

Vocational Practical Question Bank

Second Year

Medical Lab Technician

Course Code : 612

State Institute of Vocational Education

**O/o the Commissioner of Intermediate
Education**

Telangana, Hyderabad

&

Board of Intermediate Education,

Telangana, Hyderabad

**MEDICAL LAB TECHNICIAN
SECOND YEAR
SUBJECT : BIO CHEMISTRY-II
PAPER - I**

Time : 3 Hours

Max. Marks : 50

Section - I

(1 x 8 = 8 Marks)

1. Separation of serum amino acids by paper chromatography – demo.
2. Oral G.T.T – demo.
3. Estimation of serum calcium.
4. Determination of urine proteins by sulfosalicylic acid test.
5. Demonstration of working of auto analysers.
- 6.. Procedure of Estimation of sodium by fpm in the given sample of serum.

Section - II

(1 x 8 = 8 Marks)

7. Procedure of Estimation of potassium by fpm in the given sample of Serum.
8. Qualitative identification of urine sugar.
9. Qualitative identification of urine proteins by heat coagulation test.
10. Qualitative identification of urine bile salts
11. Qualitative identification of urine bile pigments.
12. Quantitative determination of bilirubin in the given sample of serum.

Section - III

(1 x 8 = 8 Marks)

13. Determination of SGPT in the given sample of serum
14. Determination of Alkaline Phosphatase in the given sample of serum.
15. Determination of urea in the given sample of blood.
16. Determination of creatinine in the given sample of serum.
17. Estimation of HDL cholesterol in the given specimen of serum.
18. Paper electro phoresis of serum proteins – demo. .

Section - IV

(2 x 4 = 8 Marks)

19. (a) Draw the diagram of setup of paper chromatography.
(b) Draw the diagram of setup of paper electrophoresis.
20. (a) Name the reagents used in the determination of SGPT.
(b) Name the reagents used in the determination of serum alkaline phosphatase.
21. (a) Diagrammatic representation of organization of a computer.
(b) Flow diagram of working of FPM.
22. (a) Collection of blood sample.
(b) Types of urine specimens.
23. (a) Separation of serum from clotted blood.
(b) Determination of Rf value.
24. (a) Names of lipid profile tests.
(b) Interpretation of lipid profile.

Section - V

(4 x 2 = 8 Marks)

Identify the following

25. (a) Paper Chromatography chamber
(b) Disposable syringe
(c) Serological pipette.
(d) Burette
26. (a) Photo electric colorimeter.
(b) Volumetric flask
(c) Cuvette
(d) Test tube.
27. (a) Centrifuge tube
(b) Centrifuge
(c) Conical flask
(d) R.B.flask
28. (a) Disposable needle
(b) Beaker
(c) Measuring cylinder
(d) Filter funnel
29. (a) Reagent bottle
(b) Weighing bottle
(c) Dropper bottle
(d) Watch glass.
30. (a) Surgical cotton
(b) Glass slide
(c) Filter paper
(d) Wash bottle.

Section - VI

a. Record

5 Marks

b. Viva voce

5 Marks

**MEDICAL LAB TECHNICIAN
SECOND YEAR
MODEL QUESTION PAPER
SUBJECT : BIO CHEMISTRY-II
PAPER - I**

Time : 3 hours

Max. Marks : 50

Section - I

1 x 8 = 8 marks

1. Separation of serum amino acids by paper chromatography – demo

Section - II

1 x 8 = 8 Marks

9. Qualitative identification of urine proteins by heat coagulation test.

Section - III

1 x 8 = 8 Marks

15. Determination of urea in the given sample of blood.

Section - IV

2 x 4 = 8 Marks

21. (a) Diagrammatic representation of organization of a computer.
(b) Flow diagram of working of FPM.

Section - V

4 x 2 = 8 Marks

25. (a) Paper Chromatography chamber
(b) Disposable syringe
(c) Serological pipette.
(d) Burette

Section - VI

a. Record

5 Marks

b. Viva voce

5 Marks

Note : The Serial numbers of the questions mentioned above are the serial numbers in question bank. In practical examination only the serial number of the questions will be given, the examiner shall decode it with question bank and give the questions.

