



रेलवे भर्ती बोर्ड / RAILWAY RECRUITMENT BOARD
सी ई एन - ०३/२०२५ - CEN - 03/2025
Recruitment for Paramedical Categories



RRB PARAMEDICAL 2025

Lab Assistant Grade II

Paramedical Categories | CEN 03/2025

ENGLISH ANSWER KEY

Official Answer Key

Complete Paper · 11 Mar 2026

Post	Lab Assistant Grade II
Questions	100 per paper
Marking	+1 correct / -1/3 wrong
Duration	90 minutes
Sections	General Ability 30 · Professional Ability 70

Every paper is printed from the official question text with the correct answer marked.

HOW TO USE THIS BOOK

- 1 Open the INDEX on the next page.
- 2 Click any row to jump straight to that date and shift.
- 3 The correct option of every question is ticked in green.
- 4 Use the bookmarks panel of your PDF reader to move between shifts.

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Compiled 27 October 2026

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RRB Paramedical 2025 - Lab Assistant Grade II (English) - 1 paper

PAPER	DATE	TIME	QUESTIONS	PAGE
Paper 1	11 Mar 2026	4:30 PM - 6:00 PM	100	3



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PAPER 1 of 1 · Lab Assistant Grade II · English

Exam	RRB Paramedical 2025 (CEN 03/2025)
Post	Lab Assistant Grade II
Test Date	11 Mar 2026
Test Time	4:30 PM - 6:00 PM
Language	English
Questions	100
Marking	+1 correct / -1/3 wrong

Correct option of the official answer key: **green with ✓**. Question IDs are RRB's own.

Section : General Ability

- Q.1** The share price of a company was ₹2,000. It increased by 5% in the first year and then increased by 30% in the second year. What is the share price (in ₹) of the company after two years?

Ans

- 2,730 ✓
- 2,650
- 2,790
- 2,100

Question ID :
441009859506
Correct Option : 1

- Q.2** The value of $2.5555... + 1.6363... - 1.1111...$ is:

Ans

- $\frac{305}{99}$ ✓
- $\frac{311}{108}$
- $\frac{310}{100}$
- $\frac{300}{107}$

Question ID :
441009286079
Correct Option : 1

- Q.3** Which of the following Indian states shares an international boundary with both Bangladesh and Myanmar?

Ans

- Assam
- Mizoram ✓
- Tripura
- Manipur

Question ID :
4410091561869
Correct Option : 2

Q.4 Which of the following asexual reproduction techniques is commonly used for the multiplication of ornamental plants? Ans 1. Fission 2. Spore formation 3. Tissue culture ✓ 4. Fragmentation	Question ID : 441009651783 Correct Option : 3
Q.5 If the cartilage in joints is damaged, which property of connective tissue is most affected? Ans 1. Fat storage 2. Transmission of impulses 3. Blood cell formation 4. Flexibility and support ✓	Question ID : 4410091559688 Correct Option : 4
Q.6 Marathi belongs to which of the following language families? Ans 1. Dravidian 2. Indo-Aryan ✓ 3. Tibeto-Burman 4. Austroasiatic	Question ID : 4410091571780 Correct Option : 2
Q.7 The McMahon Line separates India from which country? Ans 1. China ✓ 2. Myanmar 3. Nepal 4. Pakistan	Question ID : 441009933498 Correct Option : 1
Q.8 In an experiment, a student blocks the entry of pollen tubes into the ovule. Which process will be directly affected? Ans 1. Pollination 2. Fertilisation ✓ 3. Seed germination 4. Ovary development	Question ID : 4410091568374 Correct Option : 2
Q.9 What should come in place of the '?' in the given series based on the English alphabetical order? FEG KJL POQ UTV ? Ans 1. ZXB 2. YBD 3. ZYA ✓ 4. YCE	Question ID : 4410091475419 Correct Option : 3

