TSPSC Lab Technician Practice Questions

1. Glassware used to measure 24-hour urine volumes is a:
2. volumetric flask
3. beaker
4. Erlenmeyer cylinder
5. graduated cylinder
6. safety bulb

Answer: d) graduated cylinder

2. Glassware used to make 100 ml of a 12% solution is a:
3. volumetric flask
4. beaker
5. Erlenmeyer cylinder
6. graduated cylinder
7. safety bulb

Answer: a) volumetric flash

3. A suction device used to draw up liquids is a:
4. volumetric flask
5. beaker
6. Erlenmeyer cylinder
7. graduated cylinder
8. safety bulb

Answer: e) safety bulb

4. The pipette with a bulged-out portion in the middle is a:
5. Mohr pipette
6. pasture pipette
7. serological pipette
8. volumetric pipette
9. micro-pipette

Answer: d) volumetric pipette

5. Which piece of glassware would not give critical measurement:
6. volumetric flask
7. beaker
8. Erlenmeyer cylinder
9. graduated cylinder
10. safety bulb

Answer: b) beaker

6. The durable material used to make heat resistant glassware is:
7. polyethylene
8. soda lime
9. polystyrene
10. borosilicate
11. polyvinyl chloride

Answer: d) borosilicate

7. Solid crystals of potassium oxalate are added to distilled water in a container. What term would describe the potassium oxalate?
8. solution
9. solvent
10. solute
11. reagent
12. a & c

Answer: c) solute

8. The destruction of all micro-organisms including spores is called:
9. sanitation
10. antisepsis
11. sterilization
12. disinfection
13. asepsis

Answer: c) sterilization

9. A ug is a unit to describe:
10. time
11. volume
12. distance
13. weight
14. length

Answer: d) weight

10. A pH of 2 is _____ than a pH of 5:
11. 1000 times more acidic
12. 100 times more acidic
13. 2 times less acidic
14. 20 times less acidic
15. 1000 times more acidic

Answer: e) 1000 times more acidic

11. Cells in a hypertonic solution will:
12. swell and burst
13. dehydrate
14. hemolyze
15. not be affected
16. stop mitosis

Answer: b) dehydrate

12. The solution used to fix a pap smear is:
13. wright stain
14. hematoxylin
15. physiological saline
16. cytospray
17. methylene blue

Answer: d) cytospray

13. Blood for an RBC count must be prepared from:
14. EDTA blood
15. citrated blood
16. heparinized blood
17. oxalated blood
18. clotted blood

Answer: a) EDTA blood

14. Which reagent is not routinely used to preserve tissue in a life-like manner:
15. formic acid
16. Zenker's fluid
17. 40% formaldehyde dissolved in water
18. Bouin's fluid
19. 10% formalin

Answer: a) formic acid

15. Which piece of histology equipment is not temperature dependent:
16. wax
17. tissue processor
18. microtome
19. embedding center
20. water bath

Answer: c) microtome

16. A biopsy is:
17. a removal of biological fluid
18. the removal of an organ
19. a post mortem examination
20. excision of a representative tissue sample
21. a collection of blood

Answer: d) excision of a representative tissue sample

17. During tissue processing, what is the correct sequence of steps:
18. clearing, dehydration, infiltration

19. clearing, infiltration, dehydration
20. dehydration, infiltration, clearing
21. dehydration, clearing, infiltration
22. embedding, sectioning, staining

Answer: d, dehydration, clearing, infiltration

18. Fixation is important in tissue processing because it:
19. prevents cell morphology changes and shrinkage
20. allows tissue to be examined in a life-like condition
21. facilitates the staining process
22. a & c
23. a, b, & c

Answer: e) a, b, & c

19. The liquid portion of blood remaining after a clot has formed is called:
20. the buffy coat
21. serum
22. plasma
23. lymph
24. tissue fluid

Answer: b) serum

20. Which test could not be performed on a serum sample:
21. iron
22. vitamin B12
23. total lipids
24. clotting factors
25. potassium

Answer: d) clotting factors

21. The shape of a normal erythrocyte is described as:
22. biconcave disc
23. spherocyte
24. polymorphonucleocyte

25. thin column
26. bull’s eye

Answer: a) biconcave disk

22. Glucose results are correctly reported in:
23. g/mmol
24. mmol/L
25. g/L
26. g/ml
27. g/dl

Answer: b) mmol/L

23. If a patient refuses to have a venipuncture done you should:
24. tear up the requisition
25. collect a urine sample
26. politely ask a patient to come back next week
27. restrain the patient and proceed with the venipuncture
28. notify the patient’s physician