**MEDICAL LAB TECHNICIAN
SECOND YEAR
PRACTICAL SCHEME OF VALUATION
SUBJECT : BIO CHEMISTRY-II
PAPER - I**

Time : 3 hours

Max. Marks : 50

Section - I,II,III Major Questions (1 x 8 = 8 Marks)

- | | | |
|------------------------------------|---|---------|
| 1. Principle / Objective / Purpose | : | 1 mark |
| 2. Materials | : | 1 mark |
| 3. Procedure / Method | : | 4 marks |
| 4. Result / Observation / Comment | : | 2 marks |

Section - IV (2 x 4 = 8 Marks)

- | | | |
|------------------------------|---|---------|
| 1. Purpose / Use / Objective | : | 1 mark |
| 2. Method / Description | : | 2 marks |
| 3. Result or Remark | : | 1 mark |

Section - V Identification and Use (4 x 2 = 8 Marks)

- (a)
- (b)
- (c)
- (d)

Section - VI

- | | | |
|---------------|---|---------|
| Record | : | 5 Marks |
| Viva | : | 5 Marks |

**MEDICAL LAB TECHNICIAN
SECOND YEAR
SUBJECT : MICROBIOLOGY
PAPER - II**

Time : 3 Hours

Max. Marks : 50

Section - I

(1 x 8 = 8 Marks)

1. Perform the widal test with given sample.
2. Collection of specimens for fungal examinations.
3. Identify the ova and cysts by wet preparation.
4. Incubation of fertile eggs and inoculation by various routes.
5. Perform VDRL with the given sample.
6. Identify the staphylococcus by biochemical reactions.

Section - II

(1 x 8 = 8 Marks)

7. Methods of collection of clinical specimens.
8. Identify the E.coli by biochemical reactions.
9. Perform Antibiotic sensitivity test with the given sample.
10. Preservation methods of stock cultures.
11. Describe Dermatophytes with figures.
12. Collection, preservation and transportation of fecal material

Section - III

(1 x 8 = 8 Marks)

13. Procedure, processing of sputum for AFB.
14. Identify ova & cyst in the given sample by concentration technique.
15. Identify the HIV by ELISA technique.
16. Procedure for skin clipping of leprae bacilli.
17. Identify the salmonella by biochemical reactions.
18. Fungal examination by KOH preparation.

Section - IV

(2 x 4 = 8 Marks)

19. (a) Germ tube test
(b) collection of CSF
20. (a) sterilization by HAO.
(b) Fungal culture.
21. (a) RIA
(b) Lyophilization.
22. (a) Agglutination.
(b) Inoculation
23. (a) Taenia solium.
(b) Preparation of Antibiotic disc
24. (a) IMVIC test.
(b) Staphylococcus.

Section - V

(4 x 2 = 8 Marks)

25. (a) Microscope.
(b) Aspergillus.
(c) Hot air oven.
(d) Gonococci.
26. (a) Pencillium.
(b) Autoclave.
(c) Rabies virus.
(d) Meningicoci.
27. (a) Inoculation loop
(b) Candida.
(c) VDRL
(d) Widal kit.
28. (a) Pneumococci
(b) Petridish.
(c) Cryptococcus.
(d) Incubator.
29. (a) Vibriocholera.
(b) Staphylococci.
(c) CRP
(d) E.histolytica.
30. (a) Stock culture
(b) HIV
(c) Centrifuge.
(d) Yeast.

Section - VI

Record

5 Marks

Viva

5 Marks

**MEDICAL LAB TECHNICIAN
SECOND YEAR
MODEL QUESTION PAPER
SUBJECT : MICROBIOLOGY
PAPER - II**

Time : 3 hours

Max. Marks : 50

Section - I

1 x 8 = 8 marks

1. Perform the widal test with given sample.

Section - II

1 x 8 = 8 Marks

9. Perform Antibiotic sensitivity test with the given sample.

Section - III

1 x 8 = 8 Marks

14. Identify ova & cyst in the given sample by concentration technique.

Section - IV

2 x 4 = 8 Marks

21. (a) RIA
(b) Lyophilization.

Section - V

4 x 2 = 8 Marks

30. (a) Stock culture.
(b) HIV
(c) Centrifuge.
(d) Yeast

Section - VI

Record

5 Marks

Viva

5 Marks

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**MEDICAL LAB TECHNICIAN
SECOND YEAR
PRACTICAL SCHEME OF VALUATION
SUBJECT : MICROBIOLOGY
PAPER - II**

Time : 3 hours

Max. Marks : 50

Section - I,II,III Major Questions (1 x 8 = 8 Marks)

- | | | |
|------------------------------------|---|---------|
| 1. Principle / Objective / Purpose | : | 1 mark |
| 2. Materials | : | 1 mark |
| 3. Procedure / Method | : | 4 marks |
| 4. Result / Observation / Comment | : | 2 marks |

Section - IV (2 x 4 = 8 Marks)

- | | | |
|------------------------------|---|---------|
| 1. Purpose / Use / Objective | : | 1 mark |
| 2. Method / Description | : | 2 marks |
| 3. Result or Remark | : | 1 mark |

