

104/2023-E

Question Booklet
Alpha Code

A

Question Booklet
Serial Number

120205

Total No. of questions : 100

Time : 75 Minutes

Maximum : 100 Marks

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 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.

SEAL

104/2023-E

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. The most common fixative used in histopathology is :
(A) 10% formalin (B) 40% formalin
(C) 10% saline (D) 10% acetic acid
2. All the following are fixatives used in cytology EXCEPT :
(A) 95% ethyl alcohol
(B) 80% propyl alcohol
(C) Equal mixture of 90% Ethyl alcohol and ether
(D) 20% Propyl alcohol
3. Fixative in Leishman's stain is :
(A) Ethyl alcohol (B) Acetone free methyl alcohol
(C) Acetone (D) Propyl alcohol
4. Tissue processing includes all the following steps EXCEPT :
(A) Hydration (B) Dehydration
(C) Clearing (D) Embedding
5. Tissue sections after microtomy is floated in water bath maintained at a temperature of around :
(A) $5-10^{\circ}\text{C} < \text{the melting point of wax}$ (B) $5-10^{\circ}\text{C} > \text{the melting point of wax}$
(C) $11-20^{\circ}\text{C} < \text{the melting point of wax}$ (D) $11-20^{\circ}\text{C} > \text{the melting point of wax}$
6. All the following are mounting medias EXCEPT :
(A) DPX (B) Bee wax
(C) Canada balsam (D) Glycerin jelly
7. False statement about Hematoxylin & Eosin stain (H&E) is :
(A) It degrades quickly
(B) Hematoxylin is extracted from the logwood of a tree
(C) Eosin stains the cytoplasm pink
(D) H&E Is the most common stain used in histopathology

8. Quantity of urine required to determine the specific gravity of urine by urinometer method is :
- (A) 20 ml (B) 30 ml
(C) 40 ml (D) 50 ml
9. The normal color of urine is :
- (A) yellow (B) straw color
(C) red (D) black
10. Twenty-four hours urine sample is used for quantitative analysis of all EXCEPT :
- (A) Hormones (B) Proteins
(C) Blood (D) Calcium
11. Preservative for urine is :
- (A) Toluene (B) Thymol
(C) Chloroform (D) All the above
12. Cyanmet hemoglobin method for hemoglobin estimation is the best available method because :
- (A) most stable method
(B) all hemoglobin EXCEPT sulphemoglobin is converted to cyanmethemoglobin
(C) a stable reference standard is available
(D) all the above
13. The quantity of blood required for acid hematin method of hemoglobin estimation is :
- (A) 20 cu mm (B) 2 cu mm
(C) 4 cu mm (D) 10 cu mm
14. Blood smears for demonstration of microfilaria should be made preferably between :
- (A) 10 PM and 2 AM (B) 4 AM and 10 AM
(C) 10 AM and 2 PM (D) 3 PM and 7 PM
15. Blood smear preparation for Filariasis test include :
- (A) Wet smear examination (B) Thick smear examination
(C) Concentration technique (D) All the above
16. Which malarial parasite has no schizont in the peripheral smear?
- (A) Plasmodium vivax (B) Plasmodium falciparum
(C) Plasmodium malaria (D) None of the above

17. Mycobacterium tuberculosis is also known as :
- (A) Hansen's bacilli (B) Koch's bacilli
(C) Golden bacilli (D) Magical bacilli
18. All the following are Acid fast organisms EXCEPT :
- (A) Nocardia (B) Mycobacterium tuberculosis
(C) Streptococci (D) Isospora belli
19. Agar concentration required to prepare nutrient agar is :
- (A) 1 - 2% (B) 5 - 7%
(C) 0.25 - 0.25 (D) 0.5 - 1%
20. A positive tuberculin test is indicated by an area of induration of :
- (A) < 5 mm in diameter (B) 6-9 mm in diameter
(C) No induration (D) > 10 mm in diameter
21. Diagnostic test for Typhoid fever is :
- (A) Dick test (B) Widal test
(C) Schick test (D) Mantoux test
22. Which of the following is live attenuated vaccine?
- (A) BCG vaccine (B) Tetanus toxoid
(C) Diphtheria toxoid (D) Rabies vaccine
23. The method of killing of all microorganisms and their spores is known as :
- (A) Incineration (B) Sterilization
(C) Disinfection (D) Lysis
24. Temperature range used for autoclaving is :
- (A) 100°C for 10 minutes (B) 121°C for 15 minutes
(C) 100°C for 30 minutes (D) 121°C for 30 minutes
25. Flexible fiberoptic endoscopes are sterilized by :
- (A) Autoclave (B) 2% glutaraldehyde
(C) Gamma-radiation (D) Cetrimide
26. The shape of cocci are :
- (A) rod (B) comma
(C) spiral (D) spherical

