CBSE / TN STATE Board

Exam Preparation

For STD IX – STD XII Students

Presented by

E. Ramanathan

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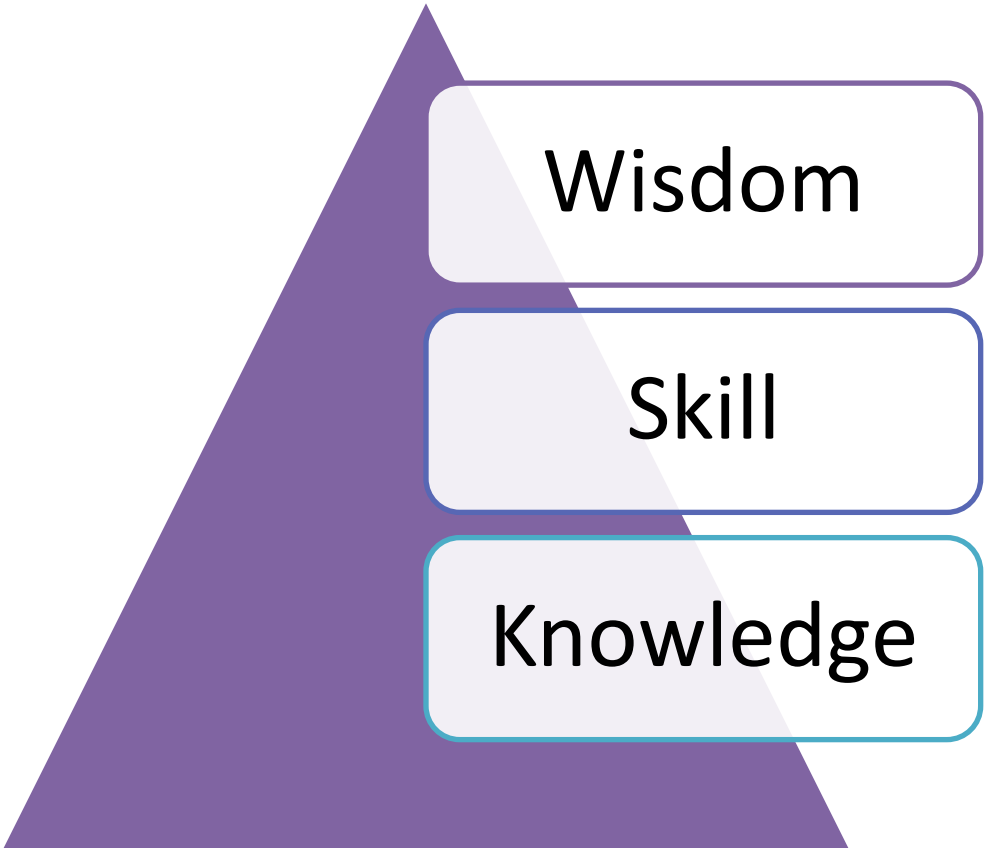
Philosophy Starts where Physics Ends



1. KUAS or CHAOS ?

- **K**nowledge – terms, definitions, symbols
- **U**nderstanding – concept, method
- **A**pplication – solving problems and issues
- **S**kill – by practice

2. KUDOS

- KUDOS – Problem Solving Technique
- Known
- Unknown
- Definition
- Output
- Substantiation

Q.No. Sub: Maths Topic: App. of Trigonometry Class: X Name: S. Pavani

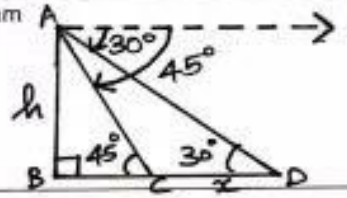
Question From the top of a lighthouse 75m high, the angles of depression of two ships are observed to be 30° and 45° respectively. If one ship is directly behind the other on the same side of the lighthouse then find the dis. between the two ships.

1) Given

$AB = h = 75m$

$CD = x$ = Dis between two ships

2) Reference data / diagram



3) To find out

$x = ?$ (Dis between two ships)

4) Formulae

$\tan 30° = \frac{1}{\sqrt{3}} = \frac{Opp}{Adj}$

$\tan 45° = 1 = \frac{Opp}{Adj}$

5) Reformulation

$\frac{h}{BC+x} = \frac{1}{\sqrt{3}}$ $\boxed{h = BC}$

$\rightarrow \boxed{h\sqrt{3} = BC + x}$

6) Substitution

$\boxed{75 = BC}$

$75\sqrt{3} = 75 + x$

7) Working

$\boxed{BC = 75m}$

$75\sqrt{3} = 75 + x$

$x = 75\sqrt{3} - 75$

$x = 75(\sqrt{3} - 1)$

8) Answer Dis. between two ships $75(\sqrt{3}-1)m$

Rough work

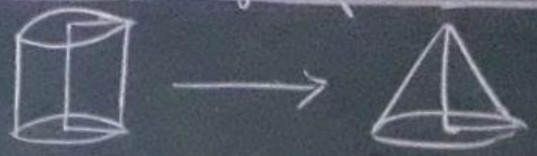
Problem:- A cylindrical bucket, 32 cm high and with radius of 18 cm is filled with sand. This bucket is emptied on the ground & a conical heap is formed with height 24 cm. Find the radius and slant height of cone?

