Section - A

(I) Short Notes

Ans1→ These are viscous liquid preparations that's and used for the treatment of cough. They contains medicaments which have demulcent, sedative, expectorant action eg simple linctus.

Ans2→ young's rule formula to calculate the dose.

$$\text{Dose for child} = \text{Adult dose} \frac{\text{Age}}{\text{Age}+12}$$

Ans 3→ There are two types of prescription are :-
→ Compounded prescription
→ Non-Compounded prescription.

Ans4→ Liniments are liquid or semi liquid preparations meant for external use to apply on skin. These are applied with friction & rubbing of the skin to reduce pain and relieve stiffness. eg camphor

Ans 5→ Suspension is an example of biphasic liquid dosage form in which finely divided solid particles are dispersed into liquid phase.
eg - Milk of Magnesia.

Ans 6→ it is clear, sweetened, aromatic, hydroalcholic preparations meant for oral use eg:- Piperazine Citrate Elixir I.P.

Section - B

II Short Essay

Ans 7→

	Flocculated Suspension	Deflocculated Suspension
1.	Particles form loose aggregate and form a net work like structure.	Particle exist as separate entities.
2.	The rate of sedimentation is high	The rate of sedimentation is low.
3.	Sediment is easily to redisperse	Sediment is difficult to redisperse.
4.	Sediment is loosly packed and does not form a hard cake	sediment is very closely packed and form a hard cake at bottom.
5.	Supernatent liquid is clear	Supernatent liquid is not clear.
6.	Suspension is not pleasing in appearance	Suspension is pleasing in appearance.

Ans8→ The Factors affecting the posology are:-

1. Age:- Newborn infants are abnormally sensitive to certain drugs because of im mature state of their hepatic and renal function is inactive. and elderly people may slow drug clearance due weak renal and hepatic function.

2. Body weight:- The official usual doses for drugs are considered suitable for 70 kgs (150 pounds) individuals. The abnormally leaner obese patients required more dose of medicine/drug.

3. Body Surface Area
A close relation exists between a large number of physiological processes and body surface area (BSA). The surface area is calculated or determined from a nomogram.

4. Sex :- Women are more susceptible to the effects of certain drugs than are man. Pregnant women and nursing mothers should use medications only with advise of their physician.

5. Pathological State :- Warning and precautions are used in the drugs labeling to alert the physician to certain restrictions in the use of a particular drug.

6. Tolerance :- Drug tolerance - The ability to endure the influence of a drug, particularly when acquired by a continued use of the substance.

7. Drug - Drug interactions :- The effects of a drug may be modified by the concurrent administration of another drug.

8. Time of administration :- The presence of food in the stomach delays the absorption of drugs. The drugs are more rapidy absorbed from the empty stomach.

9. Route of administration :- Drugs administraked intravenously enter the blood stream directly and thus the full amount administered is present in the blood.

10. Pharmaceutical dosage from and drug physical state :- Increasing the surface area of a drugs by then reduction of its particle size has a significant effect on the rate of absorption.

11. Environmental factors :- Daylight is stimulant, enhancing the effect of stimulating drugs and diminishing the effect of hypnotics.

12. Emotional Factors :- The females are more emotional than males and requires less dose of certain drugs.

13. Presence of disease :- During fever a patient can tolerate high doses of antipyretics than a normal person.

14. Accumulation :- The drugs which are slowly excreted, may build up a sufficient high concentration in the body and produce toxic symptoms if it is repeatedly administered for a long time.

15. Synergism :- When two or more drugs are used in the combination form, their action is increased is called Synergism.

16. Antagonism :- when the action of one drug is opposed by the other drug on the same physiological system is known as anatgonism.

17. Idiosyncrasy :- An extra ordinary response to a drug which is different from its characteristics pharmacological action is called idiosyncrasy.

Ans 9 → The first edition of the Indian pharmacopoeia was published in 1955 by Indian Pharmacopoeia committee under the Chairman ship of Dr. B.N Ghosh. It was written in english with the official titles of monograph given in latin. The first edition covered 986 monographs.

The salient features are :-

→ The weights and measures have been given in the metric system.

→ All statements contained in the individual monographs have been

→ Considered to constitute standards for the official substances.
Doses are expressed both in the metric system as well as english system.

Section - C

III. Long Essay

Dosage forms are the carriers through which drug molecules are delievered to sites of action within the body. Every dosage form is a combination of the drug and different kinds of excipients or additives

Classification - I

1. Physical state	2. Route of administration	3. state of administration	4. Use.
Solid	Oral	Skin	Foot	Internal
Semi-solid	Parental	Eye	Hair	External
Liquid	Rectal	Tooth	Nose	
Gaseous	Nasal	Hand		

Classification - II

1. Solid dosage form → Unit dosage form
   → tablets → powders
   → Capsules → Pills
   ↓
   Bulk
   ↙ External (Snuffs, Dusting powder, Ear powder)
   ↘ Internal (Fine powder granuls)

This dosage form is present in solid state: They are most handy and less chances of being unstable.
Ex paracetamol tablets
Aspirin tablets.

2. Liquid dosage form → Parental
   Small volume
   Large volume.

Biphasic	Monophasic		
Emulsion	Internal	External	
Suspension	Syrups	Liniments	Eyelotions
	Elixir	lotions.	Eye drops
	Linctus	Throatspaints	Nasal drops.
	Drops	Mouthwashes	
		Sprays	

This dosage form is present in liquid state. These are bulky to handle, more prone to breakage and spilling and microbial growth too.

Ex - Calamine lotions
Codeine linctus.

3. Semi Solid dosage forms

Internal	External.
Suppositories	Ointements
Pessaries	Creams
	Jellies
	Pastes.

These are present in semi-solid form eg Zandu Balm, Move etc.

Ans 11) Preparation of emulsion -
→ Dry gum Method
→ wet gum method
→ Bottle ~~gum~~ Method

- Dry gum method The ration of oil : water : gum is 4:2:1 requires morter and pestle.
This are added in same order and triturated well till clicking sound and the volume is made up to required.

- **Wet gum method**
The ratio of oil: water: gum is 4:2:1
requires morter and pestle
This are added in same order and titrated well till clicking sound and the volume is made upto requirement.

- **Bottle Method**
The ratio of oil: water: gum is 2:2:1
All the compentents are added into the bottle and shaken well to get primary emuslion than the volume is made upto the requirement.

Stability problems in emuslion are:-
1. Cracking
2. Creaming
3. Phase Inversion
4. Coalescence

- Cracking:- sepration of 2 layer/phases of the emuslion
- Creaming:- means upward or downwards movements of the dispersed phase to form thick layer at the surface or bottom of emuslion.
- Phase inversion is simply defined as conversion of o/w emuslion into w/o emuslion or vice versa.
- Coalescene is the process in which two or more droplets merge together to form a single large droplet.

Methods to overcome the stability Problem.
→ Selection of proper emulsifying agent
→ By increasing the viscosity of the emuslion
→ By proper Storage of the emuslion
→ By maintaining minimum density difference.
→ By reducing the size of dispersed globules.