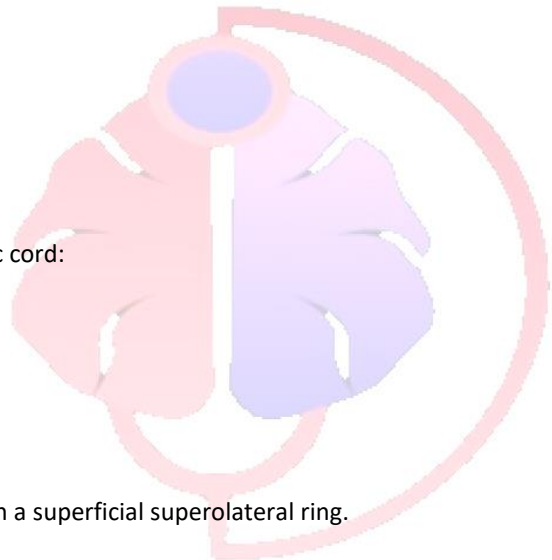
- A. True
- B. False

6) Of the following tubes/tubules, which is the only one that lies outside the testis?

- A. Ejaculatory duct
- B. Seminiferous tubule
- C. Rete testis
- D. Efferent ducts

7) A 65-year-old man with clear semen that lacks its milky appearance, what is the problem?

- A. Abnormal sperms are being produced
- B. Orchitis (Testicular inflammation)
- C. Aging (getting old)
- D. Problem in prostate secretions





8) The spermatic cord is another name for the ductus deferens. This statement is:

- A. False
- B. True

9) Which of the following has the main adaptation action to regulate the testes temperature?

- A. Inguinal nerve
- B. Pampiniform plexus
- C. cremaster muscle
- D. testicular artery

10) A male had his testicles excised (removed), he will still have ejaculation; because:

- A. testicles don't contribute in producing seminal fluid or ejaculation
- B. All of the listed choices
- C. body will recreate new testicles
- D. prostatic gland will develop to synthesize sperms due to the absence of testes

11) Which of the following does NOT add a secretion to the semen?

- A. prostate
- B. corpus cavernosum
- C. bulbourethral glands
- D. seminal vesicles

12) which of the following have the structures of male reproductive tract listed in correct order from testes to urethra?

- A. ejaculatory ducts, seminiferous tubules, epididymis, vas deferens
- B. seminiferous tubules, epididymis, vas deferens, ejaculatory ducts
- C. epididymis, ejaculatory ducts, seminiferous tubules, vas deferens
- D. vas deferens, seminiferous tubules, epididymis, ejaculatory ducts

13) Which of the following do the testes produce?

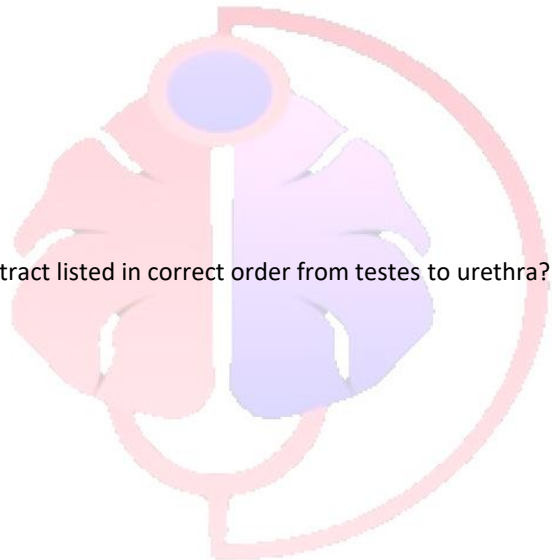
- A. capacitated spermatozoa
- B. about 25% of the ejaculated volume of semen
- C. slightly acidic fluid
- D. motile and mature spermatozoa

14) The two structures that make the ejaculatory duct are:

- A. Epididymis + Seminal vesicle
- B. Ampulla of Vas deferens + Epididymis
- C. Epididymis + Seminiferous tubules
- D. Ampulla of Ductus deferens + Seminal vesicle

15) What is the function of epididymis?

- A. Production of sperm
- B. Stores sperm and facilitates their maturation
- C. Stores sperm and produces seminal fluid
- D. Carries semen out through the penis



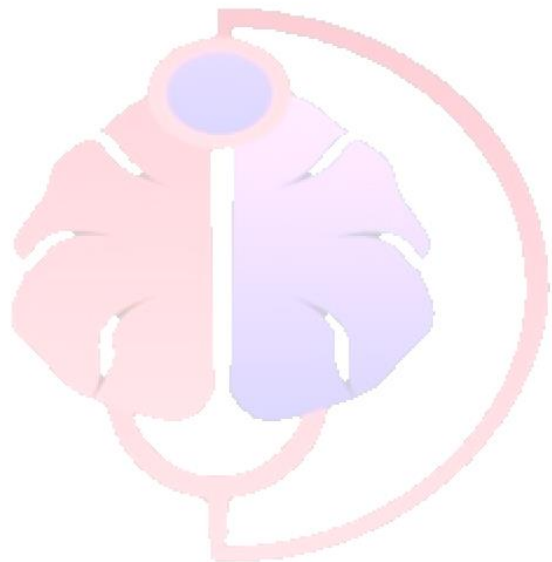
16) The deepest covering between all of the following coverings of the testes is:

- A. Dartos muscle
- B. Internal spermatic fascia
- C. Tunica albuginea
- D. Tunica vaginalis

**Answers**

1	2	3	4	5	6	7	8	9	10
D	B	B	C	B	A	D	A	C	A
11	12	13	14	15	16				
B	B	A	D	B	C				

HATAHET  
ANATOMY



# Female Reproductive System

1) The usual site of embryo implantation and oocyte fertilization respectively is:

- A. uterus, peritoneal cavity
- B. uterus, ampulla of fallopian tube
- C. vagina, ampulla of fallopian tube
- D. ampulla of uterine tube, uterus

2) The female homologue of the male scrotum is the

- A. ovary
- B. labia majora
- C. labia minora
- D. bulb of the vestibule

3) One of the main functions of mammary glands is colostrum production, which is stimulated by:

- A. Estrogen
- B. Prolactin
- C. Oxytocin
- D. All of the above

4) Which of the following ligaments of the uterus reaches a part of the labia majora?

- A. Broad ligament
- B. Round ligament
- C. Suspensory ligament
- D. Ovarian ligament

5) The vaginal fornix:

- A. is a part of the female vulva
- B. surrounds the tip of the cervix
- C. None of the listed choices
- D. surrounds the external vaginal orifice

6) All of the following is TRUE about stratum functionalis, except:

- A. it is the temporary layer of endometrium that sheds during menstruation
- B. it is the deep layer of the endometrial mucosa
- C. it is the permanent layer that gives rise to another stratum basalis after each menstrual cycle
- D. the blood supply of this layer of endometrium are straight arterioles

7) All of the following is FALSE about ovaries, except:

- A. it is anchored to the lateral walls of uterus by the ovarian ligaments
- B. considered an accessory glandular organ
- C. it is where usually fertilization takes place
- D. Two answers are correct



8) The glans penis in males have their homologous in females as the \_\_\_\_\_.

