

1) A midline abdominal incision below the umbilicus passes through all the following EXCEPT:

a) pyradmidalis

b) linea alba

c) extra peritoneal fat

d) transversalis fascia

e) Scarpa's fascia

2) The spleen:

a) has a lower pole which normally projects forward to the anterior axillary line

b) lies between the 8th and 10th ribs

c) has a long axis lying in the line of the 9th rib

d) as it enlarges, glides in contact with the anterior abdominal wall in front of the splenic flexure of the colon

e) when palpable on abdominal examination, is identified by being resonant to percussion

3) Which is the most common site for the appendix found at appendicectomy?

a) retro-ileal

b) reto-caecal

c) pelvic

d) anterior to terminal ileum

e) below terminal ileum overlying psoas

4) The abdominal aorta:

- a) passes into the abdomen behind the diaphragm at the level of the 10th thoracic vertebra
- b) bifurcates at the level of the body of the 2nd lumbar vertebra
- c) has a surface marking for its bifurcation as 2cm below and to the right of the umbilicus
- d) gives rise to the coeliac artery at the level of the body of the 10th thoracic vertebra
- e) has the renal arteries arising at the level of the body of the 1st lumbar vertebra

5) With regard to the spleen, which is NOT true?

a) in splenomegaly, the splenic flexure of the colon lies superficial to its anterior border

b) its anterior border is notched

c) its medial relations include left kidney, lienorenal ligament, pancreas and lesser sac

d) it lies between the 9th and 11th ribs

e) accessory spleens occur in 10% of people

6) With regard to the duodenum, which is NOT true?

a) the duodenal cap has plicae circulares which are often evident on x-ray

b) the third part may be compressed by the superior mesenteric artery

c) the second part lies at level of 2nd lumbar vertebra in cadavers

d) the duodenal cap lies upon bile duct, hepatic artery and portal vein

e) the accessory pancreatic duct opens into it proximal to the ampulla of Vater

7) Regarding abdominal vascular anatomy, all of the following are true EXCEPT:

- a) the left renal vein lies under the superior mesenteric artery
- b) the appendix is supplied by the ileo colic branch of the superior mesenteric artery
- c) the left gastro epiploic artery is a branch of the splenic artery
- d) the portal vein lies posterior to the pylorus
- e) the duodenum receives no supply from the superior mesenteric artery

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9) Which nerve passes through psoas muscle and emerges anteriorly to run down the front of the muscle?

a) ilioinguinal

b) iliohypogastric

c) genitofemoral

d) lateral cutaneous nerve of the thigh

e) medial cutaneous nerve of thigh

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10) The spleen:

a) is a retroperitoneal organ

b) lies along the axis of the left 10th rib

c) lymphatics drain to the superior mesenteric paraaortic nodes

d) pain fibres accompany sympathetic fibres and pain may radiate in the distribution of thoracic dermatomes 6-10

11) The liver:

- a) lies from the 7th to the 11th left ribs along the midaxillary line
- b) is normally completely under the costal margin
- c) the upper margin is the 4th costal cartilage
- d) blood supply divides into left and right supplying the lobes as divided by the falciform ligament

12) The transpyloric plane:

a) lies on a line connecting left and right 10th costal cartilages

b) lies at the level of T12

c) lies at the origin of the superior mesenteric artery off the aorta

d) is 2cm below the xiphisternum

13) Regarding potential spaces in the abdomen:

a) the entrance to the lesser sac is inferiorly via the transverse mesocolon foramen

b) the right hepatorenal pouch is the lowest lying region of the peritoneal cavity in the supine position (excluding pelvis)

c) the peritoneal cavity is divided into supracolic and infracolic by the epiploic foramen

d) the root of the mesentery of the small intestine is a small 2cm area at the duodenojejunal junction

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14) The forgut:

- a) includes from the abdominal aorta to the end of the duodenum
- b) is supplied by branches of the superior mesenteric artery
- c) venous drainage includes the blood from the lower third of the oesophagus
- d) drains entirely into the splenic vein

15) The midgut:

- a) is from the opening of the bile duct into the duodenum to the ileocaecal junction
- b) all venous drainage is to the superior mesenteric vein
- c) superior mesenteric artery lies on the right side of the superior mesenteric vein
- d) superior mesenteric artery originates off the aorta at L3

16) The inferior mesenteric artery arises:

a) at L3

b) behind the inferior border of the third part of the duodenum

c) at the level of the umbilicus

d) 3-4cm above the aortic bifurcation

e) all of the above

17) The nerve supply to the stomach:

a) the anterior vagal trunk alone controls the pyloric sphincter

b) the posterior vagal trunk alone controls the pyloric sphincter

c) secretion is controlled by sympathetic supply

d) the posterior vagal trunk is in contact with the left side of the oesophagus



18) Regarding the inguinal canal:

