



JUNIOR LAB ASSISTANT



ANSWER KEY

03 OCT 2026

Maximum : 100 marks

Time : 1 hour and 30 minutes

1. The RPM in centrifuge stands for _____.
(A) Repulsion per minute
(C) Rate per minute
(B) ☒ Rotation per minute.
(D) Revolution per minute
2. Hazard warning symbols are :
(A) Round black pictures in white background
(B) Round white pictures in blue background
(C) Round green pictures in white background
(D) ☒ Black pictures in yellow or orange background
3. Which one is correct in case of severe burns?
(A) Apply ointment
(C) ☒ Do not remove his clothes.
(B) Remove his clothes
(D) None of the above
4. Which one of the following is a powerful disinfectant?
(A) ☒ Phenol
(C) Soap
(B) Dettol
(D) Sanitizer
5. The burning of wastes at high temperature is :
(A) Deep burial
(C) ☒ Incineration
(B) Fumigation
(D) Sewage disposal
6. New Glass wares should be soaked in _____ before use.
(A) Alkali
(C) Deionised water
(B) Distilled water
(D) ☒ Acids
7. Human Anatomical wastes are put in _____ colour coded container.
(A) Green
(C) Blue
(B) ☒ Yellow
(D) Red
8. Example for a corrosive chemical is :
(A) Benzaldehyde
(C) ☒ Conc. Acids
(B) Potassium Cyanide
(D) O-Toluidine

9. The working principle of colorimeter is based on _____ law.
☒ (A) Beer – Lambert's law (B) Pascal's law
 (C) Newton's third law (D) Bohr's law
10. The temperature of incubator is usually kept at :
 (A) 48°C ☒ (B) 37°C
 (C) 24°C (D) 19°C
11. _____ act as solvent in polychrome staining solution.
☒ (A) Methanol (B) Ethanol
 (C) H_2SO_4 (D) HCl
12. Haematocrit tube can hold _____ blood.
 (A) 0.1 ml (B) 5 ml
☒ (C) 1 ml (D) 10 ml
13. _____ is used for blood smear staining.
 (A) Leishman staining (B) Wright stain
 (C) Geimsa stain ☒ (D) All of these
14. An example of supravital staining solution :
 (A) Leishman stain (B) Feilds stain
 (C) MGG ☒ (D) Brilliant cresyl blue
15. Which of these are the principles employed for cell analysis by automated cell counters?
 (A) Impedance measurement
 (B) Light scattering
 (C) Centrifugation and quantitative buffy coat analysis
☒ (D) All of these
16. Blood group antigens present on :
☒ (A) red cell membrane (B) serum
 (C) plasma (D) none of these
17. Routinely used anticoagulant in blood bank :
 (A) EDTA ☒ (B) CPD
 (C) Double oxalate (D) Heparin

18. Bombay blood group lacks :
(A) A antigen
(C) B antigen
☒ (B) H antigen
(D) All of these
19. In infants _____ is the commonest site of venipuncture.
(A) umbilical vein .
☒ (C) antecubital vein
(B) femoral vein
(D) none of these
20. The ratio of potassium oxalate to ammonium oxalate in double oxalate mixture's _____.
☒ (A) 2 : 3 .
(C) 3 : 2
(B) 1 : 3
(D) All of these
21. Sites of capillary blood collection from the following is _____.
(A) Finger tip .
(C) Great toe or heel
(B) Ear lobe
☒ (D) All of these
22. Which anticoagulant is used as choice for CBC investigations?
(A) 3.8% trisodium citrate .
(C) Double oxalate mixture
☒ (B) EDTA
(D) All of these
23. Blood react with Drabkins reagent to form a stable coloured product is _____.
(A) Acid haematin
☒ (C) Cyanmeth haemoglobin
(B) Methaemoglobin .
(D) All of these
24. A patient has a positive urine glucose test. Which statement is most accurate?
(A) It always indicates diabetes mellitus .
(B) It always indicates renal failure
☒ (C) It may occur when blood glucose exceeds the renal threshold .
(D) It is diagnostic of glomerulonephritis
25. A semen specimen remains markedly viscous after the expected liquefaction period. Which interpretation is most appropriate?
☒ (A) Delayed liquefaction may interfere with accurate assessment of sperm motility
(B) It is always evidence of azoospermia
(C) It proves complete obstruction of the vas deferens
(D) It indicates absence of seminal plasma .

