

031/2020

Question Booklet Alpha Code

A

	Question Booklet Sl. No.
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Total Number of Questions : 100

Time : 75 Minutes

Maximum Marks : 100

**INSTRUCTIONS TO CANDIDATES**

1. The Question Paper will be given in the form of a Question Booklet. There will be four versions of Question Booklets with Question Booklet Alpha Code viz. **A, B, C & D.**
2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the Question Booklet.
3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.
4. If you get a Question Booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator **IMMEDIATELY.**
5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your Question Booklet is un-numbered, please get it replaced by new Question Booklet with same alpha code.
6. The Question Booklet will be sealed at the middle of the right margin. Candidate should not open the Question Booklet, until the indication is given to start answering.
7. Immediately after the commencement of the examination, the candidate should check that the Question Booklet supplied to him/her contains all the 100 questions in serial order. The Question Booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.
8. A blank sheet of paper is attached to the Question Booklet. This may be used for rough work.
9. **Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.**
10. Each question is provided with four choices **(A), (B), (C)** and **(D)** having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball Point Pen in the OMR Answer Sheet.
11. **Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.**
12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.
13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.

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1. The process of formation of glucose from lactate is called as  
A) Glycolysis  
B) Gluconeogenesis  
C) Glycolysis  
D) Lipogenesis
2. Presence of protein in a sample of urine is detected by  
A) Rotheras test  
B) Benzidine test  
C) Benedicts test  
D) Heat coagulation test
3. Optimal levels of LDL Cholesterol is  
A) <100mg/dl  
B) >150mg/dl  
C) 100-150mg/dl  
D) >200mg/dl
4. Glycosidic linkage present in sucrose is  
A)  $\alpha$  (1 – 1)  
B)  $\alpha$  (1 – 2)  
C)  $\alpha$  (1 – 4)  
D)  $\beta$  (1 – 4)
5. Clearance of a substance is given by the formulae  
A)  $C = U\sqrt{V/P}$   
B)  $C = UV/P$   
C)  $C = UP/V$   
D)  $\sqrt{UV/P}$
6. According to Beer's law, concentration of analyte in a solution is directly proportional to  
A) Transmittance  
B) Absorbance  
C) Path length  
D) Cuvette thickness
7. To prepare 10ml of 6N HCl, the volume of concentrated HCl required is (Normality of Conc.HCl is 12)  
A) 5ml  
B) 0.5ml  
C) 7.5ml  
D) 2.5ml
8. The ideal blood collection tube for Glucose estimation is  
A) Heparin  
B) EDTA  
C) Sodium citrate  
D) Sodium fluoride
9. The fraction of protein that moves faster when subjected to protein electrophoresis is  
A)  $\alpha$ -globulin  
B)  $\beta$ -globulin  
C) Albumin  
D)  $\gamma$ -globulin
10. Serum Total Protein of a 55 yr. old male is 6g/dl, 'Serum Albumin is 3g/dl. A/G ratio is  
A) 1 : 1  
B) 1 : 3  
C) 3 : 1  
D) 2 : 1
11. When subjected to urine aminogram, the solvent front was 6 cm and solute front was 5 cm, the  $R_f$  Value is  
A) 0.83  
B) 1.2  
C) 1.0  
D) 0.5

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12. Glass Cuvettes must not be cleaned with
- A) Mild detergents
  - B) Ethanol
  - C) Dichromate solution
  - D) Concentrated HCl
13. Which of these is not a method for estimating blood glucose ?
- A) Hexokinase
  - B) Glucokinase
  - C) Glucose oxidase-peroxidase
  - D) O-toluidine
14. All of these are Ketone bodies except
- A) Acetone
  - B) Acetoacetate
  - C) Acetate
  - D)  $\beta$ -hydroxy butyrate
15. The co-factor required for transamination reactions is
- A) NADH
  - B) NADPH
  - C) TPP
  - D) PLP
16. Bile salts and Bile pigments in urine are seen in
- A) Obstructive jaundice
  - B) Hepatic jaundice
  - C) Pre-hepatic jaundice
  - D) Latent jaundice
17. When a molecule absorbs light at one wavelength and reemits light at a longer wavelength it is called
- A) Absorbance
  - B) Phosphorescence
  - C) Fluorescence
  - D) Transmittance
18. Following were the lipid profile results of a 45 yr. old male
- Serum Triglyceride-150mg/dl
- Serum Total Cholesterol-200mg/dl
- Serum HDL Cholesterol-40mg/dl
- The Serum LDL Cholesterol of this man is
- A) 100mg/dl
  - B) 130mg/dl
  - C) 90mg/dl
  - D) Insufficient data to calculate

