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) The ejaculatory ducts:
   a) are formed by the union of the prostatic ducts and the ducts of the seminal vesicle
   b) lie on the superior surface of the bladder
   c) open into the membranous urethra
   d) contract with parasympathetic stimulation
   e) have none of the above properties

8) The ureter passes deep to the:
   a) femoral nerve
   b) gonadal artery
   c) psoas muscle
   d) genitofemoral nerve
   e) common iliac artery

9) With respect to the testicle:
   a) the tunica albuginea overlies tunica vaginalis
   b) the head of the epididymis is attached to the lower pole of the testis
   c) the appendix testis (if present) is attached to the upper pole of the testicle
   d) testicular and scrotal lymph drainage is the superficial inguinal nodes
   e) parasympathetic supply is via the T10 segment of the cord

10) With regard to the spleen, which is NOT true?
    a) it is in direct contact with the lesser sac
    b) it projects into the greater sac
    c) its anterior border is notched
    d) it receives both sympathetic and parasympathetic supply
    e) lymph drainage is via retropancreatic channels to the coeliac nodes

11) 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

12) With regard to the ureter, which is NOT true?
    a) it is narrowed at its halfway mark
    b) it crosses the genitofemoral nerve under cover of peritoneum
    c) the upper part of the right ureter lies behind the duodenum
    d) it lies just lateral to the tips of the transverse processes of L3-5
    e) it is adherent to the peritoneum of the posterior abdominal wal

13) With regard to the female pelvis, which is NOT true?
    a) the cervix is separated from the rectum by the Pouch of Douglas
    b) the cervix is separated from the bladder by the vesicouterine pouch
    c) the ureter passes 1-2cm lateral to the cervix
    d) the ureter passes under both the broad ligament and the uterine artery
    e) lymph drainage from the body of the uterus includes the inguinal nodes
14) 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

15) 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

16) 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

17) Afferent pain fibres for the biliary tract:
   a) as far as known do not exist; pain sensation relates to inflamed overlying parietal peritoneum
   b) run with the vagus nerve to the Nucleus of the Solitary Tract
   c) may run with the right phrenic nerve
   d) run with spinal nerves to T2-5
   e) do not respond to distension of the viscus

18) With regard to the usual vasculature of the abdomen, which is NOT true?
   a) the splenic vein mainly drains into the inferior vena cava
   b) the portal vein drains nearly all of the gastrointestinal tract and unpaired abdominal glands except liver
   c) the left gastroepiploic artery and the short gastric arteries are branches of the splenic artery
   d) the right gastric artery is a branch of the hepatic artery
   e) the right gastroepiploic artery is a branch of the common hepatic artery

19) Which is NOT related to the kidneys as indicated:
   a) the pleura posteriorly
   b) the second part of the duodenum, anterior to the right kidney
   c) the tail of the pancreas, anterior to the left kidney
   d) the peritoneum of the lesser sac, anterior to the left kidney
   e) the splenic artery, anterior to the lower pole of the left kidney

20) With regard to the kidneys, which is NOT true?
   a) the renal nerves are from spinal segment T12-L1
   b) at the hilum, the vein is anterior to the artery which is anterior to the ureter
   c) in horseshoe kidneys, ureters pass behind the isthmus of the kidney substance
   d) percutaneous renal biopsy is via a point 2.5cm below the 12th rib
   e) renal fascia helps prevent spread of infection from perinephric abscesses
21) With regard to the urethra in the young adult male, which is NOT true?
   a) the prostatic urethra is narrower than the membranous urethra
   b) it is approximately 20cm long
   c) has a short dilated region just proximal to the external urethral meatus
   d) it is horizontal in cross-section when empty
   e) the bulbous part is part of the spongy urethra

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) 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

29) The spleen:
   a) weights 15 ounces
   b) lies between the 8th and 11th ribs
   c) has an identifiable notch on its posterior border
   d) is supplied with parasympathetic fibres from coeliac plexus
   e) lymphatic drainage is to coeliac nodes