Given:-

Cylinder: $r_1 = 18$ cm, $h_1 = 32$ cm

Cone: $h_2 = 24$ cm

Ref:-



3) **To find:-** $r_2 = ?$ $l = ?$

radius of cone = ?

slant height = ?

4) **Formulae:-** Vol. of cylinder $= \pi r^2 h$ cu. units

Vol. of cone $= \frac{1}{3}\pi r^2 h$ cu. units.

$l = \sqrt{r^2 + h^2}$

5) **Reformulation:-** $\pi r_1^2 h_1 = \frac{1}{3}\pi r_2^2 h_2$

$$\frac{r_1^2 h_1 \times 3}{h_2} = r_2^2$$

6) **Substitution:-**

$$\frac{18 \times 18 \times 32 \times 3}{24} = r_2^2$$

7) **Working:-**

$$\frac{18 \times 18 \times 32 \times 3}{24} = r_2^2$$

$r_2^2 = 1296 \Rightarrow r_2 = \sqrt{1296}$

$\therefore r_2 = 36$ cm

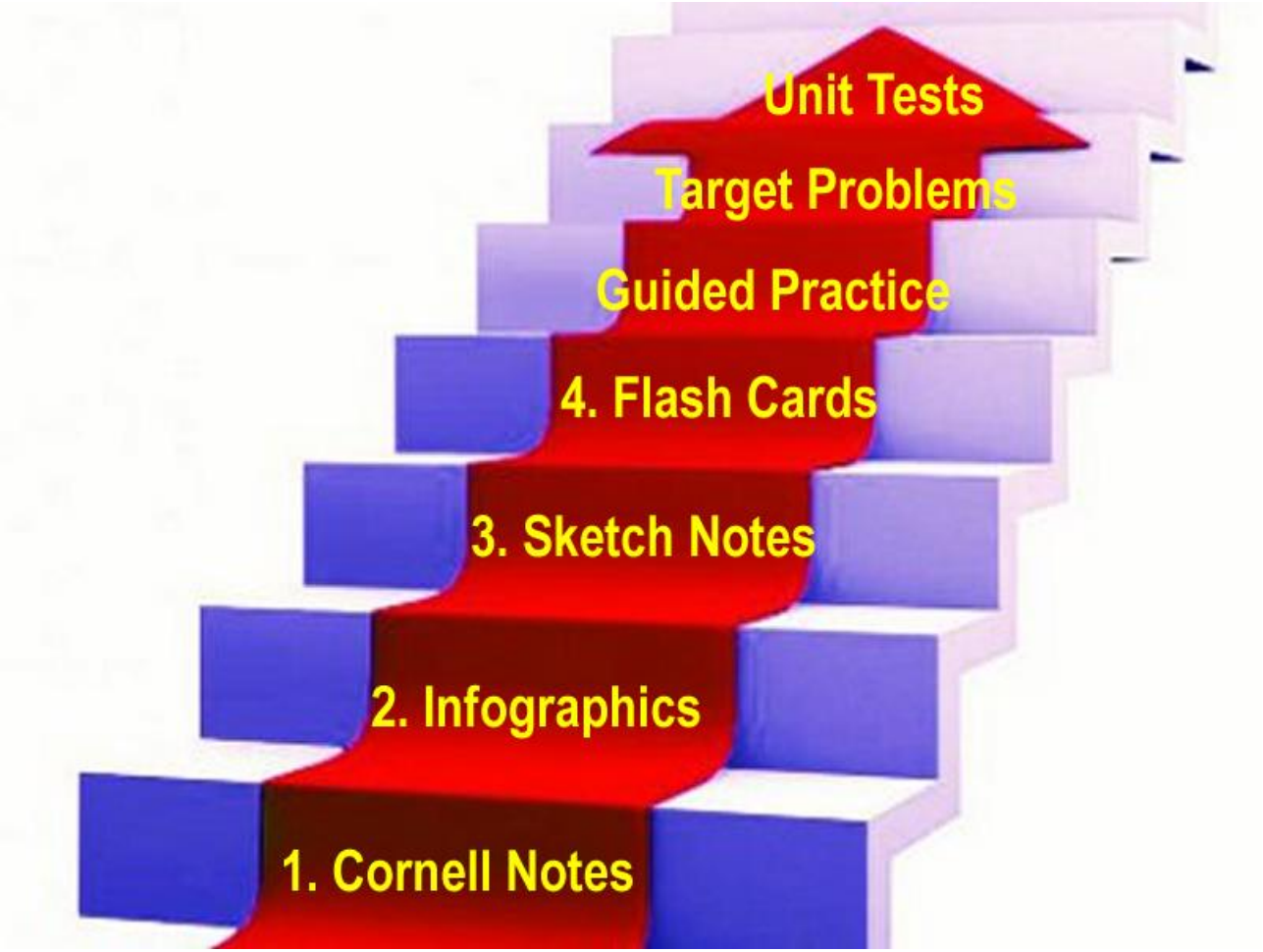
$l = \sqrt{(36)^2 + (24)^2}$

$l = \sqrt{1872}$

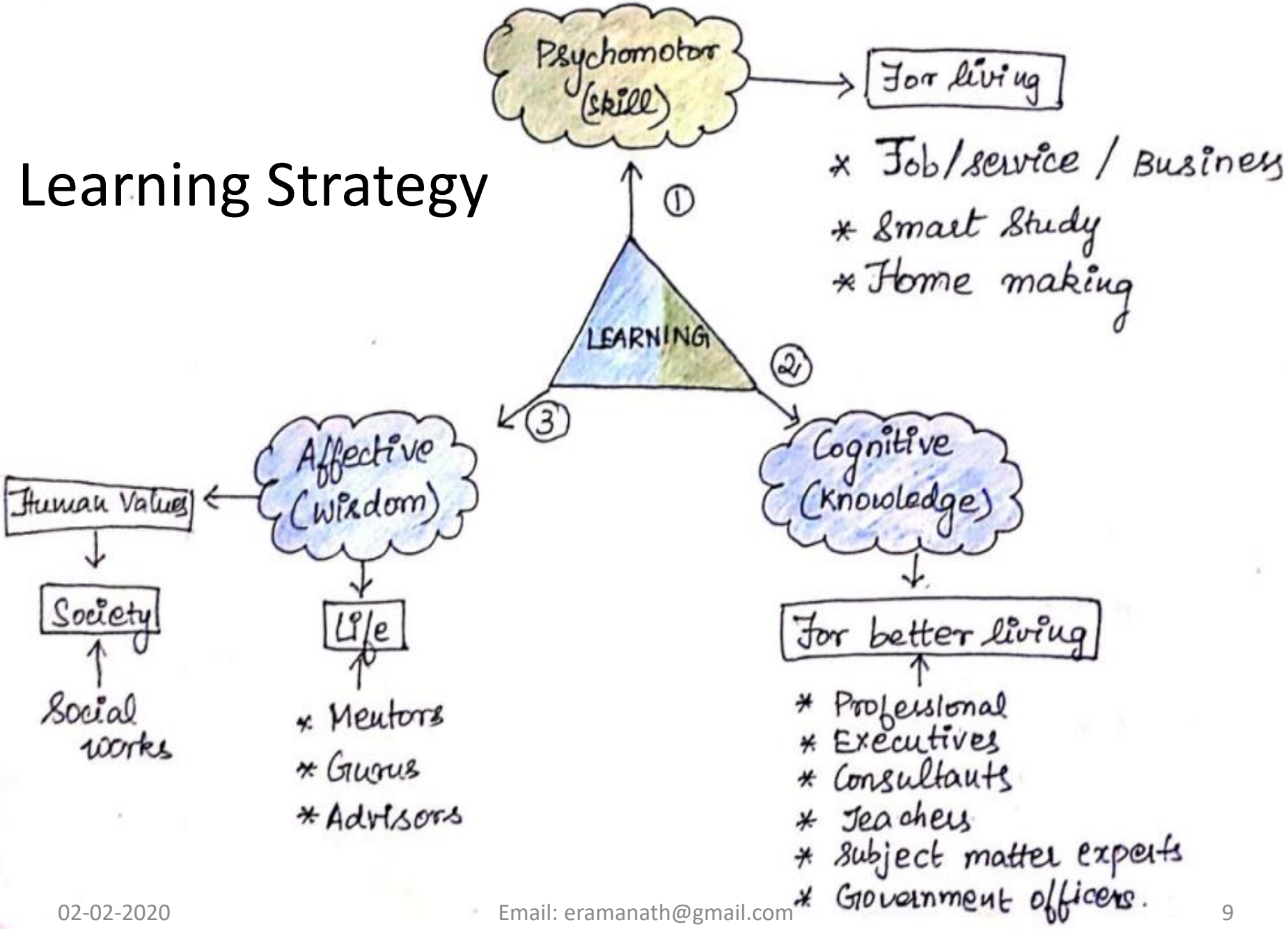
$l = 12\sqrt{3}$ cm

The radius and slant height of cone is 36 cm and $12\sqrt{3}$ cm.

