



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY

FIFTH SEMESTER – NOVEMBER 2023

UAZ 5601 – MEDICAL LAB TECHNIQUES

Date: 16-11-2023

Dept. No.

Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

SECTION A - K1 (CO1)

Answer ALL the Questions -

(10 x 1 = 10)

1. Definitions

- a) Packed cell volume
- b) Sphygmomanometer
- c) Computer Tomography
- d) Erythrocyte Sedimentation Rate

e) Biomedical waste

2. Fill in the blanks

- a) An average adult person has about _____ litre of blood by volume.
- b) The WHO has classified bio medical waste in to _____ categories.
- c) _____ is the study of blood.
- d) The main function of platelets is _____
- e) A decreased level of Hb causes _____

SECTION A - K2 (CO1)

Answer ALL the Questions

(10 x 1 =

10)

3. MCQ

- a) A condition in which red blood cells and haemoglobin are decreased is known as
a) AIDS b) Leukemia c) Polycythemia d) Anaemia
- b) Xylene is used to
a) Fix autopsy specimen b) Dehydrate tissue
c) Attach cover slips to slides d) Clear tissue in paraffin wax
- c) The anticoagulant required for a differential blood film is
a) Sodium citrate b) EDTA c) Sodium heparin d) Sodium oxalate
- d) A person who has a blood clot stuck in one area has
a) Thrombus b) Embolism c) Hematoma d) Phlebitis
- e) Which one of the following is not a WBC?
a) Reticulocyte b) Basophil c) Eosinophil d) Monocyte

4.	Match the following
a)	Haemoglobin - Cytological fixative
b)	Helly's fluid - Blood coagulation
c)	Platelet - Fixative
d)	Formalin - Anti coagulant
e)	Heparin - Cyanmethemoglobin
SECTION B - K3 (CO2)	
Answer any TWO of the following (2 x 10 = 20)	
5.	Illustrate the life cycle of Plasmodium sp. and the treatment and control measures of malaria.
6.	Explain the procedure, normal value and clinical significance of red blood cell count.
7.	Report on the bleeding disorders in man.
8.	Write the procedure, normal value and clinical significance of PCV.
SECTION C – K4 (CO3)	
Answer any TWO of the following (2 x 10 = 20)	
9.	Explain the procedure and mechanism of MRI scan with illustration.
10.	Deduce how haemoglobin is estimated colorimetrically by cyanmethaemoglobin method.
11.	Infer the physiological effects of junk foods.
12.	Illustrate the procedure and mechanism of ultrasound scanning.
SECTION D – K5 (CO4)	
Answer any ONE of the following (1 x 20 = 20)	
13.	Appraise the morphological and etiological classification of anaemia.
14.	Summarize the details of the cardiac cycle and common diseases of the cardiovascular system.
SECTION E – K6 (CO5)	
Answer any ONE of the following (1 x 20 = 20)	
15.	Report the tissue processing histopathological techniques with illustrations.
16.	Compile the factors and mechanism of blood coagulation.

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