**S.N.E**

**RENAL FINAL 2025**

**Which of the following findings in urine analysis suggest a nephrologic cause of hematuria:**

Question 1Answer

a.Reddish urine.

b.Isomorphic RBCs.

c.Negative dipstick test.

**d.Presence of proteins and casts.**

**The site of origin of prostate cancer is**:

Question 2Answer

a.Fibrous stroma.

**b.Peripheral zone.**

c.Transition zone.

d.Central zone

**S.N.E**

**Histologic types of renal cell carcinoma include all of the following except:**

Question 3Answer

a.Conventional.

b.Papillary.

c.Chromophobe.

**d.Squamous cell carcinoma**

**The treatment of stage 1 non seminoma germ cell testicular tumor is:**

Question 4Answer

**a.High inguinal orchiectomy and retroperitoneal lymph node dissection.**

b.High inguinal orchiectomy and chemotherapy.

c.High inguinal orchiectomy and radiotherapy.

d.None of the above.

**S.N.E**

**The least common site of uroepithelial tumors is:**

Question 5Answer

a.Renal calyces and renal pelvis.

b.ureter.

**c.Urethra.**

d.Bladder

**The degradation pathways of pyrimidines generally result in the production of which of the following?**

Question 6Answer

a.Uric acid

**b.Ammonium ($NH_4^+$)**

c.Lactate

d.Ketone bodies

**S.N.E**

**Uracil nucleotide feedback inhibition control the activity of:**

Question 7Answer

a.Dihydro-orotase

**b.Carbamoyl phosphate synthase II**

c.Aspartate transcarbamoylase

d.Hydroxymethyl cytidylate synthase

e.Orotidylic pyrophosphorylase reductase

**The "committed" step in purine biosynthesis is:**

a.Ring closure of allantoin to reform uric acid

**b.The synthesis of phosphoribosylamine**

c.The synthesis of phosphoribosylpyrophosphate

d.The formation of azaserine, which interferes with glutamine reactions

e.Ring closure of formamidolmidazole-carboxamide ribotide to form IMP

**S.N.E**

**Which of the following is true of de novo pyrimidine synthesis?**

Question 9Answer

a.Its synthesis starts with ribose-5-phosphate

b.Carbon-6 is donated by folic acid derivatives

c.Carbamoyl phosphate donates C2 and N2 atoms

d.Glycine is a carbon donor

**e.Glutamine is a nitrogen donor**

**The key enzyme of do novo synthesis of purine nucleotides is:**

Question 10Answer

a.PRPP synthase.

b.PRPP dehydrogenase.

**c.PRPP glutamyl amido transferase.**

d.IMP dehydrogenase

**S.N.E**

**Two THFA-requiring steps of purine biosynthesis are:**

Question 11Answer

a.Formation of phosphoribosylamine and glycinamide ribonucleotide

**b.Formation of formylglycinamide ribonucleotide and aminoimidazole carboxamide ribonucleotide**

c.Formation of aminoimidazole carboxylic acid ribonucleotide and inosinic acid from formylglycinamide ribonucleotide

d.Formation of formamidoimidazole carboxamide ribonucleotide

e.Formation of inosinic acid and adenylosuccinic acid.

**For the conversion of dUMP to TMP, what is required?**

**a.Tetrahydrofolic acid**

b.ATP

c.FMN

d.4'-Phosphopantothenate

e.Pyridoxal phosphate

**S.N.E**

**In pyrimidine degradation, the carbon atoms from thymine are converted to which of the following molecules?**

Question 13Answer

a.Acetyl-CoA

**b.Succinyl-CoA**

c.Oxaloacetate

d.Acetoacetate

**The glomerular filtration barrier consists of all the following except:**

Question 14Answer

a.Fenestrated endothelium

b.Glomerular basement membrane

c.Podocyte foot processes

**d.Mesangial cells**

e.Filtration slits

**S.N.E**

**The urothelium lines all the following structures except:**

Question 15Answer

a.Renal pelvis

b.Major calyces

c.Ureter

d.Urinary bladder

**e.Prostatic urethra**

**The proximal convoluted tubule can be distinguished microscopically by:**

a.Sparse mitochondria

b.Flattened nuclei and clear cytoplasm

**c.Prominent brush border and eosinophilic cytoplasm**

d.Absence of microvilli

e.Tall columnar cells with mucin

**S.N.E**

**Which structure contains principal cells and intercalated cells?**

Question 17Answer

a.Thick ascending limb

b.Proximal tubule

c.Distal convoluted tubule

**d.Collecting duct**

e.Glomerulus

**The renal corpuscle includes:**

a.Glomerulus + macula densa

**b.Glomerulus + Bowman's capsule**

c.Proximal tubule + loop of Henle

d.Glomerulus + distal convoluted tubule

e.Bowman’s capsule + collecting duct

**S.N.E**

**Which of the following is not a characteristic of juxtaglomerular cells?**

Question 19Answer

a.Located in the afferent arteriole

b.Contain renin granules

**c.Sense sodium concentration**

d.Modified smooth muscle cells

e.Part of the juxtaglomerular apparatus

**Which part of the nephron is most active in glucose and amino acid reabsorption?**

Question 20Answer

a.Loop of Henle

b.Distal convoluted tubule

**c.Proximal convoluted tubule**

d.Collecting duct

e.Bowman's capsule

**S.N.E**

**Asymptomatic bacteriuria (ASB) is defined by the presence of symptoms related to urinary tract infection.**

Question 21Answer

a.True

**b.False**

**Pregnant women should be screened for bacteriuria by urine culture at least once in early pregnancy.**

Question 22Answer

**a.True**

b.False

**Midstream clean catch specimens or suprapubic aspiration may be needed to avoid contamination in urine specimens.**

Question 23Answer

**a.True**

b.False

**S.N.E**

**A risk factor for urinary tract infections in women is:**

Question 24Answer

a.Circumcision

**b.Frequent sexual intercourse**

c.Long urethra

d.Strong pelvic floor muscles

e.High pH urine

**In cases of pyelonephritis where E. coli is suspected, which treatment is typically prescribed for hospitalized patients?**