Q.10 All 53 people are standing in a row facing north. Nishika is 44th from the right end, while Subham is 41st from the left end. How many people are there between Nishika and Subham? Ans 1. 23 2. 30 ✓ 3. 21 4. 24	Question ID : 4410091608428 Correct Option : 2
Q.11 The governor's power to issue ordinances is mentioned in which Article of the Indian Constitution? Ans 1. 213 ✓ 2. 199 3. 112 4. 123	Question ID : 4410091344254 Correct Option : 1
Q.12 India's First Five-Year Plan (FYP) was launched in which year? Ans 1. 1947 2. 1956 3. 1961 4. 1951 ✓	Question ID : 4410091585800 Correct Option : 4
Q.13 Which charged particle in an atom moves around the nucleus? Ans 1. Electron ✓ 2. Positron 3. Neutron 4. Proton	Question ID : 441009647440 Correct Option : 1
Q.14 Which of the following expressions is correct for time period 'T', when the frequency (v) of sound wave is 500 Hz? Ans 1. $T = \frac{1}{5} \text{ s}$ 2. $T = \frac{1}{500} \text{ s}$ ✓ 3. $T = 500 \text{ s}$ 4. $T = 5 \text{ s}$	Question ID : 4410091256927 Correct Option : 2
Q.15 Refer to the following letter, symbol series and answer the question. Counting to be done from left to right only (Left) D \$ # E O % \$ \$ I £ % © & @ # G * © M * I N (Right) How many such letters are there each of which is immediately preceded by a letter and also immediately followed by a symbol? Ans 1. 2 2. 3 3. 0 4. 1 ✓	Question ID : 441009790514 Correct Option : 4

Q.16 A question is followed by two statements numbered (I) and (II). You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and select the most appropriate answer. Question: Among five sticks, V, H, Y, D and N, each having a different height, which stick is the shortest? Statements: (I) D is taller than only one stick. V is taller than H. (II) D is taller than N. Ans 1. Data in Statement II alone is sufficient to answer the question while data in statement I is not 2. Data in Statement I alone is sufficient to answer the question while data in statement II is not 3. Both statements I and II together are NOT sufficient to answer the question 4. Both statements I and II together (and not statement I alone or statement II alone) are sufficient to answer the question. ✓	Question ID : 4410091340115 Correct Option : 4
Q.17 If Thomson's model is applied to explain the stability of multi-electron atoms, what major flaw arises? Ans 1. Electrons lose energy continuously while revolving. 2. Electrons revolve in fixed circular orbits. 3. Fails to explain atomic stability and line spectra. ✓ 4. The positive charge is concentrated at the nucleus.	Question ID : 4410091560935 Correct Option : 3
Q.18 Which of the following incidents led to the withdrawal of the Non-Cooperation Movement? Ans 1. Chauri Chaura incident ✓ 2. Arrival of Simon Commission 3. Dandi March 4. Jallianwala Bagh massacre	Question ID : 4410091582440 Correct Option : 1
Q.19 What is the name given to the robotic surgery facility inaugurated at AIIMS Raipur in Central India in early September 2025? Ans 1. RoboHeal 2. Devhast ✓ 3. Roboray 4. SurgiTech	Question ID : 4410091480691 Correct Option : 2
Q.20 What is the name of the Act passed by the Indian Parliament in August 2025 to regulate online gaming and restrict online money games? Ans 1. Promotion and Regulation of Online Gaming Act, 2025 ✓ 2. Online Gaming (Promotion and Protection) Act, 2025 3. Social Media Games Act, 2025 4. Digital Gaming Act, 2025	Question ID : 4410091583061 Correct Option : 1