30) Regarding the kidneys:
   a) the right kidney lies at a lower level to the left kidney
   b) they lie inferior to the pleura
   c) the hilum of the left kidney is separated from the peritoneum by the duodenum
   d) the renal fascia encloses the kidney and suprarenal gland within the same sheath
   e) the renal pelvis is lined with columnar epithelium

31) Regarding the ureters, which is INCORRECT?
   a) the line of projection of the ureter on a radiograph is medial to the tips of the transverse processes of the lumbar vertebrae and crosses the pelvic brim at the sacroiliac joint
   b) they exhibit peristaltic activity when stimulated
   c) they are lined by transitional epithelium with a thick muscularis mucosae
   d) they are supplied with sympathetic fibres from T11-L2
   e) they are crossed superficially by the gonadal vessels

32) 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

33) 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

34) The testis:
   a) the epididymis arises from the lower pole of the testis
   b) the tunica vaginalis surrounds the testis but does not encase the epididymis
   c) vas deferens ascends on the anterior surface of the testis
   d) the testicular appendix lies on the testis upper pole near the origin of the epididymis
35) The testicular blood supply:
   a) is mainly from the ductal artery
   b) the right drains directly into the inferior vena cava
   c) venous drainage does not have valves
   d) a varicocele is more common on the right than the left

36) 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

37) 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

38) The for gut:
   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

39) 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

40) 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

41) 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

42) 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
43) The spleen:
   a) is a retroperitoneal organ
   b) lies along the axis of the left 10\textsuperscript{th} 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

44) 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

45) Regarding the anterior abdominal wall:
   a) the arcuate lines lie midway between the symphysis pubis and umbilicus
   b) between the umbilicus and the lateral margin transversus aponeurosis lies posterior the rectus
   c) the inferior epigastric artery originates from the internal iliac
   d) it gives support to the liver and spleen
   e) the ilioinguinal nerve passes through the deep inguinal ring

46) Pelvic joints and ligaments:
   a) the sacroiliac joint is a fibrous joint between the auricular surfaces of the ilium and sacrum
   b) the wedge shape of the sacrum contributes to its stability
   c) the coccygeous muscle lies on the pelvic surface of the sacrotuberous ligament
   d) the sacrotuberous and sacrospinous ligaments enclose the greater sciatic foramen
   e) the iliolumbar ligament is V-shaped with the apex attached to L5

47) Pelvic joints and ligaments
   a) muscles of pelvis include obturator externus and piriformis
   b) piriformis arises from the lower third part of the sacrum
   c) the sigmoid colon becomes the section at the level of the 4\textsuperscript{th} part of the sacrum
   d) the rectum has no mesentery
   e) the pelvic brim follows the line of the pubic crest, pectineal line of pubis, iliac crests and ala and promontary of the sacrum

48) Perineum:
   a) the lymphatic drainage from the scrotum goes to para-aortic nodes
   b) lymphatic drainage from the rectum passes to internal iliac nodes from the upper part and to superficial inguinal group from the lower part
   c) superior rectal branches of the pudendal nerves supply the external and sphincter
   d) the internal anal sphincter is composed of skeletal muscle
   e) the anal canal consists of inner circular muscle fibres and outer longitudinal fibres

49) Nerves of pelvis, branches of sacral plexus include all EXCEPT:
   a) nerves to piriformis
   b) pelvis splanchnic nerve
   c) obturator nerve
   d) pudendal nerve
   e) posterior femoral cutaneous nerve
Abdominal / Pelvis

Section 1 - Answers

1 A 26 C
2 D 27 D
3 B 28 C
4 D 29 E
5 A 30 A
6 A 31 C
7 E 32 B
8 B 33 C
9 C 34 D
10 D 35 B
11 E 36 C
12 D 37 B
13 B 38 C
14 E 39 B
15 B 40 E
16 D 41 A
17 C 42 A
18 A 43 B
19 E 44 C
20 C 45 B
21 A 46 E
22 C 47 D
23 A 48 ?B
24 D 49 C
25 E
Section 2