Question 25Answer

**a.Oral ciprofloxacin and a single pulse dose of gentamicin**

b.Cephalexin and amoxicillin

c.Trimethoprim and cephalexin

d.Amoxicillin alone

**S.N.E**

**In which patient population should screening and treatment of asymptomatic bacteriuria (ASB) be conducted?**

Question 26Answer

a.All elderly patients

**b.Pregnant women**

c.All patients with indwelling urethral catheters

d.All men under age 40

**Pregnancy is a predisposing factor for urinary tract infections.**

Question 27Answer

**a.True**

b.False

**Asymptomatic bacteriuria can occur in all age groups.**

Question 28Answer

**a.True**

b.False

**S.N.E**

**The diagnostic gold standard for UTI is:**

Question 29Answer

a.Urine dipstick

b.Urinalysis

**c.Urine culture**

d.Cystoscopy

e.Renal ultrasound

**Detecting bacteria in a urine culture is considered the diagnostic "gold standard" for UTI.**

Question 30Answer

**a.True**

b.False

**Patients who are septic from a renal source need to start with intravenous antibiotics.**

**a.True**

b.False

**S.N.E**

**First-line treatment for uncomplicated cystitis in women is often:**

Question 32Answer

a.Ciprofloxacin

b.Trimethoprim-sulfamethoxazole

**c.Nitrofurantoin**

d.Amoxicillin-clavulanic acid

e.Gentamicin

**Which is incorrect regarding the investigation of UTI?**

Question 33Answer

a.The sensitivity of dipstick for nitrites is 96%.

b.A positive dipstick for leucocyte esterase is 96% specific for >10 wbc/mm3.

c.A bacterial culture with > 10 5 has 95% probability of representing infection.

d.Use of blood cultures in does not change management when urine culture is taken.

**e.All patients with pyelonephritis require follow-up USS of kidneys.**

**S.N.E**

**You are called to examine a patient who presented to the ER complaining from right lumbar pain for two days, associated with fever, chills, and vomiting . He was fully conscious and oriented , and vitally stable with a temperature of 39 Upon examination there was costophrenic angle tenderness CBC revealed WBC of 15000 mainly neutrophils , U/A revealed WBC 100, RBC 70, many bacteria, positive nitrite, and a PH of 7 A struvite stone ( triple phosphate stone ) was detected by X ray , which of the following is the most likely organism**

Question 34Answer

a.E. Coli

b.Klebsiella

c.Staphylococcus aureus

d.pseudomonas aeruginosa

**e.Proteus mirabilis**

**S.N.E**

**Which group of people are likely to need treatment for their asymptomatic bacteriuria- assuming their renal tracts are normal?**

Question 35Answer

**a.pregnant women**

b.young children

c.non pregnant women

d.men under 60 years of age

e.diabetic patient

**A tumor in the renal pelvis composed of malignant cells with papillary and flat growth patterns is best classified as:**

a.Clear cell carcinoma

b.Renal medullary carcinoma

**c.Urothelial carcinoma**

d.Papillary RCC

e.Collecting duct carcinoma

**S.N.E**

**Which stain is most useful to demonstrate immune complex deposition in glomeruli?**

Question 37Answer

a.Hematoxylin and eosin (H&E)

b.Periodic acid-Schiff (PAS)

c.Congo red

**d.Immunofluorescence**

e.Ziehl-Neelsen

**Which of the following is least likely to cause acute tubular injury?**

a.Ischemia

b.Aminoglycosides

c.Contrast media

**d.Anti-GBM disease**

e.Hemoglobinuria

**S.N.E**

**A bladder tumor with high-grade flat atypia and positive p53 and CK20 in full thickness is consistent with:**

Question 39Answer

a.Inverted papilloma

b.Urothelial papilloma

**c.Carcinoma in situ**

d.Low-grade papillary carcinoma

e.Nephrogenic metaplasia

**Which renal tumor is most often multifocal and bilateral?**

Question 40Answer

a.Clear cell RCC

b.Oncocytoma

**c.Papillary RCC**

d.Chromophobe RCC

e.Angiomyolipoma

**S.N.E**

**What is the most likely diagnosis in a patient with hematuria, sensorineural deafness, and a family history of renal failure?**

Question 41Answer

a.Thin basement membrane disease

b.IgA nephropathy

c.Membranous nephropathy

**d.Alport syndrome**

e.Lupus nephritis

**Which of the following is a poor prognostic marker in clear cell renal cell carcinoma?**

a.VHL mutation

**b.Sarcomatoid differentiation**

c.CD10 positivity

d.Clear cytoplasm

e.Presence of fibrous capsule

**S.N.E**

**Which of the following is most commonly associated with autosomal dominant polycystic kidney disease?**

Question 43Answer

**a.Mutation in PKD1 or PKD2**

b.Small echogenic kidneys

c.Oligohydramnios

d.AR inheritance

e.Early childhood presentation

**Alport syndrome is due to a defect in which of the following proteins?**

Question 44Answer

a.Collagen type I

b.Collagen type II

c.Collagen type III

**d.Collagen type IV**

e.Laminin

**S.N.E**

**A 45-year-old man presents with nephrotic syndrome. A renal biopsy shows diffuse thickening of the glomerular basement membrane without hypercellularity. Silver staining reveals "spike and dome" appearance. What is the most likely diagnosis?**

Question 45Answer

a.Focal segmental glomerulosclerosis

b.Minimal change disease

**c.Membranous nephropathy**

d.Membranoproliferative glomerulonephritis

e.Diabetic nephropathy

**A 3-year-old child presents with an abdominal mass. Histology shows blastemal, epithelial, and stromal components. What is the most likely diagnosis?**

a.Mesoblastic nephroma

**b.Wilms tumor**

c.Renal medullary carcinoma

d.Angiomyolipoma

e.Neuroblastoma

**S.N.E**

**Which feature is most characteristic of papillary renal cell carcinoma?**

Question 47Answer

a.Clear cytoplasm

b.Central scar

c.Eosinophilic granular cytoplasm

**d.Papillary architecture with foamy macrophages**

e.Triphasic histology

**What is the most common site of origin for urothelial carcinoma?**

Question 48Answer

a.Renal pelvis

b.Ureter

**c.Bladder**

d.Prostatic urethra

e.Penile urethra

**S.N.E**

**Which renal disease is associated with "tram-track" appearance on light microscopy?**

Question 49Answer

a.Minimal change disease

b.Focal segmental glomerulosclerosis

**c.Membranoproliferative glomerulonephritis**

d.IgA nephropathy

e.Diabetic nephropathy

**A biopsy shows interstitial lymphocytic infiltrates and eosinophils with tubular damage. The patient recently started antibiotics. What is the likely diagnosis?**

