

# BABA FARID UNIVERSITY OF HEALTH SCIENCES, FARIDKOT

<b>Medical Lab Technician Grade-2</b> (Under Deptt. of Health & Family Welfare, Govt. of Punjab)		
QUESTION BOOKLET		IMPRESSION OF THE CANDIDATE
OMR ANSWER SHEET		
ROLL NO:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	FULL SIGNATURE OF THE CANDIDATE
FULL SIGNATURE OF INVIGILATOR		FULL SIGNATURE OBSERVER

**Time Allowed: 2.00 Hours (2.00 PM to 4.00 PM)**

**Maximum Marks: 90**

1. Use BLACK FINE TIP BALL PEN only. Use of pencil is not allowed.
2. Write your Roll number on the OMR answer-sheet and also on the question-booklet only in the space provided for the purpose and at no other place in the question booklets and Answer-sheet
3. Enter the Question Booklet Set and Number on the OMR Answer-sheet and also darken the corresponding bubbles with BLACK FINE TIP BALL PEN.
4. Do not put any marks anywhere in the Question booklet /on the OMR Answer-sheet.
5. **There are 90 objective type questions in all of 1 Mark each.** Before attempting the questions, check that the Question-booklet is complete. In case any question/part of question or page is missing, inform the Centre Superintendent within 5 minutes of the start of the examination. After that no claim will be entertained.
6. **Each question is followed by four alternative responses listed as A), B), C) and D) out of which only one is correct / most correct. In case, all the ovals are left blank, there will be deduction of marks @ 0.25 marks for each such unattempted question. Fifth oval 'E' (introduced for security purpose) is to be darkened in case you do not want to attempt the question to avoid negative marking.**
7. To open the question booklet, remove the seal gently when asked to do so. Handover the OMR Answer-sheet to the officer on duty on the completion of the time before you leave the examination hall.
8. **The candidates are permitted to carry his/her question booklet after completion of the examination but OMR Sheets are compulsory required to be deposited with the invigilator.**
9. A candidate who create disturbance of any kind or changes his/her seat or is found in possession of any paper possibility of any assistance to him/her or unfair means will be expelled from the examination by the Centre superintendent/Observer, whose decision shall be final. ("Expulsion" for this purpose would mean cancellation of the entire examination of the candidate).
10. **THE CANDIDATES ARE NOT PERMITTED TO CARRY ANY TELECOMMUNICATION EQUIPMENT SUCH AS WATCH, CELLULAR PHONE, WIRELESS SET, SCANNER ETC. INSIDE THE EXAMINATION HALL.**
11. For rough work, use only the blank space of the Question booklet.
12. The candidates will not be allowed to leave the examination hall during the examination.
13. Borrowing any material is not allowed.
14. The answer-sheet is designed for Computer evaluation. If the instructions are not followed properly, the candidate alone shall be responsible for the resultant loss.
15. Smoking/Refreshment shall not be allowed in the Entrance Test Centre/Hall.
16. Male candidates shall affix their Left Thumb Impression (LTI) while Female candidates shall affix Right Thumb Impression (RTI) at the prescribed place on the OMR answer sheet, Question Booklet and attendance sheet. The Centre superintendent shall also obtain and retain it for record.
17. The candidate must fill both the question booklet number and OMR answer sheet number on the attendance sheet.
18. No candidate shall be allowed to leave the centre before **4.00 PM**.

