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.
10. Separation of plasma from anticoagulated blood.
11. Preparation of solution of given percentage.

Section - III (1 x 8 = 8 Marks)
13. Qualitative identification of sugar in given sample of urine.
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.
    (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  
(4 x 2 = 8 Marks)

Identification

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.  5 Marks
b) Viva Voce.  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  
b) Viva Voce.  
5 Marks  
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  5 Marks
b) Viva Voce.  5 Marks
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
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

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 5 Marks
Viva 5 Marks
MEDICAL LAB TECHNICIAN
FIRST YEAR
MODEL QUESTION PAPER
SUBJECT: MICROBIOLOGY & PATHOLOGY
PAPER - II

Time : 3 hours
Max. Marks : 50

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

Section - II
7. Count the WBC in the given sample of blood.

Section - III
14. Estimate the ESR in the given sample

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

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

Section - VI
Record
Viva

5 Marks
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

Record : 5 Marks
Viva : 5 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.
7. Humerus.
10. Clavicle.
11. Tibia – Fibula.
12. Femur.
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.
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  
5 Marks  
b. Viva voce  
5 Marks
MEDICAL LAB TECHNICIAN
FIRST YEAR
MODEL QUESTION PAPER
SUBJECT: ANATOMY & PHYSIOLOGY
PAPER - III

Time : 3 hours
Max. Marks: 50

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

Section - II
9. Scapula

Section - III
14. POP Model of stomach.

Section - IV
21. (a)Liver – slide.
(b) Kidney – slide.

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

Section - VI
a. Record  5 Marks
b. Viva voce  5 Marks

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MEDICAL LAB TECHNICIAN
FIRST YEAR
PRACTICAL SCHEME OF VALUATION
SUBJECT : ANATOMY & PHYSIOLOGY
PAPER - III

Time : 3 hours Max. Marks : 50

Section - I Major Questions (1 x 8 = 8 Marks)
1. Aim / Identification : 2 marks
2. Materials and procedure/sketch. : 4 marks
3. Result / observation / comment. : 2 marks

Section - II & III (2 x 4 = 8 Marks)
1. Identification : 2 marks
2. Diagram and labelling of parts. : 6 marks

Section - IV (2 x 4 = 8 Marks)
1. Identification : 1 marks
2. Diagram : 3 marks

Section - V (4 x 2 = 8 Marks)
a) 
b) 
c) 
d) 

Section - VI
a) Record 5 Marks
b) Viva Voce. 5 Marks