1) All but which are transected / at the level of the transpylonic plane?
   a) superior mesenteric artery leaves aorta
   b) splenic vein joins superior mesenteric vein to become the portal vein
   c) hila of kidneys
   d) lower border L1 vertebra
   e) gall bladder

2) The anterolateral abdominal muscles:
   a) external oblique muscle arises by eight digitations from back of lower eight ribs and interdigitates with serratus anterior and pectoralis major
   b) external oblique fibres run obliquely upwards and forwards
   c) the lower border ext-oblique forms the inguinal ligaments
   d) internal oblique insects into the line alba from a single aponeurosis
   e) transversus abdominus runs anterior to rectus abdominus until the cruciate line

3) The anterior abdominal wall:
   a) the deep surface above the umbilicus has lymphatic drainage to mediastinal nodes
   b) the deep surface below the umbilicus has lymphatic drainage to the internal iliac and paraaortic nodes
   c) rectus abdominus is supplied by lower intercostal and subcostal nn (T8-T10)
   d) internal oblique and transversus abdominus are supplied solely by the iliohypogastric nerves
   e) the superior and inferior epigastric vessels (arteries) anastomose within the body of the rectus muscle

4) Contents of the deep inguinal ring include all but:
   a) ilioinguinal nerve
   b) vas deferens
   c) cremasteric artery
   d) genital branch of the genitofemoral ligament
   e) obliterated remains of the processes vaginalis

5) Referred pain from which organ may be felt in the cutaneous distribution of the obturator nerve?
   a) bladder
   b) prostate
   c) ovary
   d) uterus
   e) sigmoid colon

6) Within the anal canal are anal cushions (dilated venous spaces and anastomoses)
   a) 3, 7 and 11 o’clock
   b) 2, 6, and 10 o’clock
   c) 3, 6 and 11 o’clock
   d) 1, 7 and 12 o’clock
   e) 1, 7 and 9 o’clock
Section 2

Answers

1  C
2  C
3  A
4  A
5  C
6  A
1 Regarding the inguinal canal
A The deep inguinal ring is an opening in internal oblique
B The superior epigastric artery is located deep to the posterior wall medial to the deep ring
C An indirect hernia passes through the deep inguinal ring
D A direct hernia passes lateral to the deep inguinal ring
E The floor of the inguinal canal is reinforced laterally by the lacunar ligament

2 Contents of the spermatic cord include all of the following EXCEPT
A Ductus deferens
B Testicular artery
C Pampiniform plexus
D Ilioinguinal nerve
E Genital branch of the genitofemoral nerve

3 Regarding the testis
A Leydig cells secrete testosterone
B The epididymis is located posteromedially
C Lymphatic drainage is to the inguinal lymph nodes
D Arterial supply is from the aorta just above the renal arteries
E The right testicular vein drains to the right renal vein

4 The following structures are related to the transpyloric plane EXCEPT
A Coeliac trunk
B Tip of the 9th costal cartilage
C Hilum of the kidney
D Origin of the portal vein
E Body of the pancreas

5 All of the following are retroperitoneal structures EXCEPT
A Cisterna chyli
B Sympathetic trunk
C Duodenum
D Pancreas
E Ureter

6 The celiac trunk
A supplies the gut from the entrance of the bile duct to the splenic flexure of the colon
B gives rise to the inferior pancreaticoduodenal artery
C is the 1st branch of the abdominal aorta
D arises from the aorta at the level of L2
E supplies the lower part of the oesophagus

7 The superior mesenteric artery
A arises from the aorta at the level of T11
B passes anterior to the body of the pancreas
C passes anterior to the 3rd part of the duodenum
D gives the superior pancreaticoduodenal branch
E supplies the jejunum
8 The inferior mesenteric artery
A supplies the hindgut as far as the dentate line
B arises at the level of L1
C passes posterior to the 3rd part of the duodenum
D crosses the ureter at the pelvic brim
E gives rise to the right colic artery