-----

1. SHELF LIFE OF FFP IS
  - a) 6 MONTHS
  - b) 1 YEAR
  - c) 2 YEARS
  - d) 3 MONTHS
2. PACKED RED BLOOD CELLS ARE STORED AT
  - a) 2-8°C
  - b) 22-24°C
  - c) -4°C-6°C
  - d) 30-36°C
3. NORMAL SPECIFIC GRAVITY OF URINE IS
  - a) 1.003 to 1.030
  - b) 2.003 to 2.030
  - c) 3.003 to 3.030
  - d) 4.004 to 4.030
4. ALL ARE BONE MARROW ASPIRATION NEEDLES EXCEPT
  - a) SALAH
  - b) KLIMA
  - c) HORIBA
  - d) JAMSHIDI
5. NORMAL RANGE OF RETICULOCYTE COUNT IN ADULTS IS
  - a) 3-4%
  - b) 0.5%-2.5%
  - c) 2.5%-3%
  - d) 5%-6%
6. ALL THE TRANSFUSION TRANSMITTED INFECTION TEST ARE MANDATORY BY GOVERNMENT OF INDIA EXCEPT
  - a) SYPHILLIS
  - b) MALARIA ANTIGEN
  - c) TYPHOID
  - d) HIV
7. MILKY WHITE COLOUR OF URINE INDICATES
  - a) PORPHYRIA
  - b) BILIRUBIN
  - c) CHYLURIA
  - d) HEMOGLOBINURIA
8. FASTING BLOOD GLUCOSE VALUES IN DIABETES IS
  - a) <100 mg/dl
  - b) 110 mg/dl
  - c) >126 mg/dl
  - d) 120 mg/dl
9. ALL ARE LIVER FUNCTION TESTS EXCEPT
  - a) SERUM ALKALINE PHOSPHATASE
  - b) SERUM BILIRUBIN
  - c) SERUM CREATININE
  - d) SERUM ALBUMIN
10. ALL ARE ROMANOWSKY STAINS EXCEPT
  - a) JENNER
  - b) LEISHMAN
  - c) WRIGHT
  - d) PAP
11. TARGET CELLS ARE SEEN IN
  - a) THALASSEMIA
  - b) UREMIA
  - c) BURNS
  - d) GLUCOSE -6-PHOSPHATE DEHYDROGENASE DEFICIENCY
12. ALL ARE GRANULOCYTES EXCEPT
  - a) NEUTROPHILS
  - b) LYMPHOCYTE
  - c) BASOPHIL
  - d) EOSINOPHIL
13. SIZE OF PLATELETS IS
  - a) 1-3  $\mu\text{m}$
  - b) 4-6  $\mu\text{m}$
  - c) 0.2-1  $\mu\text{m}$
  - d) 6-8  $\mu\text{m}$
14. MCV is defined as
  - a) MEASURE OF AVERAGE AMOUNT OF HEMOGLOBIN IN A SINGLE RED CELL
  - b) MEASURE OF AVERAGE SIZE OF THE RED CELLS
  - c) CONCENTRATION OF HEMOGLOBIN IN 1 LITRE OF PACKED RED CELLS
  - d) MEASURE OF DEGREE OF VARIATION IN RED CELL SIZE
15. NORMAL VALUE OF RED CELL DISTRIBUTION WIDTH IS
  - a) 1-5.5
  - b) 9-14.5
  - c) 4-8.5
  - d) 15-20.5

