

i)

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paper :- CR & DR

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Q:-1:-

⇒ preprocessing :-

The digital radiographic image

over Screen film radiographic

image that together Display

the image preprocessing &

post processing.

- preprocessing of digital

image is mostly automatic.

- preprocessing is designed

free - Artifact digital image.

- gain image & offset

are automatic calibration

(P-T-O)

(a)

image to make continuous

response of the image receptor.

•) preprocessing techniques are

indicated as flat fielding.

•) Grain images are generated in

few months.

•) offset images are many times
in a day.

•) These techniques are useful

to reduce noise & improve contrast.

•) Digital image receptors have

million pixels.

10-5077

(3)

•) Every type of digital image receptor are produce electric latent image - that not completely visible.

⇒ Postprocessing :-

This digital imaging are shine.

•) This is largely automatic

Contrast

•) postprocessing of digital

image operator manipulation.

•) postprocessing the digital

(P-T-O)

(4)

Radiographic image performed

for good quality image for

Better pathology.

∴ Annotation :-

Adding text to

an image. for patient ~~id~~

identification, clinical history,

Diagnosis.

∴ They have large matrix size.

& Better spatial resolution.

∴ image flip :-

Standard image viewing

(AFO) →

•) Edge enhancement:-

For fracture & small - high
contrast tissue.

•) Highlighting :- also Add. part,

~~set~~ scroll, zoom. For

Better viewing of image.

Q:-Q:-

Contrast Resolution:-

•) The ability to distinguish

many shades of gray

from black to white.

•) All digital image have

(6)

Best Contrast

•) one hundred percent Contrast

is Black & white.

Spatial Resolution :-

•) The ability of imaging

System to resolve & render

on the image a small-high

Contrast

(P-TU) →

Q:-3:-

lowes patient Radiation

Dose :-

To reduce patient dose By

20% to 50% depend on

examination.

1) patient dose should be possible because of the manner in which the digital image receptor respond to x-ray.

1) Not exposure are repeated

2) over exposed image do not

(0-1-0)7

Be repeated.

-) DR System Cannot Compensate for excessive noise caused by Quantum mottle.

Q:- 40

Liquid Crystal Display :-

-) The liquid crystal display have very intense white

Backlight each pixel.

-) each pixel contains light-polarizing filter & film

(R+0) →

(9)

To Control the intensity
of colour & light.

•) They have 5 megapixel
display (2000 x 2500 pixel arrangement)

•) They view ~~hard~~ soft
copy digital image.

Q:-6:-

3 type of imaging Artifacts.

i) Dirty Rollers:-

This artifacts

(P-T-O)

can cause emulsion pickup
& gelation Buildup. which
result in sludge deposits
on the film.

i) These appear in sharp area
of DO increase or decrease.

i) The particles of sludge
are transported in processor and
are actually dried on the film
in the dryer.

ii) Handling & Storage :-

i) These occur in

(D-F-0) →

(11)

Improper film storage

Condition:

1) The image fog can result

the temperature or humidity

too high.

2) The pressure mark can

occur if the film is

stacked too high.

3) proper facility design

help reduce ~~the~~ handling

& storage.

(P-I-O) →

(12)

ciii) pressure of ink mark:-

→ it occurs due to improper

handling of stages before or

after processing.

•) it can cause ink &

stretches mark.

•) The ink mark may appear

as a finger nail mark.

•) Both are usually appear when

increased O.D.

Q:-7:-

⇒ Image Compression:

- 1) it is the type of Data-Compression applied to Digital image to reduce their ~~feature~~ the storage & cost.

⇒ Lossy :-

- 1) it also irreversible Compression.
- 2) These technique as used to reduce data size for storing, handling & transmitting content.

(14)

⇒ Lossless :-

This type of data compression that allow the original data reconstituted from the compressed data.

∴ This is ~~not~~ used in

many application et like (ZIP).

∴ (This is reversible compression)

0: 0: i:-

⇒

Collimation & partition :-

1) When x-ray exposure field

Not properly Collimated,

hips, size, hips - positioned

The error occurs ~~may~~

in exposure field.

•) This result are very Dark

a very light or very noisy.

•) The projected of Collimation

to 2-ray beam to reduce

patient dose. also improved

image Contrast.

•) Partitening:

multiple are image

are projected into a

(D-700)

(16)

a single IP. each have clear

collimated edges & margins

between each filed. is called.

Partitioning.

⇒ Alignment:-

1) improper central ray alignment

it will distort a radiographic

image. when used with the

Collimator Test Tool - This

device proved of determining.

Q:- 55.

⇒ Picture & ArchivingCommunication & System:

1) Digital images come to

every area it includes

Radiology, CT, MRI, Fluoroscopy

when it is fully ~~imp~~

implemented only not

acquisition but also the

inspection and storage

of each medical image

in digital form without

resorting to hard copy.

(P-T-0)

(18)

•) it efficiencies Time
and Cost.

•) These improve the
Image interpretation, viewing
processing, Storage & Recall.

⇒ it is 4 principi
Component :-

i) Display System.

ii) Storage System.

iii) Network.

iv) Image acquisition System.

(P-T-O)

⇒ Network :-

∴ Network is required to connected the computers to one another. The information transferred from one work station to another or main server.

∴ Some countries have patient card. They have all patient record.

1207
⇒ Tele radiology :-

1) A process of transmission
& view image.

∴) patient Card :-

By the time

when patient reaches for

examination previous report

are available in computer

Card.

⇒ Storage System :-

1) Storage is required for

Collect the the patient

(P-FO)

(24)

Data Safe in Storage

Q:-8:-

⇒ processing image :-

The image in process under the Digital Radiographic image over Screen film

Radiography is called processing image.

(Q-I-o)

(22)

⇒ presenting image:

1) when the processing image

is completed. Thus the

processing image are

~~man~~ manipulated into

presenting image

2) That image Technologist

can use QC & and

interpretation.

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