Question 50Answer

a.Acute tubular necrosis

**b.Acute interstitial nephritis**

c.Pyelonephritis

d.Renal papillary necrosis

e.Minimal change disease

**S.N.E**

**In diabetic nephropathy, which histological feature is characteristic?**

Question 51Answer

a.Necrotizing granulomas

b.Fibrinoid necrosis of arterioles

**c.Kimmelstiel-Wilson nodules**

d.Cellular crescents

e.Intratubular calcifications

**Which genetic mutation is commonly found in clear cell renal cell carcinoma?**

Question 52Answer

a.TP53

b.WT1

**c.VHL**

d.TSC1

e.BRAF

**S.N.E**

**Which renal neoplasm is most commonly associated with tuberous sclerosis?**

Question 53Answer

a.Clear cell RCC

b.Chromophobe RCC

c.Oncocytoma

**d.Angiomyolipoma**

e.Papillary RCC

**A 4-year-old boy presents with gross hematuria and palpable flank mass. The tumor has epithelial, blastemal, and stromal elements. Which gene is most likely involved?**

a.TP53

**b.WT1**

c.VHL

d.PAX8

e.BCL2

**S.N.E**

**Which renal tumor often demonstrates trisomy of chromosomes 7 and 17 and loss of the Y chromosome in men?**

Question 55Answer

a.Clear cell RCC

**b.Papillary RCC**

c.Chromophobe RCC

d.Collecting duct carcinoma

e.Oncocytoma

**Which of the following prevention strategies has the highest level of evidence for reducing the risk of contrast-induced nephropathy (CIN) using intravenous low-osmolar contrast media (LOCM)?**

a.Ascorbic Acid plus IV saline

b.IV sodium bicarbonate alone

c.N-acetylcysteine alone

**d.Intravenous saline alone**

e.N-acetylcysteine plus IV sodium bicarbonate

**S.N.E**

**Which of the following actions is related to thiazide diuretics?**

Question 57Answer

a.hyperuricemia

**b.hyperkalemia**

c.hypernatremia

d.hypercalcemia

e.aquaresis

**All potassium-sparing diuretics**

Question 58Answer

a.produce a mild diuresis without acid/base disturbance

**b.inhibit aldosterone receptors**

c.produce hypokalemia

d.produce similar adverse effects to thiazide diuretics

e.increase the excretion of potassium ions

**S.N.E**

**A 33-year-old muscular male is brought to emergency room after being rescued from under a collapsed concrete building. Physical examination reveals multiple lower extremity bone fractures and skin lacerations. CT scan is negative for traumatic brain injury. Vitals and laboratory parameters are as follows HR 110 bpm, BP 100/65 mm Hg, RR 20/min, SpO2 96%, and temp 37.5°C. Hb 10 g/dL, Na 143 meq/L, K 4.0 meq/L, Cl 109 meq/L, creatine kinase (CK) 15 000 units/L. He has received a liter of lactated ringers so far. His urine output is dark brown and only 10 mL for the past hour. Which of the following is the next BEST step in the management of this patient?**

Question 59Answer

a.Administer 40 mg of furosemide

b.Administer 1 g/kg of mannitol

**c.Administer 1 L of normal saline (0.9% NS)**

d.Administer 50 meq of sodium bicarbonate

**Which of the following diuretics is never used in patients with kidney stone or hepatic disease?**

a.amiloride

**b.spironolactone**

c.triamterene

d.eplerenone

e.none o f the above

**S.N.E**

**Which of the following laboratory findings is consistent with an intrinsic cause of acute kidney injury?**

Question 61Answer

a.Urine osmolality of 380 mOsm/L

b.BUN/Cr ratio of 20

**c.Urine Na of 50 mEq/L**

d.Fractional excretion of sodium (FENa) of 1%

**A healthy 24-year-old male is admitted to the intensive care unit (ICU) for AKI and hyperkalemia. History is remarkable for a recent episode of sinusitis for which amoxicillin-clavulanate therapy was initiated. Physical examination is notable for a temperature of 37.6°C, skin rashes, and joint pain. Urine microscopy shows a few RBC's and eosinophils. Laboratory results are given below WBC 12.5 k/µL, Hb 14.3 g/dL, Hct 38%, Plt 256 k/µL, and eosinophilia. Na 137 mmol/L, K 5.7 mmol/L, Cl 106 mmol/L, CO 22 mmol/L, BUN 18 mg/dL, Scr 2.3 mg/dL, and glucose 176 mg/dL. What is the MOST appropriate next step in the management of this patient?**

Question 62Answer

a.Add amikacin

**b.Discontinue amoxicillin-clavulanate**

c.Add vancomycin

d.Send patient for kidney biopsy

**S.N.E**

**18-A 70-year-old woman is admitted to the emergency depart- ment because of a “fainting spell” at home. She appears to have suffered no trauma from her fall, but her blood pres- sure is 120/60 when lying down and 60/20 when she sits up. Neurologic examination and an ECG are within normal limits when she is lying down. Questioning reveals that she has recently started taking “water pills” (diuretics) for a heart condition. Which of the following drugs is the most likely cause of her fainting spell?**

Question 63Answer

a.Acetazolamide

b.Amiloride

**c.Furosemide**

d.Hydrochlorothiazide

e.Spironolactone

**In patients with acute kidney injury from statins induced rhabdomyolysis, which of the following is true?**

Question 64Answer

a.Serum myoglobin levels remain elevated longer than serum CK levels

b.Early aggressive fluid replacement with saline and loop diuretic is the mainstay of treatment

c.Mannitol is strongly recommended as first line therapy in the treatment of this condition