26. Which CSF pattern is most characteristic of acute bacterial meningitis?
- (A) Lymphocytosis, normal glucose and mildly increased protein
 - ☒ (B) Neutrophilic Pleocytosis, decreased glucose and increased protein
 - (C) Normal cell count, decreased protein and increased glucose
 - (D) Eosinophilia with increased glucose
27. An increased amount of fecal fat is most directly associated with :
- (A) Meningitis
 - (B) Hematuria
 - ☒ (C) Steatorrhea
 - (D) Diabetes insipidus
28. The most appropriate specimen for routine microbiological examination of lower respiratory tract infection is :
- (A) Saliva collected after rinsing the mouth
 - ☒ (B) Deep-cough early morning sputum
 - (C) Nasal Secretion
 - (D) Oral Swab
29. Normal range of HbA1C :
- ☒ (A) 5.7 %
 - (B) 3.2 – 8.5 %
 - (C) 4 % – 5.6 %
 - (D) 1.5 – 4.6 %
30. Which of the following is not a tumour marker?
- (A) AFP
 - ☒ (B) ABG
 - (C) CA 125
 - (D) PSA
31. Lipoprotein with fastest electrophoretic mobility :
- ☒ (A) HDL
 - (B) LDL
 - (C) VLDL
 - (D) Chylomicron
32. Which of the following is true regarding dry chemistry analysis?
- (A) Bioluminescence
 - (B) Emission spectroscopy
 - ☒ (C) Reflectance Spectroscopy
 - (D) None of the above
33. Inulin is a polymer of :
- (A) Glucose
 - (B) Galactose
 - ☒ (C) Fructose
 - (D) Lactose

34. Which of the following is used for the measurement of renal plasma flow?
☒ (A) Paraaminohippurate test (B) PSP test
 (C) Hippuric acid test (D) BSP test
35. Which of the following enzymes are indicators of liver dysfunction?
 (A) ALT (B) GGT
 (C) ALP ☒ (D) All of the above
36. Diazo reagent is :
 (i) Sulphanilic acid in Hydrochloric acid
 (ii) Sodium nitrite solution
 (iii) Sulphanilic acid in water
 (iv) Sulphanilic acid in Sulphuric acid
 (A) (i) only ☒ (B) (i) and (ii) .
 (C) (ii) and (iii) (D) (ii) and (iv)
37. The enzyme Enolase is inhibited by :
☒ (A) Sodium fluoride (B) Potassium oxalate
 (C) EDTA (D) None of the above
38. Reliable markers for Myocardial infarction except :
 (A) Troponin I (B) CKMB
 (C) LDH ☒ (D) ALT
39. Agar is :
 (A) Non-Nutritive chemical (B) Derived from sea weeds
 (C) Used to prepare solid media . ☒ (D) All are true
40. Which of the following is not true for Thick smear?
 (A) De-haemoglobinisation is required
 (B) Species wise identification of parasite is difficult
 (C) High sensitivity as large amount of blood is used
☒ (D) Used only for Filaria not for Malaria .
41. QBC in Laboratory is :
☒ (A) Method of detection of malarial parasite .
 (B) Method of anaerobic culture
 (C) Quality of Blood culture
 (D) All the three

42. Histokinet is an instrument :
- (A) Used to cut Tissue sections
 - ☒ (B) Used for automated processing of Tissues .
 - (C) Kinetic energy regulator
 - (D) Cytology sample collection devices
43. Which of the following is not a fixative?
- (A) 10% Formalin
 - ☒ (B) 5% Nitric Acid
 - (C) Bouins fluid
 - (D) Carnoys fluid
44. FNAC is a :
- ☒ (A) Needle aspiration technique
 - (B) Microtome part
 - (C) Centre where Training and research conducted .
 - (D) Rapid fixation method
45. In H and E technique E stands for :
- (A) Energy .
 - (B) Essential
 - (C) Envelop
 - ☒ (D) Eosin
46. Which of the following is related with diagnostic cytology?
- (A) Ayers spatula
 - (B) PAP staining
 - (C) Coplin jar .
 - ☒ (D) All the above
47. Example for bacteria that does not possess a cell wall is :
- (A) Micrococci
 - (B) Myco bacterium .
 - ☒ (C) Mycoplasma
 - (D) Spirochaetes
48. About Oxidase test which of the following is true?
- (A) Enterobacteriaceae is oxidase negative
 - (B) Pseudomonas and Vibrio are oxidase positive
 - (C) Neisseria are Oxidase positive .
 - ☒ (D) All the above are true
49. Culture method used for sensitivity testing are :
- (A) Anaerobic culture
 - (B) Pour plate culture
 - (C) Streak culture .
 - ☒ (D) Lawn culture