27. Method of sterilization for culture media is by :
- (A) Hot air oven (B) Pasteurization
(C) Autoclave (D) All of the above
28. The anticoagulant of choice for blood sugar estimation is :
- (A) Ammonium oxalate (B) ACD
(C) Sodium fluoride (D) Potassium oxalate
29. Regarding Hb A1c all are true statement EXCEPT :
- (A) measures average blood sugar levels over the past 3 months
(B) measure hemoglobin level
(C) measures % of RBCs that have sugar coated hemoglobin
(D) it is one of the commonly used tests to diagnose prediabetes and diabetes
30. P O C T (Point of care testing) means :
- (A) Bedside testing (B) Laboratory testing
(C) Emergency testing (D) Simultaneous site testing
31. Donor selection criteria for blood donors do not include :
- (A) Age between 18 to 50 years (B) Weight more than 50 Kg
(C) Monthly blood donation (D) Hemoglobin >12.5 gm%
32. Rh typing is based on the D antigen present in :
- (A) Lymphocytes (B) Eosinophils
(C) Platelets (D) RBC
33. The disinfectant commonly applied on the site of blood collection is :
- (A) Acetone (B) Acetic acid
(C) 70% ethanol (D) Sodium carbonate
34. All the following infections may be transmitted via blood transfusion EXCEPT :
- (A) Typhoid (B) Hepatitis C
(C) Cytomegalovirus (D) Hepatitis B
35. Blood components products are :
- (A) Whole blood (B) Platelets
(C) Fresh frozen plasma (D) All of the above
36. Calcium chelators in anticoagulants include all the following EXCEPT :
- (A) Potassium oxalate (B) Ammonium oxalate
(C) Double oxalate (D) Heparin

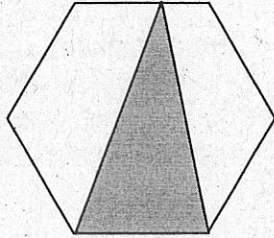
37. The ketone bodies include acetoacetic acid, acetone and :
(A) Beta-hydroxy butyric acid (B) Lactic acid
(C) Oxaloacetic acid (D) Acetic acid
38. The methods for determination of PCV include :
(A) Wintrobe's hematocrit method (B) Micro method
(C) Autoanalyzer (D) All the above
39. Anticoagulant of choice for ESR estimation by Westergren's method is :
(A) Trisodium citrate (B) Ammonium oxalate
(C) Potassium oxalate (D) ACD
40. To remove blood clots from blood pipette it is immersed in :
(A) 4% acetic acid (B) KOH
(C) Hydrochloric acid (D) Ammonium hydroxide
41. Van-den-Bergh reaction is used to detect :
(A) Serum bilirubin (B) Serum creatine
(C) Blood urea (D) Blood glucose
42. Glass vessels and glass syringes are best sterilized by :
(A) Hot air oven (B) Irradiation
(C) Autoclaving (D) Ethylene dioxide
43. Which is the best stain for reticulocyte count?
(A) New methylene blue (B) Toluidine blue
(C) Brilliant cresyl blue (D) Alcian blue
44. Earliest marker for cardiac profile test is :
(A) CK MB (B) AST
(C) Troponin T (D) LDH
45. Hazard symbols in laboratory is indicated by black picture in a background of :
(A) Orange or Yellow (B) Blue
(C) White (D) Green
46. Needles and broken glass are collected for disposal in plastic containers with color :
(A) Yellow (B) White
(C) Red (D) Blue