9 Regarding the duodenum
A All of the duodenum is retroperitoneal
B The 3rd part receives the bile duct
C The 2nd part passes over the hilum of the right kidney
D The 3rd part is crossed by the superior mesenteric artery
E The 4th part is 5 cm long

10 Regarding the liver
A The caudate lobe is bounded by the ligamentum venosum and the inferior vena cava
B The left lobe extends approximately 12cm to the left of the midline
C The gall bladder is at the tip of the 11th costal cartilage
D The bare area lies against the duodenum
E Porta hepatis contains the hepatic and portal veins

11 Regarding the spleen
A It lies between the 7th and 9th ribs
B The tail is contained in the lienorenal ligament
C The head is immediately anterior to the aorta
D The tail lies in the transpyloric plane
E The main blood supply is from the left gastric artery

12 Regarding the abdominal aorta
A It commences at T10 as it passes through the aortic opening of the diaphragm
B The first branch is the celiac trunk
C It terminates at the level of L2
D The gonadal arteries arise above the origin of the superior mesenteric artery
E The median sacral artery is a small posterior branch just before bifurcation
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1. Regarding the urinary tract
   a. The narrowest points of the ureter are at the pelviureteric junction, where it crosses the pelvic brim, and at the vesicoureteric junction
   b. Kidney innervation is derived from segments L2-L5
   c. The hilum of the right kidney lies just above the transpyloric plane 5 cm from the midline
   d. The hilum of the right kidney lies lateral to the psoas
   e. The left kidney lies over the tenth, eleventh and twelfth ribs

2. With regard to the blood supply of the rectum and anus
   a. It is principally the inferior rectal artery
   b. The anal canal is a site of porto-systemic anastomosis
   c. The veins do not correspond to the arteries
   d. The inferior mesenteric artery changes to the superior rectal artery at L3
   e. The vessels do not supply the full thickness of the anal wall

3. Lymph drainage of the testes are to
   a. The deep inguinal nodes
   b. The mediastinal nodes
   c. The para-aortic nodes
   d. The pectoral group of axillary nodes
   e. The external iliac nodes

4. Lymph drainage of the scrotum is to
   a. The superficial inguinal nodes
   b. The internal iliac nodes
   c. The deep inguinal does
   d. The external iliac nodes
   e. None of the above

5. Regarding radiological imaging of the gastrointestinal tract
   a. The terminal ileum can be identified by haustrations
   b. Haustrations represent the taeniae coli
   c. Air fluid levels on an erect abdominal X-ray are diagnostic of large bowel obstruction
   d. Gas should always be visible in the rectum
   e. Small bowel is always visible on a normal abdominal X-ray

6. Regarding the kidneys
   a. Each weighs about 340 grams
   b. The left kidney lies below the transpyloric plane
   c. The iliohypogastric and ilioinguinal nerves lie behind the posterior surface of the kidney
   d. Each kidney has six segments
   e. The hilum is separated from the peritoneum on the right side by the 3rd part of the duodenum

7. Regarding the ureters
   a. They exit the hilum behind the renal artery
   b. They are a continuation of the renal pelvis which is formed by the union of 10 major calyces
   c. They are each 40cm long
   d. On a radiograph they run just lateral to the transverse processes of the lumber vertebrae
   e. The lower ends are supplied by the ureteric branch of the renal artery
8. All of the following are relations of the body of the pancreas EXCEPT:
   a. Left crus of diaphragm
   b. Left psoas muscle
   c. Left kidney hilum
   d. Bile duct
   e. Lesser sac

9. Which of the following is INCORRECT?
   a. The inguinal canal of the female contains the round ligament of the uterus
   b. The deep inguinal ring is an opening in transverses muscle
   c. The spermatic cord in the male emerges from the deep inguinal ring
   d. The inguinal canal lies above the medial half of the inguinal ligament
   e. The roof of the inguinal canal is formed by lower edges of internal oblique and transverses muscles

