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B.Sc. Medical Laboratory Technology (BMLT)
(IIIrd Year) EXAMINATION, 2021-22 (Supplementary)
IMMUNOPATHOLOGY & BLOOD TRANSFUSION

Time: 3 Hours

Max. Marks: 70

Note: All questions are compulsory. Make diagrams wherever required.

Q1. Attempt any five MCQs. Select the correct choice as applicable.**(2x5=10)**

- Centrifuge whole blood in low speed give us ?
 i. PRP iii. PPP
 ii. PC iv. None of these
- Fresh frozen plasma store for:
 i. 5 year at -70°C iii. 24 hours at -20°C
 ii. 1 year at -4°C iv. 72 hours at Room Temperature
- 1 Unit rise Hemoglobin :
 i. 1% iii. 10%
 ii. 0.1% iv. None of these
- To check compatibility reaction, Patient serum and Donor cells is used in which type of Cross Match?
 i. Major Cross Match iii. Both i and ii
 ii. Minor Cross Match iv. All of these
- Hemolytic Disease of new born in manifested?
 i. Mother is Rh positive Baby is Rh Negative iii. Mother is Rh Negative Baby is Rh Positive
 ii. Mother is Rh positive Baby is Rh Positive iv. Mother is Rh Negative Baby is Rh Negative

Q2. Fill in the blanks. Attempt all.**(2x5=10)**

- The molecular weight of immunoglobulin's IgG and IgM is.....&.....
- The Cryoprecipitate contain.....andFactor.
- Decrease level of hemoglobin is called.....
- Normal value of M.C.H.C is.....
- Trepan Blue is an

Q3. Write True or False. Attempt all.**(2x5=10)**

- The formed elements of the blood are suspended in a pale yellowish fluid known as "Serum".
- The red blood cell appears as a "biconvex" disk.
- Platelets store at 20±22°C for 5 Days.
- PRBC storage with SAGM for 35 Days.
- AHG reagent also used in coombs Test.

Q4. Attempt any four of the following:**(5x4=20)**

- What is Immunoglobulin's? Describe the types of Immunoglobulin's.
- Describe the Coomb's Test.
- Define Tissue typing for kidney transplant.
- What is the compatibility test? Describe the Major cross match with their Principle.
- Describe screening test in blood transfusion.

Q5. Attempt any two of the following:**(10x2=20)**

- What is cancer Immunology? Discusses about tumor marker.
- Discusses on Organs and cells of Immune system.
- Describe the History and discovery of ABO and Rhesus blood group system.

Paper Code : BMLT-302 B (SVSU:2021-22/R)

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B.Sc. (BMLT) IIIrd Year

Parasitology and Clinical Microbiology

Max. Marks: 70

Time: 3 Hours**Note: All questions are compulsory. Make diagrams wherever required.****Q1. Attempt all MCQs. Select the correct choice as applicable. 2 Mark each (2x5=10)**

- a. Pinworm is the common name of
 i. Diantameoba fragilis ii. Trichuris trichiura iii. Ascaris lumbricoides iv. Enterobius vermicularis
- b. Hookworm is the common name of
 i. Ancylostoma deodenale ii. Trichuris trichiura iii. Ascaris lumbricoides iv. Enterobius vermicularis
- c. In which parasitic infection common symptom is ground itch.
 i. Round worm ii. Hook worm iii. Pin worm iv. Whip worm
- d. Black Water Fever is a special manifestation of malaria caused by
 i. P. falciparum ii. P. malariae iii. P. ovale iv. P. vivax
- e. Each of the following parasites is transmitted by mosquitoes EXCEPT
 i. P. falciparum ii. Leishmania donovani iii. Wauchereria iv. P. vivax

Q2. Fill in the blanks. Attempt all.**2 Marks Each (2x5=10)**

- a. Thinner peptidoglycan layer present in.....bacteria.
- b. Peptone water is an example of.....media.
- c. Provides protection to the cell against osmotic damage
- d. When Coccus arranged in grapes like clusters is called as
- e. Inoculated wire loop is made up of.....