Q.21 In a household circuit, why is it important to connect appliances in parallel rather than in series? Ans 1. To increase the total current in the circuit 2. To allow all appliances to generate equal magnetic fields 3. To ensure each appliance receives the same voltage ✓ 4. To reduce energy consumption	Question ID : 4410091560211 Correct Option : 3
Q.22 A conductor carrying current is placed perpendicular to a magnetic field. According to Fleming's left hand rule, the direction of force on the conductor is ____. Ans 1. along the magnetic field 2. opposite to current 3. no force acts on the conductor 4. perpendicular to both the magnetic field and current ✓	Question ID : 441009717302 Correct Option : 4
Q.23 A pipe can fill a tank in 6 hours. Another pipe can empty the filled tank in 7 hours. If both the pipes are opened simultaneously, then the time (in hours) in which the tank will be half filled, is: Ans 1. 22 2. 43 3. 21 ✓ 4. 42	Question ID : 441009897278 Correct Option : 3
Q.24 A car travels 60 km in 2 hours and 90 km in 3 hours. Its average speed is ____. Ans 1. 45 km/h 2. 50 km/h 3. 40 km/h 4. 30 km/h ✓	Question ID : 4410091256251 Correct Option : 4
Q.25 "The State shall endeavour to secure for the citizens a uniform civil code throughout the territory of India" is a provision mentioned in which of the following Parts of the Constitution of India? Ans 1. Part IVA 2. Part IV ✓ 3. Part V 4. Part III	Question ID : 441009189162 Correct Option : 2

Q.26 Select the set in which the numbers are related in the same way as are the numbers of the following sets. (NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding to/subtracting from/multiplying with 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.) (18, 19, 342) (20, 22, 440) Ans 1. (16, 22, 352) ✓ 2. (26, 13, 388) 3. (24, 17, 508) 4. (23, 17, 368)	Question ID : 441009272103 Correct Option : 1
Q.27 In a quadrilateral ABCD, the diagonals intersect at point P, forming four triangles. The areas of $\triangle APD$ and $\triangle BPC$ are 27 cm^2 and 12 cm^2, respectively. It is also known that the areas of $\triangle APB$ and $\triangle CPD$ are equal. Using this information, determine the area (in cm^2) of $\triangle APB$. Ans 1. 12 2. 27 3. 24 4. 18 ✓	Question ID : 4410091534046 Correct Option : 4
Q.28 What does the formula Na_2SO_4 indicate about the molecule? Ans 1. It contains two sulphur atoms 2. It contains two oxygen atoms 3. It contains four sodium atoms 4. It contains two sodium atoms ✓	Question ID : 4410091560964 Correct Option : 4
Q.29 In November 2025, the Government of India consolidated 29 labour laws into how many comprehensive Labour Codes? Ans 1. Two 2. Ten 3. Four ✓ 4. Six	Question ID : 4410091571271 Correct Option : 3
Q.30 The mean age of the girls in a class is 15 years, whereas the mean age of the boys in the class is 17 years. If the mean age of the whole class is 16 years, find the ratio of the number of girls to the number of boys in the class. Ans 1. 2 : 3 2. 1 : 1 ✓ 3. 1 : 2 4. 2 : 1	Question ID : 441009500153 Correct Option : 2

Section : Professional Ability

Q.31 A laboratory is required to prepare a 0.9% saline solution using SI units. What is the correct amount of sodium chloride (in grams) needed to prepare 500 mL of this solution? Ans 0.45 4.5 ✓ 1.8 9.0	Question ID : 4410091700627 Correct Option : 2
Q.32 When performing a negative stain on bacteria, which reagent is commonly used to stain the background for clear visualization of cell morphology? Ans India ink ✓ - Methylene blue - Crystal violet - Safranin	Question ID : 4410091569701 Correct Option : 1
Q.33 Performing diagnostic tests without valid clinical indication and without informing the patient represents which ethical violation? Ans - Benevolence Malpractice ✓ - Confidentiality - Conscientiousness	Question ID : 4410091582612 Correct Option : 2
Q.34 Which of the following is/are commonly used as blood substitute(s)? Ans - Trisodium Citrate - Dextrose - Saline Perfluorocarbons ✓	Question ID : 4410091583801 Correct Option : 4
Q.35 A stool sample that floats and appears greasy is most likely associated with which chemical abnormality? Ans - High glucose Increased fat content ✓ - Excess uric acid - Increased protein content	Question ID : 4410091576205 Correct Option : 2
Q.36 Which type of glassware is most suitable for preparing standard solutions due to its high accuracy in volume measurement? Ans - Beaker - Measuring cylinder Volumetric flask ✓ - Test tube	Question ID : 4410091706989 Correct Option : 3