50. Counter stain used in AFB Staining is :
☒ (A) Methylene Blue . (B) Congo Red
 (C) Carbol fuchsin (D) Mordant
51. The value of Acceleration due to Gravity at Height equal to half the radius of the earth is :
 (A) $(9/4) g$ ☒ (B) $(4/9) g$
 (C) $(2/3) g$ (D) $(3/2) g$.
52. The basic Principle of Hydraulic Lift is :
☒ (A) Pascal's Law . (B) Bernoulli's Principle
 (C) Stoke's Law (D) Charle's Law
53. In a closed pipe the first, second and third harmonic frequencies are in the ratio :
 (A) 1 : 2 : 3 ☒ (B) 1 : 3 : 5 .
 (C) 1 : 4 : 8 (D) 1 : 2 : 4
54. Which of the following thermodynamic process $\Delta Q = 0$?
 (A) Isothermal Process (B) Isobaric Process
 (C) Isochoric Process ☒ (D) Adiabatic Process .
55. Find the number of significant figures in 0.2370 gcm^{-3} :
 (A) 3 ☒ (B) 4 .
 (C) 5 (D) 6
56. The Area under velocity-time graph is :
☒ (A) Displacement (B) Velocity
 (C) Acceleration . (D) Force
57. The unit of the Power is :
☒ (A) Nm/s (B) Nm^2/s
 (C) Nm/s^2 . (D) Nm^2/s^2
58. Which electromagnetic radiation is used in RADAR?
☒ (A) Microwave (B) Radio wave
 (C) Infrared . (D) Gamma ray

59. What is the relation between the focal length (f) and radius of curvature (R) of spherical mirrors?
☒ (A) $R = 2f$ (B) $R = 3f$
 (C) $f = 2R$ (D) $f = 3R$
60. Which metal has the maximum work function related to photoelectric effect?
☒ (A) Platinum (B) Caesium
 (C) Sodium (D) Calcium
61. Which property of light is proved by its transverse nature?
 (A) Interference (B) Dispersion
 (C) Refraction ☒ (D) Polarisation
62. Which device is used to convert AC into DC (Alternating Current into Direct Current)?
 (A) Transformer ☒ (B) Rectifier
 (C) Oscillator (D) Amplifier
63. What is Gauss's theorem in electrostatics?
☒ (A) $\phi = \frac{q}{\epsilon_0}$ (B) $\phi = \epsilon_0 q$
 (C) $q = \epsilon_0 \phi$ (D) $\epsilon_0 = \phi q$
64. When dielectric medium is placed between plates of capacitor, the capacitance?
☒ (A) Increased (B) Decreased
 (C) Remains same (D) None of these
65. A Galvanometer converted into voltmeter by connecting :
 (A) Low resistance parallel (B) Low resistance series
 (C) High resistance parallel ☒ (D) High resistance series
66. The scattering of light by colloidal particles is called :
 (A) Brownian movement (B) Electrophoresis
 (C) Osmosis ☒ (D) Tyndall effect
67. Which element has the highest electronegativity?
 (A) Oxygen (B) Chlorine
☒ (C) Fluorine (D) Nitrogen
68. The chemical formula of heavy water :
 (A) H_2O ☒ (B) D_2O (C) H_2O_2 (D) T_2O

69. Which allotrope of carbon is used as a lubricant?
☒ (A) Graphite (B) Diamond
 (C) Coal (D) Charcoal
70. The industrial manufacture of sulfuric acid is carried out by the :
 (A) Haber process ☒ (B) Contact process
 (C) Ostwald process (D) Solvay process
71. Which d block element is used in the manufacture of dry cell?
☒ (A) Zinc (B) Iron
 (C) Nickel (D) Cobalt
72. One mole of any substance contains :
 (A) 6.022×10^{22} particles ☒ (B) 6.022×10^{23} particles
 (C) 3.011×10^{23} particles (D) 1.204×10^{24} particles
73. The maximum number of electrons that can occupy the K shell is :
 (A) 1 (B) 8 ☒ (C) 2 (D) 18
74. Which particle was used in Rutherford's scattering experiment?
 (A) Beta particles ☒ (B) Alpha particle
 (C) Electron (D) Neutron
75. A device that convert chemical energy into electrical energy is called :
☒ (A) Galvanic cell (B) Electrolytic cell
 (C) Fuel cell (D) Capacitor
76. Luca's test is used for the identification of _____
 (A) Aldehydes (B) Ketones
☒ (C) Alcohols (D) Carboxylic acids
77. Which is the water soluble vitamin?
 (A) Vitamin A ☒ (B) Vitamin B (C) Vitamin D (D) Vitamin K
78. Saccharin is used as a _____.
 (A) Food preservative ☒ (B) Artificial sweetener
 (C) Anti-oxidant (D) Antibiotic