**d.Alkalinization of the urine using intravenous sodium bicarbonate, targeting a pH of greater than 6.0, can prevent renal failure in patients with rhabdomyolysis**

e.Treatment should be instituted when the creatine kinase (CK) levels rise to above 3000 U/L

**S.N.E**

**Transient deafness has been reported with the usage of which of the following diuretics?**

Question 65Answer

a.Thiazides

**b.Loop diuretics**

c.Potassium sparing

d.A & b

e.None of the above

**When a diuretic is refractory, it does which of the following?**

Question 66Answer

a.produces a decreased response to a decreased amount of drug

b.produces an increased response to an increased amount of drug

**c.doesn’t produce a greater response to an increased amount of drug**

d.doesn’t produce any response to a decrease in the amount of drug

e.inhibits the secretion of antidiuretic hormone

**S.N.E**

**An elderly patient with a history of heart disease has difficulty breathing and is diagnosed with acute pulmonary edema. Which treatment is indicated?**

Question 67Answer

a.Acetazolamide

b.Chlorthalidone

**c.Furosemide**

d.Spironolactone

**Which of the following substances is cleared the most by the kidneys?**

Question 68Answer

a.Inulin

**b.PAH**

c.Creatinine

d.Urea

e.aminoacids

**S.N.E**

**Concerning the Juxtamedullary nephrons**

Question 70Answer

a.lie superficially in the renal cortex

b.Its loop of Henle are surrounded by extensive network of peritubular capillaries

c.Have shorter loop of Henle

d.Plays a minor role in urine concentration.

**e.20% to 30% of the nephrons**

**Use the values below to answer the following question. Glomerular capillary hydrostatic pressure = 47 mm Hg Bowman space hydrostatic pressure = 10 mm Hg Bowman space oncotic pressure = 0 mm Hg At what value of glomerular capillary oncotic pressure would glomerular filtration stop?**

Question 71Answer

a.57 mm Hg

b.47 mm Hg

**c.37 mm Hg**

d.10 mm Hg

e.0 mm Hg

**S.N.E**

**The macula densa is located in the:**

Question 72Answer

a.juxtaglomerular cells

b.extraglomerular mesangium

**c.beginning of distal tubule**

d.peritubular capillaries

e.collecting ducts

**Aldosterone:**

Question 73Answer

a.Increases reabsorption of potassium at the proximal convoluted tubules

**b.Secretion is stimulated by high blood potassium levels**

c.Increases secretion of renin

d.Can lead to development of metabolic acidosis

e.is a glycoprotein hormone

**S.N.E**

**In the presence of vasopressin, the greatest fraction of filtered water is absorbed in the:**

Question 74Answer

**a.Proximal tubule**

b.Loop of Henle

c.Distal tubule

d.Cortical collecting duct

e.Medullary collecting duct

**All the following are true about loop of Henle EXCEPT:**

Question 75Answer

a.It is the major site of magnesium reabsorption

**b.It is the major site of phosphate reabsorption**

c.It is the site of action of furosemide and bumetanide

d.Its thin descending segment is solute impermeable

e.Its thick ascending segment is water impermeable

**S.N.E**

**Regarding the nephrons which of the following is true:**

Question 76Answer

**A 80% of the nephrons are cortical nephrons and 20% are nephrons juxtamedullary**

b. B the proximal, distal and collecting ducts are found in the medulla

c. C the proximal tubule walls are formed of thin, flat squamous epithelial cells with no microvilli

d.D urine is propelled through the ureter into the bladder by gravity

e. E the nephrons is not regulated by endocrine system

**In response to acidosis all the following changes normally take place, EXCEPT**

Question 77Answer

a.Increase in Alpha intercalated cell-mediated H+ secretion

b.Increase in intracellular influx of hydrogen in exchange for potassium causing hyperkalemia

c.Increase in respiratory washout of carbon dioxide if acidosis was metabolic in origin

d.Increase in tubular bicarbonate production and reabsorption

**e.Decrease in net acid excretion**

**S.N.E**

**A patient with renal failure develops symptoms caused by the loss of a hormone produced by the kidney. Which of the following is the most likely diagnosis?**

Question 78Answer

a.Edema

b.Hypertension

**c.Anemia**

d.Uremia

e.Acidosis

**ADH secretion and release is caused by:**

Question 79Answer

a.Drinking 2L of distilled water

**b.Drinking 2L of hypertonic saline (sea water)**

c.Drinking 2L of isotonic saline

d.Drinking 2L of isotonic glucose

e.None of the above because increase in volume inhibits ADH secretion

**S.N.E**

**Glomerular filtration rate is approximately _____ mm/min, whereas renal plasma flow is approximately _____ mL/min Top of Form**

Question 80Answer

a.50 , 300

**b. 125, 600**

c. 200, 300

d.125, 250

e.128 ,1100

**To maintain normal H+ balance, total daily excretion of H+ should equal the daily**

Question 81Answer

a.Co2 produced through oxidative phosphorylation

b.HCO3 − excretion

c.HCO3 − filtered load

**d.fixed acid production plus fixed acid ingestion**

e.filtered load of H+

**S.N.E**

**Regarding phosphate homeostasis, which of the following is FALSE?**

Question 82Answer

a.Phosphate excretion is controlled by an overflow mechanism

b.Phosphorus exists in the body combined with other elements (as organic and inorganic phosphate)

c.The proximal tubule normally reabsorbs about 80% of the filtered phosphate

d.Parathyroid hormone decreases phosphate reabsorption

**e.Most of the body phosphate exists dissolved in plasma**

**Assuming a 30-year-old male weighs 80 Kg, then his total body water should equal:**

Question 83Answer

a.42 Liters

b.46 Liters

**c.48 Liters**

d.52 Liters

e.54 Liters

**S.N.E**

**The following drugs may be used for treatment of erectile dysfunction:**

Question 84Answer

a.PDE-5 inhibitors.

b.PGE1

c.Papaverine.

