

Positive stranded RNA in viruses acts as which of the following?

Viral RNA

DNA-dependent RNA

RNA

Messenger RNA

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Which of the following is the best laboratory test for neonatal primary hypothyroidism?

Free T3

Free T4

Thyroid Binding Globulin

Thyroid Stimulating Hormone

The prolactin hormone functions to stimulate which of the following?

Saliva secretion

Mucous secretion

Milk secretion

Sweat secretion

How many pressing points of an automated pipette can be used to release the sample from the pipette?

One

Two

Three

Four

Which of the following is post-analytical error?

- Improper preparation of the patient
- Calibrators
- Pipetting
- Interpretation of the data

Which of the following reagent is used to perform oxidase test?

- Tetramethyl para-phenylene diamine-dihydrochloride
- Alpha naphthylamine
- Potassium hydroxide (KOH)
- Para di-methyl amino benz-aldehyde

What is the difference between plasma and serum?

- Fibrinogen
- Transferrin
- Turbid colour
- Ceruloplasmin

What is the specific stain for DNA zone in electrophoresis?

Ponceau S

Amido black

Ethidium bromide

Coomassie brilliant blue

A 25 year-old patient has O blood group, and a request for two units packed RBCs has been received.

Which blood group should be used in the cross match?

A

A or B

O

Which of the following processes uses viral envelope glycoproteins?

Penetration

Assembly

Attachment

Adsorption

ABO typing on patient indicates a subgroup of the A blood group.
Which reagent should be used to resolve an A subgroup?

Anti-A

Anti-A1

Anti-B

Anti-D

Which of following is an example of selective media?

Nutrient agar

Nutrient broth

Blood agar

XLD agar
Xylose Lysin Desoxycholate

Which of the following organism produces "mycelium"?

Parasite

Filamentous fungi

Viruses

Bacteria

Which of the following fungi can be stained by gram staining?

Candida albicans

Aspergillus fumigatus

Trichophyton rubrum

Penicillium species

What is the ligand of Apo B-100?

- Chylomicron remnant in liver
- LDL receptor in liver
- HDL receptor
- IDLP receptor

Which of the following is the most convenient time for cortisol blood sampling?

At 8 am and 10 pm

At 8 am and 4 pm

At 8 am and 8 pm

At 2 am and 4 pm

Which of the following organism is responsible for cutaneous mycoses?

- Trichophyton rubrum
- Histoplasma capsulatum
- Malassezia furfur
- Cryptococcus neoformans

Some patients platelets clump in EDTA, or satellite, making platelet counts falsely low.
How should this be corrected?

- Mix the sample
- Warm the sample
- Do manual count
- Use sodium citrate tube

What is the high specific diagnostic test for ANA?

- RIBA
- Immunofluorescence
- Reverse passive agglutination
- Agglutination inhibition reaction

Which of the following is included in the functions of neutrophils?

- Granule Circulation
- Antibodies reaction
- Diapedesis is for chemotaxis
- Immunoglobulin production

While cross-matching ABO blood types, what test is used to determine when cells are coated with antibodies?

- Direct coombs test
- Indirect coombs test
- Positive heterophile test
- Anti-human IgG antibody test

Which of amino acid produces vasodilator on decarboxylation?

Glutamic acid

Histadine

Ornithine

Cyatine

Which of the following a gonadotropic hormone?

LH

ACTH

TSH

Prolactin

What does a quality control sample check out?

- Standard
- Reproducibility
- Sample blank
- Reagent blank

In a sandwich reaction with an ELISA, which of the following is attached to solid phase?

Patient Ag

Patient Ab

Specific Ag

Specific Ab

Which of the following viruses is classified as a paramyxovirus?

 Mumps

H5N1

Rhino

Influnza C

Which of the following is the standard cycle of autoclaving?

- 20 Lb pressure, 100 C temperature for 10 minutes
- 15 Lb pressure, 121 C temperature for 15 minutes
- 10 Lb pressure, 130 C temperature for 15 minutes
- 5 Lb pressure, 140 C temperature for 30 minutes

Which of the following physical hazard is associated with ethanol?

