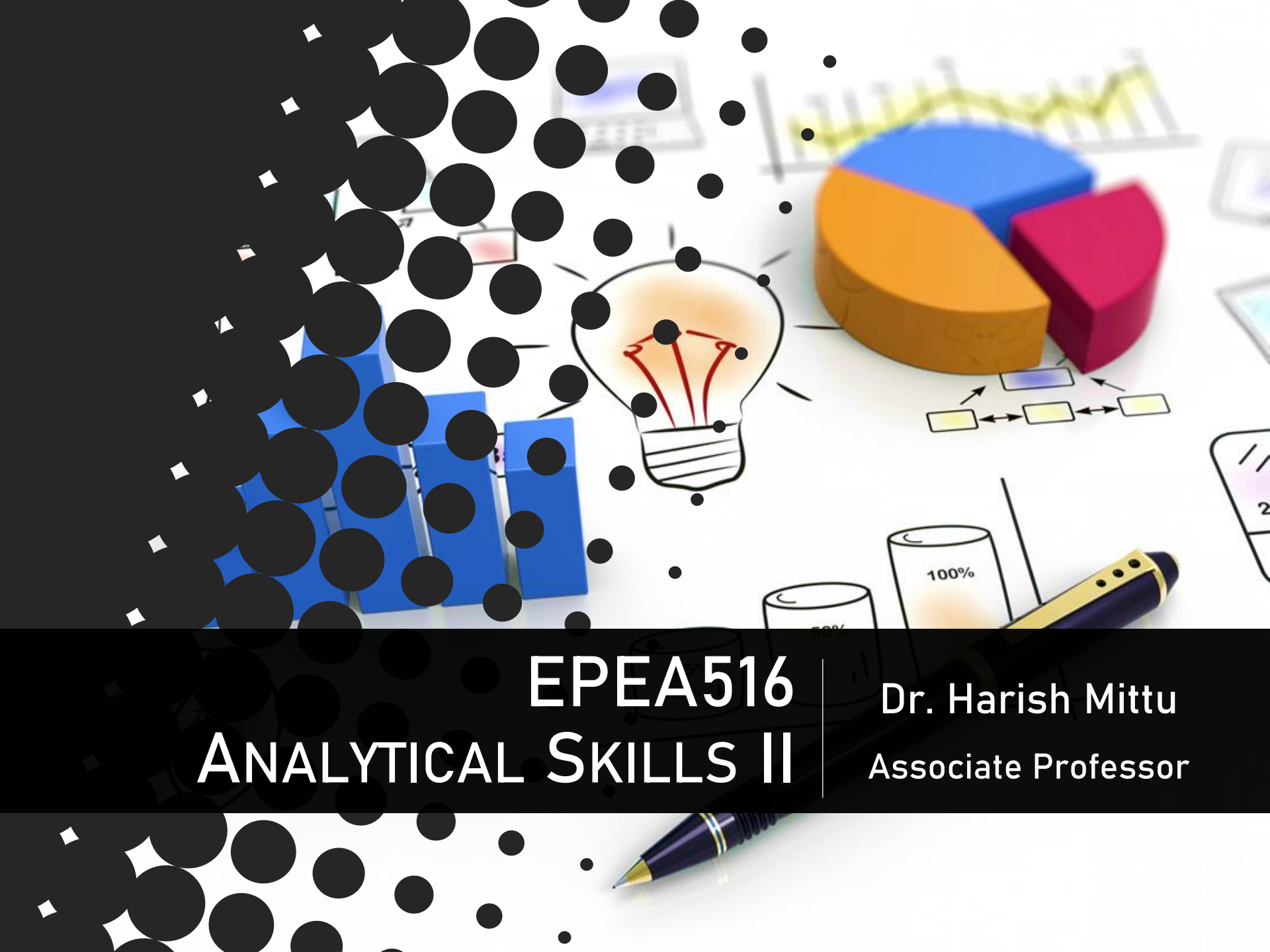

EPEA516
Analytical Skills II

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Learning Outcomes

After this lecture, you will be able to

- define the concept of principal, rate, time, simple interest, and amount.
- explore the formulae of principal, rate, time, simple interest, and amount.