**d.All of the above**

**A 12-year-old girl complained of high-grade fever, left loin pain, rigors and burning micturition. Clinical examination showed a slightly tender left loin and no other abnormalities. All of the following statements are correct except one. Choose the incorrect statement:**

Question 85Answer

a.The provisional diagnosis is acute pyelonephritis.

b.You should start systemic antimicrobial therapy till the result of urine culture and sensitivity is available.

c.CT and abdominal ultrasound are helpful and may disclose the presence of a predisposing factor.

**d.Voiding cysto-urethrogram is not required in this case**

**S.N.E**

**Which of the following is a contraindication of endoscopic transurethral resection of prostate (TURP):**

Question 86Answer

a.Fibrous prostate.

b.Calcular prostatitis.

**c.Bleeding tendency.**

d.Bladder stone of 1cm in diameter.

**Pelvic fracture may be associated with the following injuries except:**

Question 87Answer

a.Trauma to the posterior urethra.

b.Extraperitoneal rupture of the bladder.

**c.Grade III trauma to the kidney.**

d.both a and b.

**S.N.E**

**Surgery on the left kidney may be complicated by injury of:**

Question 88Answer

**a.The spleen.**

b.The sigmoid colon.

c.The second part of the duodenum.

d.None of the above.

**During radical cystectomy we remove all of the following except:**

Question 89Answer

a.Bladder and draining lymph nodes.

b.Seminal vesicle and prostate in men.

c.Uterus adnexa and part of the vagina in women.

**d.Obturator internus muscle**

**S.N.E**

**The commonest presentation of testicular cancer is:**

Question 90Answer

a.Testicular pain.

**b.Testicular mass.**

c.Testicular erosion.

d.None of the above.

**Nephrologic (glomerular) hematuria is due to:**

Question 91Answer

a.Carcinoma of the bladder.

**b.Acute post-streptococcal glomerulonephritis.**

c.Transitional cell carcinoma of the renal pelvis.

d.Ureteral stone.

**UTIs account for approximately 40% of hospital-acquired infections.**

Question 26Answer

**a.True**

b.False

**S.N.E**

**During radical nephrectomy we remove all of the following except:**

Question 92Answer

a.The kidney harboring the tumor.

b.The perirenal fascia (Gerota's fascia).

**c.The whole ureter and a bladder cuff.**

d.The ipsilateral adrenal gland in large upper pole renal tumors.

**The following is (are) the aim(s) of first stage repair of hypospadias:**

Question 93Answer

a.Correction of chordee.

b.Straightening of the penis

c.Redistribution of penile skin for a planned second stage.

**d.All of the above**

**S.N.E**

**TUR syndrome during TURP is mainly due to:**

Question 94Answer

a.Hyperkalemia.

**b.Hyponatremia.**

c.Hypernatremia.

d.Hypokalemia

**Unfavourable types of Wilms tumor include all of the following, except:**

Question 95Answer

a.Anaplastic.

b.Clear cell type.

c.Rhabdoid.

**d.Multilocular cyst.**

**S.N.E**

**The hallmark diagnostic sign that a patient with a pelvic fracture has an injury to the urethra is:**

Question 96Answer

a.Hematuria.

b.Dysuria.

**c.Bleeding spots at the meatus.**

d.Hypotension

**The most common cause of acute retention of urine in a 60-year-old man is:**

Question 97Answer

a.Prostatic cancer.

**b.Benign prostatic hyperplasia.**

c.Neuropathic bladder.

d.Microscopic crystalluria

**S.N.E**

**The following definitions are correct except:**

Question 98Answer

a.Hypospadias means abnormal presence of the external urethral meatus on the under surface of the penis.

**b.Cystolitholapaxy means removal of a bladder stone by open surgery.**

c.Cystolithotomy means removal of a bladder stone by open surgery.

d.Endopyelotomy means endoscopic incision of pelvi-ureteric junction obstruction (PUJO).

**Alpha-blockers is commonly used in treatment of:**

Question 99Answer

a.Cancer prostate.

**b.BPH.**

c.Bladder cancer.

d.None of the above

**S.N.E**

**The most common urinary malignancy of childhood is:**

Question 100Answer

**a.Neuroblastoma.**

b.Renal cell carcinoma.

c.Rhabdomyosarcoma.

d.None of the above

**The PH of normal urine is:**

Question 1Answer

**a.Acidic.**

b.Alkaline.

c.Neutral.

d.Variable

**S.N.E**

**The most accurate single investigation for diagnosing bladder cancer is:**

Question 2Answer

a.Ascending cystogram.

b.Bladder wash cytology.

c.CT Scan.

**d.Bimanual examination under anesthesia and cystoscopic biopsy.**

**The most valuable investigation in suspected urethral injury is:**

Question 3Answer

a.Ascending cystography.

**b.Ascending urethrography.**

c.Computed tomography (CT)

d.Cystoscopy.

**S.N.E**

**The definition of T4 bladder mass felt during bimanual examination under anesthesia is:**

Question 4Answer

a.Bladder mass moves with and within the bladder with smooth surface.

**b.Bladder mass fixed to pelvic wall.**

c.Bladder mass moves with but not within the bladder with smooth surface.

d.Bladder mass moves with but not within the bladder with irregular surface.

**The continence mechanism in rectal (continent) urinary diversions depends on:**

Question 5Answer

**a.The anal sphincter.**

b.The external urethral sphincter.

c.The internal urethral sphincter.

d.None of the above

**S.N.E**

**The key substance in pyrimidine biosynthesis is:**

Question 6Answer

**a.Carbamoyl phosphate**

b.Thiouracil

c.ATP

d.$NADP^+$

e.Ribose-5-phosphate

**PRPP is important in:**

Question 7Answer

a.de novo synthesis of purine nucleotides.

b.Purine salvage pathway.

c.Synthesis of pyrimidine nucleotides.

**d.All of the above.**

e.None of the above.