16. ESR IS INCREASED IN FOLLOWING CONDITION
- POLYCYTHEMIA
  - DEHYDRATION
  - SICKLE CELL DISEASE
  - INFECTIONS
17. MCV IS ELEVATED IN WHICH CONDITION
- IRON DEFICIENCY ANEMIA
  - BETA THALASSEMIA MINOR
  - SIDEROBLASTIC ANEMIA
  - MEGALOBlastic ANEMIA
18. WHICH OF THIS IS ACUTE BLOOD TRANSFUSION REACTION
- TRANSFUSION TRANSMITTED INFECTION
  - FEBRILE NON-HEMOLYTIC TRANSFUSION REACTION
  - ALLOIMUNIZATION
  - IRON OVERLOAD
19. HPLC IS USED TO DETECT WHICH DISEASE
- IRON DEFICIENCY ANEMIA
  - BETA THALASSEMIA TRAIT
  - MEGALOBlastic ANEMIA
  - HEMOLYTIC ANEMIA
20. ANTIGLOBULIN TEST IS USED FOR ALL EXCEPT
- AUTOIMMUNE HEMOLYTIC ANEMIA
  - HEMOLYTIC DISEASE OF NEWBORN
  - DRUG INDUCED ANEMIA
  - IRON DEFICIENCY ANEMIA
21. WHICH OF THE FOLLOWING IS A COAGULATION DISORDER
- HEMOPHILIA
  - IDIOPATHIC THROMBOCYTOPENIC PURPURA
  - GLANZMANN THROMBOASTHENIA
  - APLASTIC ANEMIA
22. COLOUR OF ANTISERA "A" USED FOR BLOOD GROUPING IS
- YELLOW
  - TRANSPARENT
  - PINK
  - BLUE
23. ALL EQUIPMENTS ARE PRESENT IN BLOOD COMPONENT SEPARATION UNIT EXCEPT
- REFRIGERATED CENTRIFUGE
  - PLASMA EXPRESSOR
  - TUBE SEALER
  - ELISA READER AND WASHER
24. PHILADELPHIA CHROMOSOME ABNORMALITY IS SEEN IN
- CML
  - CLL
  - ALL
  - AML
25. AGE OF FIRST TIME DONOR SHOULD BE
- 18-60 YEARS
  - 18-65 YEARS
  - 20-60 YEARS
  - 20-65 YEARS
26. OLIGOZOOSPERMIA IS DEFINED AS
- SPERM CONCENTRATION < 40 MILLION/ML
  - SPERM CONCENTRATION < 30 MILLION/ML
  - SPERM CONCENTRATION < 20 MILLION/ML
  - SPERM CONCENTRATION < 50 MILLION/ML
27. WHICH AMONG THE FOLLOWING IS NOT A THYROID FUNCTION TEST
- FT4
  - T3
  - RADIOACTIVE IODINE UPTAKE
  - AMYLASE
28. WHICH OF THE FOLLOWING IS PART OF STOMACH ANATOMICALLY
- DUODENUM
  - APPENDIX
  - CARDIA
  - RECTUM
29. ALL ARE LIPIDS EXCEPT
- CHOLESTEROL
  - FATTY ACIDS
  - ALBUMIN
  - TRIGLYCERIDES

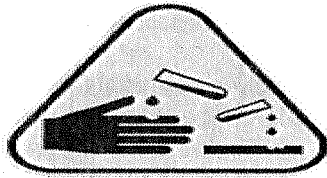
30. MALARIA IS TRANSMITTED BY ALL MODES EXCEPT

- a) BITE OF ANOPHELES MOSQUITOES
- b) BLOOD TRANSFUSION
- c) AIR BORNE
- d) USE OF CONTAMINATED NEEDLE

31. The difference between plasma & serum is that plasma?

- a) does not contain fibrinogen
- b) has more water
- c) contains fibrinogen
- d) contain iron

32. If you see this sign (symbol) in the lab it means:



- a) Flammable
- b) Corrosive
- c) Oxidizing
- d) Explosive

33. External Quality Assessment is needed for:

- a) Monitoring the performance of a single laboratory
- b) Daily monitoring of accuracy
- c) Daily monitoring of precision
- d) Comparing the performance of different laboratories

34. Five ml of coloured solution has an absorbance of 0.600nm the absorbance of 10ml of the same solution is?

- a) 1.000nm
- b) 0.250nm
- c) 0.600nm
- d) 1.500nm

35. Prolonged fast cause:

- a) Hyperglycemia
- b) Ketone body in urine
- c) Proteinuria
- d) Both a and b

36. How much water should we add to 500ml of a solution of 10% of NAOH to bring it to 7.5%?

- a) 666
- b) 250
- c) 166
- d) 189

37. Pentose phosphate metabolism cycle is important to the cell because it give:

- a) Acetyl CoA
- b) ADP
- c) NADH
- d) NADPH

38. Urea is final product of catabolism of:

- a) Amino acid
- b) Triglyceride
- c) Cholesterol
- d) Polysaccharide

39. Light effects one of the following?

- a) Glucose
- b) Urea
- c) Bilirubin
- d) Calcium

40. One of the following electrolytes is affected by hemolysis?

- a) Calcium
- b) Magnesium
- c) Potassium
- d) Sodium

41. In spectrophotometric, the amount of light absorbed is:

- a) Directly proportional to the amount of light transmitted
- b) Inversely proportional to the amount of solute
- c) Directly proportional to the concentration of the analyte
- d) Inversely proportional to the absorbance

