

# **Vocational Practical Question Bank**

**First 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  
FIRST YEAR  
SUBJECT : BIOCHEMISTRY-I  
PAPER - I**

**Time : 3 Hours**

**Max. Marks : 50**

**Section - I**

**(1 x 8 = 8 Marks)**

1. Write the proforma of a lab order form.
2. Draw the diagram of Photo electric colorimeter.
3. Draw the diagram of electric centrifuge.
4. Draw the diagram of a simple balance and label the parts.
5. Write the proforma of a lab register.
6. Draw the diagram of a spectro photo meter.

**Section - II**

**(1 x 8 = 8 Marks)**

7. Collection of capillary blood.
8. Collection of venous blood.
9. Separation of serum from clotted blood.
10. Separation of plasma from anticoagulated blood.
11. Preparation of solution of given percentage.
12. Preparation of normal solution.

**Section - III**

**(1 x 8 = 8 Marks)**

13. Qualitative identification of sugar in given sample of urine.
14. Qualitative identification of proteins in given sample of urine by heat Coagulation test.
15. Quantitative determination of sugar in given sample of blood.
16. Qualitative identification of proteins in given sample of urine by sulfo salicylic acid test.
17. Preparation of protein free blood filtrate of given sample of blood.
18. Preparation of molar solution of given substance in the given strength.

**Section - IV**

**(2 x 4 = 8 Marks)**

19. (a) Care and maintenance of electric centrifuge.  
(b) Care and maintenance of photo electric colorimeter.
20. (a) Uses of spectro photo meter.  
(b) Uses of electric centrifuge.
21. (a) Collection of random specimen of urine for analysis.  
(b) Fasting urine specimen.
22. (a) Care and maintenance of given pipette.  
(b) Care and maintenance of given test tube.
23. (a) Uses of burette.  
(b) Uses of funnel.
24. (a) Handling of pipette.  
(b) Uses of photo electric colorimeter.

**Section - V**  
**Identification**

**(4 x 2 = 8 Marks)**

25. (a) Electric centrifuge.  
(b) Simple balance.  
(c) Photo electric colorimeter.  
(d) Hand centrifuge.
26. (a) Disposable syringe.  
(b) Centrifuge tube.  
(c) Serological pipette.  
(d) Burette.
27. (a) Filter funnel.  
(b) Separating funnel.  
(c) Volumetric flask.  
(d) Conical flask.
28. (a) Beaker.  
(b) R.B.flask.  
(c) F.B.flask.  
(d) Boiling tube.
29. (a) Condensor.  
(b) Dessicator.  
(c) Watch glass.  
(d) Weighing bottle.
30. (a) Stirring rod.  
(b) Disposable needle.  
(c) R.B.C pipette.  
(d) W.B.C pipette.

**Section - VI**

- a) Record.  
b) Viva Voce.

5 Marks

5 Marks

**MEDICAL LAB TECHNICIAN  
FIRST YEAR  
MODEL QUESTION PAPER  
SUBJECT : BIOCHEMISTRY-I  
PAPER - I**

**Time : 3 hours**

**Max. Marks : 50**

**Section - I**

**1 x 8 = 8 marks**

3. Draw the diagram of electric centrifuge.

**Section - II**

**1 x 8 = 8 Marks**

7. Collection of capillary blood.

**Section - III**

**2 x 4 = 8 Marks**

13. Qualitative identification of sugar in given sample of urine.

**Section - IV**

**2 x 4 = 8 Marks**

19. (a) Care and maintenance of electric centrifuge.

(b) Care and maintenance of photo electric colorimeter.

**Section - V**

**4 x 2 = 8 Marks**

26. (a) Disposable syringe.

(b) Centrifuge tube.