Answer: e) notify the patients physician

24. Which statement is false when performing a venipuncture:
25. the vein is entered at a 15-20 degree angle
26. the tubes are pushed onto the needle with the thumb of the strongest hand
27. the bevel of the needle is pointed up when entering the vein
28. the tourniquet is removed before withdrawing the needle
29. the patients arm is cleansed before palpating the vein

Answer: e) the patient’s arm is cleansed before palpating the vein

25. A biohazardous container is used to discard:
26. lancets
27. needled
28. band-aid wrappers
29. a & b
30. a, b & c

Answer: d) a & b

26. Which needle gauge corresponds with the smallest needle size:
27. 18
28. 20
29. 21
30. 22
31. 23

Answer: e) 23

27. The vacutainer tube which is used to collect and separate serum is the:
28. red
29. green
30. lavender
31. light blue
32. SST

Answer: e) SST

28. If a lavender top, plain red top, grey top, and light blue top tubes are collected, what is the order of draw:
29. they can be collected in any order
30. plain red top, lavender, blue, grey
31. blue, plain red top, grey, lavender
32. grey, blue, lavender, plain red top
33. plain red top, light blue, lavender, grey

Answer: e) plain red top, light blue, lavender, grey

29. The tourniquet is:
30. applied very tightly to the arm
31. used to increase venous fill
32. applied about 6-8″ above the elbow
33. tied in a knot to keep it on securely
34. released after the needle is withdrawn

Answer: b) used to increase venous fill

30. If a patient faints during a venipuncture, you should:
31. call the physician at once
32. remove the needle and attend to the patient
33. yell loudly at the patient to keep him conscious
34. continue the procedure until all blood is collected
35. start artificial respiration immediately

Answer: b) remove the needle and attend to the patient

31. What vein/veins is not used to obtain a venous blood sample:
32. basilica vein
33. cephalic vein
34. medial cubital vein
35. femoral vein
36. veins on the back of the hand

Answer: d) femoral vein

32. A blood specimen collected in a heparinized tube is centrifuged. It will separate into:
33. serum and clot
34. plasma and clot
35. serum and plasma
36. plasma, buffy coat, RBC

Answer: d) plasma, buffy coat, RBC

33. Hemolysis may result from:
34. using a 25-gauge needle on an adult
35. vigorously shaking the blood specimen
36. refrigerating the vacutainer before use
37. leaving the tourniquet on for 3 minutes
38. all of the above

Answer: e) all of the above

34. The test procedure that uses a Westergren tube is:

35. erythrocyte sedimentation rate
36. hematocrit
37. reticulocyte count
38. microhematocrit
39. differential

Answer: a) erythrocyte sedimentation rate

35. Latex gloves protect the lab employee from:
36. accidental needle puncture
37. microtome injury
38. patient aerosols
39. body fluid
40. all of the above

Answer: d) body fluids

36. Which statement is false when setting up an ESR:
37. it must be read in exactly one hour
38. it should be set up near a centrifuge
39. the blood level must be at exactly zero
40. it should be performed on fresh blood
41. it must be set up in a vertical position

Answer: b) it should be set up near a centrifuge

37. What is the normal temperature of a laboratory refrigerator:
38. -4 C
39. 0 C
40. 3 C
    20 C
    e.37 C

Answer: c) 3 C

38. The purpose of doing a differential is to:
39. determine the proportion of RBC in whole blood
40. count the number of WBC’s in whole blood

41. determine the proportions of WBC's in whole blood
42. c & e
43. diagnose anemia

Answer: c) determine the proportions of WBC's in whole blood

39. Blood samples for cell counts must be thoroughly mixed immediately before testing to:
40. prevent the clumping of platelets
41. prevent the formation of small clots
42. oxygenate the sample
43. ensure even distribution of all blood components
44. mix anticoagulant with the blood

Answer: d) ensure even distribution of all blood components

40. An automated hematology cell count uses the principle of:
41. diffusion
42. color absorption changes
43. high frequency sound waves
44. changes in cell electrical currents
45. light wave scattering

Answer: d) changes in cell electrical currents

41. The maximum depth to perform a heel puncture on a newborn is:
42. 5mm
43. 0mm
44. 4mm
45. 8mm
46. 0mm

Answer: c) 2.4mm

42. The first drop of blood is wiped away after performing a skin puncture to:
43. remove any pathogens that are present
44. increase blood flow to the area
45. remove the last traces of alcohol
46. remove any excess tissue fluid

