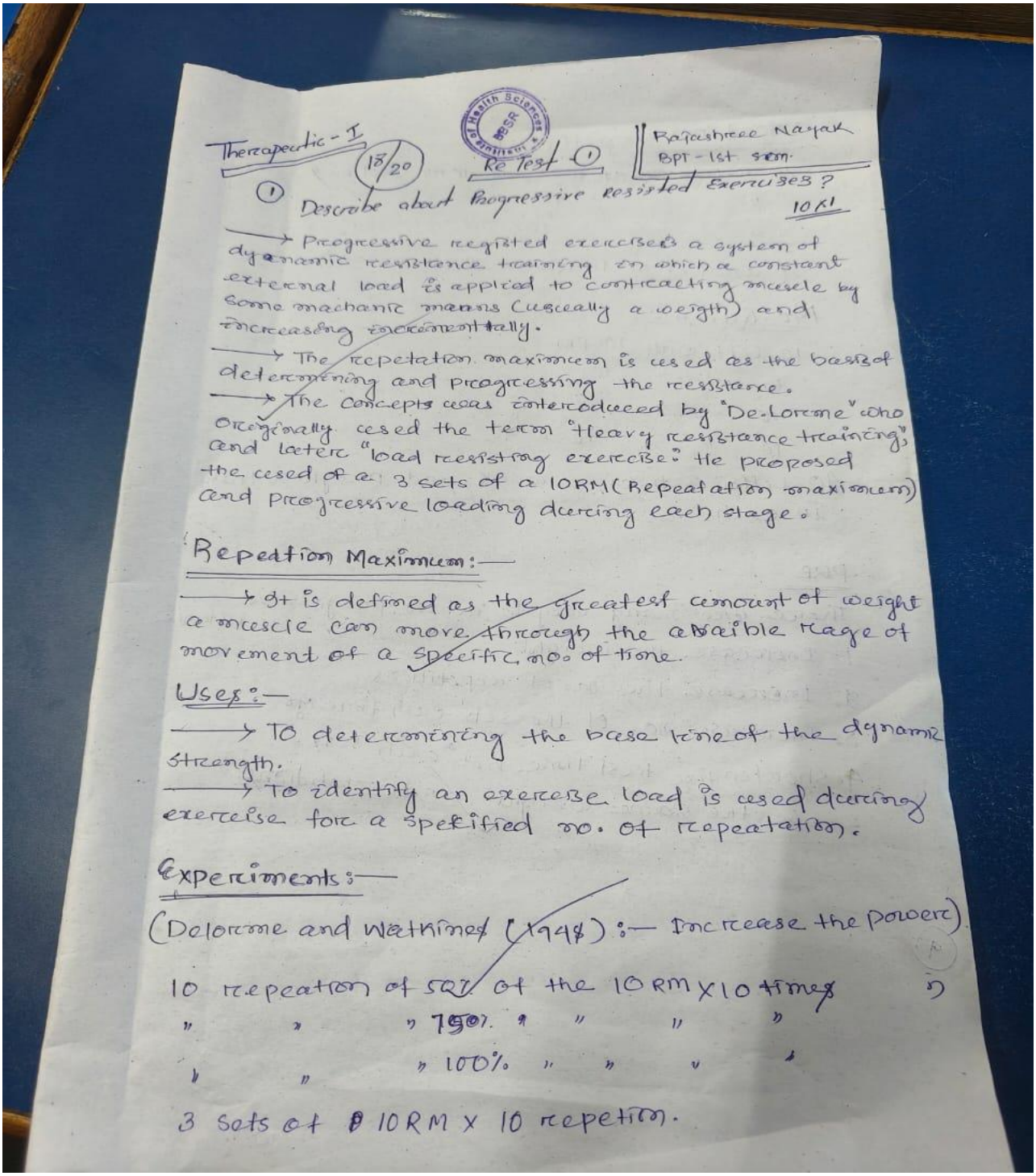
2.5.4. RETEST AND ANSWER SHEETS



Therapeutic - I 18/20 Re Test - 1 Rajashree Nayak BPT - 1st sem.

① Describe about Progressive resisted Exercises? 10/1

→ Progressive resisted exercises a system of dynamic resistance training in which a constant external load is applied to contracting muscle by some mechanic means (usually a weigth) and increasing incrementally.

→ The repetation maximum is used as the basis of determining and progressing the resistance.

→ The concepts was introduced by "De-Lorme" who originally used the term "Heavy resistance training" and later "load resisting exercise" he proposed the used of a 3 sets of a 10RM (Repeatation maximum) and progressive loading during each stage.

Repeation Maximum:—

→ It is defined as the greatest amount of weight a muscle can move through the available range of movement of a specific no. of time.

Uses:—

→ To determining the base line of the dynamic strength.

→ To identify an exercise load is used during exercise for a spekified no. of repeatation.