Principal (P or p)

- The total amount of money borrowed by an individual from other individual.
- The money borrowed or lent out for a certain period.
- The principal is the amount that initially borrowed from the bank or invested.

Rate of Interest (R or r)

- Interest - Extra money paid for using other's money.
- Interest – Per cent.
- 5% or 9%

Rate of Interest (R or r)

- Rate of interest – Percentage (R% or r%)
- $\frac{R}{100}$
- $\frac{r}{100}$
- Rate of interest - 5%, 10%, or 12%, etc.

Rate of Interest – Fixed Period of Time

- A Specified term.
- Per cent of the principal.

Rate or Interest – Fixed Period of Time

- Fixed Period - A year, six months, three months or a month.
- Rate of interest - Annually, semi-annually, quarterly or monthly.
- Rate of interest is 5% per annum.
- Interest payable on 100 for one year is 5.

Time (T or t)

- The duration for which the principal amount is given to someone.
- A year, six months, three months or a month.

Simple Interest (S.I.)

- If the interest on a sum borrowed for a certain period is reckoned uniformly.
- When interest is payable on the principal amount only.

Simple Interest (S.I.)

- The interest computed on the principal amount for the entire period it is borrowed.
- Simple interest on Rs. 100 at 5% per annum = Rs. 5 each year.

Amount (A)

- Principal borrowed plus the interest.

Basic Formulae

- P or p = Principal
- R or r = Rate
- T or t = Number of years
- S.I. or I = Simple interest
- A = Amount

Basic Formulae

- P or p = Principal, R or r = Rate, T or t = Number of years, S.I. or I = Simple interest, and A = Amount
- Simple Interest = $\frac{\text{Principal x Rate x Time}}{100}$
- S.I. = $\frac{P \times R \times T}{100}$
- I = $\frac{p \times r \times t}{100}$

Basic Formulae

- Simple Interest = $\frac{\text{Principal x Rate x Time}}{100}$
- Principal = $\frac{\text{Simple Interest x 100}}{\text{Rate x Time}}$
- P = $\frac{\text{S.I. x100}}{\text{R x T}}$
- p = $\frac{\text{I x 100}}{\text{r x t}}$

Basic Formulae

- Simple Interest = $\frac{\text{Principal x Rate x Time}}{100}$
- Rate = $\frac{\text{Simple Interest x 100}}{\text{Principal x Time}}$
- R = $\frac{\text{S.I. x100}}{\text{P x T}}$
- r = $\frac{\text{I x 100}}{\text{p x t}}$

Basic Formulae

- Simple Interest = $\frac{\text{Principal x Rate x Time}}{100}$
- Time = $\frac{\text{Simple Interest x 100}}{\text{Principal xRate}}$
- T = $\frac{\text{S.I. x100}}{\text{P x R}}$
- t = $\frac{\text{I x 100}}{\text{p x r}}$

Basic Formulae

- Amount = Principal + Interest
- A = P (or p) + S.I. (or I)
- Principal = Amount – Interest
- P = A – S.I.
- Interest = Amount – Principal
- S.I. = A - P

Basic Formulae

- Amount = Principal + Simple Interest
- $\text{Amount} = \text{Principal} + \frac{\text{Principal x Rate x Time}}{100}$
- $\text{Amount} = \text{Principal}\ (1 + \frac{\text{Rate x Time}}{100})$
- $A = P\ (1 + \frac{R \times T}{100})$
- $A = p\ (1 + \frac{r \times t}{100})$

Conclusion

- Principal - The total amount of money borrowed.
- Rate or Rate of Interest – Extra Money Paid per cent.
- Time - Duration for which the principal amount is given.
- Simple Interest - The interest computed on the principal amount for the entire period it is borrowed.
- Amount - Principal borrowed plus the interest.

Conclusion

- Simple Interest $= \frac{\text{Principal x Rate x Time}}{100}$
- Amount = Principal + Interest

Summary

- Basic Concept and Formulaes
  - Principal
  - Rate or Rate of Interest
  - