

GUS-Mid 018

بسْمِراللهِ ٱلرَّحْمَنِ ٱلرَّحِيمِ

1-The muscle which is located posterior to the right ureter is supplied by artery;

- a. Iliolumbar.
- b. Internal pudendal.
- c. Obturator.
- d. Lateral Sacral Artery.
- e. Superior gluteal.

2-Regarding the ureter, which of the following is INCORRECT;

- a. It is crossed by genitofemoral nerve.
- b. Its pelvic part is supplied by branches from vesical, middle rectal and uterine arteries
- c. The Inferior mesenteric vein is medial to the left ureter
- d. Sensory fibers from the ureter enter the spinal cord through last two thoracic and upper two lumbar segments.
- e. One of its narrowest points located medial to ischial spine.

3-Regarding reabsorption of filtered HCO3-. One of the following is NOT true;

- a. involves conversion of H+ and HCO3- to Co2 in the proximal tubular fluid.
- b. involves net secretion of H+ by proximal tubule cells.
- c. The presence of carbonic anhydrase in important in this process.
- d. involves conversion of Co2 in proximal tubule cells to H+ and HCO3 .-
- e. is almost 100% at normal filtered HCO3- loads.

4-All of the following can lead to hydronephrosis, except ONE :

- a. Atresia of urethra.
- b. PKHDI mutations.
- c. Ptosis of renal pelvis.
- d. Prostatic hyperplasia.
- e. Spinal cord damage.

5-All are correct regarding acute drug-induced tubulointerstitial nephritis, except one :

- a. Characterized by fever, skin rash and eosinophilia.
- b. Develops within days to weeks following drug exposure.
- c. Causes hematuria without significant proteinuria.
- d. Increased risk of urothelial carcinoma of the renal pelvis .
- e. Hypersensitivity reactions may be implicated.

6-ONE is true regarding IgA nephropathy:

- a. diagnosis can only be made using electron microscopy.
- b. glomerular basement membrane subepithelial humps.
- c. elevated serum anti-ASO titers are diagnostic of the disease .
- d. most common cause of nephrotic syndrome in childhood.
- e. linked to abnormality in immunoglobulin clearance.

7-Screening for, and treating asymptomatic bacteriuria is recommended in which of the following cases ?

- a. A 22-year-old male undergoing urinary tract surgery.
- b. A 50-year-old male with a chronic indwelling urinary catheter.
- c. A 73-year-old male with history of diabetes.
- d. A 30-year-old healthy female
- e. A 60-year-old male with benign prostatic hypertrophy.

8-A 71-year-old woman with a recent history of urinary tract infections presents with pain on her side and back, justifying renal function tests. As part of it, which of the following is tested by the creatinine clearance test ?

- a. The volume of plasma being cleared of creatinine per minute.
- b. The volume of urine being cleared of creatinine per minute .
- c. The amount of creatinine being filtered per minute .
- d. The amount of creatinine being reabsorbed per minute.
- e. The amount of creatinine being secreted per minute.

9-A patient presented with a twofold-elevated serum creatinine level compared to baseline for 12 hours. In order to prevent worsening azotemia, the patient's glomerular filtration rate must be increased. Which of the following is an appropriate manipulation ?

- a. Increasing hydrostatic pressure in Bowman's space.
- b. Dilating renal afferent arteriole.
- c. Dilating renal efferent arteriole.
- d. Increasing glomerular capillary colloid oncotic pressure.
- e. Constricting renal afferent arteriole.

10-A 26-year-old female, previously healthy, presents to the clinic with a 3- day history of pain on passing urine associated with frequent bathroom visits. She denies urethral discharge or itch, and reports no sexual activity in the past 6 months. Which of the following laboratory results most likely confirms her diagnosis with a UTI ?

- a. Any number of RBCS in urine.
- b. Urine culture revealing growth of coagulase negative, gram positive cocci.
- c. Dipstick test reveals decreased urine pH.
- d. Dipstick test reveals presence of nitrite.
- e. Any number of WBCS in urine.