Experiments:—

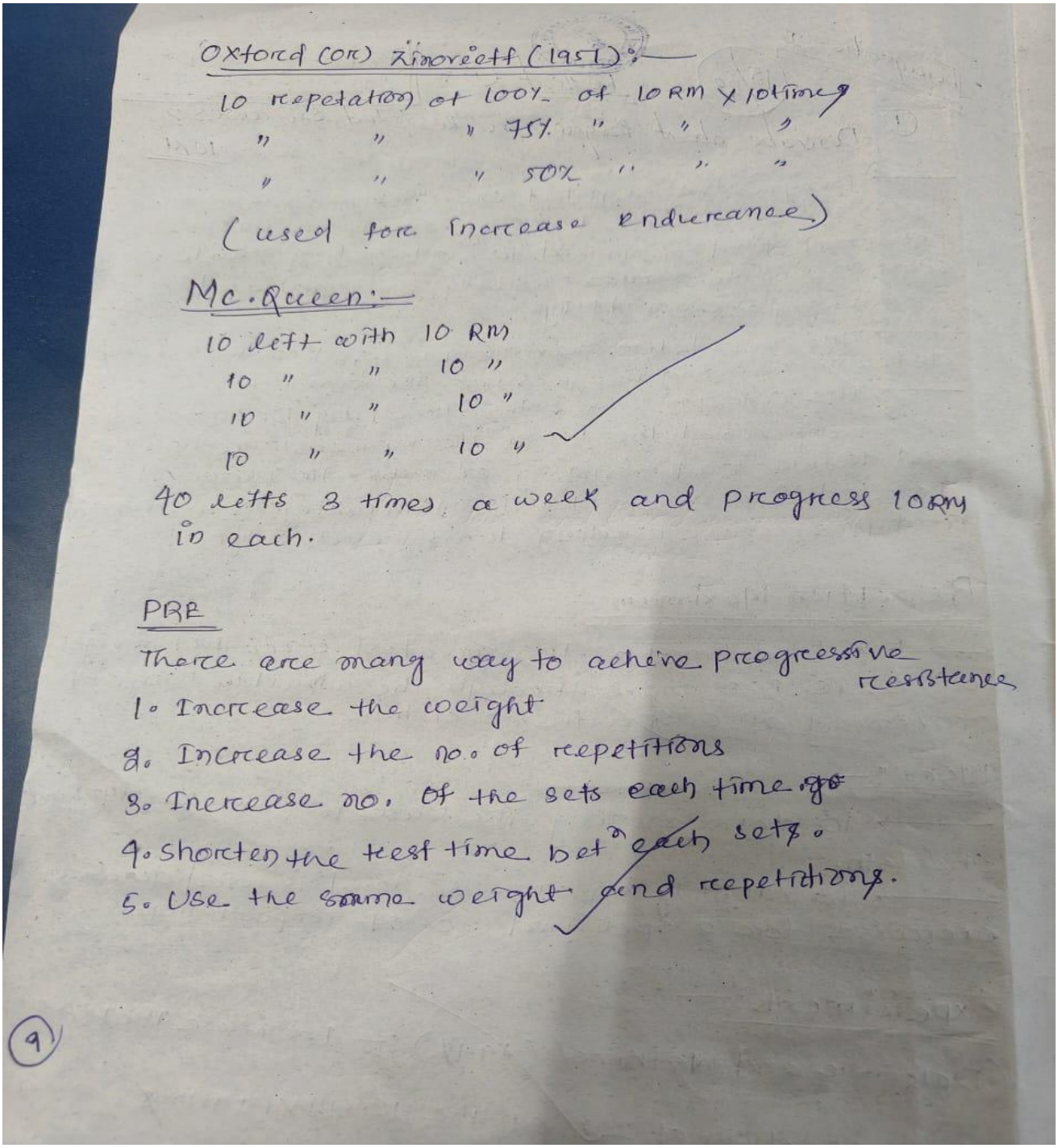
(Delorme and Watkins (1948):— Increase the power)

10 repeation of 50% of the 10RM x 10 times

" " " 75% " " " "

" " " 100% " " " "

3 sets of 10RM x 10 repetion.



Oxford (or) Zinoreff (1951):—

10 repetation of 100% of 10 RM x 10 times
" " " 75% " " "
" " " 50% " " "

(used for increase endurance)

Mc.Queen:—

10 left with 10 RM
10 " " 10 "
10 " " 10 "
10 " " 10 "

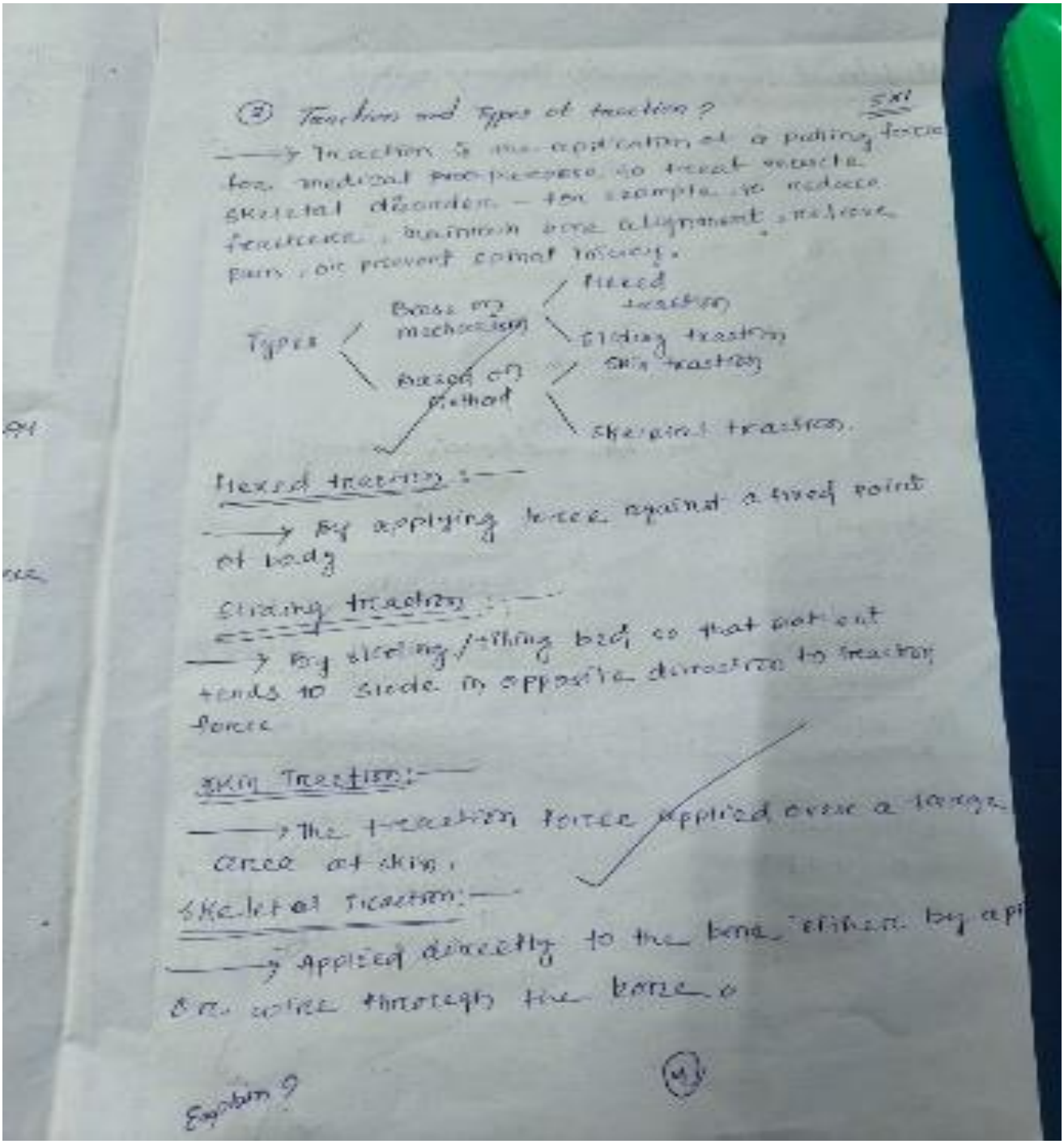
40 lefts 3 times a week and progress 10 RM in each.