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19. If the Blood urea of a patient is 85.6, then Blood urea Nitrogen would be  
A) 20                      B) 30                      C) 40                      D) 50
20. The correct order of draw of blood sample is  
A) Red tube, Green tube, Lavender tube, Grey tube  
B) Lavender tube, Grey tube, Green tube, Red tube  
C) Red tube, Green tube, Grey tube, Lavender tube  
D) Lavender tube, Green tube, Red tube, Grey tube
21. In a Clinical biochemistry laboratory, the blood sample of a patient showed very high AST, requiring dilution, which of these denotes 1: 10 dilution ?  
A) 450µl Diluent + 50µl Sample  
B) 450µl Sample + 50µl Diluent  
C) 50µl Sample + 500µl Diluent  
D) 50µl Diluent + 500µl Sample
22. The specific gravity of an Urine sample was found to be 1.005 at 30°C. After correcting for temperature the specific gravity of the sample would be  
A) 1.015                      B) 1.010                      C) 1.020                      D) 1.025
23. Transporting of blood sample in icepack is required for the estimation of  
A) Ethanol                      B) Ammonia  
C) Testosterone                      D) Prolactin
24. VLDL should not be calculated if serum triglyceride is greater than  
A) 300mg/dl                      B) 200mg/dl  
C) 400mg/dl                      D) 500mg/dl
25. All of these are properties of an ideal quality control sample except  
A) Its matrix should be to similar to patient sample  
B) Should be stable for longer periods  
C) Should have minimum vial to vial variability  
D) Lyophilized controls are convenient than liquid controls

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26. Which of the following is a Gram positive bacteria ?  
A) *Acinetobacter baumannii*  
B) *Corynebacterium diphtheriae*  
C) *Neisseria meningitides*  
D) *Moraxella catarrhalis*
27. Disinfection removes \_\_\_\_\_ from the surface or medium.  
A) All microorganisms  
B) Bacterial spores  
C) Chemical toxins  
D) Pathogenic organisms
28. All the following discs are used to test Antibiotic sensitivity for *Pseudomonas* except  
A) Ceftazidime  
B) Ciprofloxacin  
C) Gentamicin  
D) Vancomycin
29. What is the rate of HIV transmission by a contaminated needle prick ?  
A) 0.03%                      B) 0.3%                      C) 3%                      D) 30%
30. Which of the following is an agglutination test ?  
A) HBsAg test  
B) Elek's Gel test  
C) Western Blot test  
D) Widal test
31. Which of the following is an anaerobic culture method ?  
A) Alkaline pyrogallol method  
B) Castaneda method  
C) Petroff's method  
D) Slide culture method
32. The protective HBV antibody level is  
A) 0.1 mIU/ml                      B) 1 mIU/ml                      C) 10 mIU/ml                      D) 100 mIU/ml
33. MIC of an antibiotic can be tested by  
A) E test method  
B) Kirby-Bauer method  
C) PCR method  
D) Stoke's method
34. Bile aesculin test is to  
A) Assess water quality  
B) Classify vibrio cholerae  
C) Diagnose enterococci  
D) Diagnose pneumococci
35. Which of the following is not a transport medium ?  
A) Cary-Blair medium  
B) V-R medium  
C) Loeffler's serum slope medium  
D) Pike's medium

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36. All the following features are shown by enterobacteriaceae except  
 A) Gram negative  
 B) Ferment glucose  
 C) Nitrate test positive  
 D) Oxidase test positive
37. The best way to collect sputum sample for Mycobacterium culture and microscopy  
 A) 3 samples collected by the patient at 1 hour interval  
 B) 24 hour sample collected  
 C) First morning sample collected in 3 containers  
 D) First morning samples of 3 days
38. Which is true for STS (Standard Tests for Syphilis) ?  
 A) Antigen used is *Treponema pallidum*  
 B) Chance for False positive test results  
 C) Patient remain test positive for life  
 D) Highly specific test
39. The primary diagnosis of HIV is done by  
 A) Three rapid tests  
 B) ELISA and Western blot  
 C) One rapid test and PCR  
 D) One rapid test and CD4 count
40. Which of the following is characteristic of hookworm egg ?  
 A) Non bile stained, segmented ovum  
 B) Non bile stained, unsegmented ovum  
 C) Bile stained, mucous plugs, tadpole larva  
 D) Bile stained, 3 layered coat, single ovum
41. To prepare 1% hypochlorite, how much of bleaching powder is to be added to 1 litre of water ?  
 A) 1 gm  
 B) 10 gm  
 C) 20 gm  
 D) 30 gm
42. As per Biomedical waste management guidelines, the blood bag after use is to be discarded in bucket with \_\_\_\_\_ colour.  
 A) Blue  
 B) Red  
 C) White  
 D) Yellow
43. Standard precautions include all except  
 A) Gloves  
 B) Mask  
 C) Hand hygiene  
 D) Cohorting