- A. Labia majora
- B. Clitoris
- C. Vestibules
- D. Hymen

9) One of the following structures is a part of the female pudendum:

- A. Labia minora
- B. Cervix
- C. Fimbriae
- D. Fundus of uterus

10) The mammary milk is stored before it is ejected in the:

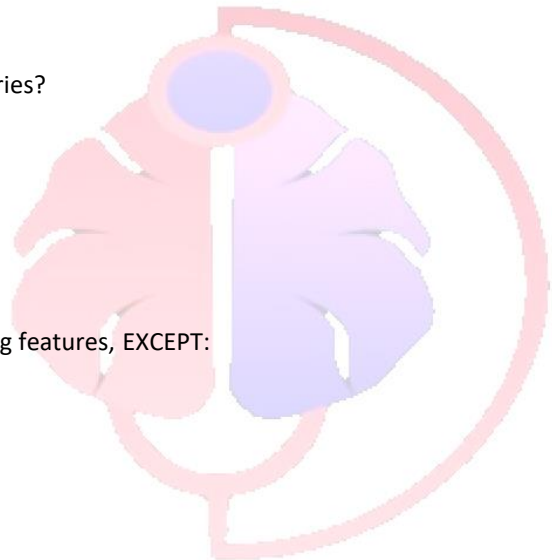
- A. Lactiferous ducts
- B. Alveoli
- C. Lactiferous sinuses
- D. Secondary tubules

11) The uterine artery is a branch of which one of the following arteries?

- A. Median sacral artery
- B. Internal iliac artery
- C. External iliac artery
- D. Infernal femoral artery

12) The areola around the nipple of the breast has all of the following features, EXCEPT:

- A. contains a series of closely-spaced openings of lactiferous ducts
- B. a circular pigmented area
- C. contains a lot of modified sebaceous glands
- D. it has a rough appearance
- E. All of the listed are true



#### Answer

1	2	3	4	5	6	7	8	9	10
B	B	B	B	B	A	A	B	A	C
11	12								
B	E								

## Nervous system (1) & (2)

1) One of the following neuroglia insulates axons of neurons of the PNS:

- A. Satellite cells
- B. Schwann cells
- C. Astrocytes
- D. Oligodendrocytes

2) The central nervous system consists of the brain and cranial nerves. This statement is:

- A. True
- B. False

3) The ventricles of the brain directly communicate with which of the following spinal cord structures?

- A. epidural space
- B. central canal
- C. pia mater
- D. dura mater

4) The Blood-Brain Barrier is formed by which of the following neuroglia:

- A. Oligodendrocyte
- B. Schwann cells
- C. Ependymal cells
- D. Astrocytes

5) The brain cerebrum is composed of many lobes, the one adjacent to where ears are located is the:

- A. Frontal lobe
- B. Parietal lobe
- C. Occipital lobe
- D. Temporal lobe

6) The nuclei in the lateral horns of the spinal cord grey matter butterfly are:

- A. regulate the involuntary and visceral actions in the body
- B. the sympathetic and parasympathetic branches of ANS
- C. found in the thoracic, lower lumbar, and sacral segments of the spinal cord
- D. All of the above

7) Which one of the following pairs is mismatched:

- A. Cervical plexus - (C1 - C5)
- B. Brachial plexus - (C5 - T1)
- C. Thoracic plexus - (T2 - T12)
- D. Lumbar plexus - (L1 - L4)



8) Trauma in the spinal cord at level L3-L4 will:

- A. cause malfunction in serratus anterior muscle
- B. disturb the respiration process
- C. affect the peristaltic movement of intestines
- D. harm the lower limbs

9) The sheet of dura mater that separates the right and left cerebral hemispheres is the:

- A. falx cerebri
- B. tentorium cerebri
- C. falx cerebelli
- D. superior sagittal sinus

10) The nerve that supplies Biceps brachii & Triceps brachii respectively are:

- A. Musculocutaneous nerve, Thoracodorsal nerve
- B. Musculocutaneous nerve, Radial nerve
- C. Phrenic nerve, Radial nerve
- D. Obturator nerve, Radial nerve

11) Anterior to the central sulcus is the \_\_\_\_\_, which contains the \_\_\_\_\_.

- A. Precentral gyrus, Primary motor area
- B. Precentral gyrus, Primary somatosensory area
- C. Postcentral gyrus, Primary motor area
- D. Postcentral gyrus, Primary somatosensory area

12) The subarachnoid space lies between which two layers of meninges?

- A. arachnoid mater and pia mater
- B. arachnoid mater and bone of skull
- C. arachnoid mater and dura mater
- D. dura mater and epidural fascia

13) The meninges of the brain differ from those of the spinal cord in that the brain is covered by the 2 sub-layers of dura mater, while the spinal cord is covered by the inner one only. This statement is:

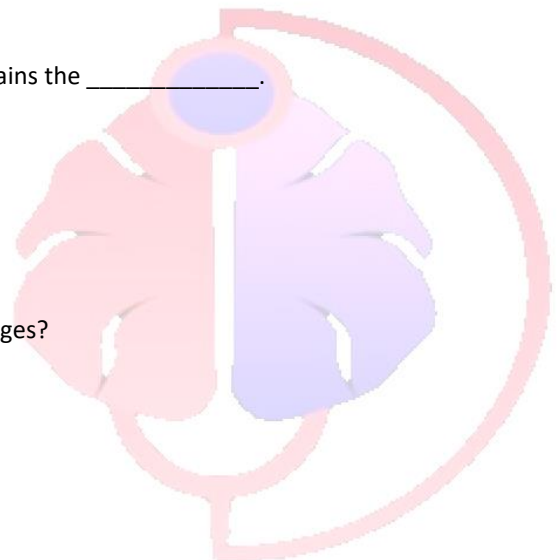
- A. True
- B. False

14) All of the following cranial nerves contain Mixed (sensory & motor) fibers, except:

- A. X
- B. IX
- C. V
- D. VI

15) The cell bodies of sensory neurons are located in the \_\_\_\_\_ of the spinal cord.

- A. Anterior white columns
- B. Ventral grey horns
- C. Posterior white columns
- D. Dorsal grey horns
- E. Lateral white columns





16) One of the following cranial nerves is a pure motor nerve:

- A. Vestibulocochlear nerve
- B. Glossopharyngeal nerve
- C. Oculomotor nerve
- D. Facial nerve

17) Which of the following is not a part of the brainstem?

- A. Pons
- B. Cauda equina
- C. Medulla oblongata
- D. Midbrain

18) The only layer of the meninges that follows the brain surface into its gyri and sulci is the:

- A. Periosteal dura mater
- B. Arachnoid mater
- C. Pia mater
- D. Meningeal dura mater

19) If the most inferior part of the CNS is the conus medullaris, then the most superior part of the following is: (سؤال ميكاب)

- A. Lateral ventricles
- B. Hypothalamus
- C. Pons
- D. Medulla oblongata

#### Answers

1	2	3	4	5	6	7	8	9	10
B	B	B	D	D	D	C	D	A	B
11	12	13	14	15	16	17	18	19	
A	A	A	D	D	C	B	C	A	

# Gametogenesis

1) All of the following cells are diploid cells, EXCEPT:

- A. Type A spermatogonium
- B. Spermatid
- C. Primordial germ cell
- D. Type B spermatogonium

2) What is the approximate number of oocytes will the female have in birth?

- A. 40,000
- B. 1 million
- C. 400,000
- D. 400

3) Type A spermatogonia and Type B spermatogonia are histologically similar in all of the following, except:

- A. Chromosomal combination (#n)
- B. the shape of the nucleus
- C. number of nucleoli
- D. they are identical cells because they resulted from a mitotic division

4) Type A spermatogonia returns to the basal lamina of seminiferous tubules of testes. This statement is:

- A. True
- B. False

5) Regarding spermatogenesis, the total number of spermatids results from the spermatogenesis of 3 spermatogonia is:

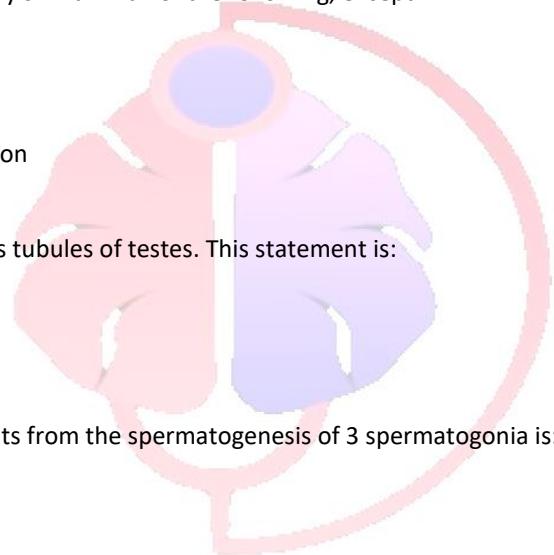
- A. 3
- B. 9
- C. 6
- D. 12

6) The point of oogenesis in which metaphase II is resumed and Meiosis II is completed is when:

- A. primary oocyte is fertilized by a sperm
- B. secondary oocyte is fertilized by a sperm
- C. the 1st polar body is produced
- D. local hormones in ovaries stimulate primordial follicle to undergo mitosis

7) The term "Spermiogenesis" is the definition of:

- A. the differentiation of spermatids into spermatozoa
- B. the mitotic division of a spermatogonium into type A and B
- C. the process in which a sperm's nucleus unites with an oocyte's nucleus
- D. the process by which one of the produced spermatogonia will return to the male's reservoir



8) In some cases, oogonia may undergo 2 mitotic divisions and the extra produced cells returns to reservoir.

- A. True
- B. False

9) Which one of the following statements about oogenesis is FALSE?

- A. oocyte stem cell is called oogonium
- B. fate of unfertilized ovum after 24hrs is to be degraded and reabsorbed (apoptosis)
- C. 1<sup>st</sup> polar body may undergo meiosis II to give the 2<sup>nd</sup> polar body
- D. LH surge stimulates the process of ovulation

10) One of the following events takes place during the childhood of a female's life:

- A. all primary oocytes are arrested in prophase I of the first mitotic division
- B. some polar bodies appear during this stage/period
- C. all secondary oocytes are arrested in metaphase II of the second mitotic division until fertilized
- D. most of the primary oocytes start degenerating due to lack of female's puberty hormones

11) After ovulation, the secondary oocyte will have 2 extra layers around it, the zona pellucida is the:

- A. outer cellular layer
- B. outer glycoprotein layer
- C. inner cellular layer
- D. inner glycoprotein layer

12) The chromosomal combination of all of the following cells is (2n), except for the:

- A. Ovum
- B. Spermatogonium
- C. Primary oocyte
- D. Zygote

13) In spermatogenesis, the number of spermatozoa produced always has the same number of:

- A. Spermatogonia
- B. Primary spermatocytes
- C. Spermatids
- D. spermatozoa have their own unique number

14) The reason why polar bodies are produced with small morphological appearance is because:

- A. the cell membrane of the oocyte is depolarized
- B. the cleavage of cytoplasm in each meiotic division of oocyte is unequal
- C. the polar bodies are Anucleated diploid cells
- D. None of the above

#### Answers

1	2	3	4	5	6	7	8	9	10
B	C	D	B	D	B	A	B	C	D
11	12	13	14						
D	A	C	b						

# Embryology

## Week 1

1) The cleaved zygotes that are being transferred to the uterus during in vitro fertilization have reached the:

- A. 8 - 10 blastomeres stage
- B. 4 - 8 blastomeres stage
- C. morula stage
- D. compaction stage

2) The correct order of layers of secondary that the sperm penetrates is:

- A. Zona pellucida > Corona radiata > Cell membrane
- B. Cell membrane > Zona pellucida > Corona radiata
- C. Cell membrane > Corona radiata > Zona pellucida
- D. Corona radiata > Zona pellucida > Cell membrane

3) The first event that occurs when blastocyst attaches to endometrium at day 6 is:

- A. the formation of trophoblast and embryoblast
- B. the differentiation of trophoblast into cytotrophoblast and syncytiotrophoblast
- C. syncytiotrophoblast cells secrete proteolytic enzymes that erode the endometrium
- D. conversion of blastocyst into the morula stage

4) Which part of the following parts of the sperm will not enter the secondary oocyte?

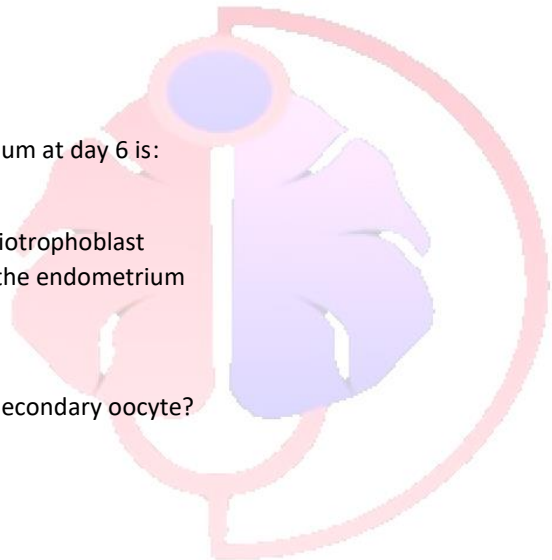
- A. Mitochondria
- B. Inner tail
- C. Acrosome
- D. Two answers are correct

5) The mechanism by which the ovum becomes impermeable to other than one sperm is called:

- A. Decidual reaction
- B. Redox reaction
- C. Zona reaction
- D. HATAHET reaction

6) The acrosomal enzyme that is responsible for penetrating the zona pellucida is called:

- A. Elastase
- B. Hyaluronidase
- C. Acrosin
- D. ATPase



7) Which of the following is/are common cause for ectopic pregnancy?

- A. Inflammation
- B. Abnormal anatomy
- C. Paralyzed cilia due to smoking
- D. All of the above

8) Morula is the stage of cleavage of zygote when there are \_\_\_\_ blastomeres, and zona pellucida is \_\_\_\_\_.

- A. 2 - 4 , intact
- B. 12 - 32 , intact
- C. 8 - 10 , intact
- D. 12 - 32 , degenerated

9) "A multinucleated protoplasmic mass of tissue with no cell boundaries", this is the definition of the structure that is capable of:

- A. giving rise to a whole embryo
- B. lining the blastocystic cavity from the inside
- C. providing nutrients for the embryo during the 1<sup>st</sup> week
- D. eroding the maternal endometrium to initiate the implantation

10) The fusion of both male and female pronuclei will give the:

- A. Zygote
- B. Blastomere
- C. Embryoblast
- D. Blastocyst

11) The trophoblast is going to develop and differentiate through the whole pregnancy period to form:

- A. the yolk sac
- B. the 3 germ layers
- C. the placenta
- D. the GI tract

12) The sperms used in the culture medium of in vitro fertilization are capacitated. This statement is:

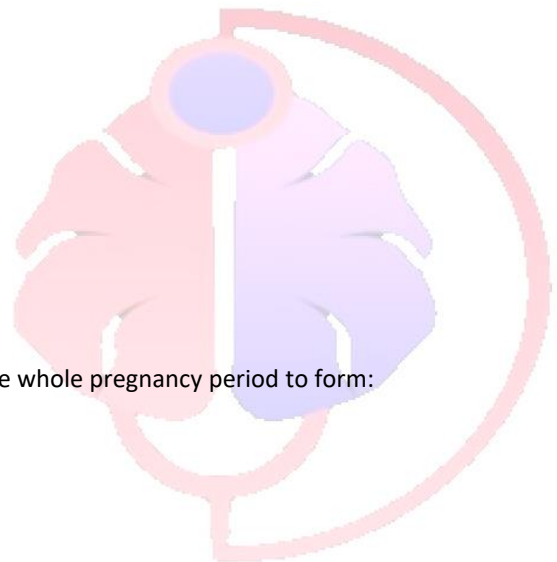
- A. True
- B. False

13) A 34-year-old woman was evaluated to the hospital after suffering acute abdominal pain and periods of abnormal bleeding, an ultrasonography image showed an implanted embryo at the wall of fallopian tube. Based on the previous information, to prevent the rupture of fallopian tube, which of the following procedures should be done?

- A. a C-section operation
- B. Surgical removal of the fetus
- C. Methotrexate is prescribed
- D. Two answers are correct

14) The blastocystic cavity is formed when uterine fluid passes through zona pellucida into blastocyst. This statement is:

- A. False
- B. True



## Answers

1	2	3	4	5	6	7	8	9	10
B	D	B	D	C	C	D	B	D	A
11	12	13	14						
C	A	D	B						

## Week 2

1) Which one of the following statements is TRUE about both epiblast and hypoblast?

- A. they originate from the embryoblast
- B. they are the 2 layers of the trilaminar embryonic disc
- C. both are composed of single cuboid epithelium
- D. both are located exactly at the center of the blastocystic cavity

2) The day when the fibrin coagulum defect is completely sealed with surface epithelium is

- A. Day 10
- B. Day 11
- C. Day 12
- D. Day 13

3) Amnioblasts are:

- A. the undifferentiated cells of epiblasts
- B. the epiblast cells adjacent to the cytotrophoblast
- C. the invasive cells of syncytiotrophoblast
- D. the cuboid cells that make the hypoblast

4) Syncytiotrophoblast cells at week 2 penetrate deeper into the stroma, they may erode:

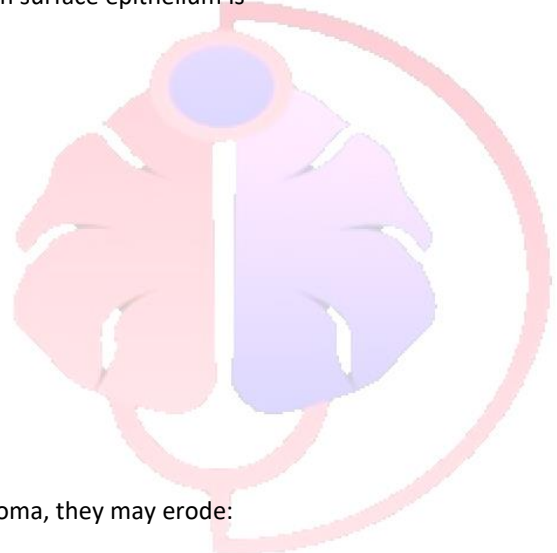
- A. Sinusoids
- B. portions of peritoneum
- C. Myometrial cells
- D. maternal neurons

5) The Extraembryonic mesoderm is a differentiated layer of cells derived from amniotic sac. This statement is:

- A. True
- B. False

6) The connecting stalk is going to develop and differentiate through the whole pregnancy period to form:

- A. the placenta
- B. the umbilical cord
- C. the vertebral column
- D. the axis of the body





7) All of the following are true about the decidual reaction, except:

- A. accumulation of lipids and glycogen in endometrial cells takes place
- B. provides an immunologically-privileged site for the embryo
- C. it provides the nutritional substances for the early embryo
- D. causes swelling in some endometrial cells which will be called (Stem cells)

8) Extraembryonic cavity will be named the (Chorionic cavity) after it gets expanded into a larger cavity. This statement is:

- A. True
- B. False

9) One of the main events that occur during the 11<sup>th</sup> day of fertilization is:

- A. blastocyst implantation is completed
- B. fibrin coagulum is sealed completely
- C. cytotrophoblast invade syncytiotrophoblast to make Primary villi
- D. Two answers are correct

10) When the extraembryonic cavity develops and becomes larger, one of the following will happen:

- A. the exocoelomic cavity will decrease in size and will be called the Primitive yolk sac
- B. the extraembryonic somatic mesoderm will line the whole chorionic cavity, including the connecting stalk
- C. large portions of the exocoelomic cavity are pinched off to form the exocoelomic cyst
- D. None of the above

11) The very first blood supply of the embryo is through the:

- A. Primary chorionic villi
- B. Lacunae network
- C. Connecting stalk
- D. Fibrin coagulum

#### Answers

1	2	3	4	5	6	7	8	9	10
A	D	B	A	B	B	D	A	A	C
11									
B									

## Week 3

1) The source of the 3 primordial germ layers are the cells of:

- A. Epiblast
- B. Hypoblast
- C. Extraembryonic somatic mesoderm
- D. Bilaminar embryonic disc

2) Which one of the following statements is TRUE about the primitive streak?

- A. it remains active during the whole 3<sup>rd</sup> week
- B. starts at the middle of the epiblast and elongates to reach the caudal end
- C. formed by the union of columnar epiblast cells and cuboidal hypoblast cells
- D. the appearance of the primitive streak is the first morphological sign of gastrulation
- E. Two answers are correct

3) Sacrococcygeal teratomas may contain tissues derived from all three germ layers in incomplete stages of differentiation; because:

- A. the tumor is located at the sacrococcygeal region
- B. a mutation in the maternal endometrium caused a delay in the closure of the defect with fibrin
- C. None of the listed is correct
- D. they are derived from pluripotent primitive streak cells

4) The structure that provide the base of the axial skeleton is the:

- A. Notochord
- B. Chorionic villi system
- C. Neural tube
- D. Primitive streak

5) The correct order of the events happening for the cells of epiblast and primitive streak during the gastrulation is:

- A. Loss of adhesion > Migration > Invagination
- B. Migration > Loss of adhesion > Invagination
- C. Invagination > Migration > Loss of adhesion
- D. Migration > Invagination > Loss of adhesion

6) During the process of gastrulation, the embryo may be referred to as the:

- A. Gastrula
- B. Neurula
- C. Blastula
- D. Fetus

7) The harmful cancerous remnants of the notochord are called:

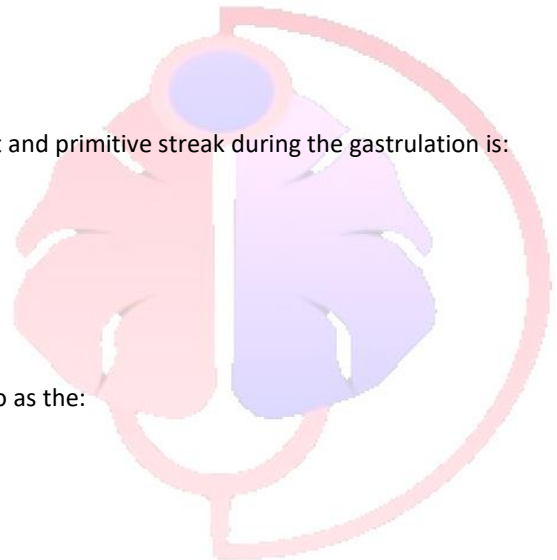
- A. Teratoma
- B. Chordoma
- C. Intervertebral discs
- D. Sarcoma

8) Enamel of teeth, lenses of eyes and internal ear are structures derived from the:

- A. Surface ectoderm
- B. Neuroectoderm
- C. Mesoderm
- D. Endoderm

9) Neural tube is located inferior to ectoderm, lying in the midline and anterior to the notochord. This statement is:

- A. True
- B. False



10) The change that switches secondary chorionic villi into tertiary chorionic villi is:

- A. the differentiation of some mesenchymal cells at the core into blood cells and blood vessels
- B. when cytotrophoblast invades syncytiotrophoblast
- C. when mesenchyme grows into the primary villi and form a core of loose mesenchymal tissue
- D. when cytotrophoblastic shell is formed around the blastocyst

11) Which one of the following sites does NOT contain mesoderm?

- A. Notochord
- B. All of the listed
- C. Cloacal membrane
- D. Prechordal membrane

12) The first organ system to reach the functional state is the Central nervous system.