Q.37 A patient's urine sample is dark brown and tests positive for bilirubin. What is the most likely diagnosis? Ans 1. Liver dysfunction such as hepatitis ✓ 2. Diabetes mellitus 3. Urinary tract infection 4. Dehydration	Question ID : 4410091707013 Correct Option : 1
Q.38 Which of the following pairs of anatomical terms are opposites and describe relative closeness to the midline? Ans 1. Superficial and Deep 2. Proximal and Distal 3. Medial and Lateral ✓ 4. Superior and Inferior	Question ID : 4410091698010 Correct Option : 3
Q.39 What is the correct sequence of steps to be followed if a chemical spill occurs in the laboratory? Ans 1. Alert others, evacuate area, follow spill procedure, report incident ✓ 2. Evacuate area, ignore spill, continue working, report incident 3. Clean spill with bare hands, continue work, report later 4. Ignore spill, report at end of shift, clean next day	Question ID : 4410091587521 Correct Option : 1
Q.40 What is the recommended time frame within which a urine sample should be processed for culture after collection? Ans 1. Within 12 hours 2. After 24 hours 3. After 8 hours 4. Within 2 hours ✓	Question ID : 4410091579252 Correct Option : 4
Q.41 What is the main principle behind the glucose oxidase-peroxidase (GOD-POD) method of blood glucose estimation? Ans 1. Oxidation of glucose to gluconic acid and hydrogen peroxide ✓ 2. Precipitation of proteins to drive protein phase separation 3. Reduction of copper ions to cupric ion 4. Formation of a blue colored complex with glucose	Question ID : 4410091576232 Correct Option : 1
Q.42 Which type of blood collection bag is ideal for collecting blood for platelet concentrate preparation? Ans 1. Quadruple bag ✓ 2. Double bag 3. Single bag 4. Triple bag	Question ID : 441009187812 Correct Option : 1

Q.43 Which of the following equipment is used to make the puncture for capillary blood collection? Ans 1. Hypodermic needle 2. Lancet ✓ 3. Butterfly infusion set 4. Syringes	Question ID : 4410091701281 Correct Option : 2
Q.44 Which anticoagulant is preferred for plasma glucose estimation in clinical biochemistry? Ans 1. Citrate 2. Heparin 3. EDTA 4. Sodium fluoride ✓	Question ID : 4410091596261 Correct Option : 4
Q.45 A phlebotomist needs to collect venous blood from an adult patient for routine testing. Considering accessibility, risk of complications, and vein stability, which site is generally preferred for initial venipuncture? Ans 1. Cephalic vein along the lateral aspect of the arm because it is always larger than other veins 2. Basilic vein along the medial aspect of the arm because it carries the highest blood flow 3. Median cubital vein in the antecubital fossa due to its superficial location and minimal risk of nerve injury ✓ 4. Dorsal venous network of the hand because it has the least chance of hematoma formation	Question ID : 4410091573703 Correct Option : 3
Q.46 Which of the following best describes the principle behind autoclaving for sterilization? Ans 1. It uses dry heat to oxidize contaminants 2. It uses pressurized steam to destroy microorganisms ✓ 3. It uses ultraviolet light to disrupt DNA 4. It uses filtration to remove particles	Question ID : 4410091701875 Correct Option : 2
Q.47 A laboratory technician finds a greasy residue on a flask after autoclaving. What is the most likely reason for this? Ans 1. Water used in autoclave was contaminated 2. Glassware was not properly cleaned before sterilization ✓ 3. The autoclave temperature was too high 4. Flask material reacted with steam	Question ID : 4410091587468 Correct Option : 2