(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  
FIRST YEAR  
PRACTICAL SCHEME OF VALUATION  
SUBJECT : BIOCHEMISTRY-I  
PAPER - I**

**Time : 3 hours**

**Max. Marks : 50**

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

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

**Section - IV (2 x 4 = 8 Marks)**

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

**Section - V (4 x 2 = 8 Marks)**

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

**Section - VI**

- |               |                |
|---------------|----------------|
| a) Record     | <b>5 Marks</b> |
| b) Viva Voce. | <b>5 Marks</b> |

**MEDICAL LAB TECHNICIAN  
FIRST YEAR  
SUBJECT : MICROBIOLOGY & PATHOLOGY  
PAPER - II**

**Time : 3 Hours**

**Max. Marks : 50**

**Section - I**

**(1 x 8 = 8 Marks)**

1. Estimate the Hb % in the given sample by sahli's method.
2. Prepare Mac Conkey's agar medium
3. Methods of collection of microbiology specimens.
4. Prepare the smear for gram staining.
5. How can you collect 24 hrs urine sample.
6. Identify the sugars & proteins in the given urine sample.

**Section - II**

**(1 x 8 = 8 Marks)**

7. Count the WBC in the given sample of blood.
8. Estimate the Hb % in the given sample by Cyan met haemoglobin method.
9. Procedure, processing of sputum for AFB.
10. Identify the bile salts in the given urine sample.
11. Estimate the PCV in the given sample.
12. Identify the crystals in the given urine sample.

**Section - III**

**(1 x 8 = 8 Marks)**

13. Identify the bile pigments in the given urine sample.
14. Estimate the ESR in the given sample.
15. Count the total RBC in the given sample.
16. Identify the casts in the given urine sample.
17. Prepare blood agar medium.
18. Perform physical examination of urine.

**Section - IV**

**(2 x 4 = 8 Marks)**

19. (a) Simple Staining.  
(b) Anti coagulants
20. (a) 24 hrs urine  
(b) Personal safety precautions
21. (a) Collection of Blood.  
(b) WBC diluting fluid.
22. (a) Disposal of hospital waste.  
(b) Cleaning of glass ware.
23. (a) Universal precautions.  
(b) Water bath.
24. (a) RBC diluting fluid.  
(b) Collection of CSF.

**Section - V**  
**Identification**

**(4 x 2 = 8 Marks)**

25. (a) Urinometer.  
(b) RBC pipette.  
(c) Sample container.  
(d) Test tubes.
26. (a) Incubator.  
(b) ESR pipette  
(c) RBC  
(d) Nutrient agar
27. (a) lancet  
(b) Neutrophil.  
(c) HAO  
(d) Platelets.
28. (a) ESR stand.  
(b) Inoculation loop.  
(c) Hb pipette.  
(d) Slides.
29. (a) Neubaur's chamber  
(b) Hb tube  
(c) Autoclave.  
(d) Petri dishes.
30. (a) Haemoglobin meter  
(b) Disposable syringe.  
(c) Centrifuge.  
(d) WBC pipette.

**Section - VI**

Record  
Viva

5 Marks  
5 Marks

**MEDICAL LAB TECHNICIAN  
FIRST YEAR  
MODEL QUESTION PAPER  
SUBJECT : MICROBIOLOGY & PATHOLOGY  
PAPER - II**

**Time : 3 hours**

**Max. Marks : 50**

**Section - I**

**1 x 8 = 8 marks**

1. Estimate the Hb % in the given sample by sahli's method.

**Section - II**

**1 x 8 = 8 Marks**

7. Count the WBC in the given sample of blood.

**Section - III**

**1 x 8 = 8 Marks**

14. Estimate the ESR in the given sample

**Section - IV**

**2 x 4 = 8 Marks**

24. (a) RBC diluting fluid.  
(b) Collection of CSF

**Section - V**

**4 x 2 = 8 Marks**

28. (a) ESR stand.  
(b) Inoculation loop.  
(c) Hb pipette.  
(d) Slides.