3. Learning Strategy



Learning Strategy



CORNELL METHOD NOTETAKING

IS SO EFFECTIVE OMG WHY WEREN'T WE TAUGHT THIS IN STUDY SKILLS

by lavidapoliglota.tumblr.com

~2 inches

2. THIS IS THE RECALL COLUMN

As soon as possible after lecture, review the notes column, take main ideas, key concepts, and important facts and write them in the recall column

1. THIS IS THE NOTES COLUMN

During lectures, note main ideas and concepts. Don't mindlessly copy - rephrase what you can to retain information

Skip one line between ideas,

several between topics

Avoid writing in complete sentences, use symbols and abbreviations, e.g.:

~~*Pelayo, a descendant of the Visigoth aristocracy, founded the Kingdom of Asturias in 718.*~~

Pelayo (dscdt/Visigoth arist.) fd. Asturias 718

3. THIS IS THE SUMMARY SECTION

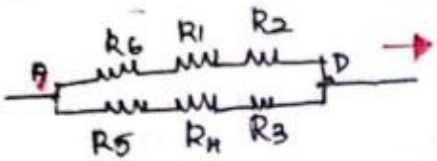
GUESS WHY IT'S CALLED THAT

Summarise main points here at the end

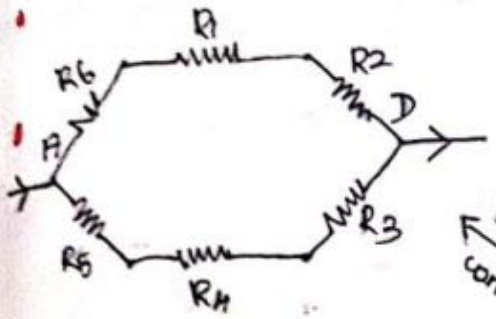
Info taken from

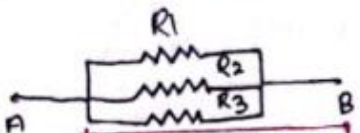
http://www.heritagehawks.org/faculty/dbrown/HistoryClass/TheCornellMethod.htm

PART - 1



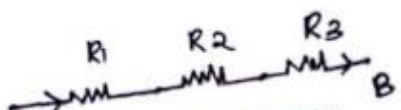
$R_1 + R_2 + R_6 = R_6$
$R_5 + R_H + R_3 = R_6'$
$\frac{1}{R_P} = \frac{1}{R_6} + \frac{1}{R_6'}$





$\frac{1}{R_P} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$

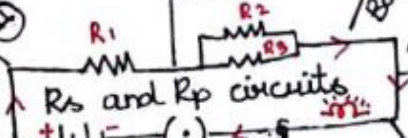
① Basic ||el circuit



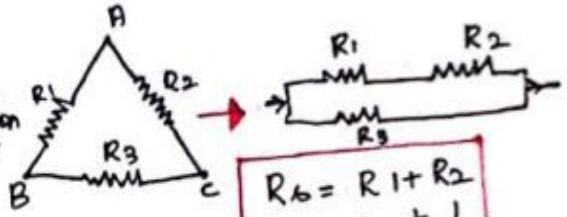
$R_5 = R_1 + R_2 + R_3$

② Basic series circuit

Hexagon combination ④

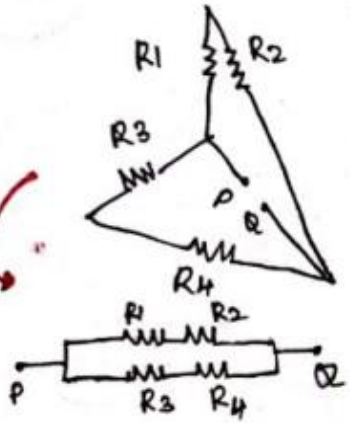


③ Δ or combination



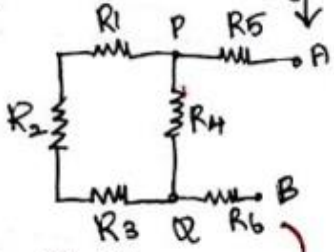
$R_6 = R_1 + R_2$
$\frac{1}{R_P} = \frac{1}{R_6} + \frac{1}{R_3}$

⑥ Rocket combination

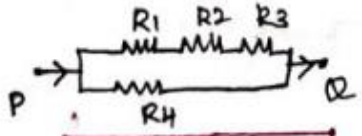


$R_6 = R_1 + R_2$
$R_6' = R_3 + R_H$
$\frac{1}{R_P} = \frac{1}{R_5} + \frac{1}{R_6'}$

⑤ open box combination

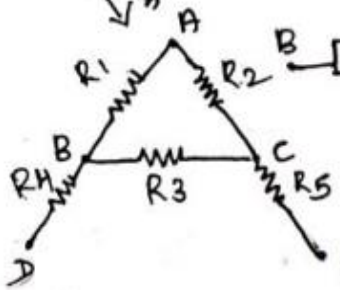


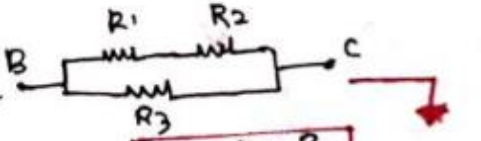
$R_6 = R_1 + R_2 + R_3$
$\frac{1}{R_P} = \frac{1}{R_6} + \frac{1}{R_H}$



