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Day: M T W T F S S

Name

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ID

14998

Paper

Pharmacology

Date

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Mid Term

Summer

2020

Date: _____

Day:

M	T	W	T	F	S	S
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①

Answer of :-

Various routes of Drug Administration

- IV route
- Oral route
- Sublingual route
- Rectal route
- Nasal route
- Ocular route
- Vaginal route

~~Parente:~~

Parenteral route :-

Parenteral route

include intermuscular and intravenous route and subcutaneous

For these route a medicine must be water soluble

The IV route of Administration bypasses the absorption

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Absorption step result in
100% of the body by bioavailability.

Answer Q2 :-

Water Compartment :-

Definition :-

The Compartment is the space within an organism cell it is separated from intracellular to extracellular.

water

Types of Water Compartment :-

The two main fluid compartments are the intracellular and extracellular.

There are three main fluid compartments which are intracellular, interstitial, and plasma.

Date: _____

Day: M T W T F S S

(2)

are functionally inter connected.

Extra cellular.

Intra cellular.

Plasma.

About two third of the
Total body water of human
is held in the cell
mostly in the ~~cytosol~~ ^{cytoplasm}
~~cytosol~~ cytosol and the
remainder is found in
the extracellular compartment.
fluid molecule and ions flow
across physical barriers
between the fluid compartment.

(4)

Answer 03:

Part B:

* Total Body clearance :-

The total body clearance

mean the volume of

Plasma completely clear, long

per unit time.

* Clearance is measured :-It can be measured in ~~milliliter~~ milliliter per minute.* Explanation :-

The substance can be cleared by various way. For example kidney, liver, lungs, etc.

Thus the total body clearance

Date: _____

Day: [A][T][T][W][T][F][S][S]

②

is equal to the sum of clearance of the substance by each organ renal, lungs and hepatic clearance.

+ Reaction:

$$CL_{\text{Total}} = CL_{\text{Hepatic}} + CL_{\text{renal}} + CL_{\text{Pulmonary}} + CL_{\text{Other}}$$

where CL_{Hepatic} + CL_{renal} are typically

the most important.

Answer 03

Part A:-

Drug elimination stages:-

Drug elimination:-

Definition:- Drug elimination is the removal of drug from the body. All drugs are eventually eliminated from the body.

⑥

They may be eliminated after being chemically altered (metabolized) or they may be eliminated intact.

Renal elimination of Drug:

Drug process through several processes in the kidney before elimination.

Glomerular Filtration:-

Drug enters to the kidney through renal arteries which filter from a glomerular capillary plexus.

Proximal Tubular Secretion:-

Drug that were not transported into the glomerular filtrate

Date: _____

Day: **M T W T F S S**

(7)

leave the glomeruli through
efferent arterioles.

Distal Tubules absorption

As a

Drug move towards the
Distal & convoluted
tubule. It contraction

increases and exceed that
of the perivascular space.

The Drug if uncharged
may diffuse out of the
nephric lumen.

Thank you