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44. Tyndallisation is a method of sterilization using
- A) Alcohol
  - B) Dry heat
  - C) Radiation
  - D) Steam
45. Which of the following is an enriched media for Salmonella species ?
- A) Bile broth
  - B) Glucose broth
  - C) Mac Conkey's broth
  - D) Selenite F broth
46. Select the organism which is oxidase test negative.
- A) *Clostridium tetani*
  - B) *Haemophilus influenzae*
  - C) *Neisseria meningitides*
  - D) *Vibrio cholera*
47. Which of the following antibiotic disc is used to identify MRSA ?
- A) Cefoxitin
  - B) Erythromycin
  - C) Penicillin
  - D) Vancomycin
48. Pick up the lactose fermenting bacteria from the following.
- A) *Proteus mirabilis*
  - B) *Pseudomonas aeruginosa*
  - C) *Salmonella typhi*
  - D) *Staphylococcus aureus*
49. The peripheral smear of a clinically suspected case of malaria shows intra erythrocytic, multiple ring forms and some of the rings show multiple nuclei also. Which is the most probable species ?
- A) *Plasmodium vivax*
  - B) *Plasmodium falciparum*
  - C) *Plasmodium malariae*
  - D) *Plasmodium ovale*
50. *Cryptococcus neoformans* is
- A) Parasite causing diarrhea
  - B) Fungus causing meningitis
  - C) Bacteria showing capsule
  - D) None of the above

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51. Bombay blood group is seen in blood group type  
A) A                      B) B                      C) AB                      D) O
52. Rh HDN occurs in  
A) First O negative child in O positive mother  
B) Second B negative child in B positive mother  
C) First A positive child in A negative mother  
D) Second B positive child in B negative mother
53. Direct Coombs test positive means Coombs serum has bound to  
A) Antibody in the plasma  
B) Antibody coated on RBC  
C) Antigen on RBC  
D) Antigen on WBC
54. Copper sulphate in blood bank is used to screen for  
A) Antibody level  
B) Hemoglobin level  
C) HIV positivity  
D) Malaria positivity
55. Anticoagulant used in blood bank is  
A) ACD                      B) CPD  
C) CPDA                      D) All of the above
56. Febrile reaction occurs in transfusion reaction due to  
A) RBC lysis  
B) Platelet aggregation  
C) Excess anticoagulant  
D) WBC antigen sensitization

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57. Indications for FFP

- A) Coagulation factor deficiency
- B) Anaemia
- C) Leukemia
- D) Thrombocytopenia

58. On high speed centrifuging of blood we obtain

- A) PRP
- B) WBC cocentrates
- C) RBC concentrate
- D) Platelet concentrate

59. Positive Coombs test means we get

- A) Agglutination
- B) Rouleaux formation
- C) Cell separation
- D) Cell lysis

60. All are transfusion transmitted hepatitis except

- A) A
- B) B
- C) C
- D) D

61. Formalin fixative used in histopathology is

- A) 10%
- B) 20%
- C) 30%
- D) 40%

62. Technique used in decalcification are all except

- A) Hydrochloric acid
- B) Nitric acid
- C) EDTA
- D) Sulphuric acid

63. Tissue section is cut in histopathology using

- A) Cryostat
- B) Microtome
- C) Processor
- D) Incubator

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64. Formalin pigment is
- A) Acid formaldehyde hematin
  - B) Alkali formaldehyde hematin
  - C) Albumin formaldehyde hematin
  - D) Lipid formaldehyde hematin
65. Steps in automated tissue processor are all except
- A) Clearing
  - B) Dehydration
  - C) Embedding
  - D) Impregnation
66. Frozen section is done in tissue received in
- A) Formalin
  - B) Gluteraldehyde
  - C) Carnoys fixative
  - D) Saline
67. Fixative used in cytology is
- A) 10% formalin
  - B) 2% gluteraldehyde
  - C) Osmium tetroxide
  - D) 95% ethyl alcohol
68. Commonly used stain in cytology is
- A) H & E
  - B) PAP
  - C) GIEMSA
  - D) Leishman
69. Van Gieson stain is used to demonstrate
- A) Carbohydrate
  - B) Connective tissue
  - C) Lipid
  - D) Pigments
70. PAS stain is used to demonstrate
- A) Carbohydrate
  - B) Connective tissue
  - C) Lipid
  - D) Pigments
71. Cells without nucleus in blood are
- A) Erythrocyte
  - B) Lymphocyte
  - C) Monocyte
  - D) Neutrophil