47. c & d

Answer: e) c & d

43. What areas on an infant are suitable for skin puncture:
44. any calloused areas of the foot
45. the second or third finger on either hand
46. the posterior curvature of the heel
47. the lateral, flat portion of the heel

Answer: d) the lateral, flat portion of the heel

44. What laboratory department studies antigen-antibody reaction:
45. hematology
46. microbiology
47. immunology
48. chemistry
49. coagulation

Answer: c) immunology

45. what tube would be drawn for ANA:
46. red
47. grey
48. SST
49. green
50. light blue

Answer: c) SST

46. A disinfectant used on metal surface is:
47. 10% formalin
48. 2% glutaraldehyde
49. 1% hypochlorite
50. 70% isopropyl alcohol
51. 15% iodine

Answer: b) 2% glutaraldehyde

47. What tube would be collected for a cross-match:
48. lavender
49. light blue
50. green
51. grey
52. plain red top

Answer: e) plain red top

48. Separated serum that is dark yellow to amber in color is termed:
49. crenated
50. lipemic
51. jaundiced
52. icteric
53. hemolyzed

Answer: d) icteric

49. Which factor would interfere with the growth of a pathogen:
50. appropriate nutrients
51. darkness
52. a moist environment
53. an acidic pH
54. a temperature of 37 C

Answer: d) an acidic pH

50. A specimen is:
51. material spread on a slide
52. an amount of blood or urine
53. a small sample taken to represent the whole organism or system
54. a colony of micro-organisms growing on solid medium
55. a technique used to microscopically examine urine

Answer: c) a small sample taken to represent the whole organism or system

51. The purpose of heat fixing a bacterial smear is to:
52. prevent cells from being washed off during staining
53. causes the cells to absorb the stain more easily
54. provide a warm temperature for the bacteria to grow
55. make the cells visible under the microscope
56. destroy the bacterial cell wall

Answer: a) prevent cells from being washed off during staining

52. The site of a specimen must be written on a swab container:
53. to warn staff about a possible pathogen
54. only if time permits-it is always on the requisition
55. to determine suitable agar and atmospheric requirements
56. to determine the o.h.i.p. fee
57. a, b, c, d and e

Answer: c) to determine selection of suitable agar and atmospheric requirements

53. Identify the correct sequence of steps on the gram stain procedure:
54. primary stain, secondary stain, mordant, decolorizing
55. mordant, primary stain, decolorizing, counterstain
56. counterstain, mordant, primary stain, decolorizing
57. primary stain, mordant, decolorizing, counterstain
58. none of the above

Answer: d) primary stain, mordant, decolorizing, counterstain

54. How should commercially prepared culture plates be stored:
55. in the freezer until several hours before use
56. inverted to prevent condensation dripping on the media
57. at room temperature in a dark area of the lab
58. at a temperature of 2*C – 4*C
59. b & d

Answer: e) b & d

55. Which Gram stain reagent acts as a mordant to bind the stain to the bacteria:
56. Lugol’s iodine

57. safranin
58. acetone-alcohol
59. Gram's iodine
60. crystal violet

Answer: d) Gram's iodine

56. Identify the false statement regarding blood culture collection:
57. the site is cleaned with betadine and alcohol
58. an arterial sample is collected
59. an aerobic specimen is required
60. blood culture tubes are always drawn first
61. the specimens are never refrigerated

Answer: b) an arterial sample is collected

57. Susceptibility testing:
58. measures how fast a micro-organism can be destroyed
59. identifies the types of micro-organisms in the specimen
60. determines growth requirements of organisms
61. produces a pure culture
62. identifies the appropriate antibiotic needed to kill the micro-organism

Answer: e) identifies the appropriate antibiotic needed to kill the micro-organism

58. Identify the false statement when a specimen is cultured:
59. the equipment required is a loop and a direct flame
60. the media is brought to room temperature before use
61. the media selected is dependent on the type of specimen
62. the loop is sterilized prior to inoculation
63. the petri lid is placed upright to the bench to prevent contamination

Answer: e) the petri lid is placed upright to the bench to prevent contamination

59. Which statement is false when a Gram stain is performed:
60. distilled water is used for the washing steps
61. acetone-alcohol decolorizes gram-negative bacteria
62. safranin stains the gram-negative bacteria red

63. Gram's iodine is used to bind the primary stain
64. crystal violet stains the gram-positive bacteria purple

Answer: a) distilled water is used for the washing steps

60. Which is most commonly used for protection when processing swabs, body fluid or blood:
61. fume hood
62. class l laminar flow hood
63. class ll laminar flow hood
64. class lll laminar flow hood
65. glove box