Q.48 In a clinical scenario, a pregnant woman is Rh negative and her partner is Rh positive. What is the best intervention to prevent hemolytic disease of the fetus and newborn? Ans 1. Administer anti-D immunoglobulin to the father 2. Administer anti-D immunoglobulin to the mother ✓ 3. No intervention is necessary 4. Perform an exchange transfusion on the fetus	Question ID : 4410091585066 Correct Option : 2
Q.49 During the standardization of a 1.0 mL volumetric pipette, which substance can be used instead of distilled water? Ans 1. Alcohol 2. Liquid Nitrogen 3. Saline 4. Mercury ✓	Question ID : 4410091587414 Correct Option : 4
Q.50 During sputum processing, what is the correct action if the specimen received is mostly saliva? Ans 1. Wash the sample with saline 2. Incubate the sample 3. Stain the sample with iodine 4. Reject the sample ✓	Question ID : 4410091586879 Correct Option : 4
Q.51 When preparing a standard solution in a volumetric flask, the concentration calculated as amount of solute per liter of solution is expressed in which unit? Ans 1. Moles per liter ✓ 2. Milligrams per liter 3. Normal per liter 4. Grams per liter	Question ID : 4410091587460 Correct Option : 1
Q.52 A laboratory technician receives a valuable tissue sample that must remain viable for future DNA analysis. Which preservation technique should be applied to best protect both cellular structure and genetic material? Ans 1. Fixation with formalin 2. Deep freezing at -80 degrees Celsius ✓ 3. Immersion in saline solution 4. Dry heat sterilization	Question ID : 4410091573669 Correct Option : 2
Q.53 What is the significance of metachromatic granules observed in Corynebacterium diphtheriae when using Neisser staining? Ans 1. They demonstrate cell wall structure 2. They indicate the presence of stored phosphate ✓ 3. They show flagella arrangement 4. They confirm antibiotic resistance	Question ID : 4410091579222 Correct Option : 2

Q.54 Which statement best describes the main purpose of an 'in use test' when evaluating disinfectants in a healthcare setting? Ans 1. It determines the shelf life of the disinfectant. 2. It ensures the disinfectant is safe for skin application. 3. It assesses the effectiveness of a disinfectant during actual conditions of use. ✓ 4. It identifies all microorganisms present in the disinfectant bottle.	Question ID : 4410091579257 Correct Option : 3
Q.55 Which of the following actions is most appropriate as an immediate first aid step before seeking further help if a glass container shatters and a student receives a cut that is bleeding? Ans 1. Cover the wound immediately with adhesive tape without prior cleaning 2. Rinse the wound under running water for several minutes before controlling bleeding 3. Apply alcohol directly into the wound before attempting hemostasis 4. Apply firm direct pressure with a clean cloth or dressing to control bleeding ✓	Question ID : 4410091589304 Correct Option : 4
Q.56 If a patient's tidal volume decreases but their respiratory rate remains the same, what is the most likely effect on alveolar ventilation and why? Ans 1. Alveolar ventilation increases due to less dead space 2. Alveolar ventilation increases due to increased oxygen uptake 3. Alveolar ventilation remains unchanged 4. Alveolar ventilation decreases due to reduced fresh air reaching alveoli ✓	Question ID : 4410091573813 Correct Option : 4
Q.57 Why is it necessary to conduct in-use tests on disinfectants solutions in hospitals? Ans 1. To ensure microbial killing ability during routine use ✓ 2. To compare with international standards only 3. To make sure the solution smells pleasant 4. To check if the solution changes color	Question ID : 4410091701816 Correct Option : 1
Q.58 Why is it important to avoid hemolysis during blood specimen collection for biochemistry tests? Ans 1. Hemolysis increases plasma volume 2. Hemolysis prevents clot formation 3. Hemolysis can release intracellular contents, altering test results ✓ 4. Hemolysis reduces the risk of infection	Question ID : 4410091700591 Correct Option : 3
Q.59 Which combination of factors is most likely to increase the risk of bacterial contamination in collected blood? Ans 1. Proper labeling and immediate refrigeration 2. Improper skin preparation and prolonged collection time ✓ 3. Use of sterile gloves and rapid collection 4. Donor fasting and high hemoglobin levels	Question ID : 4410091703518 Correct Option : 2