47. Improved Neubauer counting chamber has a depth of :
- (A) 0.2 mm (B) 0.1 mm
(C) 0.3 mm (D) 0.01 mm
48. The fluid used for RBC counting is :
- (A) Turk's fluid (B) Heyem's fluid
(C) Rees Ecker fluid (D) All the above
49. Action of EDTA as an anticoagulant is by :
- (A) Chelating Calcium in the blood
(B) Precipitating Calcium ions in the plasma
(C) Dissolving fibrin
(D) Neutralizing the thrombin
50. All the facts about iron deficiency anemia are true EXCEPT :
- (A) Low MCV
(B) Low MCH
(C) Serum iron is decreased
(D) Total Iron Binding Capacity (TIBC) is decreased
51. Difference between plasma and serum is that plasma :
- (A) Contains Fibrinogen (B) Contains more water
(C) Contains iron (D) All the above
52. When WBCs are counted manually by using Turk's fluid blood is diluted by a ratio of :
- (A) 1 : 20 (B) 1 : 40
(C) 1 : 100 (D) 1 : 200
53. The test to detect syphilis is :
- (A) ASO titre (B) VDRL test
(C) CRP test (D) Mantoux test
54. Renal function test does not include :
- (A) Blood urea (B) Serum creatine
(C) Serum bilirubin (D) Serum uric acid
55. Kala-Azar disease is caused by :
- (A) Trypanosoma cruzi (B) Leishmania donovani
(C) Wuchereria bancrofti (D) Plasmodium vivax

56. All are blood parasites except :
- (A) Plasmodium (B) Wuchereria bancrofti
(C) Giardia (D) Leishmania
57. Staining technique to demonstrate hormone change in PAP smear is by :
- (A) Leishman stain (B) Wright's stain
(C) Shorr's stain (D) H and E stain
58. The normal value of Total Leucocyte Count in an adult is :
- (A) 10000 - 16000 (B) 4000 - 11000
(C) 1000 - 2000 (D) 15000 - 20000
59. Granulocytes include all the following EXCEPT :
- (A) Neutrophils (B) Eosinophils
(C) Lymphocytes (D) Basophils
60. Monosodium Urate crystals in synovial fluid are :
- (A) Needle shaped (B) Rhomboid shaped
(C) Dust like (D) Round shaped
61. Amniotic fluid examination is done to detect :
- (A) Neural tube defect (B) Down syndrome
(C) Lung maturity (D) All the above
62. Common aqueous decalcifying agents used for bony tissue are :
- (A) Aqueous formic acid (B) Aqueous nitric acid
(C) EDTA (D) All the above
63. What is the special stain used to demonstrate ferric salts in tissue?
- (A) Perl's Prussian blue (B) Von Kossa stain
(C) Masson Fontana technique (D) Giemsa's stain
64. Urine test for bile salt is by using :
- (A) Calcium powder (B) Sulfur powder
(C) Soap powder (D) Zinc powder
65. Test for blood in urine is :
- (A) Benzidine test (B) Heat and Acetic acid test
(C) Sulfosalicylic acid test (D) Benedict's test

66. Most accurate method of diagnosis of helicobacter pylori is :
- (A) culture (B) biopsy urease test
(C) urea breath test (D) histopathology
67. The counting chamber used for Absolute Eosinophil count is :
- (A) Neubauer counting chamber
(B) Improved Neubauer counting chamber
(C) Fuchs Rosenthal counting chamber
(D) None of the above
68. Regarding Oil immersion objective of microscope which statement is correct?
- (A) the oil adhering to the objective should be removed after finishing by lens paper
(B) the oil should be left there itself
(C) the objective should be removed from microscope after use
(D) the coarse adjustment can be freely used for fine focusing
69. Regarding cleaning of new glass slides all the following are true EXCEPT :
- (A) New slides should be boiled in detergent for 30 minutes or thoroughly washed in running water
(B) They should then be placed in dichromate overnight washed again in running water
(C) Then rinsed in distilled water and stored in methylated spirit
(D) New slides should be autoclaved first
70. All about Seminal fluid is correct EXCEPT :
- (A) Normal sperm density is 20-280 million/ml
(B) Count lower than 10 million/ml is called oligospermia
(C) Absence of sperm is called Azoospermia
(D) Less than 20% motile sperm is considered normal
71. What is the sum of all factors of 128?
- (A) 256 (B) 255
(C) 512 (D) 511
72. A square is drawn with vertices on a circle. The perimeter of the square is 8 centimeters. What is the circumference of the circle?
- (A) π (B) 2π
(C) $2\sqrt{2\pi}$ (D) $\sqrt{2\pi}$