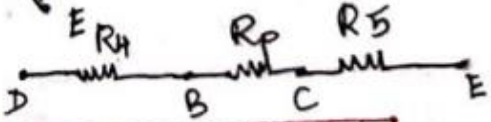
$R = R_P + R_5 + R_6$

④ Δ combination



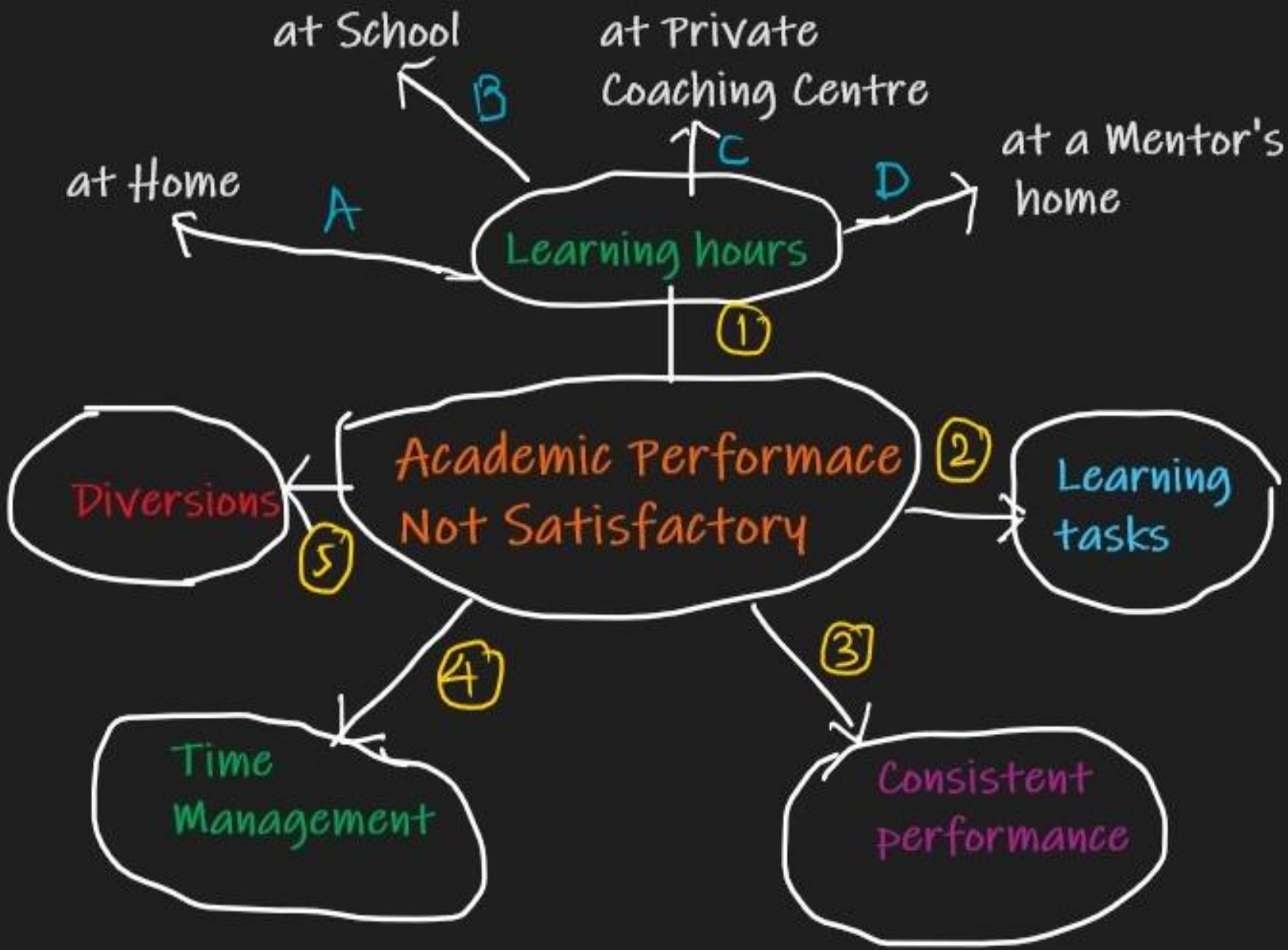


