PEA305

Analytical Skills I

Lecture #0

Breaking the ice

Department of Analytical Skills
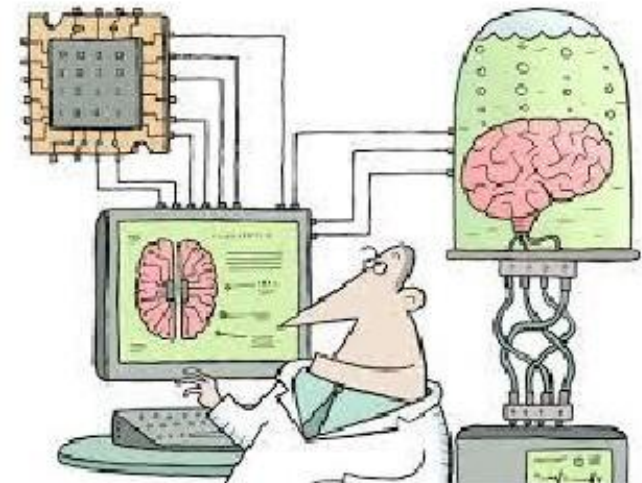
Course Details

- LTP - 2 1 0 [Two lectures, One Tutorial per week]

- **Text Book**
- ✓ Quantitative Aptitude by Dr.R S Aggarwal
- **Reference Book**
- ✓ Quantitative Aptitude by M Tyra
- ✓ Quantitative Aptitude by Abhijit Guha

Course Assessment Model

Marks break up

- Attendance   15

- CA   30

- MTE (MCQ)   15

- ETE (MCQ)   40

- **Total**   **100**

  - MTE & ETE to be done on OMR sheets
  - All tests will be based on MCQ.

Course Outcomes

CO1 :: demonstrate procedural fluency with number system and mathematical operations to solve the stated problems.

CO2 :: select an appropriate approach to solve problems related to percentage, profit and loss.

CO3 :: observe the data given and interpret given number and alphanumeric series

CO4 :: apply the analytical concepts learnt to solve the questions of ratio and proportion

CO5 :: use the concepts of permutation, combination and probability to handle various problems.

CO6 :: analyze the reasoning aptitude problems such as blood relation and direction sense to solve related problems.

Course focus identification

- Employability

Assessment and Evaluation Model

Assessment (Category)	Conducted Week
CA 1 (A0203)	Week 5 (Duration 50 Min Q 30)
MTE (11A)	After week 7 (Duration 60 Minutes Q 40)
CA 2 (A0203)	Week 10 (Duration 50 Min Q 30)
CA 3 (A0203)	Week 14 (Duration 50 Min Q 30)
ETE (11A)	After week 14 (Duration 120 Min Q 80)

Pedagogical initiative

Week	Workshops
3rd	Number ninja
4th	Perocity
11th	Puzzle Mania

Week	Competitive event
6th	Semantic analogy
7th	Mind opener
14th	Knack

Foundation classes- Week 7th and 14th

Innovative evaluation strategies

Evaluation	Conduct
CA 1	External
MTE	External
CA 2	External
CA 3	External
ETE	External

Unit wise course content

Unit I

Number system : HCF & LCM, divisibility rules, classification of numbers, factors, factorials, unit digit calculation, remainder properties

Simplification and approximation : BODMAS rule, calculation and approximation based on percentage, problem based on digit sum

Average : basic average calculations, average increase and decrease, weighted average

Unit II

Percentage : basic percentage calculations, percentage to fraction, percentage comparison, percentage increase and decrease, population change in percentage

Profit loss discount : basic concepts of cost price selling price and marked price, calculations of profit and loss percentage, types of discount and discount percentages, comparison of profit or loss with discount percentage

Simple and compound interest : basic concepts of interest calculations, comparison of simple and compound interest

Unit III

Logical reasoning : number series with introduction of AP and GP, alphabet series, alphabet test, coding and decoding, language coding

Unit IV

Ratio and proportions : basic concepts of ratio and proportions and ages, problems based on ratio and proportions and ages, problems based on partnerships and profit sharing

Alligation and mixtures : conceptual knowledge of alligation and mixtures, problems based on alligation and mixtures

Unit V

Permutation : basic principle of counting, numerical permutation(formation of numbers and sum of numbers), alpha permutation(rearrangement of words and rank of a word), linear and circular permutation, logical permutation

Combination : basic formulas of combination, formation of committee, combination of identical objects

Probability : concept of probability, classification of events, conditional probability, problems based on coins dices and cards
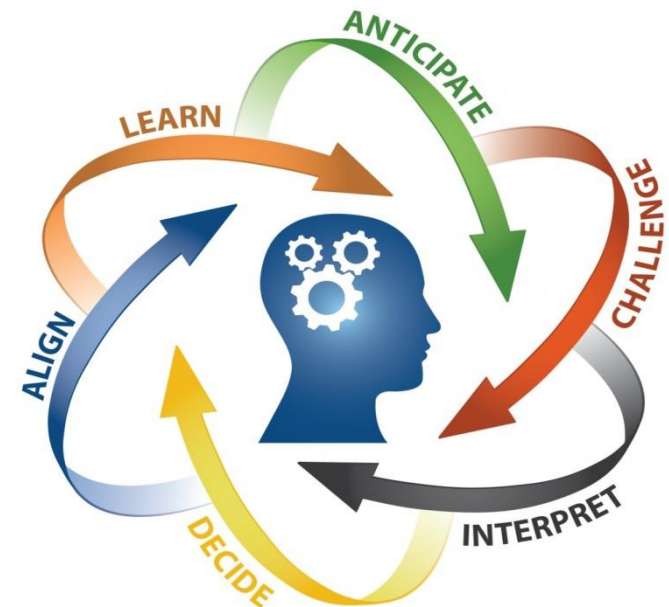
Unit VI

