Date: _____

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Paper positioning

Submitted to

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# Question # 1

What is dental ORG ? Describe the positioning & patient positioning technique in detail?

## → Orthopantomogram :-

It is a type of dental X-ray. An OPG produces a panoramic view of the jaw. The OPG unit is specifically designed to rotate around the patient's head during the scan.

## → Patient Positioning :-

→ Remove radio-opaque objects such as jewellery dentures or hearing aids.

→ The equipment is brought to the start position & careful explanation is given to the patient.

→ A 15 x 30 cm image receptor is used. DR technology may be utilized on newer equipment.

→ The patient adopts "Skiing" position by holding handles.

→ The head is tilted downwards until the frankfort plane is parallel with the floor
→ Adjust height of machine & allow patient to bite in to the bite block. with upper & lower incisor.
→ the chin should placed on rest.
→ Ensure the patient donot rotate. and the sagittal plane light runs down the middle of the face.
→ Asked to patient place their tongue on the roof of their mouth to reduce the air shadow & keep for 20 sec.
→ the exposure is taken.
→ observe the patent carefully.

## → Direction & Centring of X-ray Beam:-

→ The antero-posterior light should be centred distally to the upper lateral incisor
→ Allow optimal positioning of the focal trough the

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the zone of focus out side of which the anatomical detail becomes blurred.

## Question # 2

How will you scan a patient with lower back pain. write a basic view for lumber X-rays?

Answer:-

A patient with lower back pain we perform lumber spine x-ray. Through which doctor understand the cause of back pain or view the effects of injuries, disease or infection.

### → Position of patient:- AP

→ The patient lies supine on the Bucky table with the median sagittal plane.

→ Right angle to the midline

→ The anterior Superior iliac spine should be equidistant from the table top.

→ The hips & knees are flexed & feet are planter on the table top.
→ The image receptor should be large enough to include the lower thoracic vertebrea and the sacro-iliac joints & is centred at the level of lower costal margin.
→ Arrested expiration otherwise cause a large difference in density & contrast.

## → Lumbar Spine - Lateral :-

→ The patient lies on their side on the Bucky table.
→ Lateral position with be such that the concavity of the curve is towards the x-ray tube.
→ The arm are raised & resting on the pillow
→ Knee & hips are flexed for stability.
→ The coronal plane of the spine should coincide and perpendicular to the midline

→ The image receptor is centred at the level of the lower costal margin.
→ And arrested expiration.

## Question # 3

A patient of old age came in department with complaint knee pain, what view should be done.

Answer:-

For complaint knee pain we do x-ray of knee take AP & lateral view both.

→ **Antero - Posterior:-**

Position of patient & image receptor:-

→ For CR an 18 x 24 cm image receptor is used.
→ The patient is supine both legs are extended.
→ Affected limb is rotated to centralize the petalla blw the femoral condyles. Sand bags are placed for maintain position.

→ The image receptor should be in close contact with posterior of knee joint.
→ Direction & centring of x-ray Beam.
→ Centre 2.5 cm below the apex of petella with the central ray at 90 degrees.
→ Essential image characteristics-
→ Petella must be centralized over the femur.

## → Knee - Lateral :-

→ Position of patient & image receptor:-
→ The patient lies of table flexed the knee at 45 or 90 degrees.
→ The other limb is brought forward in front and supported on a sandbag.
→ The position of the limb is now adjusted to ensure that the femoral condyles are superimposed vertically.

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→ Direction & centring of X-ray Beam:-

→ centre to the middle of the superior border of the medial tibial condyle central x-ray at 90 degree to the long axis of the tibia.

→ Essential image characteristics:-

→ The petalla should be projected of the femur.

→ The proximal tibiofibular joint is not clearly visible.

→ femur condyle are super-imposed.

## Question # 4

A patient fell from the bike after being hit by a car has now complained for headache what are the x-ray prescribe for a skull.

Answer:-

Headache and head trauma are common presenting problem in the Accident

and Emergency department
→ Plain skull X-ray have
• largely been superseded by
  • CT scaning
  • MRI scans.
in the context of both headaches and hea injuries.

## Question # 5

a- How you see the importance of KVP & MAs setting in your X-ray machine.

→ The KVP is one of the primary setting that can be adjusted on x-ray machines to control the image quality & patient dose.

→ The MAs is selected for the exposure determines the number of x-ray produced.

• The amount of current flowing through the filament is controlled by mA selector.

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B- Write about the positioning and technique of pelvic x-ray.

## → Positioning:-

→ Patient lies in supine position with their median sagittal plan perpendicular to the table top.
→ The midline must coincide with the centred primary beam
→ Avoid pelvic rotation.
→ The limbs are slightly abducted. & internally rotated to bring femoral neck parallel to image receptor.

## → Technique:-

→ centre in the midline with a vertical central beam to the centre of image receptor.
→ Laterally to the skin margins superior to above the iliac
→ Detector size is 35cm x 43 cm
→ Exposure is 70 - 80 kvp
→ obturator foramina appear equal
→ Iliac wings have an equal concavity