PRE

There are many way to achieve progressive resistance

1. Increase the weight
2. Increase the no. of repetitions
3. Increase no. of the sets each time
4. Shorten the rest time bet^n each sets.
5. Use the same weight and repetitions.

(9)



③ Traction and Types of traction ?

——→ Traction is the application of a pulling force for medical purposes to treat muscle skeletal disorder — for example, to reduce fracture, maintain bone alignment, relieve pain, or prevent spinal injury.

Types
- Based on mechanism
  - Fixed traction
  - Sliding traction
  - Skin traction
- Based on Method
  - Skeletal traction.

Fixed traction :—

——→ By applying force against a fixed point of body

Sliding traction :—

——→ By sliding / tilting bed, so that patient tends to slide in opposite direction to traction force

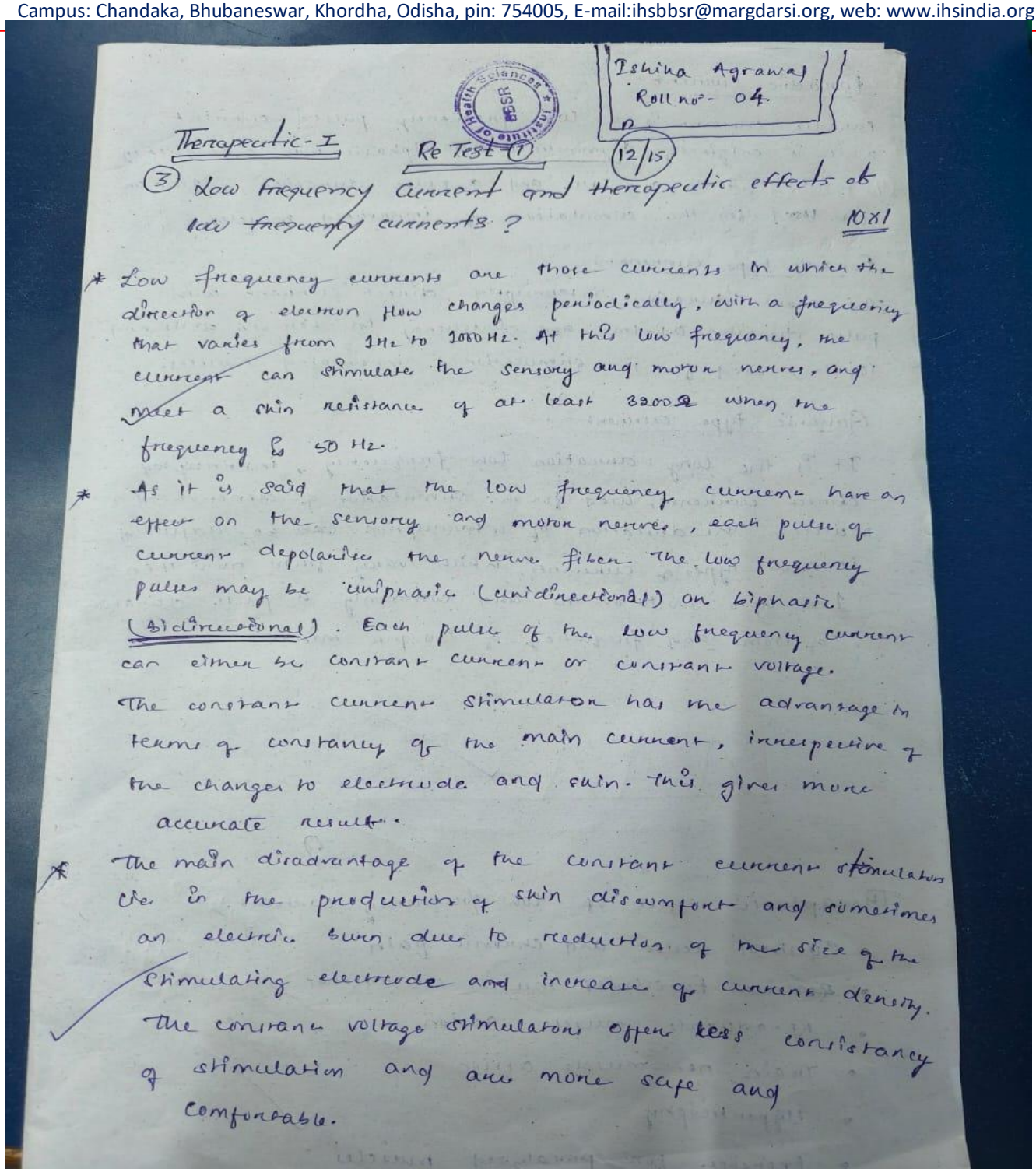
Skin Traction :—

——→ The traction force applied over a larger area of skin.

Skeletal Traction :—

——→ Applied directly to the bone either by pin or wire through the bone.

Explain ?



Ishika Agrawal
Roll no:- 04.

Therapeutic-I Re Test (1) 12/15

(3) Low frequency current and therapeutic effects of low frequency currents ? 10x1