42. CA 15.3 tumor marker is done for...

- a) Colon cancer
- b) Ovarian cancer
- c) Lung cancer
- d) Breast cancer

43. Bilirubin is not excreted in urine in ...
- Obstructive jaundice
  - Mild to moderate Hepatic jaundice
  - Hemolytic jaundice
  - All three
44. The Beta oxidation of palmitic acid provides... ATP
- 8
  - 38
  - 129
  - 146
45. Based on which of the following enzymes Hydrolysis reactions are catalysed?
- Hydrolase
  - Oxidoreductase
  - Isomerase
  - Ligase
46. Which of the following is an example of epimer?
- Mannose & Glucose
  - Glucose & Ribose
  - Galactose & Mannose
  - Glucose & Galactose
47. Which of the following is a intracellular second messengers?
- Glycine
  - Glutamate
  - Acetylcholine
  - IP3
48. Earliest marker for cardiac profile test-
- LDH
  - Troponin T
  - AST
  - CKMB
49. Which proteins are called transport proteins?
- Ovalbumin
  - Hemoglobin
  - Keratin
  - Enzymes
50. Which of the following hormone directly regulate the blood glucose levels .
- TSH
  - Insulin
  - Progesterone
  - FSH
51. The degree that a control results deviate from the known values or mean value is known as-
- Standard deviation
  - Coefficient deviation
  - Median
  - None of above
52. If sample is taken in EDTA tube ,which of the following biochemistry test results will effect ?
- Glucose
  - Urea
  - Calcium
  - Cholesterol
53. Value of the quality control that continue to either increase or decrease over a period of 6 consecutive days is called –
- Shift
  - Trend
  - Standard deviation
  - Co-efficient of deviation
54. Hemolysis may result from-
- Using a 25-gauge needle on an adult
  - Vigorously shaking the blood specimen
  - Leaving the tourniquet on for 3 minutes
  - All the above
55. When performing the venipuncture,bright red blood spurts into the tube ,this means –
- An arterial puncture
  - High haemoglobin
  - High haematocrit
  - High blood pressure
56. WHMIS stands for –
- Worker harmful material information sheets
  - Workplace hazardous material information system
  - Worker handbook on mechanical and industrial safety
  - None of above
57. Which is the part of pre analytical in quality control?
- Dispatch of reports
  - Check the vein before sample collection
  - Performing a test
  - Maintain the test records

