Answer Sheet No	
Sig. of Invigilator.	

RADIOGRAPHIC TECHNIQUES HSSC-II

SECTION - A (Marks 20)

Time allowed: 25 Minutes

NOTE:	Section-A is compulsory and comprises pages 1-2. All parts of this section are to be
	answered on the question paper itself. It should be completed in the first 25 minutes and
	handed over to the Centre Superintendent. Deleting/overwriting is not allowed. Do not use
	lead pencil.

ე . 1	Circle the correct option i.e. A / B / C / D. Each part carries one mark.					
	(i)	Whic	h of the following is the atomic number of	tungste	en?	
		A.	24	В.	54	
		C.	74	D.	94	
	(ii)	Whic	h of the following is ionizing radiation?			
		A.	Radio-waves	B.	Gamma rays	
		C.	Microwave	D.	F.M waves	
	(iii)	Whic				
		A.	Very low frequency	В.	Very small wavelength	
		C.	Very high energy	D.	Can cause genetic mutation	
	(iv)	Whic	h of the following is correct about x-ray?			
		A.	Non-ionizing	B.	Wavelength is angstrom	
		C.	Energy less than sunlight	D.	Safe is pregnancy	
	(v)	Which of the following is incorrect about x-ray generation?				
		A.	Electrons are boiled by filament heatin	g B.	Anode is positively charged	
		C.	High KVs (100kv)	D.	Large amount of heat is produced	
	(vi) What is incorrect about mammography?					
		A.	Study of mammary glands	B.	Low dose radiations are used	
		C.	Useful in detecting cancer	D.	Is done by the common machine	
	(vii)	Which is incorrect about mammography machine?				
		A.	Dedicated machine	B.	Compression device	
		C.	About 60 KVs are used	D.	None of these	
	(viii)	Whic	h is incorrect about angiography?			
		A.	Contrast study of blood vessels	В.	Catheterization may be needed	
		C.	Invasive procedure	D.	May be done by MRI	
	(ix)	Whic	h is incorrect about barium study?			
		A.	Barium sulphate is used as contrast	В.	Barium is an inert material	
		C.	Is easily absorbed through gut	D.	Is used in studying GIT	
	(x)	Whic	h of the following is a bone of Thigh?			
		A.	Tibia	В.	Fibula	
		C.	Radius	D.	Femur	
	(xi)	Whic	h is incorrect about Oesophagography?			
		A.	Also called barium swallow	B.	Dysphagia is the most common indication	
		C.	Done under flouro	D.	Is contra-indicated in children	

DO NOT WRITE ANYTHING HERE

(xii)	Which	of the following is wrong about Sialograph	ny?					
	A.	There are four pairs of salivary gland						
	B.	Submandibular glands are located below	v tongue	е				
	C.	Parotid gland is located at angle of mandible						
	D.	None of these						
(xiii)	Which of the following is incorrect about computed radiography (CR)?							
	A.	Special x-ray machine is used						
	B.	Film is replaced by a phosphor plate						
	C.	Also called filmless radiography						
	D.	X-ray can be stored in the computers for	r long te	erm				
(xiv)	Which	Which of the following is wrong about gamma rays?						
	A.	Are non-ionizing radiation	B.	Energy is higher than	x-ray			
	C.	Wavelength is smaller than x-ray	D.	Is emitted by radioact	ive elements			
(xv)	Which	of the following statement is Incorrect?						
	A.	Grids absorb scatter	B.	Grids reduce radiation	n dose			
	C.	Grids are of moving and stationary type	D.	None of these				
(xvi)	Which	of the following is an incorrect statement	about C	T scan?				
	A.	Also known as computed tomography	B.	It takes cross section	al images			
	C.	Both A and B	D.	None of these				
(xvii)	Which	of the following is wrong about x-ray film?	>					
	A.	Is painted on both sides with radio-graph	hic emu	Ision				
	B.	Base is made of polyester of plastic						
	C.	Different sizes are available						
	D.	Film processing time in automatic proce	ssor is t	three minutes				
(xviii)	Which	of the following is wrong about dark room	1?					
	A.	No sunlight allowed						
	B.	Amber color light is used						
	C.	Cassettes are loaded and unloaded with						
	D.	Is located at a distance from x-ray room						
(xix)		of the following is correct about CT?						
	A .	Takes long time than MRI	B.	Claustro-phobia is co				
	C.	Helical or spiral CT are modern CT	D.	Is expensive than MR	l l			
(xx)		is wrong about MRI?			21.01			
	Α.	Is good for soft tissue imaging	В.	Movement does not s	•			
	C.	Shows better contrast than CT	D.	Children may need ar	nestnesia			
For Ex	aminer'	's use only:	-					
			Total Marks: 20					
			Marks Obtained:					

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RADIOGRAPHIC TECHNIQUES HSSC-II

Time allowed: 2:35 Hours

Total Marks Sections B and C: 80

NOTE: Sections B and

Sections B and C comprise pages 1-2. Answer any twenty-five parts from Section 'B' and any three 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 50)

Q. 2 Answer any TWENTY-FIVE parts. The answer to each part should not exceed 2 to 4 lines. (25x2=50)

- (i) Define Ionizing radiation.
- (ii) Write names of ionizing and nonionizing radiation.
- (iii) What is inverse square law?
- (iv) What is collimation?
- (v) What is attenuation?
- (vi) What is mammography?
- (vii) How is a mammographic machine different from common x-ray machine?
- (viii) What is the normal length of oesophagus? Write the names of normal curves seen in oesophagus.
- (ix) What is enterocylsis?
- (x) What is real time imaging? Which studies is real time?
- (xi) What is angiography?
- (xii) What is infertility? What are the studies done to investigate these problems?
- (xiii) What is nephrogram?
- (xiv) Write the names of films taken during IVU.
- (xv) Which part of GIT is studies during barium follow through? What are the films taken in this study?
- (xvi) What is skyline view?
- (xvii) What is orbito meatal line? What is its significance?
- (xviii) Write the names of para nasal sinuses. What are the views taken for these?
- (xix) What is high and low osmolar contrast media?
- (xx) What are the serious side effects of intravascular contrast media?
- (xxi) What are planes of imaging? What is the plain used by CT scan?
- (xxii) Write four main advantages of CT scan over MRI.
- (xxiii) What is MRI?
- (xxiv) Write four main differences between CT scan and MRI.
- (xxv) How will you define ultrasound?
- (xxvi) What is transducer?
- (xxvii) What are two basic principles of radiation protection?
- (xxviii) What are the objects of radiation protection available in the x-ray room?
- (xxix) What is transducer?
- (xxx) What is Apical view?
- (xxxi) What is High Tension Generator?

SECTION - C (Marks 30)

Note: Attempt any THREE questions. All questions carry equal marks.

 $(3 \times 10 = 30)$

- Q. 3 What is IVU? Describe its procedure.
- Q. 4 What is dysphagia? Which study is done for this problem? Write the procedure of doing barium swallow.
- Q. 5 What is HOCM and LOCM? Write side effects of ionic contrast media.
- Q. 6 What is inverse square law? Where is this law applied? Write down the basic fundamentals of radiation protection.
- Q. 7 Which parts of body are studied in Barium follow through and Barium enema tests? Name the series of views for Barium enema test.