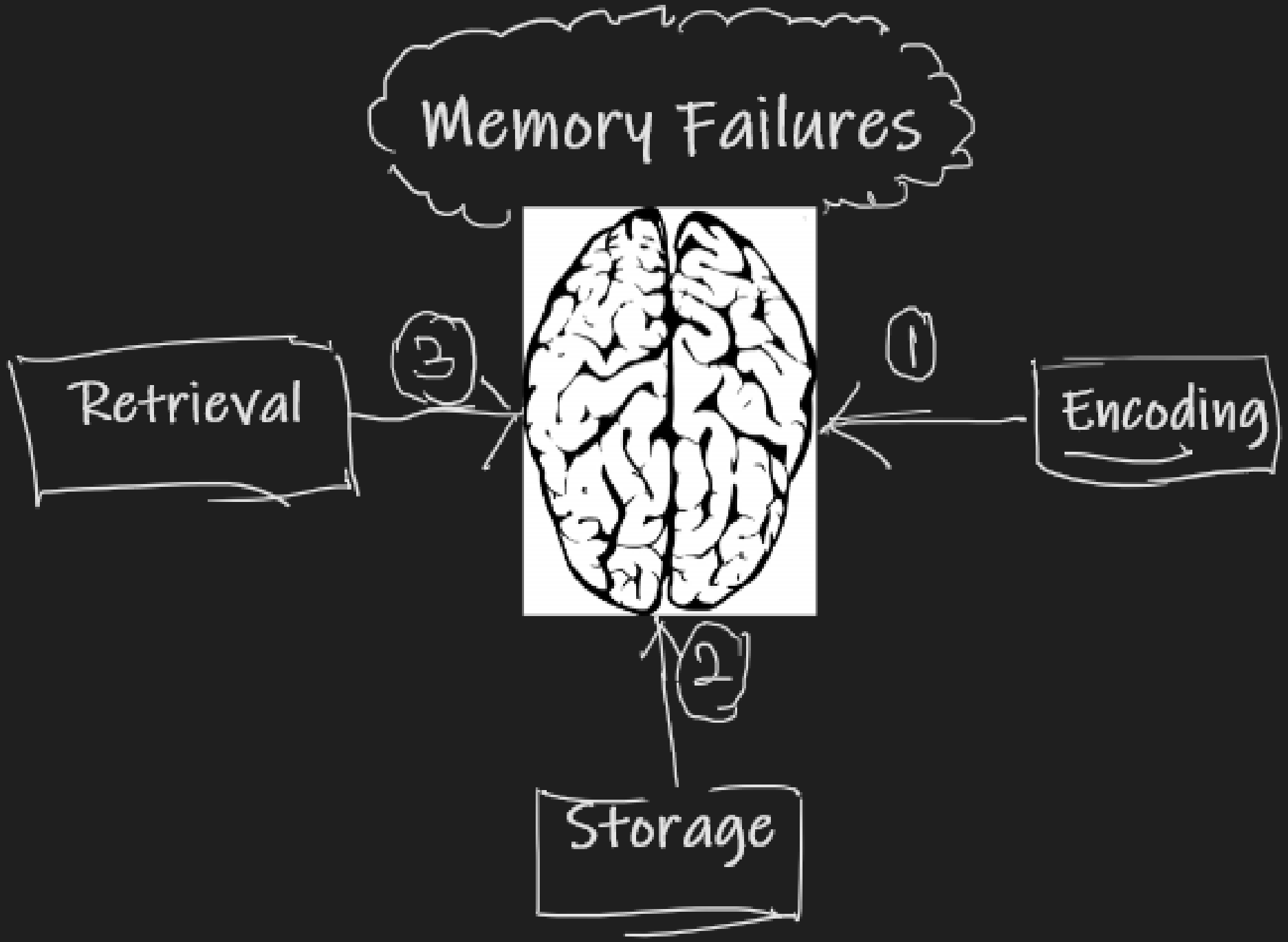
$R_6 = R_1 + R_2$
$\frac{1}{R_P} = \frac{1}{R_6} + \frac{1}{R_3}$