11-In a normal human who has a diuresis due to drinking a large volume of water; all the following statements are true EXCEPT:

- a. the osmolarity of the urine is less than 300 mosmol per liter.
- b. the glomerular filtration rate may be 50% above that in the nondiuretic situation.
- c. the renal venous blood has a higher osmolarity than the renal arterial blood.
- d. plasma antidiuretic hormone (ADH) levels are decreased.
- e. vigorous (severe) muscular exercise will inhibit the diuresis.

12-All of the following can inhibit bacterial growth in the urinary tract except :

- a. Tamm-Horsfall protein.
- b. Lactoferrin.
- c. Urine flow.
- d. Abundance of Iron.
- e. Urea.

13-The following information was obtained from a normal human being. GFR = 125 ml/min. Plasma [X] = 1 mg/ml. Urine [X] = 0 mg/ml. Urine flow rate = 1 ml/min. From the above data, we can conclude with CERTAINITY that :

- a. X is not filtered.
- b. X is completely reabsorbed.
- c. clearance of x-zero ml/min.
- d. X is secreted but completely reabsorbed.
- e. X is reabsorbed by a Tm- limited process.

14-In order to maintain perfect potassium balance;

- a. potassium reabsorption must equal potassium filtered.
- b. potassium excretion must equal potassium filtered.
- c. potassium reabsorption must equal potassium intake.
- d. potassium secretion must equal potassium filtered.
- e. potassium excretion must equal potassium intake.

15-Choose the WRONG statement;

- a. The Cremastric artery is a branch from inferior epigastric artery
- b. Sinus of epididymis extends between lateral side of testis and the epididymis.
- c. The Middle spermatic nerves arise from the superior hypogastric plexus.
- d. The feeling of kick in the stomach accompanying injury of the testis is a referred pain through inferior spermatic nerve.
- e. The left renal vein is compressed between aorta and superior mesenteric artery.

16-Which of the following cells maintain acid-base balance by secreting either H+ or HCO3;-

a. Lacis cells.

- b. Mesangial cells.
- c. Dark intercalated cells of collecting ducts.
- d. Juxta-glomerular cells.
- e. Podocytes.

17-Which of the following is true regarding pelvic inflammatory disease (PID)?

- a. PID symptoms usually disappear with menstruation .
- b. PID only affects pregnant women.
- c. Can occur following invasive surgery in the uterus and is not always associated with sexually transmitted infections.
- d. E. Coli is the most common pathogen isolated from patients with PID.
- e. Usually caused by hematogenous spread of bacteria to the uterus.

18-ONE is true about cystic diseases of the kidney :

- a. Hypertension complicates many cases of autosomal dominant polycystic disease .
- b. Chronic hemodialysis is a risk factor to have simple renal cysts .
- c. Polyuria and polydypsia are symptoms of adult polycystic renal disease.
- d. PKD 2 mutation is linked to autosomal recessive polycystic kidney disease.
- e. Nephronophthisis uremic complex is associated with numerous cortical cysts.

19-The pka of NH3/NH4+ is 9.2. When tubular fluid pH is 6.2 :

- a. the NH4+ concentration is 10 times the NH3 concentration in tubular fluid.
- b. the NH3 concentrations is 1000 times the NH4+ concentration in tubular fluid.
- c. NH3 and NH4+ are present in equal concentrations in tubular fluid.
- d. the NH4+ concentration is 1000 times the NH3 concentration in tubular fluid.
- e. the NH4+ concentration is 100 times the NH3 concentration in tubular fluid.

20"-Struvite" renal stones are composed of :

- a. Magnesium ammonium phosphate.
- b. Calcium phosphate.
- c. Cystine crystals.

- d. Uric acid crystals.
- e. Calcium oxalate.

21-Bacterial vaginosis is best described as :

- a. Vaginal discharge caused by a disturbance in the vaginal microbiota.
- b. Vaginal discharge caused by gram positive rods.
- c. A Common sexually transmitted disease .
- d. A Self-limiting disease that should not be treated with antibiotics.
- e. A rare cause of vaginal discharge worldwide.