- A. True
- B. False

13) The defect that causes spinal bifida is the incomplete closure of the:

- A. Caudal neuropore
- B. Rostral neuropore
- C. Neural groove
- D. Somites

14) The neuroectodermal cells will be distributed at the end of gastrulation in 2 regions, which are:

- A. Primitive streak and Notochord
- B. Cytotrophoblast and Syncytiotrophoblast
- C. Neural tube and Neural crest cells
- D. Paraxial mesoderm and Endoderm

15) CVS primordial will be formed by all of the following, EXCEPT:

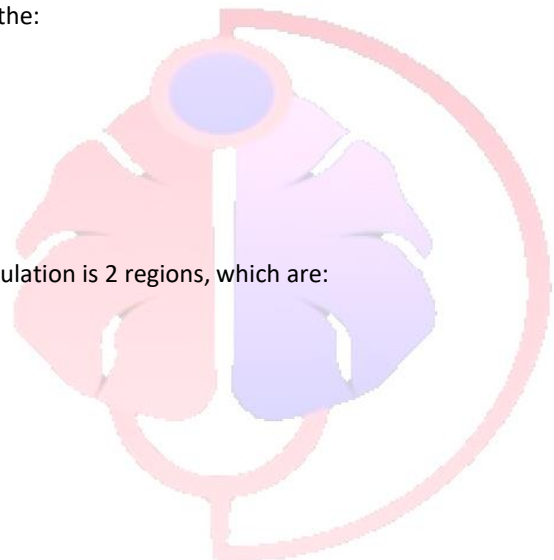
- A. Tubular heart
- B. Connecting stalk
- C. Yolk sac
- D. Notochord

16) a tissue of loosely arranged cells suspended in a gelatinous matrix is the definition of

- A. Neural crest cells
- B. Somites of neural tube
- C. Neuroectoderm
- D. Mesenchyme

17) The upper two-thirds of the neural tube gives rise to the brain. This statement is:

- A. True
- B. False



18) Period of organogenesis is the period:

- A. that occurs between the (3<sup>rd</sup> - 8<sup>th</sup>) week
- B. that is also called Embryonic period
- C. when each of the three germ layers gives rise to a number of tissues and organs
- D. All of the above

19) All of the following structures and tissues below arise from the mesoderm, EXCEPT:

- A. Serosal layer of all body cavities
- B. Most skeletal muscles
- C. connective tissue of the trunk
- D. Epithelial lining of GI tract

#### Answers

1	2	3	4	5	6	7	8	9	10
D	E	D	A	A	A	B	A	B	A
11	12	13	14	15	16	17	18	19	
B	B	C	C	D	D	B	D	D	

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# Digestive Lab & Urinary Lab

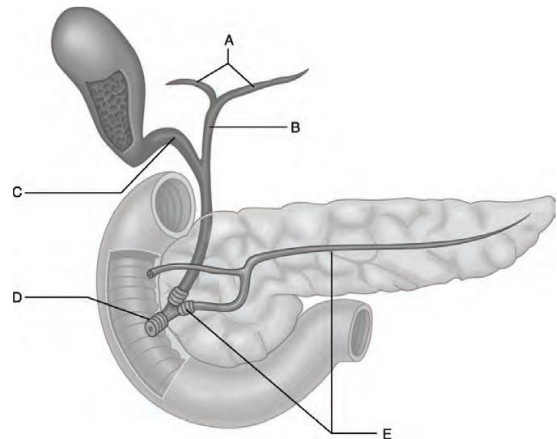
\*\*\* Using the diagram to answer the questions 1-2:

1) The sphincter labelled D is called:

- A. Common hepatic sphincter
- B. Pancreatic sphincter
- C. Cardiac sphincter
- D. Hepatopancreatic ampulla

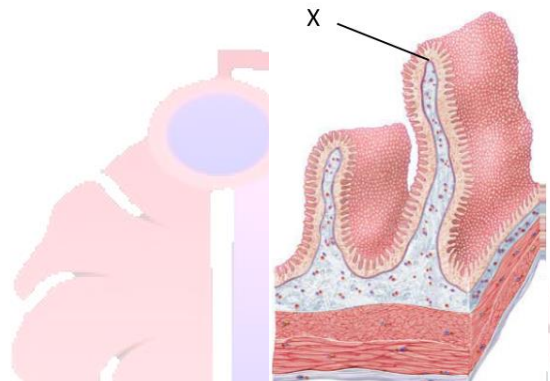
2) Cystic duct is labelled as the letter:

- a. C
- b. A
- c. B
- d. D



3) The structure pointed at is called:

- A. Villi
- B. Microvilli
- C. Plica circularis
- D. Rugae



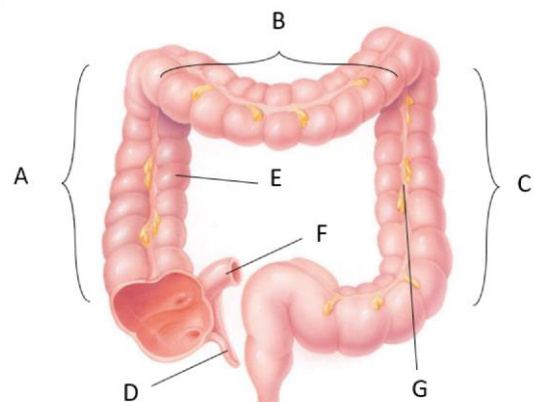
\*\*\* Using the diagram to answer the questions 4-6:

4) The ascending colon is labelled as the letter:

- a. A
- b. C
- c. D
- d. F

5) The Haustra is \_\_\_ and the Tinea coli is \_\_\_.

- A. G , E
- B. E , D
- C. G , D
- D. E , G

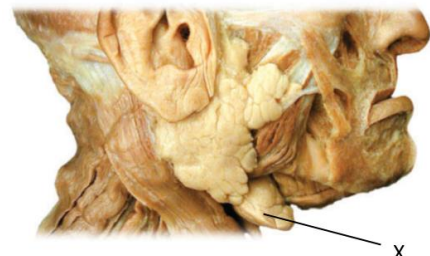


6) The junction between the structure F and the large intestine is known as:

- A. TMJ
- B. BBB
- C. ICJ
- D. OMG

7) The salivary gland pointed at is called

- A. Parotid gland
- B. Submandibular gland
- C. Sublingual gland
- D. Accessory parotid gland



\*\*\* Using the diagram to answer the questions 8-10:

8) The canine in the picture is the tooth labelled as:

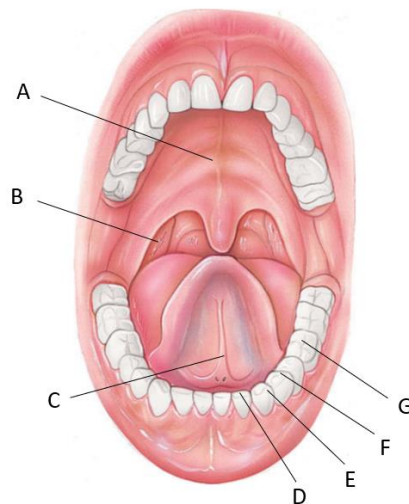
- A. D
- B. E
- C. F
- D. G

9) Between the structure C are the openings of:

- A. Submandibular duct
- B. Parotid duct
- C. Sublingual duct
- D. Accessory parotid duct

10) The palatine tonsils are located at:

- a. A
- b. B
- c. C
- d. can't be shown from this angle/view



\*\*\* Using the diagram to answer the questions 11-12:

11) The labelled structure E is called:

- A. Renal pelvis
- B. Renal sinus
- C. Ureter
- D. Minor calyx

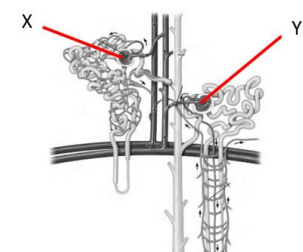
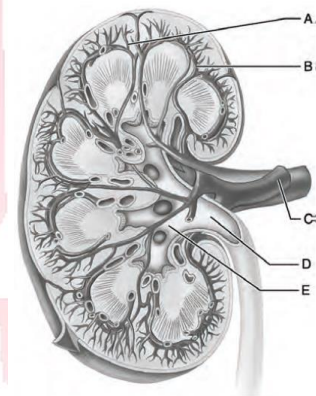
12) Arteries labelled as A are called:

- A. Interlobar arteries
- B. Interlobular arteries
- C. Arcuate arteries
- D. Afferent arterioles

13) The nephron which is more considerable to be juxtamedullary nephron is:

- A. X
- B. Y

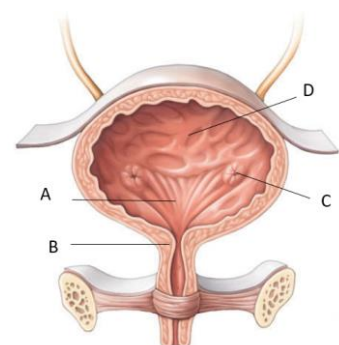
All vessels here are Arteries:



\*\*\* Using the diagram to answer the questions 14-15:

14) Rugae is the structure labelled as:

- a. A
- b. B
- c. C
- d. D





15) The ureteral sphincter in the diagram is:

- a. D
- b. C
- c. B
- d. A

**Answers**

1	2	3	4	5	6	7	8	9	10
D	A	C	A	D	C	B	B	A	B
11	12	13	14	15					
A	B	B	D	B					

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ANATOMY



# Nervous Lab & Reproductive Lab

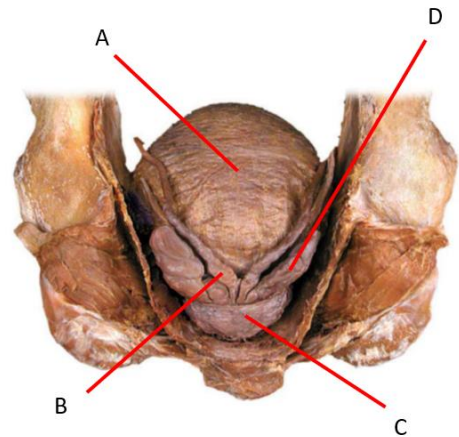
\*\*\* Using the diagram to answer the questions 1-2:

1) The structure that gives the semen its milky white appearance is:

- a. A
- b. B
- c. C
- d. D

2) The structure labelled B is a part of:

- A. Vas deferens
- B. Seminal vesicle
- C. Epididymis
- D. Urinary bladder



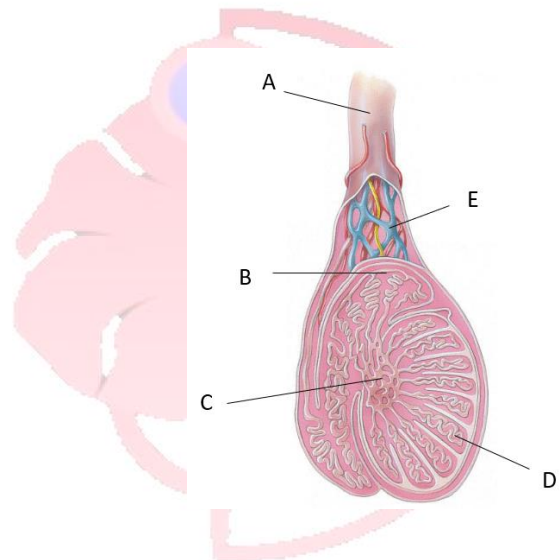
\*\*\* Using the diagram to answer the questions 3-4:

3) The correct passageway for produced sperms is:

- a.  $D > C > B$
- b.  $B > D > C$
- c.  $D > B > C$
- d.  $B > C > D$

4) The plexus E inside the structure A is called:

- A. Meissner plexus
- B. Auerbach plexus
- C. Sacral plexus
- D. Pampiniform plexus



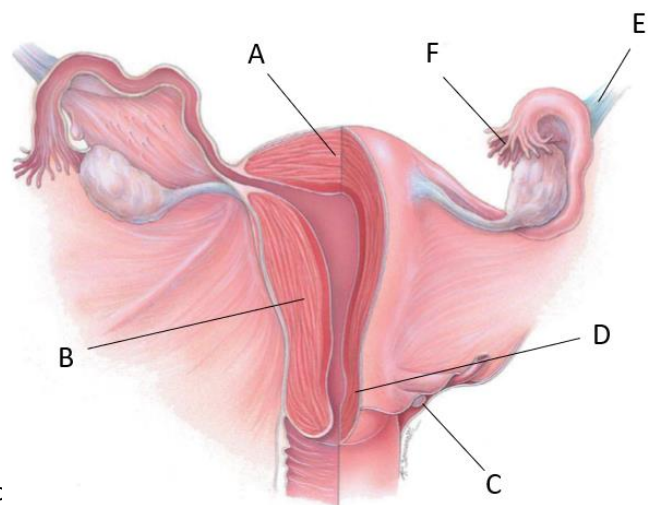
\*\*\* Using the diagram to answer the questions 5-7:

5) The Uterosacral ligament is the one labelled as:

- a. F
- b. E
- c. D
- d. C

6) The function of the structure F is:

- A. attaching ovaries to the pelvic wall
- B. catching the ovulated oocyte
- C. keeping the ovaries warm
- D. providing the ovarian blood supply and nervous innervation



7) The blastocyst will be implanted in the endometrium of:

- a. A
- b. B
- c. C
- d. F

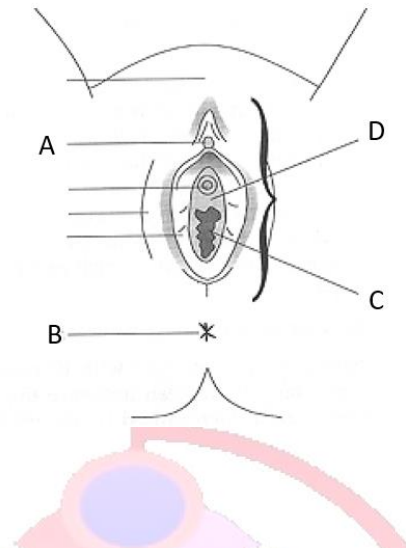
\*\*\* Using the diagram to answer the questions 8-9:

8) The hymen would cover the structure:

- a. A
- b. D
- c. B
- d. C

9) The vestibule is the structured labelled as:

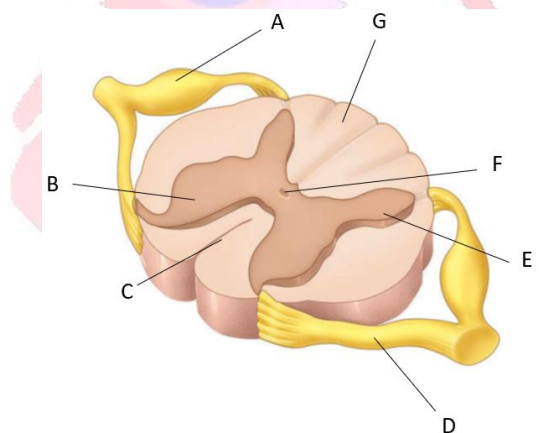
- a. D
- b. B
- c. A
- d. C



\*\*\* Using the diagram to answer the questions 10-11:

10) The CFS may run in which of the following structures?