Explosive

Flammable

Water reactive

Oxidizer

Which of the following organisms produce macroconidia and microconidia?

Bacteria

Viruses

Yeasts

Filamentous fungi

What is the appropriate diagnostic test for HCV?

Agglutination inhibition reaction

Revere passive agglutination

Immunofluorescence

RIBA

Calculate the MCHC given this data?

RBC $4.63 \times 10^{12}/L$

hemoglobin 15 g/dl

Hct 45 %

- 30
- 33
- 35
- 37

Which of the following is pre-analytical error?

- Improper preparation of the patient
- Calibrators
- Picting
- Interpretation of the data

What phase does quality control assess?

- Analytical
- Post analytical
- Pre analytical
- Extra-analytical

Before taking blood from a donor, the phlebotomist routinely inspects blood bag.

What is the most important item to be inspected?

- Defects
- Expiry date
- Capacity
- Anticoagulant

Which of the following is the first viral marker detected after hepatitis B infection?

HBeAg

HBsAg

HBcAg

Anti-HBc

A patient with a deep subcutaneous tissue was admitted and diagnosed with necrotizing fasciitis
(see lab.results).

Test	Results
Organism	Gram +ve cocci
Haemolysis	Beta
Catalase	-ve

Which is the most likely organism?

- Streptococcus pneumoniae
- Staphylococcus lugdunensis
- Streptococcus pyogenes
- Viridans Streptococcus

Which of the following is used to grow virus in the laboratory?

Nutrient agar

Blood agar

Nutrient broth

Tissue culture

Which is the most likely stain used to identify for malaria parasitis?

Gram

Iodine

Giemsa

Leishmans

Which of the following should be collected for a CBC analysis?

RBCs

Serum

Plasma

Whole blood

Which of the following is true for vibrios and Pseudomonas?

- They are gram positive
- They are non-motile
- They are oxidase negative
- They are non-lactose fermenters

Transmission of which of the following could cause *Schistosoma haematobium* infection?

- Ingestion of oocyst
- Ingestion of embryonated egg
- Penetration of the skin by cercaria
- Penetration of the skin by cysticercus

Carbon dioxide is required for primary isolation of which organism?

Escherichia

Streptococcus pneumoniae

Pseudomonas aeruginosa

Enterococcus faecalis

Which of the following blood sample is required for glucose estimation in an emergency situation?

Four sample after every half and hour

Postprandial (2hours)

Fasting (8 hours)

Random

Which of the following sample will be rejected from the laboratory?

Grossly cleared

Labeled as dangerous

Insufficient in quantity

Patient identification labels

Which of the following fraction of bilirubin is water soluble and reacts with diazo reagent without adding an accelerator?

Unconjugated

Conjugated

Total

Indirect

Which of the following organisms appear in Gram stained film as chains?

Gonococci

Streptococci

Staphylococci

Meningococci

A patient is experiencing glucosuria (glucose in urine).
An excess of which hormone could be the cause?

- Glucagone
- Calcitonin
- Somatostatin
- Antidiuretic hormones

Which of the following is the correct sequence to be followed when preparing a donors arm for blood collection?

- Select vein, apply tourniquet, clean with PVP-iodine, venipuncture
- Select vein, apply tourniquet,, venipuncture, clean with PVP-iodine
- Select vein, clean with PVP-iodine , apply tourniquet,, venipuncture,
- Select vein, venipuncture, clean with PVP-iodine , apply tourniquet,,

Which of the following health hazard is associated with ethylene oxide?

- Irritant
- Carcinogen
- Nephrotoxin
- Hepatotoxin

Which of the immunoglobulin is found in very few amounts in serum?

IgM

IgD

IgG

IgA

What could be diagnosed by determining the PTH levels?

1

Parathyroid Hormone

- Hypercalcemia
- Hyperglycemia
- Hyperlipidemia
- Hyperkalemia

Which of the following specimens is used for viral diagnosis of respiratory tract infection?