Analytical reasoning : blood relations, direction sense test

Let us look around…

Why every organization takes Quantitative Aptitude Tests before hiring any future employee…

Right Decision Making

- Mental Alertness
- Ability to quickly interpret data
- Establish logical relationship
- Arrive at the correct conclusions
- Make the right judgment

Organizations recruit people who have *Quick Mental Abilities.*

How you will make your mental ability Quick…!!!

Quick = Tricks

123456^654321

Find the unit digit

And What about this….?

In how many ways the committee of 5 members be formed out of 7?

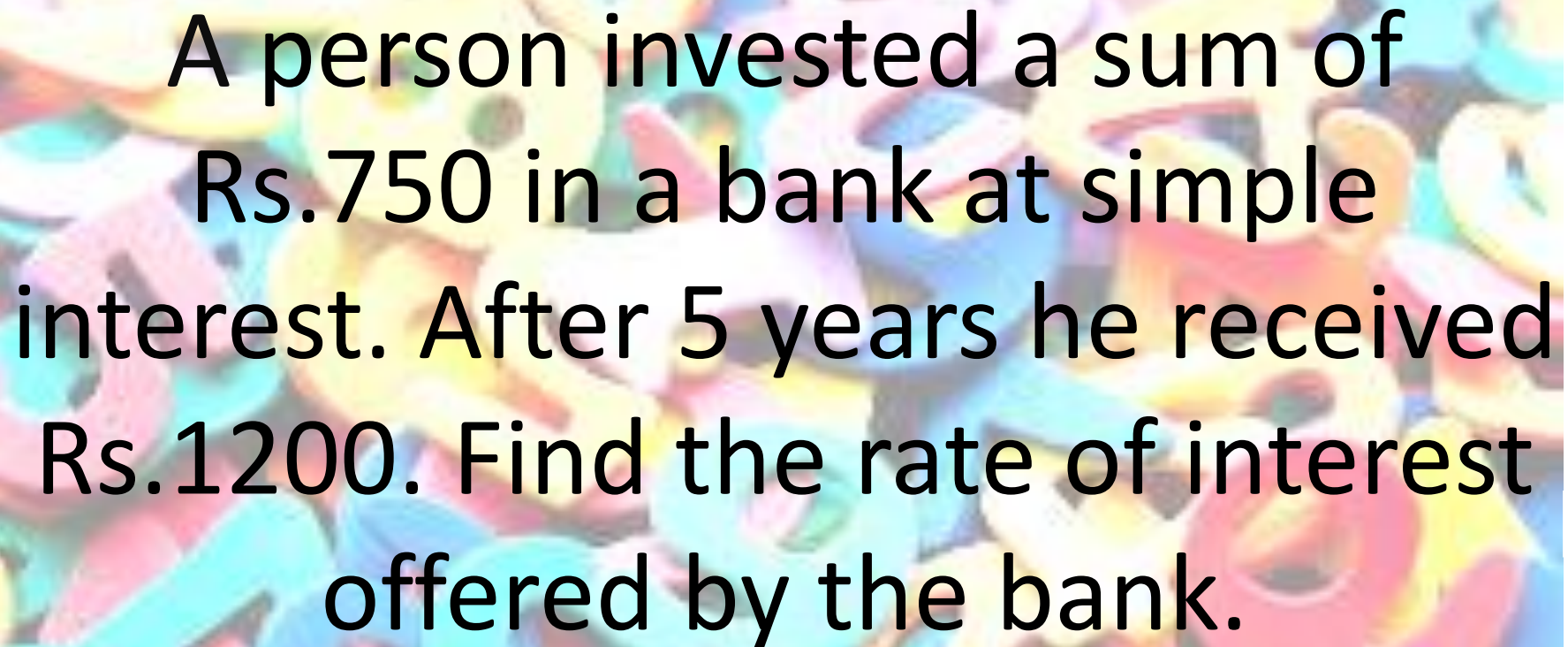✓ 5 minute…???

✓ 10 minutes…???

✓ 15 minutes…???

✓ 20 minutes…???

Again…!!! It will not take more than

30 SECONDS.

What do we need to know?

A person invested a sum of Rs.750 in a bank at simple interest. After 5 years he received Rs.1200. Find the rate of interest offered by the bank.

What do we need to know?

This course PEA305 : Analytical Skills-I

*   Ability to efficiently solve the company specific Quantitative Aptitude Tests.

*   Ability to prioritize and manage Time.

*   Ability to efficiently analyze data.

Next Class: Number System