

## **DOCTORSIMES**

Muhammad Zubair Hassan

BS(MLT), MS(MV)

Elementary Anatomy & Microtechniques

## Microtechniques

• Refers to a set of methods and procedures used in the field of pathology to prepare, process and analyze microscopic specimens including tissues, cells and fluids.



- Introduction to microtechniques
- Identification of tissues
- Fixation of tissues
- Tissue processing

- Section cutting
- Routine Staining
- Mounting of slides
- Decalcification of bone



## Elementary Anatomy & Microtechniques

## **ELEMENTARY ANATOMY AND MICROTECHNIQUES**

Topics	Weight %
1. Introduction to Anatomy	4 %
2. Respirator System.	6%
3. Digestive system	6 %
4. Urinary system.	6 %
5. Circulatory system.	6 %
6. Nervous system.	6 %
7. Reproductive system	6 %
8. Muscular and skeletal system	6 %
9. Endocrine system.	4 %
10. Introduction to microtechnique	4 %
11. Identification of tissues	10 %
12. Routine histopathological techniques	8 %
13. Section cutting.	7 %
14. Routine staining.	8 %
15. Mounting of slides.	6 %
16. Decalcification and staining of bone.	6 %
	Total % 100 %



			No. of Candidate.		Answer Sheet No. Sig. of Invigilator.	
	ELE	MEN	TARY ANATOMY A	AND MICR		HSSC-I
ime	allow	ed: 1	0 Minutes			
HOTE:	Sec	tion-A	is compulsory. All parts of the be completed in the first 10 verwriting is not allowed. Do n	minutes and h	anded over to the Centr	estion paper itself e Superintendent
2. 1	Circle	the co	rect option i.e. A/B/C/D. E	ach part carries	one mark.	
	40	www.ic	h organelle of the cell is termed.	as processing pl	ant of the cell:	
			Mitochondria	B.	Lysosomes	
		0	Centroles	D.	Golgi bodies	
	593	WATER	h of the following statements is 1	TRUE about the		
		-	Longer and slimmer	Θ.	Shorter and slimmer	-
		C	Longer and wider	D.	Shorter and wider	
	4100	Char	dae tendinae are the structures t	found in the:		
		-	Kidney	8.	Heart	
		-	Spileen	D.	Pancreas	
	(PV)	to wit	tich cells is NISSL substance for	and?		
		A	Fibroblasts «	B.	Nerve cells	
		C	Adipose cells	D.	Lymphocytes	
(v) The recommended fixative for lipids Histochemistry is:						
		-	Fermol calcium	B.	Pionic seid	
		C.	Formaldehyde	D.	Mercuric chioride	
	040	Time 1	exative which fixes tissues in the	ir natural colour i		
		-	Mercuric chioride	D.	Formaldehyde	
		0	Picric acid	D.	Acetic acid	
	CWED	In ca	se of which microtome is the terr	m "Slant angle" ur	sed?	
		-	Flotary	e.	Rocking	
		C	Freezing	D.	Base sledge	
	CHES	Time t	reatment of tissue sections with	1% acid water is	termed as:	
		^	Differentiation	В.	Blueing	
		0	Dewaxing	D.	Clearing	
	GKD	Com	monly used decalcifying agent is	KC .		
		^	Formic acid		Nitric acid	
		C.	EDTA	D.	Hydrochloric acid	
	(×3	In wit	sich of the following steps of H/E	staining is 1% a	mmonia water used?	
		-	Hydration	В	Blueing	
		C.	Dehydration	D.	Clearing	
	For Examiner's use only:  Total Marks:				10	
					s Obtained:	



# Short Questions



## ELEMENTARY ANATOMY AND MICROTECHNIQUES HSSC-

#### Time allowed: 2:20 Hours Total Marks Sections B and C: 40 NOTE: Answer any thirteen parts from Section 'B' and any two questions from Section 'C' on the separately provided answer book. Use supplementary answer sheet i.e. Sheet-B if required. Write your answers neatly and legibly. SECTION - B (Marks 26) Q. 2 Answer any THIRTEEN parts. The answer to each part should not exceed 2 to 5 lines. (13 x 2 = 25) Name any four cytoplasmic organelles. Write down the structure of "Larynx". Why is it also called sound box? (20) Pharytix receives seven openings in it. List any four openings. Briefly describe the unit of structure of Kidneys. Heart comprises three coats / layers. Write down their names, What type of tissue these are? CVO Name anatomical parts of Human Brain. What are Lateral ventricles? Write down the structure of testis. What is testosterone? Name atypical cervical vertebrae. Why is the seventh cervical vertebra called vertebra prominence? (via) Briefly mention the inicroscopic features of appendix wall. Write down the structure of transitional epithelium. Why is it named so and where it is located? Name the Hormones secreted by anterior tobe of pituitary gland. What are 'Microtechniques'? Write down the significance and scope of this subject of study. Give any four properties of an ideal fixative.

Briefly describe the method of 'Permanent mounting'. Name any two mounting media. Define decaloritication. Give any two ments of nitric acid as a decaloritying agent.

Write down the working principle and merits of rotary microtome.

(xvii) Write down the features of Haematoxylin stain.



# Long Questions

### SECTION - C (Marks 14)

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Note:	Attempt any TWO questions. All questions carry equal marks.	$(2 \times 7 = 14)$
Q.3	What are 'Stains'? Discuss the steps of Blueing and Differentiation in H/E staining.	
0.4	Write down the structure of liver. What types of vessels enter and leave the liver substance.	
0.5	Write down the anatomy and anatomical position of Human Heart, Differentiate between	
	"Endocardium" and "Endothelium".	

# THANK