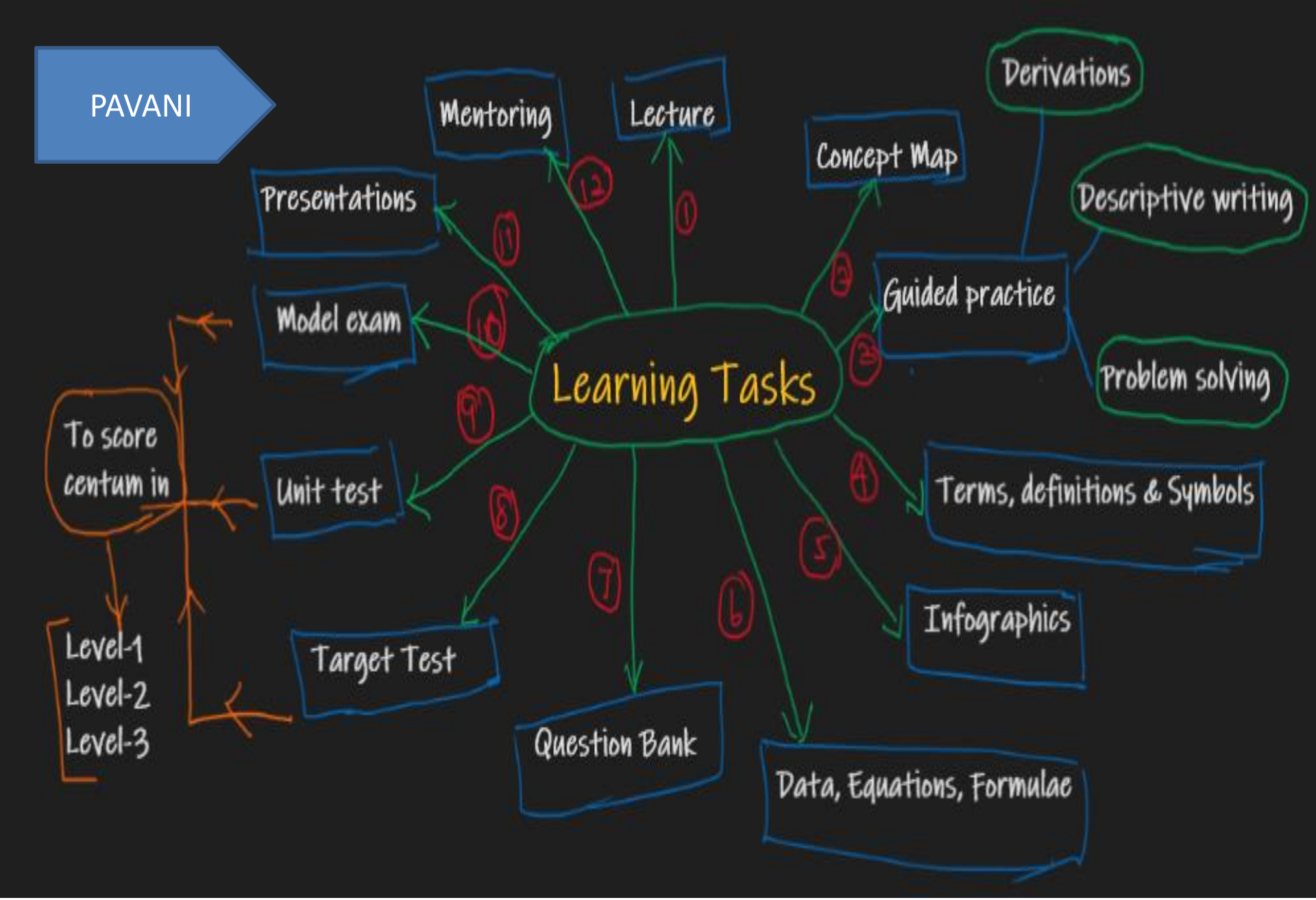


$R = R_P$
$R + R_H + R_5 = R_S$ (DE)

ACADEMIC TRACKING

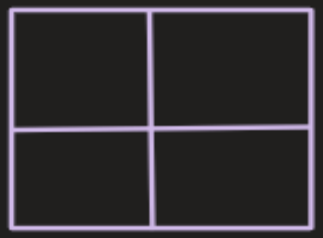



Memory Failures
Retrieval
3
1
Encoding
2
Storage



All learning tasks should be supported by documents.

1



No skill

2

Basic knowledge

3

Perform task with some help

4

Perform task independently

5

Perform task independently and also guide others

s@itech Informatics

SAITECH CENTUM SCORING MARKSHEET

NAME: S. Harini STD: X SUBJECT: Maths MODEL: 01 DATE: 27/01/2020

SECTION	MAX. MARKS	LEVEL-1	LEVEL-2	LEVEL-3	TOTAL MARKS	CENTUM ACHIEVED
A	20	20	–	–	20	100%
B	12	12	–	–	12	
C	24	24	–	–	24	
D	24	16	8	–	24	
TOTAL MARKS	80	72	8	–	80	
TOTAL TIME (MINUTES)	180	149	10	–	159	

Saitech Informatics Signed by www.saitechinfo.net

SIGNATURE OF STUDENT	SIGNATURE OF PARENT	SIGNATURE OF FACULTY
S. Harini		E. Ramanathy 30/01/2020

Saitech Informatics, 43, Arthi Flats, Haridoss Main Road, Kolathur, Chennai – 600 099.
Telegram | WhatsApp | Mobile No. +91 9444929163, Ph.: 91-44-2550 8163, Email: support@saitechinfo.com, www.saitechinfo.net

4. Revision Time

14 Days Revision

- Primary notes – 3 times
- Secondary notes – 6 times
- 10 min. break for every 1.5 hours
- 12 hours on holidays
- 4 hours on working days
- No social media
- Avoid friends

1 or 2 Days Revision

- Primary notes – 1 time
- Sec. notes – 2 times
- Don’t study anything new
- Don’t exceed 12 hours study
- No mid-night study
- Min. 6 - 8 hours sleep