Q.60 Why is it important to use a blank solution when calibrating a colorimeter? Ans 1. To test the durability of the cuvette 2. To increase the sensitivity of the colorimeter 3. To correct for absorbance due to solvents and reagents ✓ 4. To enhance the color intensity of the sample	Question ID : 4410091585103 Correct Option : 3
Q.61 A pus aspirate was received for culture. Which of the following is the correct step before Gram staining? Ans 1. Directly prepare smear ✓ 2. Use the anaerobic swab to make gram stain 3. Mix with saline, centrifuge, and stain the pellet 4. Inoculate culture media first, then prepare smear from residual aerobic pus sample	Question ID : 4410091698970 Correct Option : 1
Q.62 Which component inside an autoclave ensures even distribution of steam for effective sterilization? Ans 1. The water reservoir lid 2. The perforated tray or rack ✓ 3. The outer insulation layer 4. The control panel	Question ID : 4410091584638 Correct Option : 2
Q.63 What is the main function of the myelin sheath in the nervous system? Ans 1. To connect neurons to muscles 2. To speed up signal transmission ✓ 3. To protect the neuron cell body 4. To generate nerve impulses	Question ID : 4410091564834 Correct Option : 2
Q.64 What is the main function of the heart in the cardiovascular system? Ans 1. To produce hormones 2. To filter waste 3. To pump blood ✓ 4. To digest food	Question ID : 4410091573788 Correct Option : 3
Q.65 Which body fluid is commonly collected for the diagnosis of bacterial meningitis? Ans 1. Synovial fluid 2. Ascitic fluid 3. Cerebrospinal fluid ✓ 4. Pleural fluid	Question ID : 4410091579228 Correct Option : 3

Q.66 A patient presents with pale, bulky, foul-smelling stool that floats. This presentation is associated with which abnormality? Ans 1. Pancreatic enzyme deficiency 2. Excess fat (steatorrhea) in the stool ✓ 3. Presence of undigested muscle fibers (creatorrhea) 4. Increased bilirubin	Question ID : 4410091698085 Correct Option : 2
Q.67 A laboratory technician needs to transfer 10 mL of solution accurately and then dispense it completely by blowing out the last drop. Which pipette should be used for this procedure? Ans 1. Pasteur pipette 2. Mohr pipette 3. Serological pipette ✓ 4. Volumetric pipette	Question ID : 4410091706990 Correct Option : 3
Q.68 Which laboratory equipment is essential for measuring the absorbance of solutions to determine concentration, and what principle does it operate on? Ans 1. Colorimeter; it operates on the Beer-Lambert Law. ✓ 2. Microscope; operates on magnification. 3. Centrifuge; operates on centrifugal force. 4. Spectrophotometer; operates on the law of reflection.	Question ID : 4410091584972 Correct Option : 1
Q.69 According to standard operating procedures (SOP), what is the maximum recommended storage duration for whole blood at 2-6°C to ensure safety and efficacy? Ans 1. 21 days 2. 35 days ✓ 3. 45 days 4. 14 days	Question ID : 4410091705388 Correct Option : 2
Q.70 A doctor advised platelet concentrate transfusion for a patient with thrombocytopenia following chemotherapy. What is the most likely reason for this intervention? Ans 1. To enhance immunity 2. To correct electrolyte imbalance 3. To reduce the risk of bleeding ✓ 4. To treat anemia	Question ID : 4410091703538 Correct Option : 3
Q.71 When preparing a phosphate buffer, why is it important to use both monobasic and dibasic sodium phosphate? Ans 1. To prevent the precipitation of sodium ions 2. To achieve the desired pH by balancing acidic and basic components ✓ 3. To increase the solubility of phosphate salts 4. To ensure the buffer solution remains colorless	Question ID : 4410091587438 Correct Option : 2