22-ONE is true about membranoproliferative glomerulonephritis :

- a. elevated serum anti-ASO titers.
- b. most common nephrotic syndrome in childhood.
- c. mesangial IgA deposits are diagnostic.
- d. most common cause of azotemia in children.
- e. duplicated glomerular basement membrane.

23-Dense deposit disease is characterized by glomerular deposits composed of one of the following:

- a. IgG.
- b. IgA.
- c. IgM.
- d. C3.
- e. C4.

24-Choose the WRONG Statement:

- a. The posterior ligaments of the urinary bladder contain vesical veins.
- b. The lymphatics from spongy part of male urethra are drained by deep and superficial inguinal lymph nodes.
- c. The urethral sphincter that prevents reflux of semen into the urinary bladder during ejaculation is supplied by autonomic fibers from the inferior hypogastric plexus.

- d. During insertion a male urinary catheter you feel resistance while it passes through membranous urethra as it is the narrowest part of the urethra.
- e. The female urethra is more distensible than male urethra.

25-Which of the following is true regarding complicated and uncomplicated UTIS ?

- a. Management is the same for both.
- b. The most common pathogen is the same for both.
- c. Bacteria lacking adhesions usually cause uncomplicated UTIS, while bacteria expressing adhesions cause complicated UTIS.
- d. Risk factors are the same for both .
- e. Dysuria and frequency are found only in complicated UTIS.

26-A 35-year-old male presents to the clinic complaining of a genital vesicular rash that appeared a few days before the visit, with some vesicles starting to ulcerate, his history reveals unprotected intercourse with 3 different sexual partners in the last 2 months. The patho en causing this lesion is most likely ?

- a. A spirochete.
- b. A yeast.
- c. A gram-negative diplococci.
- d. A double stranded DNA virus.
- e. A single stranded RNA virus.

27-ONE statement is correct regarding tumors of the urinary tract :

- a. Schistosomiasis is a risk factor of Chromophobe renal carcinoma.
- b. Painful hematuria is a frequent symptom of renal cancers.
- c. Wilms tumor is linked to mutations in VHL gene.
- d. Clear cell carcinoma is the most common renal tumor in adults.
- e. Renal papillary carcinoma reveals mutations in VHL gene.

28-A 45-year-old woman donates a healthy kidney to her sister. In regards to creatinine, which of the following is expected to be decreased in the donor after full recovery from the operation ?

- a. Renal excretion.
- b. Clearance.
- c. Production.
- d. Storage
- e. Plasma concentration.

29-A patient presents with severe renal artery stenosis. When an angiotensinconverting enzyme (ACE) inhibitor is administered, the patient has to be carefully monitored for which of the following ?

- a. Reduced renal tubule potassium reabsorption.
- b. Increased systemic blood pressure.
- c. Reduced glomerular filtration rate.
- d. Increased renal resistance to blood flow.
- e. Increased protein excretion in the urine.

30-Adam is 3 months old, his parent notice a swelling in his scrotum. The doctor diagnosed it as a hydrocele. During fluid aspiration the needle will pass through the following structures EXCEPT:

a. Internal spermatic fascia.

- b. Skin and Dartos muscle.
- c. Visceral layer of Tunica vaginalis.
- d. External spermatic fascia.
- e. Cremastric muscle and fascia.

31-In an experiment, the renal vein of a rat was cannulated, and paraaminohippurate (PAH) was infused. Following a sufficient period of equilibration, plasma PAH concentration was 0.2 mg/ml and urinary concentration was 100 mg/ml. Urinary flow was 1 mL/min. Inulin clearance was found to be 100 ml/min. The fraction of filtered plasma at the glomerulus is which of the following ?

a. 0.5

b. 0.2

c. 0.4

d. 0.3

e. 0.1

32-Choose the WRONG match:

a. Membranous urethra stratified columnar and pseudostratified columnar epithelium.