Conjunctival swab

Cerebrospinal fluid

Stool sample

Nasal swab

Which of the following are the chocolate agar containing vancomycin, colistin, nystatin and trimethoprim?

EMP agar

Skirrows media

Thayer-Martin agar

Columbia PNBA agar

Which of the following blood collecting tubes could be used for serological test?

- Plain tube
- EDTA tube
- Sodium citrate tube
- Lithium heparin tube

Which is the following organ synthesized and secreted high density lipoproteins?

Pancreas

Kidney

Muscle

Liver

Which of the following techniques is commonly used for hormonal estimations?

Microscopy

Electrophoresis

Flamphotometry

immune diffusion

What does a urine collection container include?



Acid

EDTA

Heparin

Sodium fluoride

Which of the following parasites is a significant intestinal protozoa to human health?

Entamoeba histolytica

Ascaris lumbricoides

Fasciola hepatica

Taenia saginata

A blood donor comes to the blood Donation Center.He says he wishes to donate blood.An examination of both arms there were skin lesions

What is the next step to be taken?

- Deferral donor
- Collect blood from donor
- Ask donor to return from donation after 2 weeks
- Send donor to blood bank physician for evaluation

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Which of the following gel separates large DNA fragments?

- ✓ Agarose
- Cellulose acetate soium
- Denaturing polyacrylamide
- Dodecyl sulfate-polyacrylamide

Which of the following statements best describes "B-haemolysis on sheep blood agar"?

- Partial clearing around colonies
- No clearing around colonies
- Complete clearance around colonies
- Brown colour around colonies

Which anticoagulant is used for complete blood count analysis?

✓ Ethylenediaminetetraacetic acid

Lithium iodoacetate

Lithium heparin

Sodium fluoride

A request for ABO typing has been received; a blood Bank technician has started the procedure of forward grouping by labeling the test tubes.

Which of the following is the correct sequence to be followed before reading the result?

- Add cells, add antisera, spin and mix
- Add plasma, add cells, spin and mix
- Add Serum, add antisera, spin and mix
- Add antisera, add cells, spin and mix

What is the most common method of automated immunoassay?

- Nephelometry
- Atomic absorption
- Spectrophotometer
- Chemiluminescence

When blood clot forms inappropriately inside a blood vessel, what is that process called?

Hemostasis

Thrombosis

Hematopoiesis

Blood coagulation

A 30 year-old male comes to blood Donation center, the donor was fit for donation and 500 ml of blood is collected. this unit of blood was unsuitable for platelets transfusions.

What is the most likely cause?

- Platelets unit was not irradiated
- The draw time was longer than the 20 minutes.
- Platelets prepared 5 hours after collecting time
- Platelets was not prepared by plateletapheresis

Which reagent is used in the oxidase test?

- Hydrogen peroxide
- Acetyl methyl carbinol
- Para-dimethylaminobenzaldehyde
- Tetramethyle-p-phenylenediamine

Examination of sample from which of the following is best done for the diagnosis of Nesseria gonorrhoea in afemal patient?

Vaginal discharge

Cervix

Blood

Urine

Which of the following is falsely increased when clenching the fist prior to vein puncture?

Sodium

chloride

Potassium

Ionized calcium

In a positive anti-streptolysin O test, which of the following results can be confirmed?

Agglutination

NO Agglutination

Haemolysis

No Haemolysis

What is the colour of the label sample of hepatitis C patient?

 Red

Green

Yellow

Orange

A 45 year-old male comes to blood Donation Center.His past medical history confirmed that he previously had been infected with hepatitis B surface antigen

How long is deferral period?

Two weeks

One month

Three years

Permanent

Which part of the virus is detected by PCR

- Antigen
- Viral particles
- DNA
- Envelope

The technician left the tourniquet on for more than the recommended time period.
Which of the following will be falsely increased in the blood sample?

- Sodium
- Glucose
- Protein
- Triglycerides

A 30 year-old femal come to the Emergency department with tiredness, headache, and weakness.A blood sample was taken from the arm with an IV infusion.
What is the main cause for low results?