Q.72 A microbiologist performs Gram staining on a mixed culture but omits the iodine step. What is the likely result observed under the microscope? Ans 1. Gram-positive cells are purple and Gram-negative cells are pink 2. Gram-positive cells are pink and Gram-negative cells are purple 3. Both Gram-positive and Gram-negative cells appear purple 4. Both Gram-positive and Gram-negative cells appear pink ✓	Question ID : 4410091698957 Correct Option : 4
Q.73 A patient presents with high serum urea and normal serum creatinine. What does this most likely indicate? Ans 1. Post-renal obstruction 2. Acute tubular necrosis 3. Pre-renal azotemia ✓ 4. Chronic kidney disease	Question ID : 4410091700583 Correct Option : 3
Q.74 Which of the following is a key ethical principle that must be upheld in laboratory medicine? Ans 1. Ensuring convenience in sample collection procedures 2. Achieving technical accuracy in test performance 3. Maximizing profitability of laboratory services 4. Maintaining confidentiality of patient information ✓	Question ID : 4410091589295 Correct Option : 4
Q.75 What is the preferred thickness for frozen sections, and which adhesive is commonly used for fixed sections during microtomy? Ans 1. 15-20 microns and gelatin 2. 50-70 microns and 10% formalin 3. 4-10 microns and albumin ✓ 4. 20-30 microns and paraffin wax	Question ID : 4410091581641 Correct Option : 3
Q.76 Which of the following is the most suitable preservative for maintaining the cellular integrity of urine samples for microscopic examination in a clinical laboratory? Ans 1. Alcohol 2. Formalin ✓ 3. Distilled water 4. Sodium chloride	Question ID : 4410091700608 Correct Option : 2
Q.77 What is the main reason basic fuchsin is preferred over safranin as a counterstain for gram-negative bacteria? Ans 1. Safranin stains both gram-positive and gram-negative bacteria equally 2. Basic fuchsin is the only counterstain approved for clinical use 3. Basic fuchsin stains gram-negative organisms more intensely than safranin ✓ 4. Basic fuchsin is less expensive than safranin	Question ID : 4410091582013 Correct Option : 3

Q.78 Which of the following features of a triple blood collection pack enables the separation of plasma, red blood cells, and platelets from a single blood donation? Ans 1. A primary collection bag with increased storage capacity 2. Multiple sterile satellite bags connected to the main collection bag ✓ 3. An integrated leukocyte reduction filter within the tubing 4. Dual venipuncture needles to allow parallel component collection	Question ID : 4410091591083 Correct Option : 2
Q.79 Which combination best explains why laboratory safety rules must be strictly followed by students during experiments? Ans 1. To impress the instructor and finish experiments faster 2. To avoid cleaning up afterwards 3. To prevent accidents and minimize exposure to hazardous materials ✓ 4. To finish experiments faster to prevent accidents	Question ID : 4410091591124 Correct Option : 3
Q.80 Which of the following is the possible cause of performing sterility testing on culture media before use in microbiological laboratories? Ans 1. To check the temperature stability 2. Ensuring the media does not contain contaminating microorganisms ✓ 3. To measure the nutrient composition 4. To ensure the colour is consistent	Question ID : 4410091701851 Correct Option : 2
Q.81 pH is defined as: Ans 1. A measure of how the colour of a substance changes 2. A measure of how the temperature of a substance changes 3. A measure of how acidic or basic a substance is ✓ 4. A measure of how the volume of a substance changes	Question ID : 4410091585116 Correct Option : 3
Q.82 The lungs are located in which cavity? Ans 1. Abdominal cavity 2. Thoracic cavity ✓ 3. Pelvic cavity 4. Cranial cavity	Question ID : 4410091576063 Correct Option : 2
Q.83 Which type of anemia is most likely to develop in a patient with chronic blood loss? Ans 1. Sickle cell anemia 2. Pernicious anemia 3. Aplastic anemia 4. Iron deficiency anemia ✓	Question ID : 4410091564833 Correct Option : 4
Q.84 Which of the following species is most likely to be identified by Neisser's stain? Ans 1. Salmonella species 2. Escherichia coli 3. Microthrix parvicella ✓ 4. Mycobacterium tuberculosis	Question ID : 4410091582078 Correct Option : 3