**Section - VI**

**Record**

**5 Marks**

**Viva**

**5 Marks**

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**MEDICAL LAB TECHNICIAN  
FIRST YEAR  
PRACTICAL SCHEME OF VALUATION  
SUBJECT: MICROBIOLOGY & PATHOLOGY  
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. Material                        | : | 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**

- |               |   |         |
|---------------|---|---------|
| <b>Record</b> | : | 5 Marks |
| <b>Viva</b>   | : | 5 Marks |

**MEDICAL LAB TECHNICIAN  
FIRST YEAR  
SUBJECT : ANATOMY & PHYSIOLOGY  
PAPER - III**

**Time : 3 Hours**

**Max. Marks : 50**

**Section - I**

**(1 x 8 = 8 Marks)**

1. Determine the total count (TC) of RBC by collecting capillary blood from your friend.
2. Determine the total count (TC) of WBC by collecting capillary blood from your friend.
3. Determine the differential leucocyte count (DLC) by collecting capillary blood from your friend.
4. Determine blood pressure of your friend.
5. Determine T.P.R. of your friend.
6. Name the bones of skull given and draw the sketch.

**Section - II**

**(1 x 8 = 8 Marks)**

7. Humerus.
8. Radius – ulna.
9. Scapula.
10. Clavicle.
11. Tibia – Fibula.
12. Femur.

**Section - III**

**(1 x 8 = 8 Marks)**

13. POP Model of brain.
14. POP Model of stomach.
15. POP Model of Heart.
16. POP Model of kidney.
17. POP Model of liver.
18. POP Model of uterus.

**Section - IV**

**(2 x 4 = 8 Marks)**

19. (a) Epithelial tissue – slide.  
(b) Connective tissue – slide.
20. (a) Muscular tissue – slide.  
(b) Nervous tissue – slide.
21. (a) Liver – slide.  
(b) Kidney – slide.
22. (a) Spleen – slide.  
(b) Pancreas – slide.
23. (a) Skin – slide.  
(b) Testes – slide.
24. (a) Stomach layers – slide  
(b) Small intestine layers – slide.

**Section - V**

**(4 x 2 = 8 Marks)**

25. (a) Thermometer  
(b) Stethoscope.  
(c) Sphygmomanometer.  
(d) Neubaur slide.
26. (a) Disposable needle.  
(b) Cotton.  
(c) Slide.  
(d) Coverslip.
27. (a) Carpal bones  
(b) Meta carpal bones  
(c) Phalanges.  
(d) Innominate bone.
28. (a) POP model of lungs  
(b) POP model of intestines.  
(c) POP model of spleen  
(d) POP model of fallopian tubes
29. (a) Large intestine – slide  
(b) Lymph nodes – slide  
(c) Ovary – slide  
(d) Uterus – slide
30. (a) Compound microscope  
(b) Cuff of Sphygmomanometer  
(c) Tourniquet  
(b) Lancet.

**Section - VI**

- a. Record
- b. Viva voce

**5 Marks**

**5 Marks**

**MEDICAL LAB TECHNICIAN  
FIRST YEAR  
MODEL QUESTION PAPER  
SUBJECT: ANATOMY & PHYSIOLOGY  
PAPER - III**

**Time : 3 hours**

**Max. Marks: 50**

**Section - I**

**1 x 8 = 8 marks**

1. Determine the total count (TC) of RBC by collecting capillary blood from your friend.

**Section - II**

**1 x 8 = 8 Marks**

9. Scapula

**Section - III**

**1 x 8 = 8 Marks**

14. POP Model of stomach.

**Section - IV**

**2 x 4 = 8 Marks**

21. (a) Liver – slide.  
(b) Kidney – slide.

**Section - V**

**4 x 2 = 8 Marks**

25. (a) Thermometer  
(b) Stethoscope.  
(c) Sphygmomanometer.  
(d) Neubaur slide.

**Section - VI**

- a. Record  
b. Viva voce

**5 Marks**

**5 Marks**

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