P#1:

Date:

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Q No 1:

parts of digital fluroscopy imaging system:-

The main component is

1# X-ray tube
2# Spectral shaping system
3# field restriction device
4# anti scatter grid
5# image receptor
6# display device

(P.T.O)

Date:

function:

Unlike regular x-ray which records the image film, digital florescopy records a series of Image to a Computer one digtized, we can view the area being examined in real time on a Computer monitor.

Q No 2:

Prime exposure factors:

The Quantaty & quality of x-ray are controlled by the four prime factors.

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1) KVp :-
- # it control radiographic Contrast.
- # it determine the penetration ability of tissue.
- # it have more effect on the beam quality.

2) mAs :-
- mA and exposure time are combinedly expressed as mAs.
- # it control optical densit & patient dose & also radiation quantaty
- # it does not effect the radiation quality

3) :- Exposure time :-
- # it always kept short as possible.

(D.T.O) ### #

it minimize motion blur resulting from patient motion
it is much greater probalem with the weight bearing radiography

Q No 4:-

Image Intersfierer Component:-
it consist the following major component

1) Input window Screen:-
its convert the incident x-rays into light photons

2) Photo cathode:-
Its convert light photons into electrons only 10 to 20%.

(P.T.O)

3) electrodes:-
et focalized the electrons on the out-put screen by the electronic megnification.

4) Output screen:-
et convert the accele-rated electrons into light photons.

Q no 5 :-

Advantages

They are sensitive allows a lower dose of radiati-on than film.
They are lighter
They are more durrable
Smaller in volume.

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it is more accurate
having much less image distortion
it can also be produced with larger areas.

Q no 5 (b)

Properties & uses of Charge Couple devices:-

CCD having an array of linked or coupled capacitor
CCD are widely used in proffissional, medical & scientific applicatio where high quality image data are requiered.

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* CCD is the device for the movement of electric - charge usually from with in the device where the charge can be manipulated

* example:-
  → Conversion into digital Values.

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Q No 3:-

Four image quality factors:- The clarity and sharpeness of the image is a true representation of the subject. These features make up the four makes up the four elements of a radiographic image quality

1) Radiographic or optical density:- The overall blackness of the image is reffered to the rediographic density or optical density When the radiographic density is d optimum, the image is black & dark

and dark enough to & light enough for you to see the anatomic detail

2):- Radiographic contrast:-
The d/f b/w the optical density of adjacent structure within the image is refered to as the radiographic contrast.
The low contrast image has black & white appearance and the optimum contrast image shows detail within all areas of the image although the contrast in same area are less prounou-ced

3) Kilovoltage:-
These include the nature of the subject

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and the charactrastics of the film or image receptor The high kilo voltage produce an x-ray beam that penetrate completely and leaving no white area in the images -

4) Image detail :-

These is reffered as the sharpeness of the (element) image when detail is high the edges and the lines that makes up the image and crisp & presice. and with law detail is appears somewhat blurred or out of foccussed "

THE END.