- a. A
- b. F
- c. G
- d. C



11) The structure labelled D is called:

- A. Ventral rami
- B. Ventral root
- C. Dorsal rami
- D. Dorsal root

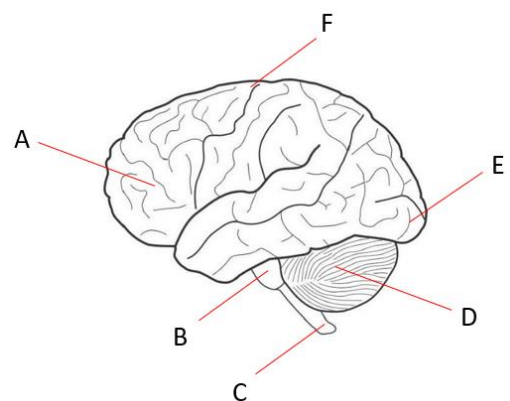
\*\*\* Using the diagram to answer the questions 12 - 13:

12) The sulcus that separates A from the parietal lobe is labelled as F, it is called the:

- A. Lateral cerebral sulcus
- B. Transverse fissure
- C. Central sulcus
- D. Longitudinal fissure

13) the cerebellum and pons are labelled as, respectively:

- a. B , D
- b. D , B
- c. C , D
- d. E , D



## Answers

1	2	3	4	5	6	7	8	9	10
C	A	A	D	D	B	B	D	D	B
11	12	13							
B	C	B							

## ❖ Highness Final Questions (Dr. Wafaa')

### ➤ Digestive system

1) Common hepatic duct is formed by:

- A. Right and Left hepatic ducts
- B. Cystic duct and Pancreatic duct
- C. Cystic duct and Common hepatic duct
- D. Pancreatic duct and Common hepatic duct

2) Which type of papillae at the tongue lack taste buds?

- A. Filiform papillae
- B. Foliate papillae
- C. Vallate (Circumvallate) papillae
- D. Fungiform papillae

3) Common bile duct is formed by:

- A. Right and Left hepatic ducts
- B. Cystic duct and Pancreatic duct
- C. Cystic duct and Common hepatic duct
- D. Pancreatic duct and Common hepatic duct

4) All of the following structures are considered retroperitoneal, EXCEPT:

- A. Transverse colon
- B. Ascending colon
- C. Descending colon
- D. Most of Pancreas

5) "A large double-sheet peritoneal fold that hangs in front of the abdominal organs like an apron". This is the definition of:

- A. Mesocolon
- B. Lesser omentum
- C. Greater omentum
- D. Mesentery



6) The salivary gland that secretes saliva through ducts open on both sides the lingual frenulum is:

- A. Parotid gland
- B. Sublingual gland
- C. Submandibular gland
- D. Accessory parotid gland

7) The part of the stomach that attaches it to the esophagus is:

- A. Cardia
- B. Fundus
- C. Pyloric
- D. Body

8) Cecum delivers wastes to which part of the colon?

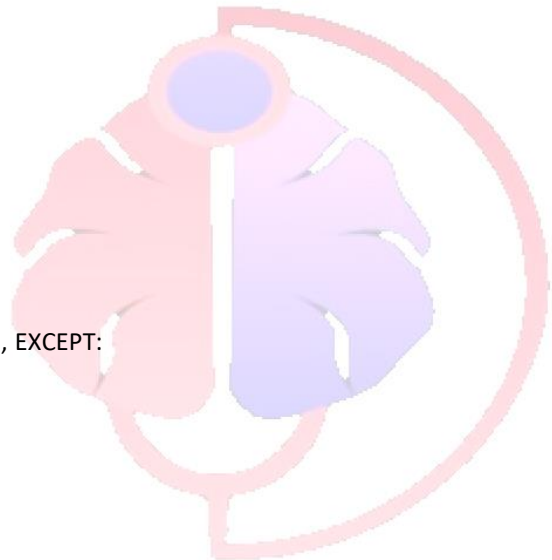
- A. Ascending colon
- B. Transverse colon
- C. Descending colon
- D. Sigmoid colon

9) The palatine tonsils are found in which part of the pharynx?

- A. Oropharynx
- B. Laryngopharynx
- C. Nasopharynx
- D. Not located in the pharynx

10) All of the following organs are considered intraperitoneal organs, EXCEPT:

- A. Stomach
- B. Appendix
- C. Descending colon
- D. Sigmoid colon



## ➤ Reproductive system

11) The cremaster muscle of males is a continuation of the:

- A. External oblique muscle
- B. Internal oblique muscle
- C. Transverse oblique muscle
- D. Rectus abdominis

12) Which of the following is homologous to labia minora in males?

- A. Spongy urethra
- B. Glans penis
- C. Scrotum
- D. Corpus cavernosum

13) The layer of endometrium that is shed during menstruation is the:

- A. Stratum basalis
- B. Stratum spinosum
- C. Stratum functionalis
- D. Stratum Corneum

14) Uterine artery branches from the:

- A. Internal iliac artery
- B. Median sacral artery
- C. External iliac artery
- D. Femoral artery

15) All the following structures pass within the spermatic cord, EXCEPT:

- A. Testicular artery
- B. Ductus deferens
- C. Ilioinguinal nerve
- D. Dartos muscle

16) All of the following ligaments attach the uterus in place, EXCEPT:

- A. Broad ligament
- B. Round ligament
- C. Suspensory ligament
- D. Cardinal ligament

## ➤ Nervous system

17) The sciatic nerve is a division of the:

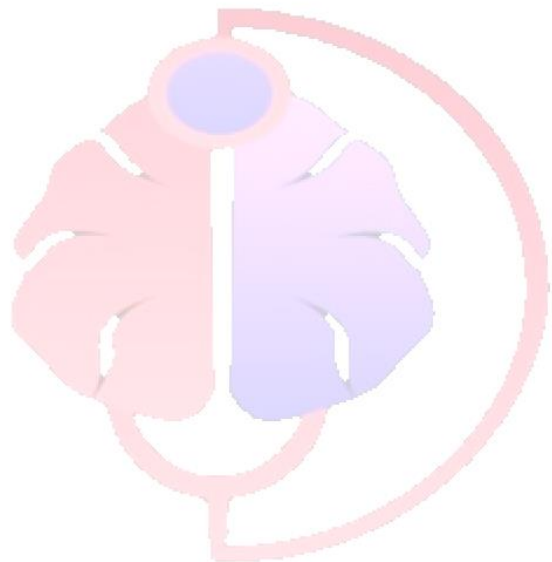
- A. Brachial plexus
- B. Sacral plexus
- C. Lumbar plexus
- D. Coccygeal plexus

18) "Inferior extension of the pia mater from conus medullaris and it fuses with both arachnoid mater and dura mater, it attaches the spinal cord to the coccyx". This is the definition of:

- A. Filum terminale
- B. Cauda equina
- C. Conus medullaris
- D. Medulla oblongata

19) A sensory ganglion can be located within:

- A. Grey matter of spinal cord
- B. Grey matter of brain
- C. Dorsal root
- D. Ventral ramus





20) "The axon / bundle of axons outside the central nervous system". The previous is the definition of:

- A. Nucleus
- B. Nerve
- C. Ganglion
- D. White column

21) The intermediate space between pia mater and arachnoid space is called the:

- A. Subdural space
- B. Subarachnoid space
- C. Epidural space
- D. Hypodural space

22) Which of the following about the cranial nerves is CORRECT?