10. The duodenum
    a. Is a retroperitoneal structure
    b. Is 25cm in length
    c. Lies between the levels of L2-L4
    d. In its fourth part lies to the right of the aorta
    e. All of the above

11. The highest branch of the abdominal aorta is
    a. Right suprarenal artery
    b. Celiac trunk
    c. Left renal artery
    d. Left gonadal artery
    e. Superior mesenteric artery

12. The main vessel supplying the body of the pancreas is the
    a. Superior pancreaticoduodenal artery
    b. Splenic artery
    c. Left gastric artery
    d. Left gastroepiploic artery
    e. Inferior pancreaticoduodenal artery

13. All of the following about the abdominal aorta are correct EXCEPT:
    a. It passes between crura of the diaphragm at the level of T12 vertebra and terminates at body of L4
    b. It is crossed by the splenic vein below the celiac trunk and above the superior mesenteric artery
    c. It has the uncinate process of the pancreas lying anteriorly
    d. It gives off 5 paired lumbar arteries
    e. It continues as the median sacral artery

14. The ureter
    a. Passes anterior to genitofemoral nerve
    b. Develops from the metanephric cap
    c. Is represented by dermatome L2
    d. In the male, is crossed anteriorly by the ductus deferens
    e. Passes anterior to the uterine artery in the female
15. The abdominal aorta is crossed anteriorly by
a. Left renal artery
b. Inferior mesenteric artery
c. Left renal vein
d. Right gonadal artery
e. Right renal vein

16. Which is true of the superior mesenteric artery and its branches?
   a. Right colic artery is the main supply of the caecum
   b. Superior mesenteric artery runs anterior to the 1st part of the duodenum
   c. Right colic artery passes behind the right ureter
   d. Superior mesenteric arises from aorta at level of L2
   e. Main trunk of the superior mesenteric artery ends at the level of Meckel's diverticulum

17. Which is true of the inferior mesenteric artery and its branches?
   a. Inferior mesenteric ends as the superior rectal artery
   b. The main trunk crosses the left ureter, but its branches pass behind it
   c. It arises from the aorta at the level of L2
   d. The descending branch of the left colic supplies the sigmoid colon only
   e. There is very little anastomosis between the branches

18. Direct tributaries of the portal vein include all but
   a. Right gastric vein
   b. Short gastric vein
c. Splenic vein
d. Superior pancreaticoduodenal vein
   e. Left gastric vein

19. Which is the correct portosystemic anastomosis?
   a. Portal = tributary of inferior mesenteric vein, systemic = tributary of internal iliac vein
   b. Portal = periumbilical vein, systemic = phrenic veins
   c. Portal = intrahepatic portal branches, systemic = azygos vein
d. Portal = left gastric vein, systemic = IVC via oesophageal veins
   e. Portal = middle rectal vein, systemic = inferior rectal vein

20. Which is not true of the surface markings of the liver?
   a. Lies below ribs 7-11 in the right midaxillary line
   b. Highest point on right is 5th rib
   c. Superior surface crosses the xiphisternal joint
d. Inferior margin lies level with right costal margin in most cases
   e. Highest point on left is 6th intercostal space

21. Which is the correct order of structures in the porta hepatis (anterior-posterior)
   a. hepatic arteries, portal veins, hepatic ducts
   b. portal veins, hepatic ducts, hepatic arteries
c. hepatic ducts, cystic duct, hepatic arteries, portal veins
d. hepatic ducts, hepatic arteries, cystic duct, portal veins
e. hepatic ducts, hepatic arteries, portal veins
22. Which is not a structure of the retroperitoneum?
   a. Kidney
   b. Adrenal gland
   c. Cisterna chilii
   d. Spleen
   e. Pancreas

23. Which is not a structure in the transpyloric plane?
   a. Pancreas
   b. Superior mesenteric artery origin
   c. Fundus of gallbladder
   d. Tip of 9th costal cartilage
   e. Lower pole of right kidney

24. Regarding the relations of the ureter, which is INCORRECT?
   a. Cross the vas deferens in males
   b. Medial to the transverse process of lumbar spine
   c. Cross the genitofemoral nerve
   d. Cross the SI joint
   e. ?