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72. Hemoglobin is composed of
- A) One iron and one globin
  - B) One iron and 4 globin
  - C) 4 iron and one globin
  - D) 2 iron and 2 globin
73. At which stage of RBC development hemoglobin first appears in the cell ?
- A) Pronormoblast
  - B) Early normoblast
  - C) Intermediate normoblast
  - D) Reticulocyte
74. The cell in which Barr body counted is
- A) Lymphocyte
  - B) Neutrophil
  - C) Erythrocyte
  - D) Squamous epithelial
75. Myeloid stem cell gives rise to all except
- A) Erythrocyte
  - B) Neutrophil
  - C) Lymphocyte
  - D) Platelet
76. Cell producing platelets are
- A) Myeloblast
  - B) Lymphoblast
  - C) Megakaryocyte
  - D) Pronormoblast
77. Reagent used for sickling test is
- A) Sodium nitroprusside
  - B) Sodium metabisulphite
  - C) Sodium chloride
  - D) Sodium nitrate
78. Pathology of thalassemia is
- A) RBC number is increased
  - B) Globin production decreased
  - C) Iron is deficient
  - D) Abnormal globin produced

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79. Pernicious anaemia is a specific type of
- A) Dimorphic anaemia
  - B) Microcytic anaemia
  - C) Macrocytic anaemia
  - D) Normocytic anaemia
80. Hereditary spherocytosis is due to
- A) Hemoglobin structural defect
  - B) Hemoglobin quantitative defect
  - C) Membrane defect
  - D) Enzyme defect
81. Cell increased in acute leukemia is
- A) Myeloblast
  - B) Myelocyte
  - C) Metamyelocyte
  - D) Neutrophil
82. Cell increased in multiple myeloma is
- A) Myeloblast
  - B) Lymphoblast
  - C) Promyelocyte
  - D) Plasma cell
83. Prothrombin time measures the abnormality in
- A) Extrinsic pathway
  - B) Intrinsic pathway
  - C) Common pathway
  - D) Vessel wall
84. Partial thromboplastin time measures the status of
- A) Extrinsic pathway
  - B) Intrinsic pathway
  - C) Common pathway
  - D) Vessel wall
85. The anticoagulant used for ESR estimation is sodium
- A) Fluoride
  - B) Oxalate
  - C) EDTA
  - D) Citrate

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86. The anticoagulant used for osmotic fragility is  
A) Heparin                      B) Oxalate                      C) EDTA                      D) Citrate
87. Hematocrit means  
A) ESR                      B) MCV                      C) MCH                      D) PCV
88. Leishman stain is used to stain  
A) Blood smear                      B) Cytology smear  
C) Sputum smear                      D) Squash imprint
89. Westergrens pipette is used to estimate  
A) ESR                      B) RBC count  
C) WBC count                      D) PCV
90. LE cell preparation is done to demonstrate  
A) Antinuclear antibody                      B) Red cell antigen  
C) Barr body                      D) Sickling
91. Test for blood in urine is  
A) Benedict test                      B) Benzidine test  
C) Rothera test                      D) Hays test
92. Casts in urine are  
A) Protein coagulated in tubules  
B) Salts crystallized in urine  
C) Bacteria forming clumps  
D) Extraneous objects
93. Specific test for glucose in urine is  
A) Urine strip test                      B) Benedict test  
C) Barfoed test                      D) Hays test

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94. Glycosuria means urine contains
- A) Glucose
  - B) Acetoacetic acid
  - C) Glycogen
  - D) Beta hydroxybutyric acid
95. Compared to exudates the transudate would have
- A) Lower specific gravity
  - B) More cells
  - C) More protein
  - D) Association with infections
96. CSF fluid processing can be delayed upto
- A) Half hour
  - B) 1 hour
  - C) 1 and half hour
  - D) 2 hours
97. Methods to concentrate the fluid specimen while processing are all except
- A) Cytocentrifuge
  - B) Millipore filter
  - C) Sedimentation
  - D) Distillation
98. Quality of Sputum smear report depends on
- A) Adequacy of sample produced by patient
  - B) Area identified for pick and smear
  - C) Smearing uniformity
  - D) All of the above
99. Stool occult blood test is indicated in all except
- A) Anemia
  - B) Gastrointestinal malignancy
  - C) In cases of unknown primary malignancy
  - D) Hemorrhoids
100. Time required for fixation of cytology smears is
- A) 10 mins
  - B) 15 mins
  - C) 20 mins
  - D) 30 mins

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Space for Rough Work

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