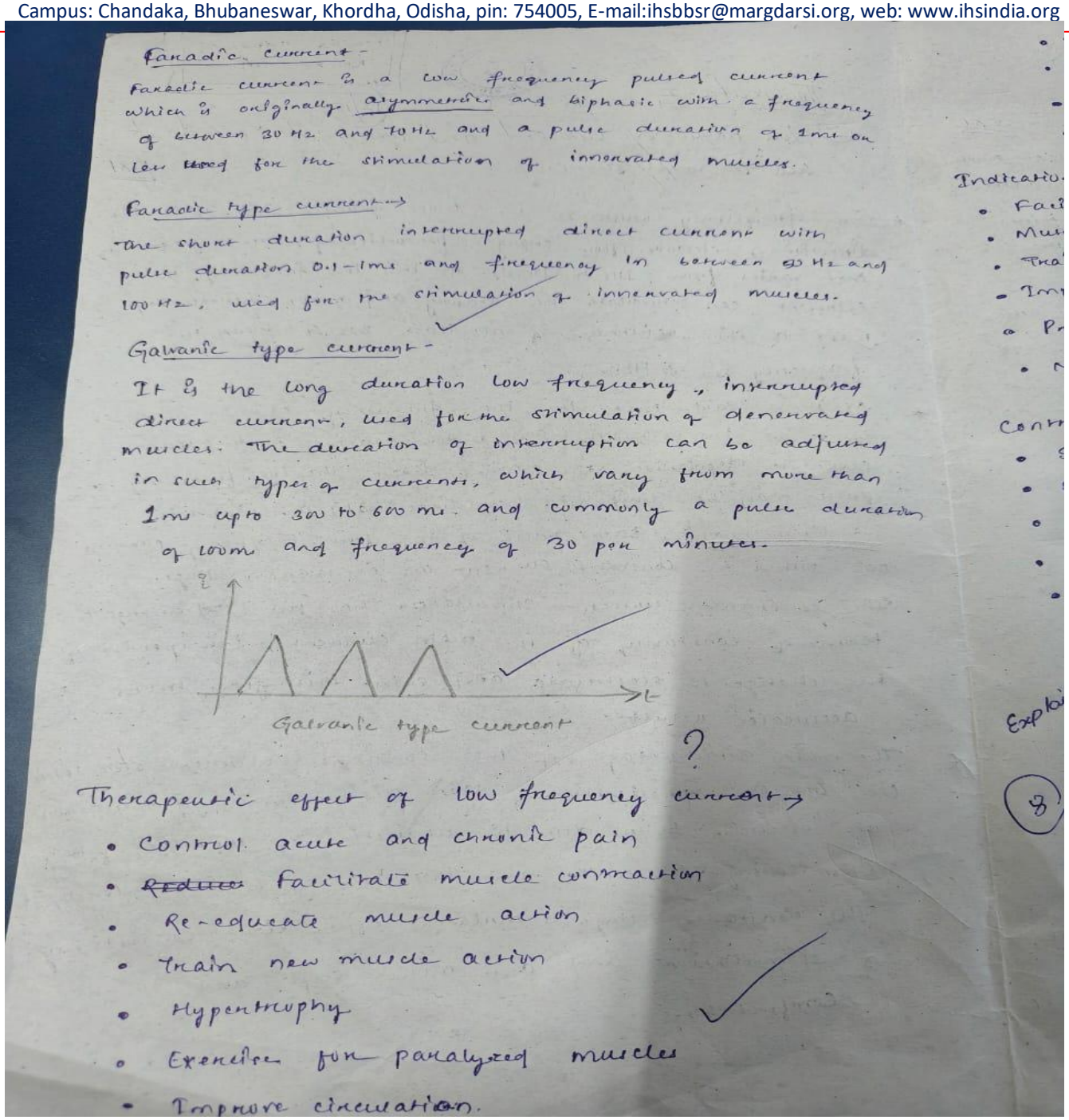
* Low frequency currents are those currents in which the direction of electron flow changes periodically, with a frequency that varies from 1Hz to 1000Hz. At this low frequency, the current can stimulate the sensory and motor nerves, and meet a skin resistance of at least 3200Ω when the frequency is 50 Hz.

* As it is said that the low frequency currents have an effect on the sensory and motor nerves, each pulse of current depolarize the nerve fiber. The low frequency pulses may be uniphasic (unidirectional) or biphasic (bidirectional). Each pulse of the low frequency current can either be constant current or constant voltage.

The constant current stimulator has the advantage in terms of constancy of the main current, irrespective of the changes to electrode and skin. This gives more accurate result.

* The main disadvantage of the constant current stimulators is in the production of skin discomfort and sometimes an electric burn due to reduction of the size of the stimulating electrode and increase of current density.

The constant voltage stimulators offer less consistancy of stimulation and are more safe and comfortable.



Faradic current -

Faradic current is a low frequency pulsed current which is originally asymmetrical and biphasic with a frequency of between 30 Hz and 70 Hz and a pulse duration of 1ms or less used for the stimulation of innervated muscles.

Faradic type current ->

The short duration interrupted direct current with pulse duration 0.1 - 1ms and frequency in between 50 Hz and 100 Hz, used for the stimulation of innervated muscles.