73. The figure shows a regular hexagon and a triangle inscribed in it. What is the ratio of the area of the triangle to that of the regular hexagon?



- (A) 1 : 2
(C) 2 : 3
- (B) 3 : 4
(D) 1 : 3
74. How many 3-digit numbers can be formed using the numbers 0, 5, 6, 7, 8 without repetition of digits?
(A) 48
(C) 24
- (B) 60
(D) 125
75. The average of few numbers is 20. If each number is multiplied by 2 and then subtracted by 2, what is the new average?
(A) 38
(C) 82
- (B) 42
(D) 78
76. What is the probability of getting a multiple of 3 in a 2 digit number?
(A) $\frac{2}{5}$
(C) $\frac{31}{90}$
- (B) $\frac{29}{90}$
(D) $\frac{1}{3}$
77. What is the value of $(0.000027)^{1/3}$?
(A) 0.3
(C) 0.003
- (B) 0.03
(D) 0.0003
78. A shopkeeper marked 20% excess on an article. Due to decrease in demand he reduced the price by 10%. He will get
(A) 8% profit
(C) 12% loss
- (B) 12% profit
(D) 10% loss
79. What is the remainder when $12^{12} + 3$ is divided by 11?
(A) 1
(C) 3
- (B) 2
(D) 4
80. If 10 men can reap a field in 20 days, in how many days will 8 men can reap it?
(A) 15 days
(C) 25 days
- (B) 20 days
(D) 30 days

81. Comprehension :

The newspapers have taken the place of the *Gita*, the *Bible* and the *Quran* with the people. For them, the printed sheet is gospel truth. The fact throws a great responsibility on the editors and news writers. Newspapers are a powerful influence. It is the duty of the editors to see that no false report or report likely to excite the public is published in their newspapers. The editors and their assistants have to be extra careful about the news they give and the manner in which they dress it. In a state of independence, it is practically impossible for Governments to control the Press. It is the duty of the public to keep a strict watch on the newspapers and keep them on the right path. An enlightened public would refuse to patronize inflammatory or indecent newspapers.

- (i) On the basis of your reading of the passage, find out the correct answer given below :
- (A) people have no faith in what is written in the newspapers
(B) People have now great faith in what is written in the newspapers
(C) People believe that newspapers never influence the people
(D) People believe that false report is published in the newspapers
- (ii) Gospel truth means :
- (A) Fake belief (B) Overconfidence
(C) Reliable truth (D) Unreliable message
- (iii) The newspapers have taken the place of :
- (A) Scriptures (B) Movies
(C) Teachers (D) Government
- (iv) What is the duty of the enlightened public?
- (A) Accept to patronize inflammatory newspapers
(B) Refuse to favour indecent newspapers
(C) Never watch the indecent news
(D) No need to keep the newspapers on the right path

82. Which word is the opposite of **audacious**?

- (A) Timid (B) Brave
(C) Courageous (D) Intelligent

83. Find out the correct feminine gender for the word **signor** :

- (A) Signoress (B) Signora
(C) Signorina (D) Signori

84. If something has happened recently, how do you ask by using **wh-questions**?

- (A) What do have happened? (B) What do happened?
(C) What has happened? (D) What will happened?