Q3. Write True or False. Attempt all.**2 Marks Each (2x5=10)**

- a. Ancylostoma duodenale causes creeping eruption ()
- b. The portal of entry of Ancylostoma duodenale through skin. ()
- c. The presence of detectable bacteria in the urine is named as Bacteriuria. ()
- d. Rota virus is the most important viral etiology of diarrhoea. ()
- e. Pyaemia is essentially septicemia with metastatic infection. ()

Q4. Attempt any four of the following:**5 Marks Each (5x4=20)**

- a. Bacteriological examination of Air.
- b. Life cycle of Round worm (draw well labeled diagram only).
- c. Food poisoning.
- d. Leshmaniasis.
- e. Sore throat

Q5. Attempt any two of the following:**10 Marks Each (10x2=20)**

- a. Principles and applications of PCR.
- b. Life cycle and laboratory diagnosis of Plasmodium.
- c. Laboratory diagnosis of diarrhoea

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Paper Code : BMLT-303 A (SVSU:2021-22/R)

Enrollment No.

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B.Sc. (BMLT) IIIrd Year
Clinical Biochemistry

Max. Marks: 70

Time: 3 Hours

Q.1: Attempt all multiple Choice Questions. Tick mark the correct answer only. (2x5=10)

- Which of the following test is used for the urea:
 (i) DAMO (ii) Benedicts test (iii) Biuret test (iv) None of these.
- Vitamin E prevents rancidity by virtue of this property:
 (i)Antioxidant (ii) Oxidant (iii)Hydrogenation (iv)Phosphorylation.
- Which of the following is the example of bile acid:
 i. Glycocholic acid ii. Taurocholic acid iii. Both of these iv. None of these.
- Which of the following is not required in the biosynthesis of heme:-
 i. Succinyl CoA ii. Glycine iii. ALA synthase iv. Alanine.
- TSH is secreted from:-
 i. Thymus ii. Thyroid gland iii. Pituitary gland iv. All of these.

Q.2: Fill in the blanks. Attempt all.

(2x5=10)

- Normal range of creatinine is.....in males andin females.
- Full form of ALT is.....
- Helicase enzyme is used in
- Obstructive jaundice is caused by.....
- Insulin is secreted from.....

Q.3: Write True or False. Attempt all.

(2x5=10)

- DNA Polymersae is the enzyme of Transcription
- Epinephrine and glucagon are antagonistic in metabolic action..
- Cholethiasis is caused due to the deficiency of bile salts.
- RIA is less time consuming technique than ELISA.
- CHOD-POD is applied in the diagnosis of DM.

Q.4: Write short notes on any four.

(5x4=20)

- Define the Carcinogens in details
- Describe the Transcription in prokaryotic.
- What is Jaundice? Describe the types of jaundice
- Describe the hormones of Thyroid gland
- Describe the Quality assurance and Errors.

Q.5: Write long notes on any two.

(10x2=20)

- Describe the process of Replication in prokaryotes.
- Explain synthesis and fate of bilirubin.
- Describe the classification of hormone and hormones of pituitary gland.

B.Sc. Medical Laboratory Technology (BMLT) 3rd Year
Subject: Medical and Surgical Condition
Subject Code: BMLT- 304

Max. Marks: 70

Time: 3 Hours

Time: 3 Hours
Note: All questions are compulsory. Make diagrams wherever required.

(2x5=10)

Q1. Attempt all question 2 Marks Each

- a. Anemia is caused due to the deficiency of.**
i. Iron ii. Magnesium iii. Copper iv. Cobalt
- b. According to the GCS a verbal score of 1 indicates.**
i. No response ii. Incomprehensible sounds iii. Inappropriate words iv. Disoriented response
- c. The most important risk factor for copd is.**
i. Tobacco smoke ii. Outdoor air pollution iii. Occupational exposure to fumes iv. Severe persistent bronchial asthma
- d. What is the major mode of Transmission of dengue fever?**
i. Bite of male culex mosquito ii. Bite of female sandfly iii. Bite of female aedes mosquito iv. Bite of female anopheles mosquito
- e. Amoebiasis is a disease of**
i. Respiratory system ii. Intestinal System iii. Gastrointestinal tract iv. Urogenital tract