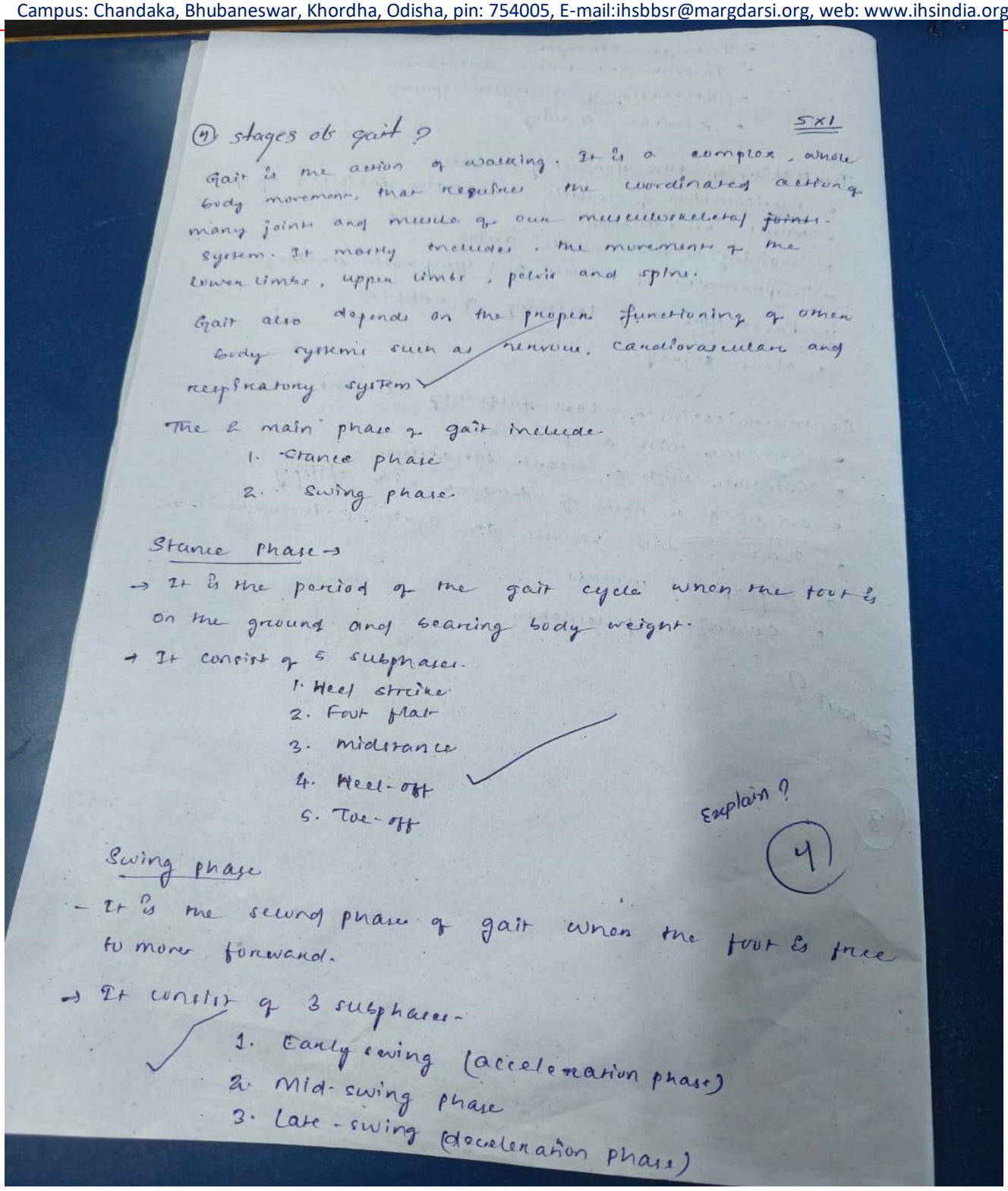
Galvanic type current -

It is the long duration low frequency, uninterrupted direct current, used for the stimulation of denervated muscles. The duration of interruption can be adjusted in such types of currents, which vary from more than 1ms upto 300 to 600 ms and commonly a pulse duration of 100ms and frequency of 30 per minutes.

Galvanic type current

Therapeutic effect of low frequency current ->

- Control acute and chronic pain
- ~~Reduce~~ Facilitate muscle contraction
- Re-educate muscle action
- Train new muscle action
- Hypertrophy
- Exercise for paralyzed muscles
- Improve circulation.



(4) stages of gait ? 5×1

Gait is the action of walking. It is a complex, whole body movement, that requires the coordinated actions of many joints and muscles of our musculoskeletal joints. system. It mainly includes the movement of the lower limbs, upper limbs, pelvis and spine.

Gait also depends on the proper functioning of other body systems such as nervous, cardiovascular and respiratory system.

The 2 main phase of gait include

1. Stance phase
2. Swing phase.

Stance Phase →

→ It is the period of the gait cycle when the foot is on the ground and bearing body weight.

→ It consist of 5 subphases.

1. Heel strike
2. Foot flat
3. Midstance
4. Heel-off
5. Toe-off

Explain ?

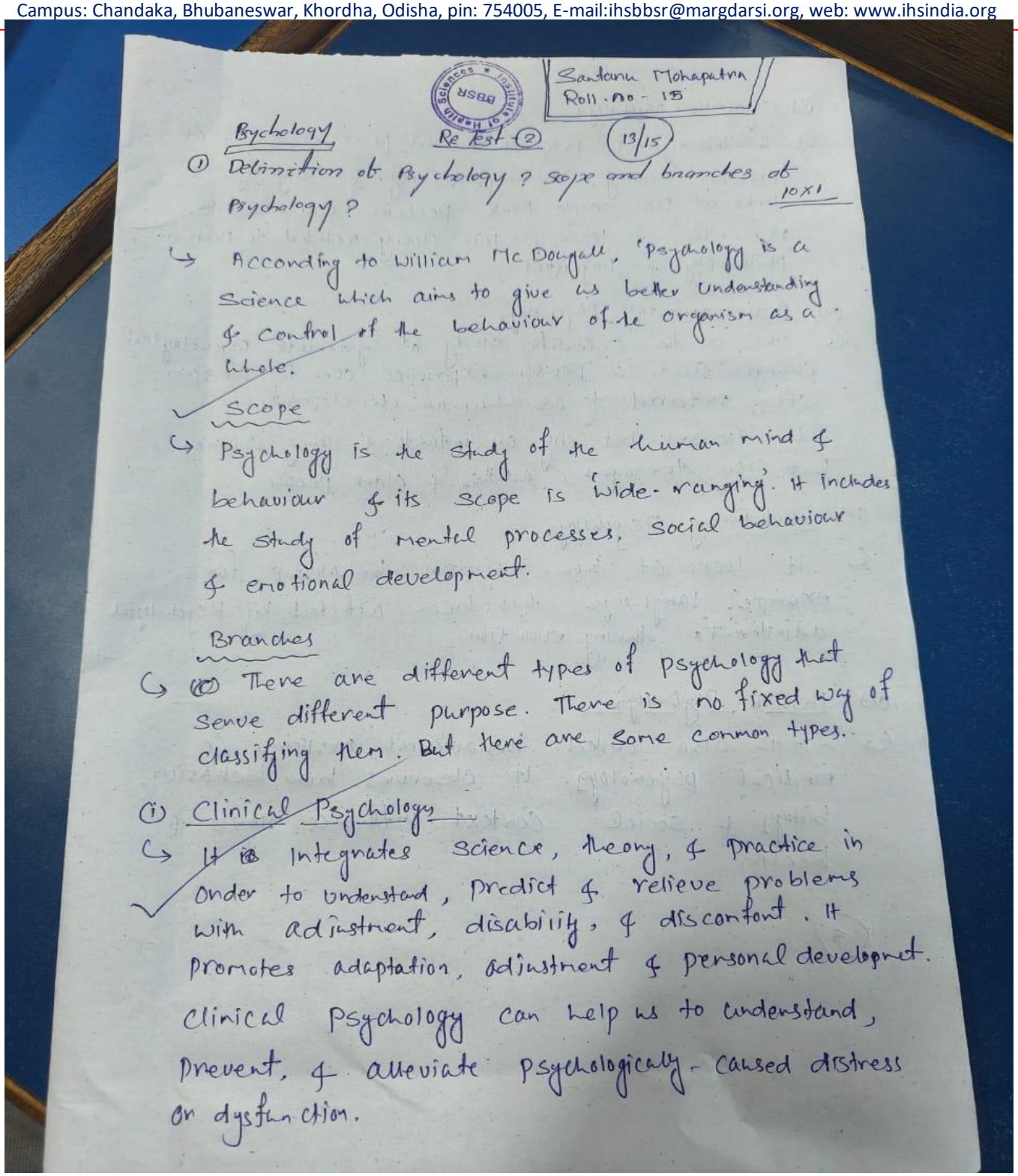
4

Swing phase

- It is the second phase of gait when the foot is free to move forward.