- a) the deep inguinal ring lies 1cm above and at the junction of the lateral third and medial two thirds of the inguinal ligament
- b) the deep inguinal ring is formed by an opening in the transversalis fascia
- c) an indirect inguinal hernia bulges into the inguinal triangle, posterior to the canal and medial to the inferior epigastric artery
- d) contains the spermatic cord that has two fascial layers/coverings and eight contents

19) Which structure does not enter the inguinal canal through the deep inguinal ring?

a) testicular artery

b) vas deferens

c) ilioinguinal nerve

d) genital branch of genitofemoral nerve

e) artery to the vas deferens

20) The relations of the THIRD part of the duodenum include:

- a) the hilum of the right kidney
- b) the attachment of the transverse mesocolon
- c) the inferior pole of the right kidney
- d) the superior mesenteric vein
- e) the portal vein

21) All of the following are true regarding the pancreas EXCEPT:

a) the neck and body of the pancreas lie anterior to the first lumbar vertebrae

b) the neck of the pancreas lies over the right and left renal veins at the level of L2 vertebra

c) the splenic artery supplies all of the pancreas

d) parasympathetic vagal fibres stimulate the exocrine secretion from the gland

e) the uncinate process drains via an accessory pancreatic duct into the duodenum

22) The first part of the duodenum:

a) lies at the level of L2 in the supine body

b) is approximately 10cm long in the adult

c) partially overlies the right crus of the diaphragm and psoas muscle

d) is entirely retroperitoneal

e) receives the common opening of the bile duct on its posteromedial wall

23) Which of the following forms the posterior wall of the inguinal canal?

a) conjoint tendon

b) internal oblique muscle

c) transversus abdominus muscle

d) lacunar ligament

e) external oblique muscle



24) Fibres of transversus abdominus arise from which part of the inguinal ligament?

- a) medial one third
- b) lateral one third
- c) lateral two thirds
- d) lateral half
- e) middle one third

25) A patient presents with a deep stab wound high up in the costovertebral angle beneath the 12th rib on the left side. The most likely internal injury is?

- a) laceration of the infra-renal aorta
- b) laceration of the right renal vascular pedicle
- c) puncture of the 3rd part of the duodenum
- d) puncture of the 4th part of the duodenum
- e) pneumothorax of the left lung



26) Concerning the abdominal aorta and branches:

a) the inferior mesenteric artery arises below the L4 lumbar arteries

b) the superior mesenteric artery arises at the level of L2

c) the renal artery arises below the level of the superior mesenteric artery

d) the suprarenal arteries arise above the coeliac trunk

e) the coeliac trunk is the highest branch of the abdominal aorta

27) The relations of the THIRD part of the duodenum include:

- a) the hilum of the right kidney
- b) the attachment of the transverse mesocolon
- c) the inferior pole of the right kidney
- d) the superior mesenteric vein
- e) the portal vein

28) With regard to the duodenum:

a) it is wholly retro-peritoneal

b) it lies wholly inferior to gallbladder

c) the third part overlies the superior mesenteric vessels

d) the second part projects slightly behind the right renal hilus

e) the head of pancreas is wholly contained within its c-shaped loop

29) The transversalis fascia contributes to which of the following structures on the anterior abdominal wall?

- a) superficial inguinal ring
- b) deep inguinal ring
- c) inguinal ligament
- d) sac of an indirect inguinal hernia
- e) anterior wall of the inguinal canal

30) The transpyloric plane of the abdomen (passing through the lower border of L1 vertebra) passes through:

- a) the spleen
- b) the third part of the duodenum
- c) the tail of the pancreas
- d) the origin of the superior mesenteric artery
- e) the fundus of the gallbladder



31) Lymphatic vessels within intestinal villi, which transport lipids to the circulatory system, are called:

- a) capillaries
- b) canaliculi
- c) dactules
- d) lacteals
- e) crypts

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33. Simple tubular glands within the mucosa of the small or large intestine are called intestinal:

- a) rugae.
- b) plicae.
- c) villi.
- d) pits
- e) crypts.

34. Which of the following epithelial types is most closely associated with active secretion at a mucosal surface, as in the stomach lining?

- a) simple squamous
- b) stratified squamous
- c) simple columnar
- d) stratified columnar
- e) stratified cuboidal

35. Which of the following regions of the GI tract is not characterized by simple columnar epithelium on the mucosal surface?

- a) stomach
- b) small intestine
- c) appendix
- d) large intestine
- e) anal canal



36. In which of the following regions of the GI tract does the highest proportion of goblet cells occur in the surface epithelium of the mucosa?

- a) stomach
- b) duodenum
- c) jejunum
- d) ileum
- e) large intestine

37. Which of the following regions of the GI tract is characterized by short tubular invaginations (crypts or pits) which are not lined by dividing, differentiating cells?

- a) esophagus
- b) stomach
- c) duodenum
- d) jejunum
- e) ileum



38. Which of the following regions of the GI tract is characterized by numerous short tubular invaginations but no villi?

- a) duodenum
- b) jejunum
- c) ileum
- d) colon
- e) anal canal

39. Which of the following regions of the GI tract is characterized by stratified squamous epithelium?

- a) duodenum
- b) jejunum
- c) ileum
- d) colon
- e) Anal Canal

40. In which region(s) of the GI tract are there tubular mucous glands in the mucosa?

- a) upper esophagus
- b) cardiac and pyloric stomach
- c) duodenum
- d) ileum
- e) appendix

41. In which region of the GI tract is the longitudinal muscle of the muscularis arranged into distinct longitudinal bundles (taenia)?

- a) stomach
- b) duodenum
- c) jejunum
- d) ileum
- e) colon

42. Esophageal glands are located:

a) in the mucosa.

b) in the submucosa.

c) in the serosa.

d) in the adventitia.

e) deep to the wall of esophagus proper

43) The **liver** is formed from which of the following embryonic structures.

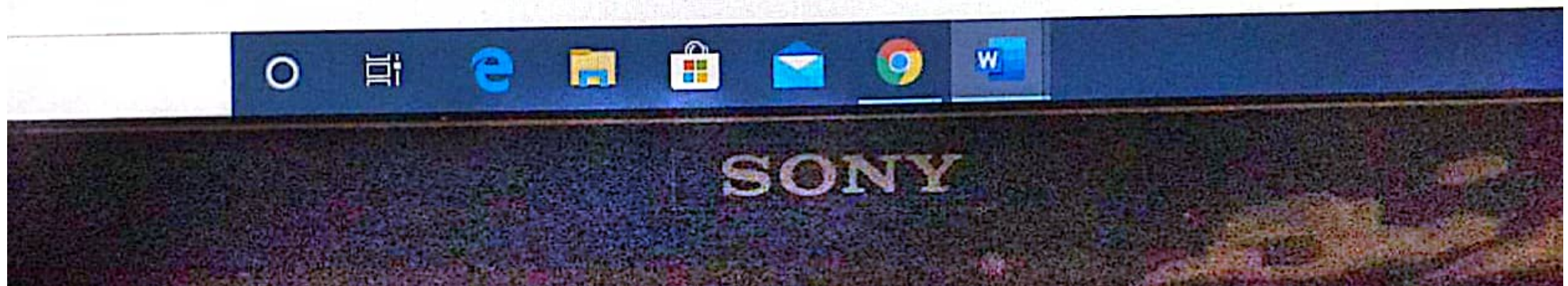
a) Septum Transversum

b) vittelineveins

c) foregut primodium

d) mid gut

e) hind gut



44) The junction of the endodermal epithelium of the hindgut and the ectoderm of the proctodeum or anal pit is believed to be indicated by the

- a) External Anal sphincter
- b) Levator animuscls
- c) Pectinate line
- d) Superior ends of the anal columns
- e) White line



45) Which of the following is the most common type of anorectal malformation?

- a) Anal agenesis
- b) Anorectal agenesis
- c) Anal stenosis
- d) Ectopic anus
- e) Persistent anal membrane

46) When the primary intestinal loop undergoes rotation between weeks 6 and 11, which of the following blood vessels lies along the axis around which it rotates?

- a) abdominal aorta
- b) celiac artery
- c) inferior mesenteric artery
- d) left umbilical vein
- e) superior mesenteric artery



47) An infant is born with a defect in the umbilicus that exposes intestinal mucosa and oozes meconium. This malformation is called;

- a) Gastrochisis
- b) Meningocele
- c) Omphalocele.
- d) Omphalomesenteric fistula
- e) Urachal Fistula



49) The analmembrane usually ruptures at the end of the week.

a) 5th

b) 6th

c) 7th

d) 8th

e) 9th

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50) The pleuroperitoneal membranes give rise to which portion of the diaphragm?

- a) central tendon.
- b) peripheral portions
- c) postolateral portions
- d) Right and left crura
- e) small intermediate portions