25. Which is true of colon?
   a. Ascending is longer than descending
   b. Only part suspended on mesentery is transverse colon
   c. Marginal artery is weakest at hepatic flexure
   d. Lymphatic drainage is via superior and inferior mesenteric lymph nodes
   e. ?

26. Where does the appendix lie in health?
   a. Retroileal
   b. ?
   c. ?
   d. ?
   e. ?

27. Regarding the kidneys:
   a. The hilum of the left kidney is just below that of the right
   b. The hilum faces medially and somewhat posteriorly
   c. The long axis is parallel with the lateral border of psoas
   d. The perinephric fat is surrounded by the renal fascia
   e. The renal artery lies in front of the renal vein

28. Concerning the colon:
   a. Appendices epiploicae are most frequent on the ascending colon
   b. The transverse colon is normally shorter than the descending colon
   c. The blood supply includes the superior mesenteric artery
   d. Parasympathetic supply does not include the vagi
   e. None of the above
29. Regarding the left kidney
   a. Anterior relations include the spleen
   b. Posteriorly lies the costodiaphragmatic recess
   c. The suprarenal gland lies within the renal fascia
   d. The lateral femoral cutaneous nerve lies posteriorly
   e. The median arcuate ligament lies posteriorly

30. The pelvic floor
   a. Consists of ischiococcygeus, iliococcygeus and pubococcygeus
   b. Muscles have significant insertion into the sacrum
   c. Creates a gutter that slopes downwards and backwards
   d. Has the anococcygeal raphe a superficial part
   e. None of the above

31. Regarding the inguinal canal
   a. It has a roof formed by lower edges of internal oblique and transverses muscles
   b. The ilioinguinal nerve enters the canal through the deep ring
   c. Its posterior wall is formed by the external oblique aponeurosis
   d. The conjoint tendon lies anterior to the superficial inguinal ring
   e. The superior epigastric artery crosses the posterior wall medial to the deep inguinal ring

32. The liver
   a. Is divided into superior and inferior lobes by the falciform ligament
   b. Has a bare area inferiorly
   c. Receives blood from portal and hepatic veins
   d. Has a caudate lobe that lies within the lesser sac
   e. Takes sympathetic nerve supply from paravertebral ganglia

33. The abdominal aorta
   a. Bifurcates into the common iliac vessels on the body of L4
   b. Gives rise to the testicular/ovarian artery above the renal artery
   c. Arises from the thoracic aorta on passing anterior to the median arcuate ligament
   d. Gives rise to the renal arteries at the level of T12
   e. Lies to the right side of the inferior vena cava

34. The branches of the lumbar plexus includes:
   a. The iliohypogastric and ilioinguinal which provide motor innervation to the internal and external oblique muscles
   b. The genitofemoral nerve which is derived from L3 and L4
   c. The femoral nerve which supplies the ileus
   d. The obturator nerve which is derived from L2,3 and 4 posterior divisions
   e. The lateral femoral cutaneous nerve which supplies sensory and motor innervation to the lateral thigh

35. Regarding the ureter the right is
   a. Narrowed at pelviureteric junction
   b. Is 10cm long
   c. Lower end of ureter is supplied by the ureteric branch of the renal artery
   d. It is endodermal in origin
   e. It is related to the second part of the duodenum on the right
36. The pancreas
a. Lies at the level of the L1 vertebra
b. Body slopes downwards across the aorta
c. Receives its blood supply form the splenic artery
d. Is about 20cm long
e. Develops from three separate buds