Q.85 Which stain is most appropriate for detecting acid-fast bacilli in tissue sections? Ans 1. Giemsa 2. Cresyl Violet 3. Masson's Trichrome 4. Ziehl-Neelsen ✓	Question ID : 4410091579193 Correct Option : 4
Q.86 A blood donor reports recent exposure to hepatitis B virus (HBV). What is the most appropriate action according to blood donor screening guidelines? Ans 1. Test the blood and collect if negative 2. Ignore the exposure and continue 3. Proceed with blood collection without considering donor history 4. Defer the donor from donating blood ✓	Question ID : 4410091582224 Correct Option : 4
Q.87 What is the recommended angle for needle insertion during venipuncture in blood collection for blood banking? Ans 1. 45 to 60 degrees 2. 0 to 10 degrees 3. 15 to 30 degrees ✓ 4. 60 to 75 degrees	Question ID : 4410091703519 Correct Option : 3
Q.88 Which of the following is the most common human blood group system used in blood banking? Ans 1. Rh system 2. Lewis system 3. ABO system ✓ 4. MNS system	Question ID : 4410091585039 Correct Option : 3
Q.89 What is the primary specimen collected for blood glucose estimation? Ans 1. Sweat 2. Whole blood 3. Plasma ✓ 4. Urine	Question ID : 4410091596282 Correct Option : 3
Q.90 Which precaution is most important to protect healthcare workers during use of glutaraldehyde as a disinfectant in a clinical setting? Ans 1. Use only glass containers for glutaraldehyde 2. Ensure adequate room ventilation due to toxic vapors ✓ 3. Store glutaraldehyde in direct sunlight 4. Dilute glutaraldehyde with tap water	Question ID : 4410091701827 Correct Option : 2

Q.91 Which of the following bones is NOT a component of nasal bones? Ans 1. Vomer bone ✓ 2. Ethmoid bone 3. Frontal bone 4. Maxilla	Question ID : 4410091566014 Correct Option : 1
Q.92 Which of the following best defines disinfection in a clinical laboratory setting? Ans 1. The process of eliminating most pathogenic microorganisms on inanimate objects ✓ 2. The use of antibiotics to treat infections 3. The complete removal of all forms of microbial life 4. The process of washing hands with soap and water to aid in microbial growth	Question ID : 4410091584543 Correct Option : 1
Q.93 A laboratory technician observes clusters of spherical bacteria under the microscope. What is the most appropriate term to describe their arrangement and shape? Ans 1. Streptobacilli 2. Diplococci 3. Vibrio 4. Staphylococci ✓	Question ID : 4410091698952 Correct Option : 4
Q.94 While separating serum and plasma, what is the main difference in the collection tube? Ans 1. Both tubes contain no additives 2. Serum tubes contain no anticoagulant, while plasma tubes contain anticoagulants ✓ 3. Serum tubes contain anticoagulants, while plasma tubes contain none 4. Both tubes contain anticoagulants	Question ID : 4410091588389 Correct Option : 2
Q.95 Which of the following equipment is essential for creating a sterile environment while transferring microorganisms in a microbiology lab? Ans 1. Autoclave 2. Laminar airflow cabinet ✓ 3. Hot air oven 4. Spectrophotometer	Question ID : 4410091701861 Correct Option : 2
Q.96 What is a potential hazard caused by spattering from strong acids, caustic materials, and oxidizing agents in the laboratory? Ans 1. Chemical burns ✓ 2. Electrical shock 3. Biological contamination 4. Fire hazard	Question ID : 4410091580231 Correct Option : 1

Q.97 Which of the following is the most appropriate medium for initial inoculation of a throat swab sample for bacterial culture? Ans Blood agar ✓ - Chocolate agar - MacConkey agar - Sabouraud agar	Question ID : 4410091698985 Correct Option : 1
Q.98 What substance is primarily measured in the serum to evaluate kidney excretory function? Ans - Bilirubin Creatinine ✓ - Lipase - Hemoglobin	Question ID : 4410091573643 Correct Option : 2
Q.99 Which type of anaemia is most commonly associated with iron deficiency? Ans - Normochromic macrocytic anaemia Microcytic hypochromic anaemia ✓ - Normochromic normocytic anaemia - Aplastic anaemia	Question ID : 4410091580747 Correct Option : 2
Q.100 Which of the following enzymes is most specific for diagnosing hepatocellular injury in liver function tests? Ans - Aspartate aminotransferase (AST) Alanine aminotransferase (ALT) ✓ - Gamma-glutamyl transferase (GGT) - Alkaline phosphatase (ALP)	Question ID : 4410091700577 Correct Option : 2