→ It consist of 3 subphases.

1. Early swing (acceleration phase)
2. Mid-swing phase
3. Late-swing (deceleration phase)



Santanu Mohapatra
Roll. No - 15

Psychology Re Test ② 13/15

① Definition of Psychology ? Scope and branches of Psychology ? 10x1

↳ According to William Mc Dougall, 'Psychology is a Science which aims to give us better understanding & control of the behaviour of the organism as a whole.

Scope

↳ Psychology is the study of the human mind & behaviour & its scope is 'wide-ranging'. It includes the study of mental processes, social behaviour & emotional development.

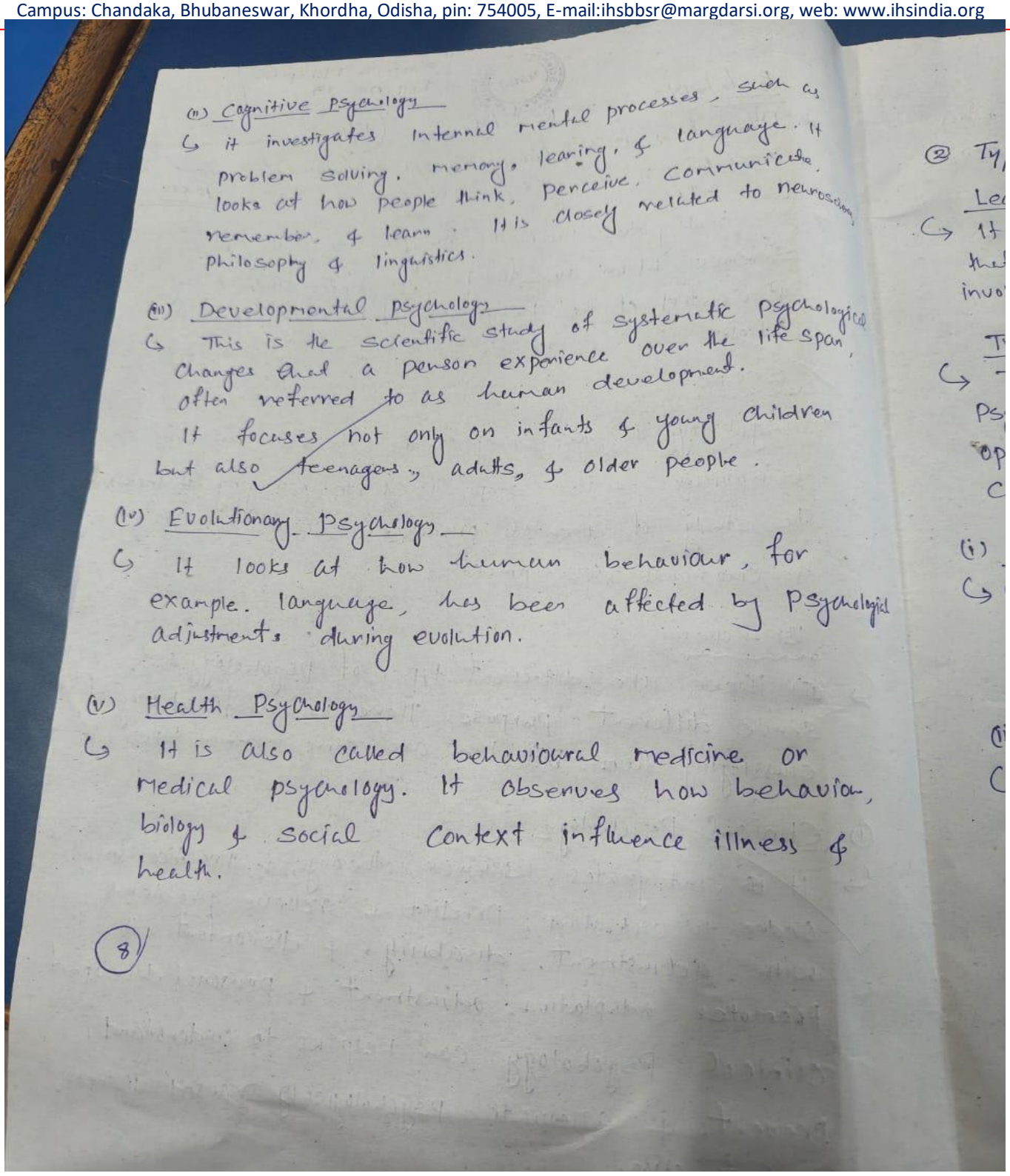
Branches

↳ There are different types of psychology that serve different purpose. There is no fixed way of classifying them. But here are some common types.

① Clinical Psychology

↳ It integrates science, theory, & practice in order to understand, predict & relieve problems with adjustment, disability, & discomfort. It promotes adaptation, adjustment & personal development.

Clinical Psychology can help us to understand, prevent, & alleviate psychologically-caused distress or dysfunction.



(ii) Cognitive Psychology

↳ It investigates internal mental processes, such as problem solving, memory, learning, & language. It looks at how people think, perceive, communicate, remember, & learn. It is closely related to neuroscience, philosophy & linguistics.

(iii) Developmental psychology

↳ This is the scientific study of systematic psychological changes that a person experience over the life span, often referred to as human development.

It focuses not only on infants & young children but also teenagers, adults, & older people.