- A. I, II → Motor
- B. III, IV, VI → Sensory
- C. V → Trigeminal
- D. VI → Fascial

23) All of the following about plexuses of the PNS are CORRECT, expect:

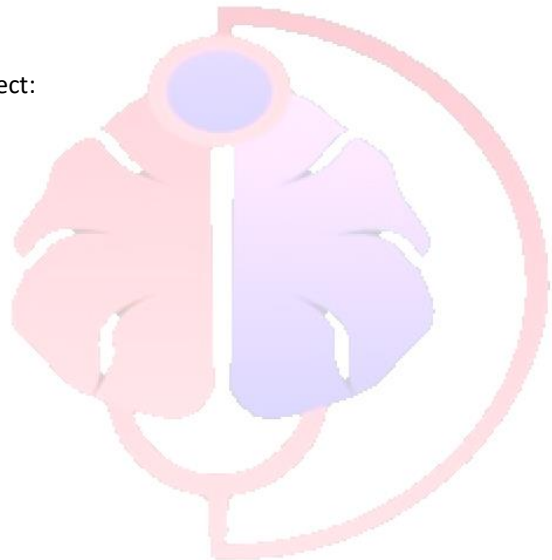
- A. Brachial plexus C5 - T1
- B. Cervical plexus T2 - T12
- C. Lumbar plexus L1 - L4
- D. Sacral plexus L4 - L5 & S1 - S4

24) The lateral grey horn is found in all of the following, except:

- A. T1
- B. T12
- C. C4
- D. T4

25) Small masses of nervous tissue consisting of neural body out of CNS. This is the definition of:

- A. Nucleus
- B. Grey horn
- C. White column
- D. Ganglion



## ➤ Embryology & Gametogenesis

26) The MAIN difference between spermatogenesis and Oogenesis:

- A. Females are born with stem cells: Oogonium
- B. Second meiotic division of gametes
- C. Females are born with Primordial follicles
- D. First meiotic division of gametes

27) Enamel of the teeth is derived from:

- A. Surface ectoderm
- B. Mesoderm
- C. Neuroectoderm
- D. Endoderm

28) Between which two layers is the extraembryonic mesoderm located?

- A. Syncytiotrophoblast and Endoderm
- B. Epiblast and Hypoblast
- C. Exocoelomic membrane and Syncytiotrophoblast
- D. Exocoelomic membrane and Cytotrophoblast

29) Heart begins to beat at:

- A. day 4 after fertilization
- B. day 3 after fertilization
- C. first day after fertilization
- D. day 21 after fertilization

30) The first two intraembryonic layers to differentiate and appear are the:

- A. Ectoderm and Mesoderm
- B. Ectoderm and Endoderm
- C. Epiblast and Hypoblast
- D. Ectoderm and Hypoblast

31) Complete capacitation of the sperm occurs in:

- A. Female reproductive tract
- B. Spongy urethra
- C. Epididymis
- D. Vas deferens

32) The first meiotic division of the oocyte is completed at:

- A. Tertiary oocyte
- B. Primary oocyte
- C. Secondary oocyte
- D. Puberty

33) Tertiary chorionic villi are:

- A. Cytotrophoblast and Syncytiotrophoblast only
- B. Cytotrophoblast, Syncytiotrophoblast and Mesenchyme
- C. Syncytiotrophoblast only
- D. Cytotrophoblast, Syncytiotrophoblast, Mesenchyme with fetal blood vessels

34) The posterior lobe of the pituitary gland is a division of:

- A. Surface ectoderm
- B. Neuroectoderm
- C. Mesoderm
- D. Endoderm



35) The anterior lobe of the pituitary gland is a division of:

- A. Surface ectoderm
- B. Neuroectoderm
- C. Mesoderm
- D. Endoderm

36) Primitive streak begins to appear:

- A. at day 13
- B. at the beginning of week 3
- C. early at week 4
- D. at day 21 to 22

37) The cells that faces blastocystic layer are the cells of:

- A. Epiblast
- B. Hypoblast
- C. Syncytiotrophoblast
- D. Amnioblast

38) The oocyte's layer that becomes impermeable when a sperm enters the cytoplasm is:

- A. Zona pellucida
- B. Oocyte's plasma membrane
- C. Corona radiata
- D. Thecal layer

39) The embryonic structure that is considered the future anus is:

- A. Prechordal plate
- B. Cloacal membrane
- C. Primitive node
- D. Primitive pit

40) When no fertilization occurs, the corpus luteum degenerates into (ما اخذناه، الجواب بي):

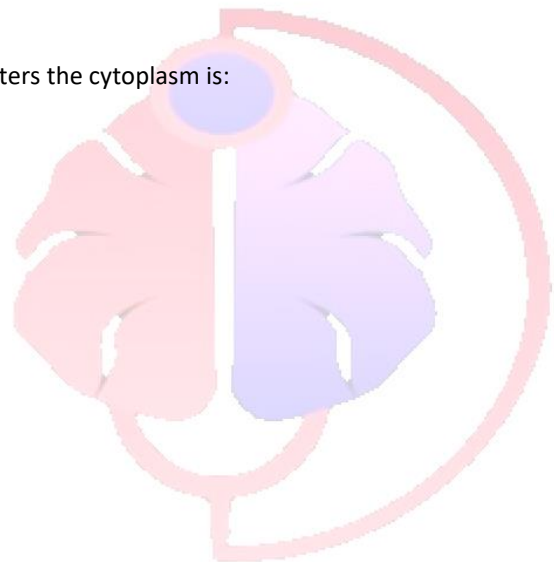
- A. Corpus cavernosum
- B. Corpus albicans
- C. Primary follicle
- D. Secondary follicle

41) Which of the following appears during gastrulation?

- A. Primitive streak
- B. Notochord
- C. Neural tube
- D. Chorionic villi

42) Sacrococcygeal teratoma is caused by:

- A. defective closure in the cranial end of neural tube
- B. defective closure in the caudal end of neural tube
- C. remnants of primitive streak
- D. remnants of notochord tissue



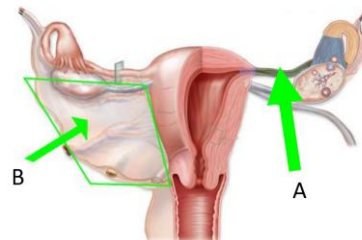
43) Meninges of the CNS rise from:

- A. Surface ectoderm
- B. Neural tube
- C. Mesoderm
- D. Neural crest cells

## ➤ Lab

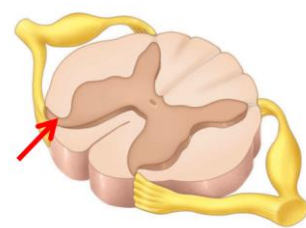
44) The structures at the tip of the pointers are:

- A. A is uterine tube and B is round ligament
- B. A is ovarian ligament and B is broad ligament
- C. A is round ligament and B is broad ligament
- D. A is uterine tube and B is broad ligament



45) The structure pointed at is called:

- A. Anterior column
- B. Posterior column
- C. Dorsal horn
- D. Ventral horn



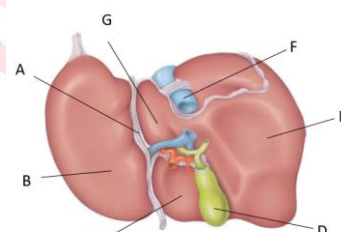
46) The structure pointed at is called:

- A. Fundus
- B. Pyloric sphincter
- C. Cardiac sphincter
- D. Cardia



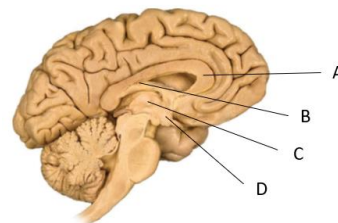
47) Regarding the diagram, which of the following statements is TRUE?

- A. (E) is the right lobe, and (C) is the caudate lobe
- B. (E) is the right lobe, and (B) is the caudate lobe
- C. (G) is the caudate lobe, and (F) is the inferior vena cava
- D. (G) is the caudate lobe, and (F) is the superior vena cava



48) The labelled structure A at the diagram on the side is the:

- A. Epithalamus
- B. Thalamus
- C. Hypothalamus
- D. Pituitary gland
- E. Cingulate gyrus



## Answers

1	2	3	4	5	6	7	8	9	10
A	A	C	A	C	C	A	A	A	C
11	12	13	14	15	16	17	18	19	20
B	A	C	A	D	C	B	A	C	B
21	22	23	24	25	26	27	28	29	30
B	C	B	C	D	C	A	D	D	C
31	32	33	34	35	36	37	38	39	40
A	D	D	B	A	B	B	A	B	B
41	42	43	44	45	46	47	48		
A	C	D	D	D	B	C	E		