- Unmixed sample
- Clotted sample
- Diluted sample
- Old sample

Which of the following sampling error can result in a falsely elevated potassium level?

- Hemolysis
- Timing error
- Contamination
- Interfering substance

What are the maximum numbers of hours that can be used to leave blood samples on the bench before centrifugation?

2

6

12

24

Which of the following enzymes is stable with refrigerated at 4c for 24 hours?

✓ Aspartate Aminotransferase

Superoxide dismutase

Creatine kinase

Valtase

What does an indirect ELISA technique detect?

- Antibodies to virus and parasites
- Antigens as protein and drugs
- Epitopes
- Label

What of the following is found in the syndrome of inappropriate antidiuretic hormone?

Hyponatremia

Hypovolemia

Hypoproteinemia

Hyperglycemia

In a precipitation curve, which of the following exist in the protozone?

✓ Ab excess

Ag excess

Insoluble Ab

Equal amounts Ag and Ab.

Which of the following analytes is separated with thin layer chromatography?

Electrolytes

Hormones

Non-volatile mixtures

Protein nitrogenous compound

Which is the compound of choice for fixation of blood films for hematological examination?

Acetone

Propanol

Methanol

Acid - alcohol

What could be used to determine the osmolality of serum and urine?

Osmometry

Nephelometry

Turbidometry

Chemiluminescence

The word "decontamination" is used with which of the following?

- ✔ Disinfection of removal of aliving organism
- Reduction of Gram-negative bacteria
- Increased Gram-negative bacteria
- Damage of spores and capsules

A patient attending Emergency Department was diagnosed with a urinary tract infection (see lab results.)

Urine analysis

Test	Result
Gram Stain	Gram -ve rods
Glucose	Fermented
Nitrates	Reduced to Nitrites
Oxidase	Negative

What is the most likely organism?

- Escherichia coli
- Proteus vulgaris
- Neisseria gonorrhoeae
- Pseudomonas aeruginosa

For inoculation or plating of bacteria on an agar plate, which of the following should be used?

A loop with handle

A hand finger

A pencil

A pen

Which of the following is resistant to penicillin?

- Cyanobacteria
- Mycoplasmas
- Spirochaetes
- Vibrios

A positive direct coombs test may be caused by which of the following ?

- Marked reticulocytosis
- Intravascular hemolysis
- Congestive heart failure
- An autoantibody on the red cells surface

ABO type on a patient gave the following reactions

Anti-A	Anti-B	Anti-AB	A1 cells
B cells			
4+	Negative	4+	1+
4+			

- A1
- A2
- Am
- Ax

Which of the following are Gram-negative motile rods that are characterized by gray, spreading film of growth on agar plates?

✓ *Proteus vulgaris*

Enterococcus faecalis

E. coli

Bacillus anthracis

Which of the following indicates standard PCR steps?

Denaturation, annealing and ligation

Denaturation, annealing

Annealing and ligation

Denaturation, annealing and extension

The sickle test depends on which of the following?

- RBC count
- Solubility of HB S
- Reticulocyte count
- Hb concentration of the patient

In a complement fixation test, incubation of a patient sera for 30 minutes is allowed to lyse complement of the patient sera.

What is the temperature required in degree centigrade for the incubation?

46

56

66

76

What should be the first measure an individual should take after swallowing an acid or alkali?

- Immediately rinse the mouth well with water and neutralize with a suitable chemical
- Put the acid or alkali away from the patient
- Transfer the patient to another area
- Calm the patient down

Which of the following statements best describes fungi?

- Has one chromosome
- Reproduce by binary fission
- Cell wall made of peptedoglycan
- Have 80S ribosomes

Which of the following techniques is commonly used for hormonal estimations?

Microscopy

Electrophoresis

Flamphotometry

Immune diffusion

What is the streptolysin O?

Pili

Flagella

Endotoxin

Exotoxin

Which of the following phase is the most problematic in a laboratory test?

- Analytical
- Pr-analytical
- Post-analytical
- Extra-analytical

In which sample the *Balantidium coli* parasite could be found?

Urine

Stool

Blood

Sputum