**S.N.E**

**The probable metabolic defect in gout is:**

**Question 8Answer**

a.An overproduction of pyrimidines

**b.An overproduction of uric acid**

c.An underproduction of purines, leading to defective genetic material

d.A defect in the kidney's ability to excrete uric acid

e.Elevated calcium levels leading to the deposition of calcium urate

**deficiency in which enzyme, essential to the nucleotide metabolism salvage pathway, leads to a severe hereditary form of gout?**

**Question 10Answer**

**a.Hypoxanthine-guanine phosphoribosyl-transferase**

b.Aspartate transcarbamoylase

c.Thymidylate kinase

d.Adenylate deaminase

e.Xanthine oxidase

**S.N.E**

**The end product of purine metabolism that is excreted by man is:**

Question 12Answer

a.Allantoic acid

b.Orotic acid

c.Urea

**d.Uric acid**

e.Xanthine

**inosine monophosphate (IMP) is the biological precursor of?**

Question 13Answer

a.Orotate and uridylic acid

b.**Adenylate and guanylate**

c.Purines and pyrimidine

d.Uracil and thymine

e.uridylic acid and cytidylic acid

**S.N.E**

**Which of the following structures is absent in the renal medulla?**

Question 17Answer

a.Thin limbs of loop of Henle

b.Vasa recta

c.Collecting ducts

**d.Glomeruli**

e.Thick ascending limbs

**In the renal cortex, which of the following structures is not typically present?**

Question 19Answer

a.Proximal convoluted tubules

b.Glomeruli

c.Distal convoluted tubules

d.Collecting ducts

**e.Thin limbs of Henle**

**S.N.E**

**Bowman's space is located between:**

**Question 20Answer**

a.Podocytes and mesangial cells

b.Endothelial cells and podocytes

**c.Visceral and parietal layers of Bowman's capsule**

d.Macula densa and proximal tubule

e.Loop of Henle and glomerulus

**The most common site of infection in a complicated UTI is:**

Question 21Answer

a.Urethra

**b.Bladder**

c.Kidneys

d.Prostate

e.All of the above

**S.N.E**

**The presence of typical symptoms of prostatitis requires a digital rectal exam to establish a diagnosis.**

Question 22Answer

**a.True**

b.False

**In adults under age 50, UTI prevalence in males is low.**

Question 23Answer

**a.True**

b.False

**Which of the following describes the inflammation in the bladder that leads to symptoms of frequency, urgency, and dysuria?**

Question 24Answer

a.Bacterial colonization

**b.Inflammatory response with neutrophil influx**

c.Increased urine production

d.Urethral lengthening

**S.N.E**

**Emphysematous pyelonephritis is characterized by which of the following?**

Question 25Answer

**a.Gas found in the renal substance and perinephric space**

b.Yellow tissue composed of lipid-laden macrophages

c.Chronic inflammation in the renal parenchyma

d.Enlarged bladder due to infection

**Asymptomatic bacteriuria occurs in what percentage of pregnant women?**

Question 26Answer

a.1–3%

**b.2–9.5%**

c.10–15%

d.20–25%

**S.N.E**

**Bacteria can only enter the renal tract through the urinary tract, not the bloodstream.**

Question 28Answer

a.True

**b.False**

**A complication of pyelonephritis with a high mortality rate (20–80%) is:**

**Question 29Answer**

a.Costovertebral angle tenderness

**b.Emphysematous pyelonephritis**

c.Bladder inflammation

d.Recurrent cystitis

**What is the typical treatment approach for emphysematous pyelonephritis?**

**Question 30Answer**

a.Antifungal therapy

**b.Antibiotics, drainage, and possible nephrectomy**

c.Radiation therapy

d.Immunosuppressive medication

**S.N.E**

**The most common organism causing UTIs in sexually active women is:**

**Question 31Answer**

**a.Escherichia coli**

b.Staphylococcus saprophyticus

c.Enterococcus faecalis

d.Candida albicans

e.Pseudomonas aeruginosa

**Coliforms account for 85% of the bacteria isolated from urine specimens in the community setting.**

Question 32Answer

**a.True**

b.False

**Healthcare-associated urinary tract infections account for more than 30% of infections reported by acute care hospitals.**

**سؤال 29الإجابة**

**a.True**

b.False

**S.N.E**

**While you are at the nephrology department, the resident doctor told you that a 57 year old male patient is diagnosed with pyelonephritis, his investigations were as followed CBC; WBC 1500 , neutrophil 400, lymphocytes 200 , creatinine 1.4, urea 30, U/A revealed Bacteria +++ , WBC +100, RBC 50, leukocyte esterase positive, and green urine through the liberation of the pigment pyocyanin Which of the following combination of antibiotics is the most appropriate one ?**

Question 33Answer

a.Amoxicillin and cefalexin

b.Piperacillin and erythromycin

**c.Piperacillin and cefepime**

d.Amoxicillin and Ceftriaxone

e.Amoxicillin and moxifloxacin

**Which of the following is NOT a common cause of hematuria?**

Question 34Answer

a.Urinary tract infection (UTI)

b.Rapidly progressing glomerulonephritis

c.Renal stone

d.Cancer

**e.HIV nephropathy**

**S.N.E**

**Which antibiotic course is inappropriate for clinical scenario?**

Question 35Answer

a.Acute simple cystitis – trimethoprim for 3 days in otherwise well young women.

b.Acute uncomplicated pyelonephritis – gentamycin + amoxicillin IV initially followed by 7 days of Augmentin orally.

**c.Pregnancy associated cystitis – nitrofurantoin 5 mg QID for 14 days.**

d.Acute simple cystitis in male patients – Augmentin or trimethoprim for 14 days.

e.Dysuria with < 10 3 organisms grown on culture failed to improve on trimethoprim – doxycycline .