Section - V Identification and Use

(4 x 2 = 8 Marks)

- (a)
- (b)
- (c)
- (d)

Section - VI

- | | | |
|---------------|---|---------|
| Record | : | 5 Marks |
| Viva | : | 5 Marks |

**MEDICAL LAB TECHNICIAN
SECOND YEAR
SUBJECT : PATHOLOGY
PAPER - III**

Time : 3 Hours

Max. Marks : 50

Section - I

(1 x 8 = 8 Marks)

1. Identify the sickle cells in the given sample.
2. Find out ABO blood group in the given sample
3. Perform cross matching in the given samples.
4. Steps performed in tissue processing.
5. Describe the decalcification.
6. Preparation of formalin for fixation.

Section - II

(1 x 8 = 8 Marks)

7. Find out clotting time in your own blood.
8. Perform coomb's test in the given sample.
9. Prepare bone marrow smears.
10. Slide preparation and staining of pap smears.
11. stain the bone marrow smear.
12. Tissue processing by using Automatic tissue processor.

Section - III

(1 x 8 = 8 Marks)

13. Describe Honing of microtome knives.
14. Find out bleeding time in your own blood.
15. Prepare buffy coat with the given sample.
16. Stropping of microtome knives.
17. Find out Rh blood grouping in the given sample.
18. Prepare the special stain PAS.

Section - IV

(2 x 4 = 8 Marks)

19. (a) Human blood group Ag & Ab
(b) Blood smear preparation.
20. (a) APTT
(b) Fixation.
21. (a) Romanow sky stains
(b) Granulocytes
22. (a) Coagulation.
(b) FNAC
23. (a) Blood banking
(b) Bone marrow.
24. (a) Haemo parasites.
(b) Mounting.

Section - V

(4 x 2 = 8 Marks)

Identify the following

25. (a) Automatic tissue processor.
(b) Test tubes.
(c) Leishman stain.
(d) Microscope.
26. (a) Coulter counter.
(b) Hot air oven.
(c) Slides.
(d) Platelets.
27. (a) Petridishes.
(b) Centrifuge.
(c) Incubator.
(d) Cover slips.
28. (a) Microtome.
(b) Watch glass.
(c) Syringe
(d) Eosinophil.
29. (a) L.E cell.
(b) Formalin
(c) Lancet.
(d) Neutrophil.
30. (a) Monocyte.
(b) Sample containers.
(c) Microtome knives.
(d) Water bath.

Section - VI

Record

5 Marks

Viva

5 Marks

**MEDICAL LAB TECHNICIAN
SECOND YEAR
MODEL QUESTION PAPER
SUBJECT : PATHOLOGY
PAPER - III**

Time : 3 hours

Max. Marks : 50

Section - I

1 x 8 = 8 marks

2. Find out ABO blood group in the given sample and show the result.

Section - II

1 x 8 = 8 Marks

11. Stain the bone marrow smear.

Section - III

1 x 8 = 8 Marks

14. Find out bleeding time in your own blood and Show the results.

Section - IV

2 x 4 = 8 Marks

24. (a) Haemo parasites.

(b) Mounting.

Section - V

4 x 2 = 8 Marks

26. (a) Coulter counter.

(b) Hot air oven.

(c) Slides.

(d) Platelets.

Section - VI

Record

5 Marks

Viva

5 Marks

Note : The Serial numbers of the questions mentioned above are the serial numbers in question bank. In practical examination only the serial number of the questions will be given, the examiner shall decode it with question bank and give the questions.

**MEDICAL LAB TECHNICIAN
SECOND YEAR
PRACTICAL SCHEME OF VALUATION
SUBJECT : PATHOLOGY
PAPER - III**

Time : 3 hours

Max. Marks : 50

Section - I,II,III Major Questions

(1 x 8 = 8 Marks)

- | | | |
|------------------------------------|---|---------|
| 1. Principle / Objective / Purpose | : | 1 mark |
| 2. Materials | : | 1 mark |
| 3. Procedure / Method | : | 4 marks |
| 4. Result / Observation / Comment | : | 2 marks |

Section - IV

(2 x 4 = 8 Marks)

- | | | |
|------------------------------|---|---------|
| 1. Purpose / Use / Objective | : | 1 mark |
| 2. Method / Description | : | 2 marks |
| 3. Result or Remark | : | 1 mark |

Section - V Identification and Use

(4 x 2 = 8 Marks)

- (a)
- (b)
- (c)
- (d)

Section - VI

- | | | |
|---------------|---|----------------|
| Record | : | 5 Marks |
| Viva | : | 5 Marks |