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Submitted to

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## QUESTION NO 1 ANSWER

- Iodinated contrast is the main type of radio contrast used for intravenous administration

- The iodinated contrast are differentiated in

- Ionic Monomer
- Ionic Dimer (HOEM)
- Non ionic Dimer monomer (LOEM)

### Ideal IV Administered contrast

The non ionic dimer are the most ideal contrast agent used for administration as they are less toxic and deliver

more iodine with less osmolality

## FAVOURABLE CHARACTERISTIC

- It highlights the blood vessels
- It enhance the tissue structure of organs
- The contrast agent begin to diffuse directly into the water and extra-vascular spaces just immediately after the injection
- It can be spreaded throughout the body easily.
- once the contrast is injected into the blood-stream through IV route the contrast media then circulates through the heart and passes into the arteries, then the body capillaries and then passes into the veins and back to heart.

There is no barrier for  
contrast media if injected through  
IV.

This contrast media can  
maximize the clinical  
benefits.

# QUESTION NO 2

how is venography performed?  
Explain in detail

## ANSWER

venography is an x-ray examination that uses an injection of contrast material to show how blood flows through your veins

your doctor may use it to find blood clots, identify a

vein for use in a bypass  
procedure or dialysis  
access, or to assess  
varicose veins before  
surgery

## PERFORMED

- This examination is usually done on an outpatient basis.
- A venogram is done in hospital x-ray department or in an interventional radiology suite.
- Patient lie on an x-ray table. depending on the body part being examined
- Table place to a standing position
- If the table is repositioned during the procedure you will be secured with safety straps.

- The physician will insert a needle or catheter into a vein to inject contrast agent

- where the needle placed depend upon the area of the body where the veins are being evaluated.

- As the contrast material flows through veins being examined several x-ray are taken.

- patient move on different position x-rays taking picture of veins in different angles

- local Anesthetic is injected
- contrast material pass from patient body feel warmth.

- Venogram takes 30 to 90 minutes to complete / Perform

# QUESTION NO

3

## ANSWER

# LOOP PROGRAM

A loopogram is a diagnostic test that is performed on the section of bowel that functions in place of the urinary bladder. It is also known as a urogram antegrade

# PERFORMED

A loopogram is a diagnostic test that is performed on the section of bowel that functions in place of the urinary bladder.

The patient who don't have a bladder or have a malfunctioning bladder may undergo a surgical procedure called urinary diversion to reroute the flow of urine through an opening in the abdomen. The opening is called Stoma.

- Sometimes a section of bowel usually the small intestine is removed and repositioned to enable urine to flow from ureters to the stoma. This section of bowel is called an ileal conduit. The urine that flows through conduit to the stoma is collected in an external pouch called Stoma bag.



# NEED OF LOOPOGRAM

- In cases of surgical treatment of bladder cancer, laparoscopic radical cystectomy can be performed.

- During these procedure the bladder is removed

- To restore urinary flow to patients surgeons have number of options to divert the flow of urine.

A loopogram tests the ileal conduit (replacement bladder) to see its functioning as it should.

# QUESTION NO 4 ANSWER

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## ROLE OF RADIOLOGIC TECHNOLOGISTS IN PERFORMING FLUOROSCOPIC PROCEDURES

Examples of tasks radiologic technologists perform include

- Explaining procedures to patients and answering questions.
- Preparing equipment for use as needed.
- Preparing examination room for patient exams.

- Positioning patients for imaging exams
- monitoring patient during examination
- Documenting information with computers.
- Reporting important information to the physician
- Ensuring safety of patients during exams
- producing diagnostic images of soft tissue
- using sound waves to obtain images of organs and tissues in the body
- Administering targeted doses of radiation to the patient's body to treat cancer or other diseases
- Administering trace amounts of radio pharmaceuticals to a patient to obtain functional information about organs, tissues and bone
- Measuring bone mineral density at a specific anatomical site.

# QUESTION NO 5

## ANSWER

### GUIDE WIRES

- They are the stainless steel metallic structures that guides the catheter through blood vessels for placement.
- Guide

### USES

- Guide wires are used for both Cardiology and radiology angiographic procedures

• Guide wires are relatively simple spring type wires that provides necessary firmness and the control to the site where Angiogram will be taken

As the name suggest it  
guides the catheter.

- PTFE coated soft tip for  
the smoothness during  
insertion
- less trauma to the  
initial wall of the  
artery

## Why guide wire USE

- The guide wires are  
designed to navigate  
vessels to reach a  
lesions or vessel segment
- once the tip of  
the devices arrives at  
its destination, it acts  
as a guide that larger  
catheters can rapidly  
follow for easier  
delively to the  
treatment site.

# TYPES:-

- The solid guide wire
- wrapped guide wire

## GUIDE WIRE

- The Advantages of solid guide wires are that it reduces the possibility of catheter tip flaring, Blood clotting on the guide wire, Abrasion of the vessels and the danger of unravelling.
- disadvantage lack of versatility

## WRAPPED WIRE

The wrapped guide can be constructed so that it has a movable core, making versatile than the solid stainless steel guide wires

Some disadvantages:-

- possibility of catheter tip flaring
- Blood clotting on the guide wire
- Abrasion of the vessels
- The danger of unravelling.

# CATHETER

is a hollow flexible tube that can be inserted into a body cavity, duct or vessel.

catheters thereby allow drainage or injection of fluids, distend a passageway or provides access by surgical instruments.

The process of inserting a catheter is catheterization

# USE OF CATHETER

- A catheter is a tube that is inserted into your bladder, allowing your urine to drain freely.
- The most common reasons for using a catheter are:-
  - to rest the bladder following an episode of urinary retention.
  - to rest the bladder after surgery → most commonly bladder, bowel or urinary tract surgery.

## TYPES

There are three main types of catheters: indwelling catheters, external catheters and short-term catheters.



INDWELLING → An indwelling catheter is a catheter that resides in the bladder

External catheters (condom catheters)

Short-term catheters (intermittent catheters).