**Which of the following is the most common type of renal cell carcinoma?**

**Question 36Answer**

a.Papillary RCC

**b.Clear cell RCC**

c.Chromophobe RCC

d.Collecting duct carcinoma

e.Renal medullary carcinoma

**S.N.E**

**Which renal pathology is associated with anti-GBM antibodies?**

**Question 43Answer**

a.Minimal change disease

**b.Goodpasture syndrome**

c.Lupus nephritis

d.Alport syndrome

e.IgA nephropathy

**Which bladder tumor variant is high-grade, shows nested architecture, and may be mistaken for benign lesions?**

**Question 45Answer**

a.Micropapillary carcinoma

**b.Nested variant urothelial carcinoma**

c.Plasmacytoid carcinoma

d.Squamous cell carcinoma

e.Urothelial papilloma

**S.N.E**

**Urothelial carcinoma in situ is best described as:**

**Question 46Answer**

a.Papillary tumor with fibrovascular cores

**b.Flat lesion with high-grade cytologic atypia**

c.Invasive tumor with desmoplasia

d.Benign proliferation of urothelial cells

e.Squamous metaplasia of the bladder epithelium

**Which of the following is a benign bladder tumor that arises from the muscularis propria?**

**Question 47Answer**

a.Urothelial papilloma

b.Inverted papilloma

**c.Leiomyoma**

d.Squamous papilloma

e.Nephrogenic adenoma

**S.N.E**

**Which renal tumor is strongly associated with sickle cell trait?**

**Question 48Answer**

a.Wilms tumor

b.Chromophobe RCC

**c.Renal medullary carcinoma**

d.Papillary RCC

e.Angiomyolipoma

**Which immunohistochemical marker is most useful in distinguishing urothelial carcinoma from prostate adenocarcinoma?**

**Question 50Answer**

a.CK7

b.CK20

c.GATA3

**d.PSA**

e.PAX8

**S.N.E**

**What is the hallmark histologic finding in chronic pyelonephritis?**

**Question 51Answer**

a.Crescent formation

b.Mesangial expansion

**c.Tubular atrophy with thyroidization**

d.Eosinophilic infiltration

e.Endocapillary hypercellularity

**Which of the following markers is typically positive in clear cell RCC?**

**Question 52Answer**

a.GATA3

b.HMB-45

**c.CD10**

d.CK20

e.Chromogranin

**S.N.E**

**Which immunohistochemical marker is most consistently positive in urothelial carcinoma?**

**Question 55Answer**

a.PSA

**b.GATA3**

c.TTF-1

d.PAX8

e.HMB-45

**The primary site of action of thiazide diuretics in the nephron is**

**Question 56Answer**

a.the proximal tubule

b.the loop of Henle

**c.the distal tubule**

d.the capsule area of glomerular filtration

e.the osmotic urea channel

**S.N.E**

**Which of the following medications would be the likely cause of acute kidney injury in a female patient with a new rash, white blood cells in the urine, a white blood cell count and eosinophilia on urine microscopy?**

**Question 57Answer**

a.Phenytoin

**b.Ketorolac**

c.Heparin

d.Pantoprazole

e.Amoxicillin

**Select the areas of the kidneys where water is reabsorbed.**

**Question 59Answer**

a.glomerulus

**b.proximal convoluted tubule and collecting ducts**

c.distal convoluted tubule

d.uremic channel

e.zona glomerulosa

**S.N.E**

**Diuretics used in hypertension patients with impaired renal function**

**Question 60Answer**

a.Thiazides

**b.Loop-diuretics -**

c.Potassium sparing

d.Beta blockers

e.none of the above

**A 67-year-old man is referred for intermittent chest pain. His medical history is significant for CKD KDIGO category G3a, type 2 diabetes, and hypertension. Medications include enalapril, hydrochlorothiazide, and pioglitazone. Laboratory values include SCr 1.8 mg/dL, glucose 189 mg/dL, Hgb 12 g/dL, and hematocrit (Hct) 36%. His physical examination is normal. The treatment plan is elective cardiac catheterization PCI. Which is best for hydration?**

**Question 61Answer**

a.Lactated Ringer .

**b.0.9% Saline sodium chloride.**

c.5% dextrose/0.45% sodium chloride.

d.Oral hydration with water.

**S.N.E**

**After the administration of radiocontrast, which best represents the optimal time to reevaluate renal function to assess for the development of contrast-associated nephropathy?**

**Question 62Answer**

a.6 hours.

**b.24 hours.**

c.4 days.

d.7 days

**A group of college students is planning a mountain climbing trip to the Andes. Which is most appropriate for them to take to prevent altitude sickness?**

**Question 64Answer**

a.A thiazide diuretic such as hydrochlorothiazide

b.An anticholinergic such as atropine

**c.A carbonic anhydrase inhibitor such as acetazolamide**

d.A loop diuretic such as furosemide

**S.N.E**

**Which medication reduces edema by blocking the reabsorption of sodium in the distal tubules?**

Question 65Answer

a.eplerenone

b.torsemide

c.triamterene

**d.chlorothiazide**

e.Lasix

**There is an increased risk of hyperkalemia when potassium sparing diuretics are co-administered with which of the following?**

**Question 66Answer**

a.thiazides

b.loop diuretics

**c.ACE-inhibitors**

d.A&B

e.none o f the above

**S.N.E**

**regarding the clearance of a substance:**

**Question 68Answer**

a.It equals the amount of substance removed from the plasma as it passes the kidneys per unit of time.

b.It can be used to estimate substance filtration and reabsorption not secretion

c.The clearance of inulin is used to measure GFR and renal plasma flow

**d.The clearance of creatinine can be used to estimate GFR**

e.The clearance of PAH exactly equals renal plasma flow

**Which of the following substances has the lowest renal clearance:**

**Question 69Answer**

**a.Glucose**

b.Urea

c.Inulin

d.Creatinine

e.PAH

**S.N.E**

**Which of the following would cause an increase in both glomerular filtration rate (GFR) and renal plasma flow (RPF)?**

**Question 70Answer**

a.Hyperproteinemia

b.A ureteral stone

c.Dilation of the afferent arteriole

d.Constriction of the efferent arteriole

**e.C and D are correct**

**concerning Antidiuretic hormone:**

**Question 71Answer**

a.Aquaporin 3 and 4 expression is dependent on ADH stimulation.

b.Its effect can result indirectly in net increase in Na excretion.

**c.Stimulation through osmotic changes is more durable than through blood pressure changes.**

d.Volume overload will not cause any further secretion of ADH.

e.All of above are incorrect.