Answer: c) class ll laminar flow hood

61. You are collecting a blood glucose level. The patient asks if you think he has diabetes. You would tell him:
62. this is a possibility, but you are not positive
63. you are unable to give him any information
64. to discuss this with the doctor as he can answer the question
65. you have been instructed not to give out any information, therefore you can't discuss it
66. to read a prepared pamphlet and make his own decision

Answer: c) to discuss this with the doctor as he can answer this question

62. The autoclave is set at _____ for small loads:
63. 121*C for 50min at 6 p.s.i.
64. 130*C for 30min at 30 p.s.i.
65. 121*C for 15min at 15 p.s.i.
66. 121*C for 45min at 15 p.s.i.
67. 154*C for 20min at 20 p.s.i.

Answer: c) 121*C for 15min at 15 p.s.i.

63. The universally accepted disinfectant for the medical workplace is:
64. 2% glutaraldehyde
65. 1% hypochlorite
66. 10% formalin

67. 70% isopropyl alcohol
68. 5% iodine

Answer: b) 1% hypochlorite

64. A patient's health card # consists of ___ digits:
65. 4
66. 6
67. 8
68. 10
69. 12

Answer: d)10

65. A 1/6 dilution of serum in water was made. The glucose result was 4.0 mmol/L. What is the reported result:
66. 66 mmol/L
67. 0 mmol/L
68. 0 mmol/L
69. 0 mmol/L
70. 0 mmol/L

Answer: c) 24.0 mmol/L

66. 100ml of 20% hydrochloric acid will make how many mls of 4% hydrochloric acid:
67. 50ml
68. 80ml
69. 100ml
70. 500ml
71. 1000ml

Answer: d) 500ml

67. How many grams of NaCl are needed to make 300ml of a 2% solution:
68. 2 grams
69. 4 grams
70. 6 grams
71. 20 grams

72. unable to determine with information

Answer: c) 6 grams

68. Approximately how many centimeters are in one foot:
69. 3
70. 12
71. 24
72. 30
73. 100

Answer: d) 30

69. Two standard deviations from the mean includes:
70. 5% of all values
71. 34% of all values
72. 50% of all values
73. 68% of all values
74. 95% of all values

Answer: e) 95% of all values

70. When performing a venipuncture, bright red blood spurts into the tube. This means:
71. an arterial puncture
72. high hemoglobin
73. high hematocrit
74. high blood pressure
75. high blood pH

Answer: a) an arterial puncture

71. A patient has hepatitis, which test(s) will be increased:
72. ALT
73. AST
74. alkaline phosphates
75. bilirubin
76. all of the above

Answer: e) all of the above

72. Acid phosphates is an enzyme which increases in:
73. gout
74. kidney disease
75. liver disease
76. prostatic cancer
77. heart disease

Answer: d) prostatic cancer

73. Which enzyme(s) would be increased in a patient with acute myocardial infarction:
74. Acid phosphatase
75. Creatine kinase
76. Aspartate aminotransferase
77. b & c
78. all of the above

Answer: d) b & c

74. Xylene is used in:
75. fixation of autopsy material
76. dehydration of tissues
77. paraffin wax embedding process
78. attaching cover slips to slides
79. histology as a clearing agent

Answer: e) histology as a clearing agent

75. A 2 hr. p.c. glucose:
76. is collected 2 hours after eating a meal high in carbohydrates
77. is a valuable screening test for diabetes mellitus
78. measures glucose when it is at its highest level after a meal
79. is not affected by medication
80. a & b

Answer: e) a & b

76. A routine GTT:
77. is three hours long
78. requires five blood samples
79. includes 6 urine samples
80. uses 100 grams of glucose in a 300ml solution
81. uses 50 grams of glucose in a 500ml solution

Answer: b) requires five blood samples

77. Glycosylated hemoglobin:
78. causes sickle cell anemia
79. is affected by the patient's food intake on the day of testing
80. is drawn on a green top tube
81. indicates blood glucose levels from preceding months
82. requires an SST tube

Answer: d) indicates blood glucose levels from preceding months

78. Serum is acidified after separation for which test:
79. uric acid
80. Frederickson typing
81. acid phosphate
82. BUN
83. creatine

Answer: c) acid phosphate

79. WHMIS stands for:
80. worker harmful material information sheets
81. worker handbook on mechanical and industrial safety
82. workplace hazardous materials information system
83. workplace harmful methods and industrial security
84. none of the above