Q2. Fill in the blanks. Attempt all. 2 Marks Each

(2x5=10)

- a. Hyponatremia is when serum sodium is
 b.Is usually a lifelong chronic disease in which there are levels of..... in the blood.
 c. Effective antibiotics for treatment of Amoebiasis
 d. Incubation period of malaria is
 e. Tuberculosis is a disease

Q3. Write True or False. Attempt all. 2 Marks Each

(2x5=10)

- i. Amoebiasis is caused by *Entamoeba histolytica*
- ii. Anaemia is caused due to deficiency of iron.
- iii. Transmission route for dengue fever is through person to person
- iv. Diabetes is caused by hypoglycemia.
- v. Malaria spreads through the bite of female anopheles mosquito

Q4. Attempt any four questions

(5x4=20)

- Define symptoms and disease management of Malaria
- What is Amoebiasis write clinical features & Management
- Define Anemia & with clinical features, Investigations & managements.
- What is hyponatremia & hypernatremia, hyperkalemia & hypo anemia
- What is Glasgow coma scale?

Q5. Attempt any two questions

(10x2=20)

- What is tuberculosis? Define Clinical features, investigation & management of tuberculosis.
- What is diabetes mellitus write causes, clinical features investigations & management
- Discuss dengue fever with clinical features, investigation & management of dengue.

Paper Code : BMLT-305

B (SVSU:2021-22/R)

Enrollment No.

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B.Sc. (BMLT) IIIrd Year

Advanced Laboratory Techniques

Time: 3 Hours

Max. Marks: 70

Note: All questions are compulsory. Make diagrams wherever required.

Q1. Attempt any five MCQs. Select the correct choice as applicable. 2 Mark each (2x5=10)

- a. Cryostat is a type of :
i. Microtome ii. Microscope iii. Centrifuge iv. All of these
- b. Use of microtome in histopathology :
i. Section cutting ii. Clearing iii. Staining iv. None of these
- c. Negative Log of Hydrogen ion is known as
i. pH ii. pOH iii. Both of these iv. Both of these
- d. In paper chromatography the stationary phase is
i. Paper ii. Butanol iii. Water iv. Ethanol
- e. HIV positive blood bag is disinfected by
i. Normal saline ii. Formalin iii. Hypochlorite iv. Zyline
- f. The most common type of gel used for DNA separation is
i. Polyacrylamide ii. Agrose iii. Both of these iv. none of these

Q2. Fill in the blanks. Attempt all.

2 Marks Each (2x5=10)

- Polarizing is a types of.....
- Which microtome use for frozen section
- Normal thickness of a tissue section is.....
- Full form of MLDI is.....
- VDRL stands for

Q3. Write True or False. Attempt all.

2 Marks Each (2x5=10)

- 2 Marks Each (2x5=10)**
- Darkground microscope helps to demonstrate microorganism.
 - Microtome knife made up of diamond.
 - Spectrophotometer based on beer's law.
 - Western blot test is used to detect HIV antibodies.
 - Pyruvate converts in to lactate with the help of enzyme pyruvate dehydrogenase.
- Attempt any four of the following:**
- 5 Marks Each (5x4=20)**

Q4. Attempt any four of the following:

5 Marks Each (5x4=20)

- Describe the principle and types of electron microscope
 - What is homing and stopping process.
 - What is microtome? Describe their types.
 - Describe the Principle, types and application of ELISA.
 - Describe the Thin layer and paper chromatography.
- Attempt any two of the following.**

Q5. Attempt any two of the following:

10 Marks Each (10x2=20)

- 10 Marks Each (10x2=20)**
- Write the principle, instrumentation and application of HPLC
 - Write the principle, instrumentation and application of Spectrophotometer.
 - What is hybridoma technology? Describe the production of monoclonal antibodies.