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Q No 3

* Construction of radiographic film:-
There are two parts of the radiographic film which is base and emulsion.

1) Base Film:- The base is the foundation

(P.T.O)

of radiographic film

* Charactrastics of Base film:-

* They have rigid structure onto which the emulsion can be coated.
* They are flexeble
* They have 150 to 300 μm thickness
* They are made up polyester and it is lucent.

* Composition:- The radiographic base film is made up "cellulose triacetate" which is not flammable.

P.T.O.

2* Emulsion:- The x-ray film is coated on both side by the emulsion therefore also called double emulsion film.

* The emulshion is the heart of the radiographic film.

* Composition:- emulsion having the homogenuose mixture of gelatin and silver halid crystal.

* Charactrastics:- They have layer of 3 to 5 μm thick.

* They helps in the formation

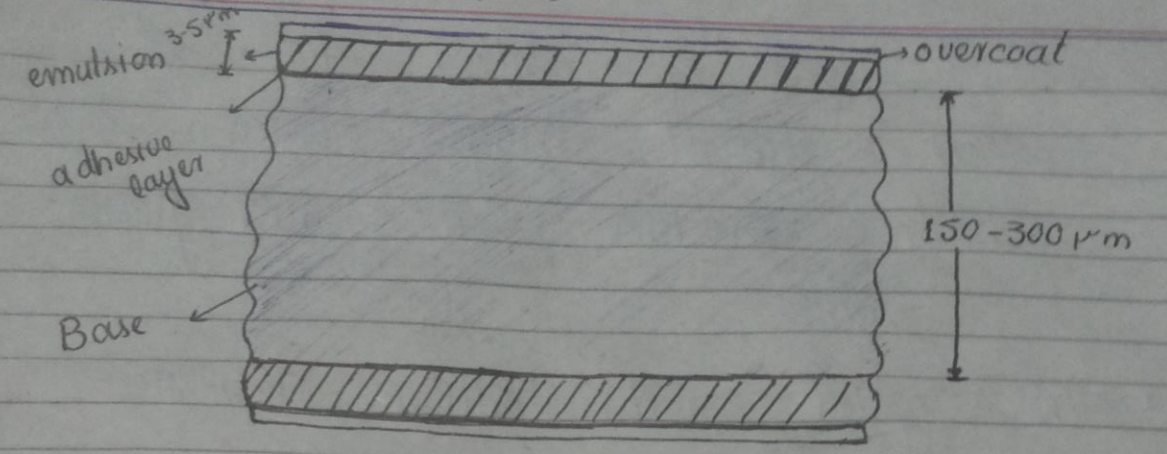
(P.T.O)

of latent image radiograph.

3* Adhesive layer:- The thin coating of materials between the emulsion and base is called adhesive layer

Adhesive layer provide proper contact b/w the emulsion & base

4* Over coat:- The proper coating which enclosed the emulsion, having thickness of 150 to 300 μm and gives protection to the emulsion.



Q no 2:-

* **Latent image formation:-**

The latent image is the invisible change that is induced in the silver halide crystal is called latent image and become visibles by proper chemical processing.

(P.T.O)

The silver halide having silver, bromine and iodines atoms and becomes ions.

* Photons intraction:-

When the photons intracts with films by silvers and hallides atoms that forms the latent image and release electrons in the crystal.

* The bromines and iodines atoms are now free to migrate b/c having the no ionic forces bounds.

* They migrate out to the

of the crystal into the gelatin portion of the emulsion.

* **Latent image:-** The negative electrification produce sensetivity center due to the concentration of electrons.
* The positive silver ions is attracted by the sensitivity center.
* Then the silver ions are becomes neautrals by electrons and converted into the mettalic silver.
* The silver deposition is not observable.

(P.T.O)

The group of silver atoms is called latent image center which produce the radiographic image.

* The crystal with silver deposited at the sensitivity center are developed into black grain.
* The inactivated silver hallide Crystals constituat latent image

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P# 9:-

Q NO 1:-

* Calcium tungstate Screens:-

The active substance of most phospher is calcium tungst-ate. and embeded in polymer matrix.

* They are also used as a phospher.
* They can absorbed high x-rays.
* They can Convert high light x-rays in per unit time.
* They are not effected by heat, humids and other enviromental Condition.

(P.T.O)

Inventor:- Calcium tungstate was discover by Thoms A. edison.

* They are slower than the Rare earth screen.

* Rare earth screen:-

They shows the element of IIIA having the atomic number of 57 to 71

* They are used as transitional metal

* They increased speed is attained without loss of spatial ressolution

* They increased sensitivety through the higher x-ray absorption.

(P.T.O)

P#12

* They are faster than the Calcium tungstate screens.
* They are having better absorption properties.

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The END.