**S.N.E**

**About countercurrent multiplier mechanism, all the following is true EXCEPT:**

**Question 72Answer**

a.It is required for excreting concentrated urine

b.It depends on function of Na/2Cl/K channel in thick ascending limb of the loop of Henle

c.It produces an increase in renal medullary interstitial osmolarity

**d.Function and alignment of vasa recta of renal medulla reduce renal medullary interstitial osmolarity**

e.Its effect is augmented by ADH-mediated urea recycling

**Regarding bicarbonate (HCO3-) reabsorption and handling in the renal tubules, which of the following is FALSE?**

**Question 73Answer**

**a.For each HCO3- ion reabsorption, the tubular cells secrete 2 H+ ions**

b.New bicarbonate production results from excretion of H+ bound to NH4+

c.New bicarbonate production results from excretion of H+ bound to H2PO4-

d.Bicarbonate reabsorption is linked to tubular sodium reabsorption

e.The majority of tubular bicarbonate reabsorption occurs in proximal tubule

**S.N.E**

**The effective renal plasma flow, determined from the clearance of p-aminohippuric acid (PAH), is less than the true renal plasma flow because of which of the following?**

**Question 74Answer**

a.The fraction of PAH filtered is less than the filtration fraction

**b.The plasma entering the renal vein contains a small amount of PAH**

c.The cortical and medullary collecting ducts are able to reabsorb some PAH

d.The calculated clearance of PAH depends on the urinary flow rate

e.The measured value of the plasma PAH concentration is less than the actual PAH concentration

**A 47-year-old female patient, found to have nephrotic syndrome proven by kidney biopsy. Her physical exam is remarkable for generalized edema, manifesting clinically as periorbital puffiness, pleural effusion and bilateral pitting lower extremity edema. The pathophysiology underlying her edema is:**

**Question 76Answer**

a.Increased capillary hydrostatic pressure

b.Increased capillary filtration coefficient

c.Decreased capillary hydrostatic pressure

d.Decreased interstitial colloid osmotic pressure

**e.Decreased capillary colloid osmotic pressure**

**S.N.E**

**A previously well 12-year-old boy is brought to the Emergency Department with vomiting and severe abdominal cramps after a prolonged period of exercise. Elevated levels of serum creatinine and blood urea nitrogen suggest acute renal failure. Following treatment and recovery, his serum uric acid concentration (0.6 mg/dL) remains consistently below normal.To determine if his low serum uric acid level is related to renal dysfunction, uric acid clearance studies are conducted and the following data are obtained: Urine volume = 1 mL/min Urine uric acid = 36 mg/Dl Which of the following is the patient's uric acid clearance?**

**Question 77Answer**

a.6 mL/min

b.12 mL/min

c.24 mL/min

d.48 mL/min

**e.60 mL/min**

**Regarding signals from macula densa which is true:**

**Question 82Answer**

a.Will increase the renal blood flow through efferent arteriole feedback.

b.Will increase the Glomerular hydrostatic pressure through feedback to both afferent and efferent arterioles.

c.Is directly proportional to amount of Na delivered to juxtaglomerular cells.

**d.Will result in angiotensin I release from granular cells**

e.Does not play role in renal autoregulation.

**S.N.E**

**The standard treatment of unilateral renal pelvis tumor with normal contralateral side is:**

**Question 84Answer**

a.Simple nephrectomy.

b.Radical nephrectomy.

c.Nephrourethrectomy.

**d.Nephroureterectomy with excision of the bladder cuff.**

**Urinary Vanillyl mandelic acid is not elevated in:**

**Question 87Answer**

**a.Wilms tumors.**

b.Pheochromocytoma.

c.Neuroblastoma.

d.None of the above

**S.N.E**

**A patient with perinephric abscess may present with:**
**Question 88Answer**

a.High grade fever.

b.Loin pain

c.localized bulge at the renal angle.

**d.All of the above.**

**Which of the following statements regarding JJ ureteric stents is correct?**

**Question 89Answer**

a.Stents increase intrarenal pressures.

**b.Stents lower intrarenal pressure.**

c.Stents are extremely effective at relieving obstruction from extrinsic compression.

d.None of the above.

**The most suitable radiologic test for evaluation of renal function is:**

**Question 93Answer**

a.IVU.

b.MRU.

**c.Isotope renogram.**

d.Ultrasonography.

**S.N.E**

**All of the following are incontinent urinary diversions, except:**

**Question 95Answer**

a.Colon conduit.

b.Ileal loop conduit.

**c.Ileal W-neobladder.**

d.Cutaneous vesicostomy

**The stage of chronic kidney disease has a patient with an estimated GFR of 26ml/min/1.73m2 is:**

**Question 96Answer**

a.Stage 1.

b.Stage 2.

c.Stage 3.

**d.Stage 4.**

**The first aid management of posterior urethral injury is:**

**Question 97Answer**

a.Immediate fixation of urethral catheter tube.

**b.Suprapubic diversion using suprapubic tube.**

c.Immediate perineal exploration and repair of urethral injury.

d.None of the above..

**S.N.E**

**Elevation of PSA level may be observed in all of the following except:**

**Question 98Answer**

a.Prostatic adenocarcinoma.

b.Tuberculous prostatitis.

c.After prostatic biopsy.

**d.Cystitis.**

**Allograft is defined as:**

**Question 99Answer**

a.Transplantation of own tissue.

b.Transplantation among genetically identical persons.

**c.Transplantation among genetically nonidentical of the same species.**

d.Transplantation among different species

**The most common type of hypospadias is:**

**Question 100Answer**

**a.Anterior hypospadias.**

b.Middle hypospadias.

c.Posterior penile hypospadias.

d.Penoscrotal hypospadias

**S.N.E**

**Which renal pathology shows segmental sclerosis and hyalinosis on light microscopy, with negative immunofluorescence?**

**سؤال 47الإجابة**

a.Minimal change disease

b.Membranous nephropathy

**c.Focal segmental glomerulosclerosis (FSGS)**

d.Post-streptococcal GN

e.Amyloidosis

تم بحمدالله دعواتكم لنا بالفرج
2025-5-16 الرحمة لجميع شهدائنا ...