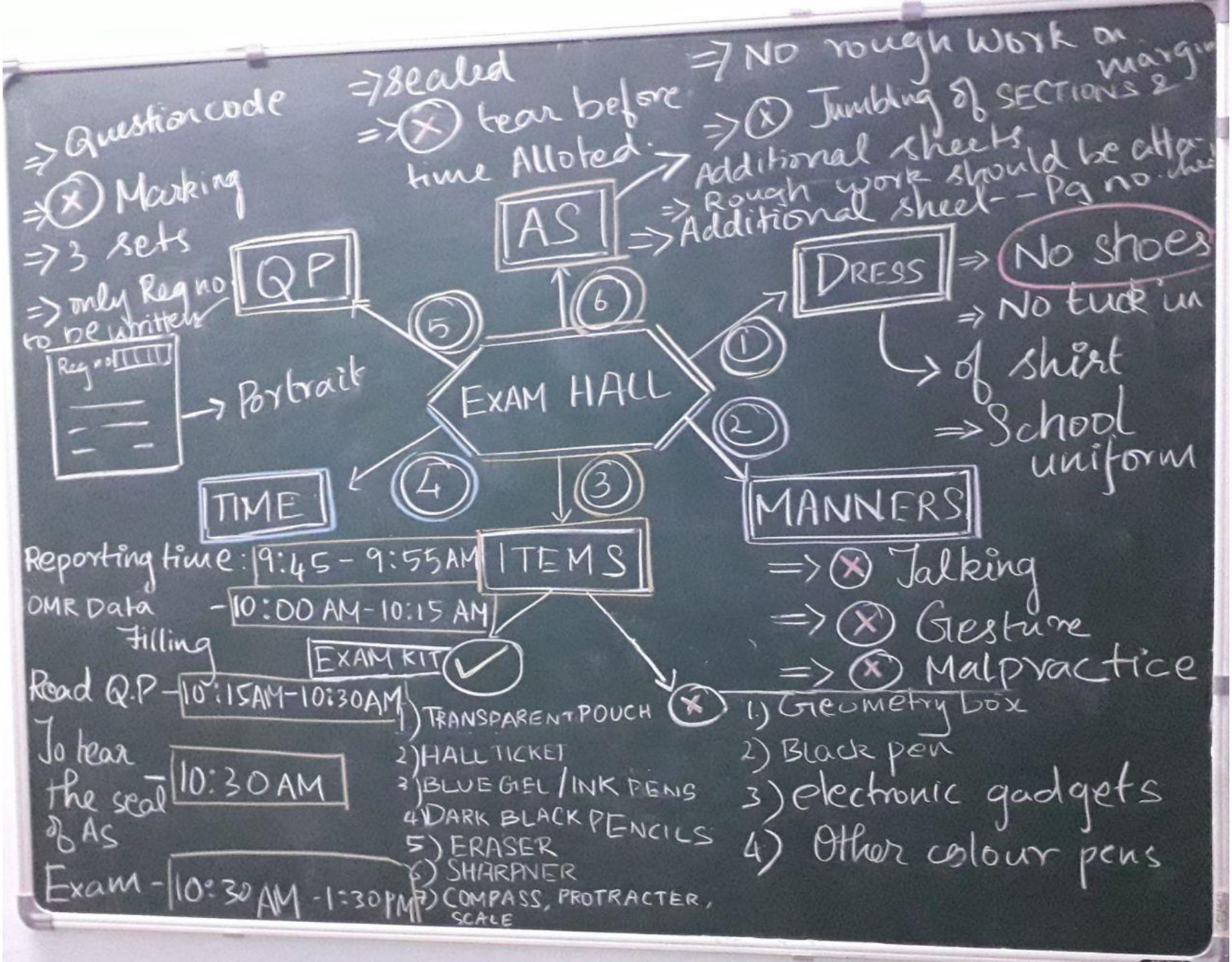

Say
NO
to
WhatsApp
Telegram
Till you finish your exam

5. On the Eve of Exam

- No late night revision
- Sleep well
- Get up by 5:00 a.m.
- Recap only memory points from secondary notes
- Fast scan sketch notes
- Recheck Exam Items
- Refresh
- Get the Blessings from elders
- Get ready
- Start Early; drive slowly; reach safely

6. In the Exam Hall

1. Dress code
2. Manners
3. Items Checklist
4. Time management
5. Question paper
6. Answer sheet


Question code
Marking
3 sets
only Reg no to be written
Reg no
Portrait
QP
Sealed
tear before time Alloted
AS
No rough work on margin
Jumbling of SECTIONS 2
Additional sheets
Rough work should be attached
Additional sheet -- Pg no
DRESS
No shoes
No tuck in of shirt
School uniform
EXAM HALL
1
2
3
4
5
6
TIME
ITEMS
MANNERS
Reporting time: 9:45 - 9:55 AM
OMR Data Filling - 10:00 AM - 10:15 AM
EXAM KIT
Read Q.P - 10:15 AM - 10:30 AM
To tear the seal of As - 10:30 AM
Exam - 10:30 AM - 1:30 PM
1) TRANSPARENT POUCH
2) HALL TICKET
3) BLUE GEL / INK PENS
4) DARK BLACK PENCILS
5) ERASER
6) SHARPNER
7) COMPASS, PROTRACTER, SCALE
Talking
Gesture
Malpractice
1) Geometry box
2) Black pen
3) electronic gadgets
4) Other colour pens

7. After the Exam

- Treat the exam attempt as Level-1
- Reattempt Level-2 with the unknown questions at home.
- Review and continue Level-3 to get 100%
- Centum Score Cyclic Exam with 3 Levels
- Bridge course to fill up the gap
- Join Summer Course
- Involve Social Activities and Services
- Read Good books
- Get ready for next academic year

8. Counselling at Skill School

- Every Sunday between 5:30 p.m. and 7:30 pm
- Academic skill builder classes from STD IX to STD XII
- Maths – pre-algebra, logarithms, calculus
- Physics – units and dimensions, problems in physics
- Chemistry – IUPAC, balancing, problems
- Biology – terminology, problems
- CSC – Java and Python primer, typing
- Basic accounts and GST
- Communication skill


Education for Life and Living !