Answer: c) workplace hazardous materials information system

80. MSDS sheets do not contain:
81. product identifier and use
82. hazardous ingredients
83. first aid measures
84. preventative measures
85. hazard symbols

Answer: e) hazard symbols

81. When using acid and water:
82. acid is slowly added to water
83. water is slowly added to acid
84. water and acid are added together
85. it makes no difference how they are added
86. they are never mixed as heat is produced

Answer: a) acid is slowly added to water

82. Insidious hazards:
83. include substances which react violently with each other
84. include aerosols, carcinogens, mutagens, and radiation
85. are substances which injury by direct chemical action
86. are graded using TLV and TLV-S.T.E.L. values
87. are always chemical in nature

Answer: b) include aerosols, carcinogens, mutagens, and radiation

83. Which test would not be performed on plasma or serum:
84. lipoprotein electrophoresis
85. iron
86. BUN
87. hemoglobin electrophoresis
88. electrolyte profile

Answer: d) hemoglobin electrophoresis

84. The function unit of the kidney is the:
85. renal cell

86. renal cortex
87. renal tubule
88. bladder
89. nephron

Answer: e) nephron

85. Pus cells or fat in urine would cause this color:
86. red
87. yellow-brown
88. greenish-blue
89. milky-white
90. black

Answer: d) milky-white

86. The end products of protein digestion are:
87. glycerol
88. fatty acid
89. triglycerides
90. monosaccharides
91. amino acids

Answer: e) amino acids

87. Which statement is true regarding the use of reagent dipsticks:
88. heat and moisture do not affect the reagent reactivity
89. timing of each reagent area is not necessary
90. reagent sticks are held vertically when reading
91. all reagent sticks tests do specific gravity
92. reagent strips should be tested daily with control

Answer: e) reagent strips should be tested daily with control

88. A 1/8 dilution of urine is:
89. 1-part water and 8 parts urine
90. 1-part urine and 8 parts water
91. 1-part urine and 7 parts water

92. 1-part water and 7 parts urine
93. 1-part water and 9 parts urine

Answer: c) 1-part urine and 7 parts water

89. Before performing an R & M on a specimen, the urine would be;
90. filtered
91. brought to room temperature
92. centrifuged
93. well-mixed
94. b & d

Answer: e) b & d

90. A backup test(s) to confirm a positive protein in urine would be:
91. ictotest
92. SSA test
93. Clinitest
94. TCA test
95. b & d

Answer: e) b & d

91. Which test result would increase in a urine specimen sitting at room temperature for 3 hours:
92. bilirubin
93. nitrite
94. leukocyte
95. urobilinogen
96. ketones

Answer: b) nitrite

92. Water free of charged particles is:
93. distilled
94. radioactive
95. chlorinated
96. de-ionized

97. heavy

Answer: d) de-ionized

93. Identify the incorrect step when using a serological pipette:
94. the pipette tip is below the liquid surface when filling
95. releasing the safety bulb will draw liquid into the pipette
96. it delivers total capacity or multiple volumes
97. it is held vertically and allowed to drain freely
98. the last portion of the pipette contents is discarded in a separate container

Answer: e) the last portion of the pipette contents is discarded in a separate container

94. A “TC” pipette is:
95. allowed to drain freely
96. marked with a double ring at the mouthpiece
97. used for toxic corrosive liquids
98. emptied forcibly with a safety bulb
99. rinsed out after delivery

Answer: e) rinsed out after delivery

95. The destruction of erythrocytes to release hemoglobin is called:
96. hemorrhage
97. hemostasis
98. erythropoiesis
99. hemolysis
100. hypoxia

Answer: d) hemolysis

96. Which factor may cause a blood smear to be too thin:
97. the angle of the spreader is too high
98. the edge of the spreader is cracked
99. the smear is spread too slowly
100. the angle of the spreader is too low
101. a dirty spreader is used

Answer: d) the angle of the spreader is too low

97. The test measuring the oxygen-carrying capacity of RBC's is the:
98. CBC
99. Hct
100. ESR
101. Hgb
102. MCV

Answer: d) Hgb

98. An immature neutrophil is called:
99. blast cell
100. LE cell
101. band cell
102. reticulocyte
103. packed cell

Answer: c) band cell

99. The test that counts the number of immature RBC's is the:
100. osmotic fragility test
101. differential
102. reticulocyte count
103. RBC count
104. stab cell count

Answer: c) reticulocyte count

100. Which test does not monitor a patient's coagulation mechanism:
101. PT
102. ACTH
103. APTT
104. FDP
105. platelet count

Answer: b) ACTH