- b. Proximal convoluted tubules. Simple cuboidal epithelium with long microvilli.
- c. Thick limbs of loop of henle. Simple cuboidal epithelium with no Microvilli.
- d. Distal convoluted tubules. Simple columnar epithelium; short microvilli.
- e. Distal part of spongy urethra...stratified squamous epithelium.

33-Omar, a 38 years old man is complaining of severe renal colic radiating to his flanks. X ray revealed renal stone. After surgical removal of the stone, the doctor advice his family that Omar can eat and drink after his full recovery. Why Omar can eat and drink after this operation ?

- a. The kidney is not a gastrointestinal organ.
- b. Small intestine is supplied by superior mesenteric artery while the kidney by renal artery.
- c. The intestinal blood is drained by portal vein while renal vein is drained by systematic circulation.
- d. The intestinal pain transmitted to TIO while renal pain to T12 segments of spinal cord.
- e. The kidney is a retroperitoneal structure.

34-An unidentified substance has a plasma concentration of 1 mg/ml and a urine concentration of 300 mg/mL. GFR is 100 ml/min and urine flow rate is 1 mL/min. The substance is:

- a. para-aminohippurate.
- b. chloride.
- c. sodium.
- d. inulin.

```
e. creatinine.
```

35-An 11-year-old boy presents with polydipsia, polyuria, fatigue, and headache, so a series of renal function tests are ordered. Which of the following test results would be an abnormal finding ?

- a. Creatinine clearance of 130 ml/min.
- b. Glucose clearance of 10 ml/min.
- c. PAH clearance 600 mL/min.
- d. Inulin clearance 120 mL/mi.
- e. Plasma creatinine concentration of 0.5 mg/dL.

36-Clinically, to assess the pelvis of a pregnant women before labor, we measure the distance between .

- a. The two arcuate lines.
- b. Sacral promontory and lower border of symphysis pubis and subtract 1.5 cm.
- c. Sacro-iliac joint on one side and the iliopubic eminence on opposite
- d. Sacral promontory and upper border of symphysis pubis.
- e. Ischial spine and pubic Arch.

37-By using the micropuncture technique at different points across the nephron, we found that [TF/P]x/[TF/P] inulin > 1.0; then X :

- a. underwent net reabsorption.
- b. freely filtered, not secreted, but partially reabsorbed.
- c. is not filterd.
- d. has the same criteria as inulin.
- e. underwent net secretion.

38-Regarding pelvic nerves, choose the WRONG statement:

- a. The sensation from base of the urinary bladder in females is carried by pelvic splanchnic nerve.
- b. Pudendal nerve is a branch of sacral plexuses.

- c. The pudendal nerve block is used to anesthetizes the patient during Episiotomy.
- d. The pregnant women could complain of aching pain extending down one of the lower limbs due to compression of anococcygeal nerve.
- e. The ganglion impar is formed by union of the two sacral sympathetic trunks.

39-The pathogen that causes the common sexually transmitted disease chlamydia :

- a. Is similar morphologically to the pathogen causing syphilis.
- b. Is diagnosed using culture on tryptic soy agar.
- c. Can survive inside epithelial cells.
- d. Only affects epithelium of the genital tract.
- e. Can only be transmitted through sexual contact.

40-ONE is true about primary membranous nephropathy :

- a. caused by Streptococcus Group A infection.
- b. a disease of childhood.
- c. glomerular basement membrane thickening.
- d. urine RBC casts.
- **e.** positive family history.

AIISWEIS							
1	Α	11	В	21	Α	31	В
2	Α	12	D	22	Ε	32	D
3	В	13	С	23	D	33	Е
4	В	14	E	24	D	34	Α
5	D	15	D	25	В	35	В
6	E	16	С	26	D	36	В
7	Α	17	С	27	D	37	E
8	Α	18	Α	28	В	38	D
9	В	19	D	29	С	39	С
10	D	20	Α	30	С	40	С

Answare