79. Which of the following base is not present in D.N.A.?
 (A) Adenine (B) Guanine (C) Thymine ☒ (D) Uracil
80. Glycerol is purified by which method?
☒ (A) Distillation under reduced pressure
 (B) Steam distillation
 (C) Fractional distillation
 (D) Simple distillation
81. Scientific rearing of Honey bee :
 (A) Sericulture (B) Vermiculture
 (C) Silviculture ☒ (D) Apiculture
82. Thermostable 'Taq polymerase' enzyme used in PCR is isolated from :
 (A) *Agrobacterium tumefaciens* ☒ (B) *Thermus aquaticus*
 (C) *Bacillus thuringiensis* (D) *Haemophilus influenzae*
83. The first Transgenic cow that produces human protein, alpha - lactalbumin enriched milk is :
☒ (A) Rosie (B) Dolly (C) Tracy (D) Polly
84. The first clinical Gene therapy was done in 1990, for a child suffering from :
 (A) Thalassaemia (B) PKU deficiency
 (C) Sickle cell anemia ☒ (D) ADA deficiency
85. The process by which water-soluble inorganic nutrients present in the detritus go down into the soil horizon and turn into unavailable salts :
 (A) Mineralisation (B) Catabolism
☒ (C) Leaching (D) Humification
86. The logistic population growth is expressed by the equation :
 (A) $dN/dt = rN \left(\frac{N-K}{K} \right)$ ☒ (B) $dN/dt = rN \left(\frac{K-N}{K} \right)$
 (C) $dN/dt = rN$ (D) $dN/dt = rN \left(\frac{N-K}{N} \right)$
87. Short interval between Meiosis I and Meiosis II :
 (A) Cytokinesis (B) Diakinesis
☒ (C) Interkinesis (D) Karyokinesis

88. Which statement is incorrect regarding Mesosome?
- ☒ (A) Present both in Prokaryotes and Eukaryotes .
 - (B) It is the infoldings of Plasma membrane
 - (C) Found in the form of vesicles, tubules and lamellae
 - (D) Help in DNA replication and its distribution
89. Which of the following best defines Apomixis?
- (A) Formation of fruit without fertilization .
 - ☒ (B) Formation of seed without fertilization
 - (C) Formation of fruit without seed
 - (D) Formation of seed after fertilization
90. Which of the following statements are true?
- (i) Rice is pollinated by wind
 - (ii) Water lily is pollinated by water
 - (iii) Vallisneria is pollinated by water
- (A) only (ii)
 - (B) only (i) and (ii)
 - ☒ (C) only (i) and (iii)
 - (D) all (i), (ii) and (iii) .
91. Which of the following cells are associated with the identification of colours in bright light?
- ☒ (A) Cone cells .
 - (B) Rod cells
 - (C) Lacrimal cells
 - (D) Cells of Muller
92. Which amino acid is substituted in sickle cell anaemia?
- (A) Glutamic acid by valine in α -chain
 - ☒ (B) Glutamic acid by valine in β -chain
 - (C) Valine by glutamic acid in β -chain
 - (D) Valine by glutamic acid in α -chain .
93. During transcription the site of DNA molecule at which RNA polymerase binds is called _____.
- ☒ (A) Promoter
 - (B) Regulator
 - (C) Receptor .
 - (D) Enhancer

94. Cancer cells do not exhibit the property of :
- (A) Generating tumors (B) Metastasis
☒ (C) Contact inhibition (D) Both (A) and (B)
95. Which of the following features is not present in Phylum Arthropoda?
- ☒ (A) Parapodia (B) Jointed appendages
 (C) Chitinous exoskeleton (D) Metameric segmentation-
96. Excretory structures present in the members of Phylum Platyhelminthes :
- (A) Nephridia (B) Protonephridia
 (C) Malpighian tubules ☒ (D) Flame cells
97. Which part of mammalian alimentary canal does not secrete any enzymes?
- (A) Mouth (B) Stomach ☒ (C) Oesophagus (D) Deodenum -
98. The second heart sound (dubb) is associated with the closure of :
- (A) Tricuspid valve ☒ (B) Semilunar valves
 (C) Bicuspid valve (D) Tricuspid and bicuspid valves
99. _____ is a special sensitive region in kidney formed by cellular modifications in the distal convoluted tubule and afferent arteriole at the location of their contact.
- ☒ (A) Juxta glomerular apparatus (B) Renal capsule
 (C) Columns of Bertini (D) Renal pelvis
100. Read the given statements and select the correct option :
- Statement A : Repeated activation of muscles can lead to fatigue.
 Statement B : Lactic acid accumulation by aerobic breakdown of glycogen causes muscle fatigue
- (A) Both statements A and B are correct
☒ (B) Statement A is correct but B is incorrect
 (C) Statement A is incorrect but Statement B is correct
 (D) Both statements A and B are incorrect