58. Sharps of needle discarded in –
- Blue container
  - Red container
  - Yellow container
  - White container
59. Mobile phase and stationary phase are part of –
- Chromatography
  - Spectrophotometer
  - Electrophoresis
  - Atomic absorption spectroscopy
60. Formula to calculate LDL –
- [Total cholesterol] - [HDLcholesterol] - ((TG)/5)
  - Total Cholesterol – VLDL Cholesterol
  - [Total cholesterol] - [HDLcholesterol] - ((TG)/10)
  - [Total cholesterol] + [HDLcholesterol] - ((TG)/5)
61. Microscopic examination of stained bacterial smear requires which objective of Light microscope
- Low power x10
  - High power x 40
  - Oil immersion x 100
  - None of the above
62. In which of the following culture medium, egg is used as a solidifying agent
- Loffler serum slope
  - Lowenstein Jensen's Medium
  - MacConkey's Medium
  - Saboraud Dextrose Agar
63. Correct sentence regarding prokaryotes
- Nucleolus is present
  - Cell membrane does not contain sterols except in mycoplasma
  - Cellular organelles like mitochondria are present
  - Extrachromosomal DNA is found in mitochondria
64. Bacteria are uniformly stained in which phase of growth
- Lag phase
  - Log phase
  - Stationary phase
  - Decline phase
65. Which one of the following is not blood culture medium
- Trypticase soya broth
  - Bile broth
  - Glucose broth
  - Peptone water
66. Gloves should be worn while
- Collecting blood sample
  - Separating serum sample
  - Testing for HIV
  - All of the above
67. All the following vaccines are given at birth except
- BCG
  - DPT
  - OPV
  - Hepatitis B
68. HIV can be transmitted by
- By shaking hands with HIV positive person
  - By sharing food with HIV positive person
  - By donating blood to HIV positive patient
  - By transfusion of HIV positive blood
69. All are agglutination reactions except
- Widal test
  - Standard agglutination test
  - VDRL
  - Paul- bunnell test
70. The best disinfectant for Virology Laboratory is
- Sodium hypochlorite
  - Phenol
  - Xylene
  - Alcohol
71. Gene target for confirmation of Covid 19 includes
- Spike protein (S)
  - Membrane protein (M)
  - RNA- dependant RNA polymerase (RdRp)
  - Envelope protein (E)
72. Evaluation of the quality of air in OTs can be performed by all the following methods except:
- Settle plate
  - Slit sampler
  - Presence-absence
  - Particle count

73. How many antimicrobial discs should be placed on a 100 mm Muller–Hinton agar plate
- upto 5
  - upto 6
  - upto 7
  - upto 8
74. Soiled cotton is disposed off in
- Red bin
  - Blue bin
  - Yellow bin
  - Green bin
75. For device associated infection, the device should be present in place at least for how many calendar days
- One
  - Two
  - Three
  - Four
76. Which of the following ova is not bile stained
- Taeniasolium
  - Taeniasaginata
  - Enterobiusvermicularis
  - Ascarislumbricoides
77. Protozoan cysts are best demonstrated by
- Saline preparation
  - Iodine preparation
  - Gram staining
  - None of the above
78. All are yeast or yeast like fungi except
- Candida
  - Trichophyton
  - Trichosporon
  - Cryptococcus
79. Organisms that does not affect the nail
- Microsporium
  - Trichophyton
  - Epidermophyton
  - Candida
80. Mycobacterium leprae are demonstrated by
- Gram staining
  - Modified ZN Staining
  - Albert Staining
  - None of the above
81. Which of the following is Gram Positive bacilli
- Neisseria
  - E.coli
  - V.cholera
  - Corynebacterium diphtheria
- 82.What is the pH of alkaline peptone water
- 10
  - 7.4
  - 4.0
  - 8.6
83. Bact/ALERT principal is based on
- Calorimetric detection
  - Fluorescent detection
  - Detection of change of pressure
  - All of the above
84. Causative agent of pseudomembranous colitis
- Clostridium difficile
  - Clostridium botulinum
  - Clostridium perferingens
  - Clostridium tetani
85. Which of the following is not a commensal of female genital tract
- Lactobacillus
  - Streptococcus agalactiae
  - Neisseria
  - Trichomonas vaginalis
- 86.Rapid diagnostic test for diagnosis of tuberculosis is
- Z-N staining
  - Solid culture
  - CBNAAT
  - Liquid culture
87. Anchovy sauce-like materials is associated with
- Amoebic colitis
  - Amoebic liver abscess
  - Amoebiasis cutis
  - Pulmonary amoebiasis
- 88.Koplik's spots will develop in
- HIV
  - Mumps
  - Measles
  - Rubella

89. *Geobacillus stearothermophilus* is used as indicator for efficacy of

- a) Hot air oven
- b) Filtration
- c) Autoclave
- d) Ultraviolet rays

90. Crescent shaped or banana shaped gametocytes are seen in infection with

- a) *Plasmodium vivax*
- b) *Plasmodium falciparum*
- c) *Plasmodium malariae*
- d) *Plasmodium ovale*

\*\*\*\*\*