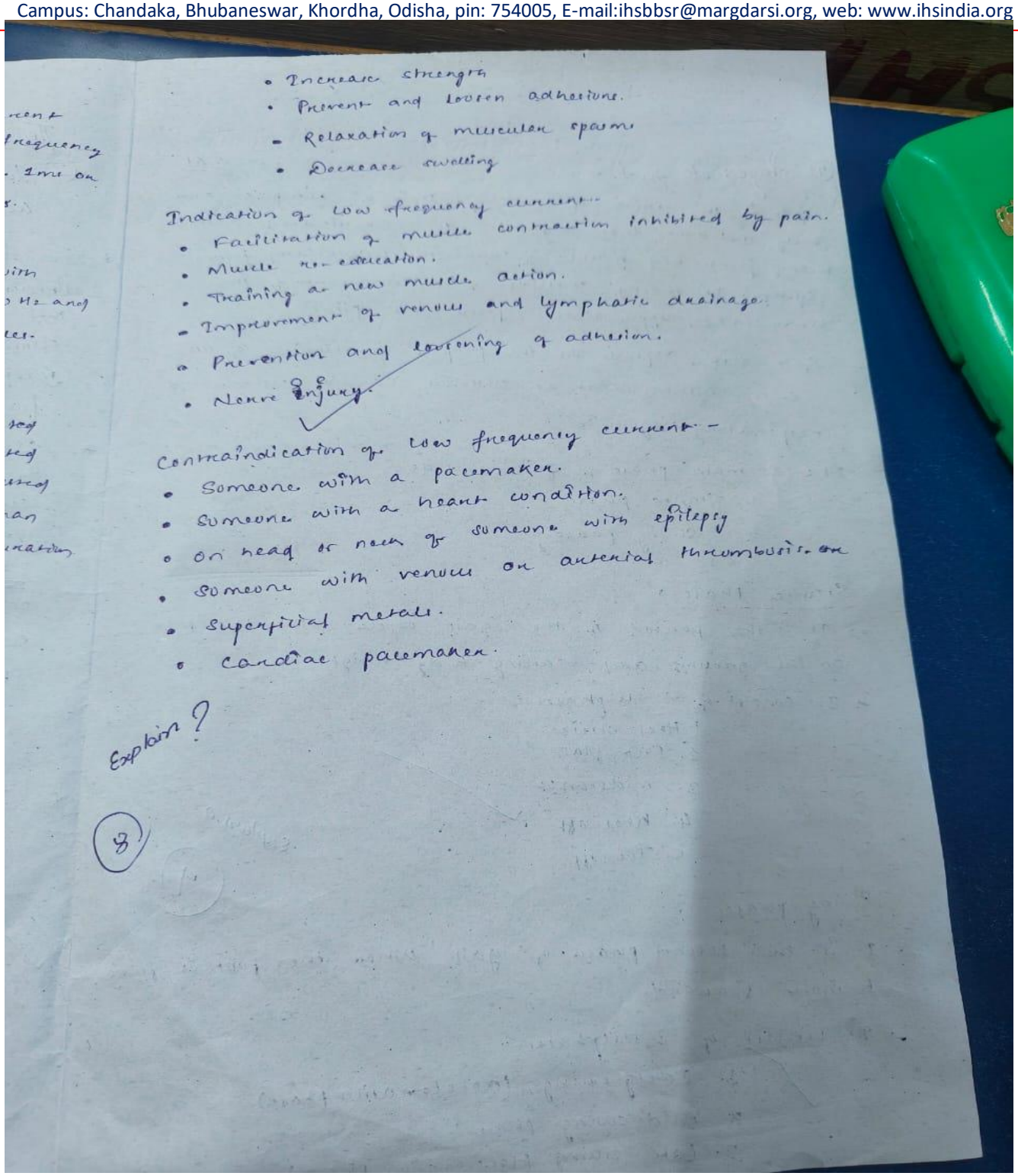
(iv) Evolutionary Psychology

↳ It looks at how human behaviour, for example, language, has been affected by psychological adjustments during evolution.

(v) Health Psychology

↳ It is also called behavioural medicine or medical psychology. It observes how behavior, biology & social context influence illness & health.

(8)



- Increase strength
- Prevent and loosen adhesions.
- Relaxation of muscular spasm
- Decrease swelling

Indication of low frequency current:-

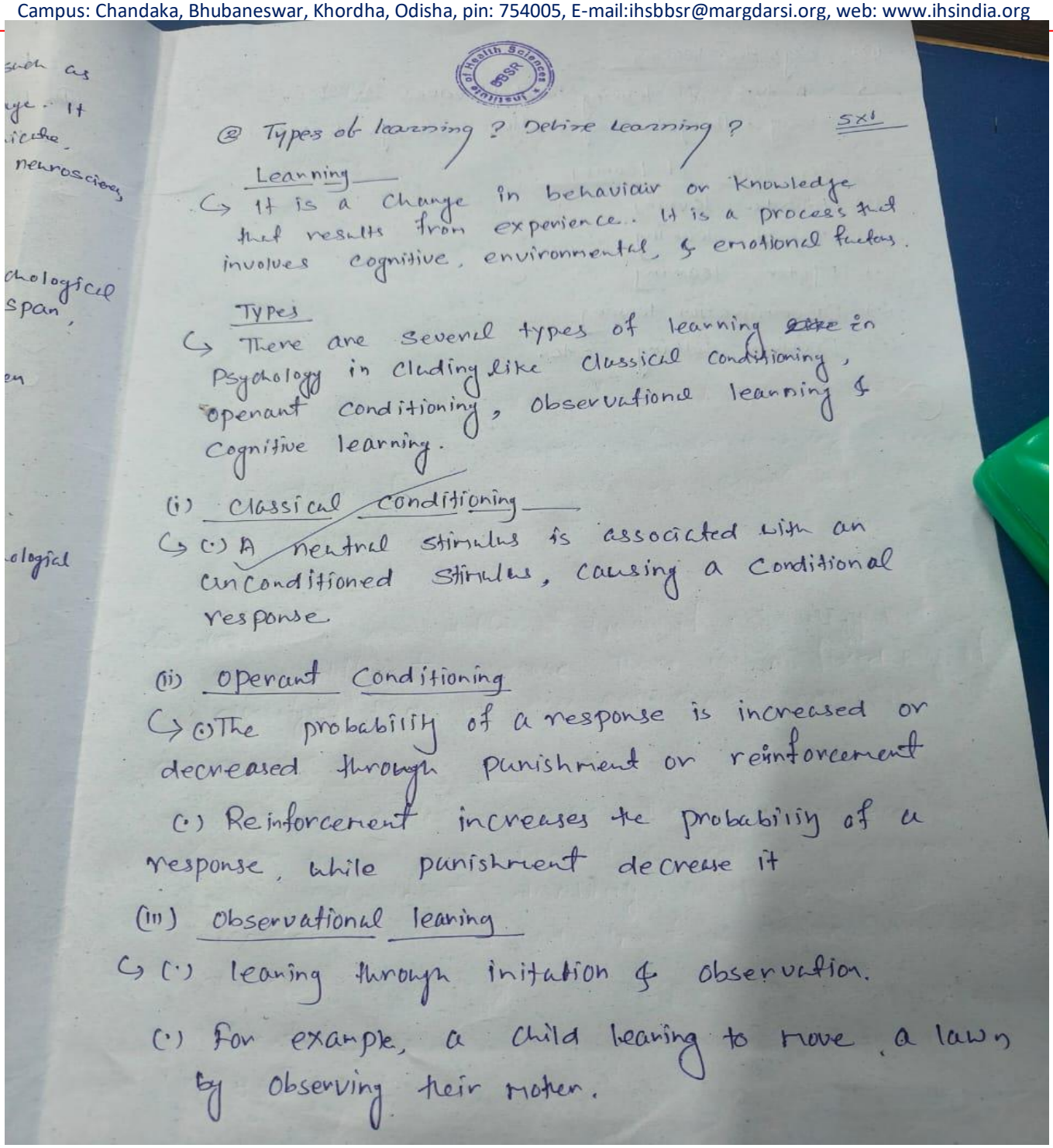
- Facilitation of muscle contraction inhibited by pain.
- Muscle re-education.
- Training of new muscle action.
- Improvement of venous and lymphatic drainage.
- Prevention and loosening of adhesion.
- Nerve injury.