85. Write the question to which the underlined words are the answers :
Megan is going to Paris by train.
- (A) Where is Megan going? (B) How is Megan going to Paris?
(C) When is Megan going to Paris? (D) Whom is Megan going to Paris?
86. Find out the correct statement and a tag for the negative question :
Aren't you a friend of Nalini?
- (A) You are not a friend of Nalini. Are you?
(B) Nalini is your friend. Don't you?
(C) You are a friend of Nalini, aren't you?
(D) Nalini is not your friend. Did she?
87. Identify the **wrong** sentence :
- (A) I would like to buy something new.
(B) I will try to remember his new address.
(C) I can't find my new pen.
(D) Let's go something else, shall we?
88. The underlined word is replaced with **phrasal verbs**. Choose the correct one.
They are trying to arrange the holiday tour to London.
- (A) They are trying to **fix up** the holiday tour to London.
(B) They are trying to **give up** the holiday tour to London.
(C) They are trying to **hold up** the holiday tour to London.
(D) They are trying to **go away** the holiday tour to London.
89. Choose the correct sentence in which active voice changed into passive voice :
The carpenter will finish the work in a fortnight.
- (A) The work will be finishing by the carpenter in a fortnight.
(B) The works are finished by the carpenter in a fortnight.
(C) The works can finished by the carpenter in a fortnight
(D) The work will be finished by the carpenter in a fortnight.
90. Here you find four different options for the sentence given below. Choose the correct one.
Nirad came to the party with one of her cousins.
- (A) Nirad came to the party with a cousin of mine.
(B) Nirad came to the party with her cousins.
(C) Nirad came to the party with all her cousins.
(D) Nirad came to the party with a cousin of hers.

91. നാടകശാലസദ്യ എന്ന ചടങ്ങു നടക്കുന്ന ക്ഷേത്രം?
 (A) ഗുരുവായൂർ ക്ഷേത്രം (B) പദ്മനാഭസ്വാമി ക്ഷേത്രം
 (C) അമ്പലപ്പുഴ ശ്രീകൃഷ്ണസ്വാമി ക്ഷേത്രം (D) ആറന്മുള ക്ഷേത്രം
92. ശ്രീരാമന്റെ വില്ലിന്റെ പേരെന്ത്?
 (A) ശൈവചാപം (B) ത്രയംബകം
 (C) കോദണ്ഡം (D) പിനാകം
93. കുമ്പളംഗന്റെ ഉദ്യാനത്തിന്റെ പേര്?
 (A) നന്ദനം (B) ചൈത്രരഥം
 (C) കദളീവനം (D) അളകാപുരി
94. കഥകളിയുടെ പൂർവ്വ രൂപമേത്?
 (A) കഥക് (B) ഹരികഥ
 (C) കൃഷ്ണനാട്ടം (D) രാമനാട്ടം
95. ക്ഷേത്രപ്രവേശന വിളംബരം നടന്ന വർഷം?
 (A) 1916 (B) 1926
 (C) 1936 (D) 1947
96. പഞ്ചവാദ്യത്തിൽ ഉൾപ്പെടാത്തതേത്?
 (A) ചെണ്ട (B) കൊമ്പ്
 (C) തിമില (D) ഇലത്താളം
97. പടയണി എന്ന ഗ്രന്ഥം രചിച്ചതാര്?
 (A) കടമ്മനിട്ട രാമകൃഷ്ണൻ (B) കടമ്മനിട്ട വാസുദേവൻ പിള്ള
 (C) എം. വി. വിഷ്ണുനമ്പൂതിരി (D) രാഘവൻ പയ്യനാട്
98. ബ്രഹ്മാവിന്റെ വാഹനമേത്?
 (A) മയിൽ (B) കുതിര
 (C) ഗരുഡൻ (D) അരയന്നം
99. തൃശൂർപുരം ആരംഭിച്ചതാര്?
 (A) സാമൂതിരി (B) കൊച്ചിരാജാവ്
 (C) ശക്തൻ തമ്പുരാൻ (D) പഴശ്ശിരാജ
100. ഭാഷാഭഗവത്ഗീത രചിച്ചത്?
 (A) മാധവപ്പണിക്കർ (B) ശങ്കരപ്പണിക്കർ
 (C) രാമപ്പണിക്കർ (D) നാരായണപ്പണിക്കർ