

Board of Intermediate and Secondary Education, Rawalpindi
Clinical Pathology

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Time: 3 Hours

Total Marks: 50

Note: - All questions of this section are to be answered on the question paper itself.

It should be completed in first 15 minutes and handed to centre supervisor on duty.

Please encircle the correct answer with Ink (Ball Pen).

Do not use led pencils (No Cutting or Erasing is acceptable.)

Section-A (15 Marks)

Fill in the Blanks 5

1. Clinical pathology is the branch of medical science that deals with the study of _____.
2. Transmittance is expressed as _____.
3. Presence of Bence Jon's proteins in urine indicates _____.
4. Ketone bodies in urine are found most commonly in _____.
5. Widal test is a type of _____.

b. **Choose the correct answer.**

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MCQs

Q:1. Urine specimens are preserved by different chemicals. Identify the substance not suitable for urine sample preservation .

- a) Toluene
- b) Formaldehyde
- c) Sulphuric acid (H_2SO_4)
- d) Hydrochloric acid (HCl)

Q: 2 Pre-renal protein urea is caused by following conditions except.

- a) Congestive Cardiac failure
- b) Hypertnsion

- c) Multiple myeloma
- d) Nephritis

Q: 3. Some substances other than glucose give urine sugar test positive. The substances are called reducing substances, non carbohydrates. Identify which one of the following is not non carbohydrate substance.

- a) Vitamin C
- b) Pentose
- c) Salicylates
- d) Isoniazid

Q: 4. Ehrlich's test is performed to detect.

- a) Glucose in urine
- b) Protein in urine
- c) Urobilinogen in urine
- d) Ketone bodies in urine

Q: 5. Oligozoospermia means.

- a) No sperm in semen
- b) Sperm count less than 20 million/ml
- c) Sperm count 350 million/ml
- d) Low count and low motility

Q: 6. Which of the following constituent of gastric juice is important for absorption of B₁₂.

- a) Pepsin
- b) Hcl(Hydrochloric acid)
- c) Intrinsic factor.
- d) Mucin

Q: 7. Cerebrospinal fluid is examined microscopically to diagnose some diseases of clinical importance except.

- a) Meningitis
- b) Tuberculosis
- c) Leishmania tropica
- d) Amoeba (Nagria)

Q: 8. Quality control refers to the steps laid by the laboratory to ensure that.

- a) Laboratory instruments/machines are in working conditions
- b) Laboratory earns more money
- c) To ensure that tests are performed accurately

d) ' Tests are performed well in time

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Q: 9. Opsonins are antibodies that.

- a) Combine with bacteria to produce their clumps
- b) These may form precipitates after combining with specificities antigens
- c) Combine with bacteria to make them susceptible for phagocytosis
- d) Cause lysis of RBCs and bacteria in the presence of complement

Q: 10. VDRL test is performed for.

- a) Diagnosis of tuberculosis
- b) Diagnosis of syphilis
- c) Diagnosis of malaria
- d) Diagnosis of joint pains (Arthritis)

Section-B (20 Marks)

e) Note: Attempt all questions. Each question carries 02 marks

1. Enumerate four branches of clinical pathology?
2. Name different types of water?
3. Name four types of urine specimen?
4. What are the causes of poly urea?
5. Name four proteins found in urine in disease states?
6. What are qualitative and quantitative tests
7. Name different tests performed for detection of Ketone bodies in urine?
8. Name important constituents of gastric juice?
9. Name types of antigens
10. Name types of antibodies

Section-C (15 Marks)

Note: attempt two questions. Each question carries 7½ marks

1. Describe WIDAL TEST.
2. Describe Glucose Tolerance Test.
3. Describe Vandenberg reaction in detail.

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Practicle Clinical Pathology & Serology

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Attempt all question. Question 1 & 2 carries 10 marks each, Question 3 carries 5 marks, Viva 20 marks, practice copy 5 marks.

Q1 Perform microscopic examination on urine samples provided and report your findings. (10)

Q2 Perform RA test serum samples provided and report your findings. (10)

Q3 Perform Benedicts qualitative test on urine sample provided and report your results (05)

Q4 VIVA (20)

Q5 Pracical Copy (05)