37. Regarding the vessels of the pelvis
a. The inferior and superior gluteal arteries are branches of the posterior division of the internal iliac artery
b. The iliolumbar artery passes in front of the obturator nerve
c. The uterine artery passes above the ureter
d. The inferior vesical artery always supplies the lower end of the ureter
e. The obturator artery lies above the obturator nerve on the side wall of the pelvis

38. The pelvic floor
a. Muscles include obturator internus
b. Slopes down and forwards
c. Is supplied by S2, S3 and S4
d. Is relaxed during quiet respiration
e. Muscle iliococcygeus arises from the ilium

39. Regarding the stomach
a. The cardia is at the level of T8
b. The stomach is supplied by branches from the celiac trunk
c. The fundus is supplied by gastroepiploic vessels
d. The pyloric opening lies to the right of midline at T12
e. It has an outer longitudinal muscle layer and an inner oblique layer

40. Which lymph nodes drain the lower anal canal?
a. Superficial inguinal
b. External iliac
c. Deep inguinal
d. Para-aortic
e. Internal iliac

41. Superior pancreaticoduodenal vein drains into
a. Left gastric vein
b. Portal vein
c. Splenic vein
d. Superior mesenteric vein
e. IVC

42. All the following are veins which drain the stomach EXCEPT:
a. Gastroepiploic
b. Gastroduodenal
c. Right gastric
d. Left gastric
e. Short gastric
43. Which is not true of the stomach?
   a. Completely invested by peritoneum
   b. Cardia situated at T12
   c. Pyloric opening at L1
   d. Aorta to the left of lesser curve
   e. Supplied by branches of the celiac trunk

44. Which does not pass through the transpyloric plane?
   a. Splenic vein
   b. Tips of the 9th costal cartilages
   c. Lower border of L1
   d. Spleen
   e. Superior mesenteric artery

45. Appendix
   a. Usually lies retrocaecal in health
   b. Drains to inguinal nodes
   c. Has no mesentery
   d. Has a tip constant in relation to the caecum
   e. Opens into the caecum 2cm below the ileocaecal valve

46. Regarding the abdominal aorta
   a. Renal arteries originate at T12
   b. Splenic vein crosses the aorta just below superior mesenteric artery origin
   c. Surface marking from a point just above the transpyloric plane to a point just to the left of the umbilicus
   d. ?
   e. ?

47. Regarding the testicular blood supply
   a. Division of the testicular artery results in testicular infarction
   b. Testicular artery has numerous anastomoses with the cremasteric artery
   c. Pampiniform plexus is a superficial plexus surrounding the testicular artery
   d. ?
   e. ?

48. Which of the following regarding the appendix is FALSE?
   a. It has a base constant in relation to the caecum
   b. It has its own mesentery
   c. It is formed by teneae coli convergence
   d. Varies in length between 2 and 25 cm
   e. It always lies retro-ilieal in presence of disease

49. The ureters
   a. Widest in diameter at the PUJ
   b. Innervated by sympathetic nerves T12-L1
   c. Lie lateral to the tips of the lumbar transverse processes
   d. Depend on innervation from the pelvis for peristalsis
   e. None of the above are true
50. The ureters
a. Cross the gonadal vessels
b. Cross over the vas deferens
c. Are crossed by the genitofemoral nerve
d. Pass under the cover of the psoas muscle
e. Lie lateral to the lumbar transverse processes

Answers Abdomen

2. b 25. d  
3. c 26. a  
4. a 27. c  
5. b 28. c  
6. c 29. b  
7. a 30. ?  
8. d 31. a  
9. b 32. d  
10. b 33. a  
11. b 34. c?  
12. b 35. a  
13. d 36. c  
14. a 37. c  
15. c 38. b  
16. e 39. b  
17. a 40. a  
18. b 41. b  
19. a 42. b  
20. e 43. b  
21. e 44. d  
22. d 45. e  
23. e 46. c  
24. a 47. c  
25. e 48. e  
49. e  
50. ?