Contraindication of low frequency current -

- Someone with a pacemaker.
- Someone with a heart condition.
- On head or neck of someone with epilepsy
- Someone with venous or arterial thrombosis.
- Superficial metals.
- Cardiac pacemaker.

Explain?

(3)



@ Types of learning ? Define Learning ? 5x1

Learning

↳ It is a change in behaviair or knowledge that results from experience. It is a process that involves cognitive, environmental, & emotional factors.

Types

↳ There are several types of learning in Psychology including like classical conditioning, operant conditioning, observational learning & cognitive learning.

(i) Classical conditioning

↳ (·) A neutral stimulus is associated with an unconditioned stimulus, causing a conditional response

(ii) Operant Conditioning

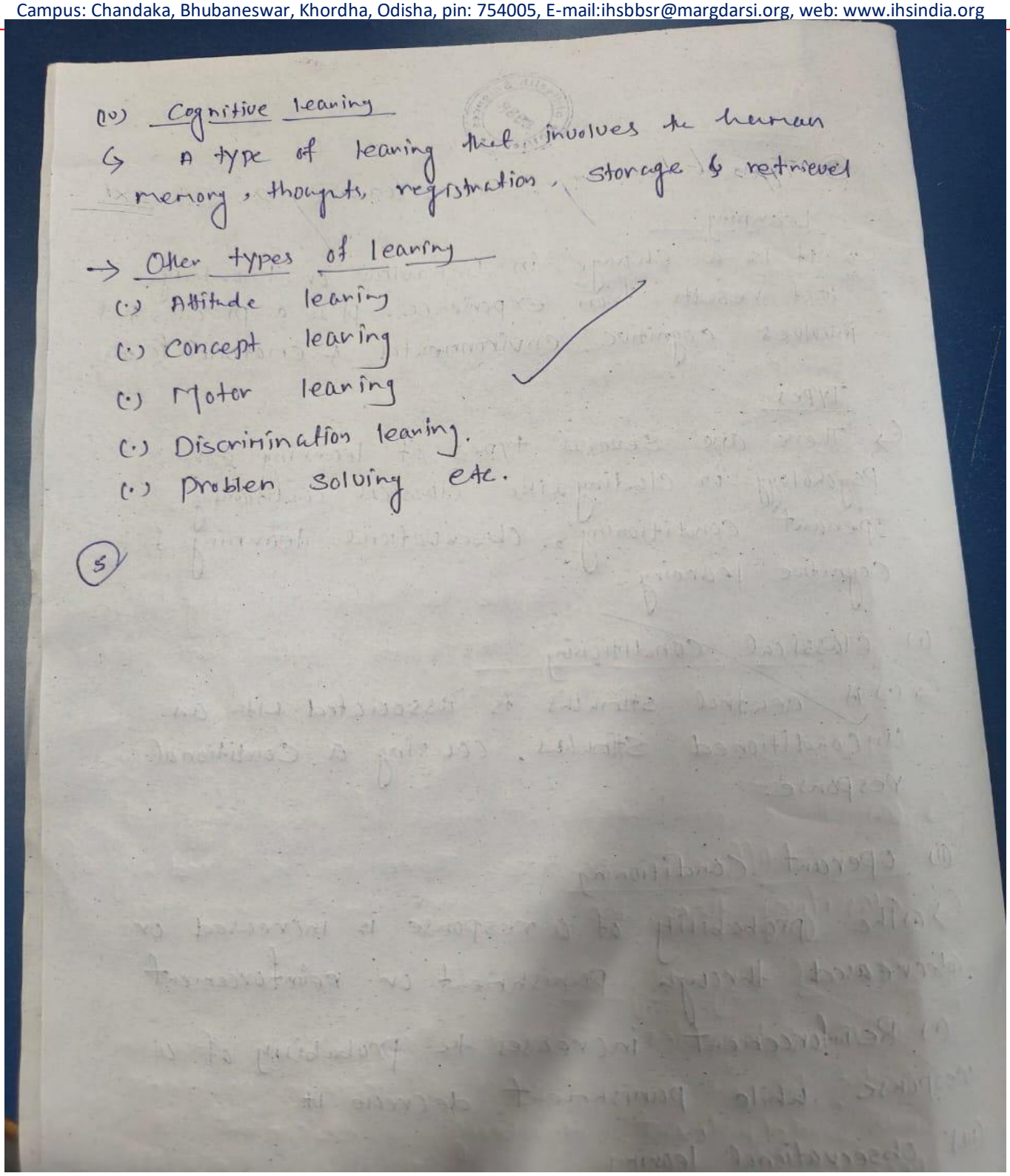
↳ (·) The probability of a response is increased or decreased through punishment or reinforcement

(·) Reinforcement increases the probability of a response, while punishment decrease it

(iii) Observational leaning

↳ (·) leaning through initation & observation.

(·) For example, a child leaning to move a lawn by observing their mother.



(iv) Cognitive learning

↳ A type of learning that involves the human memory, thoughts, registration, storage & retrieval

→ Other types of learning

(·) Attitude learning
(·) Concept learning
(·) Motor learning
(·) Discrimination learning.
(·) Problem solving etc.

5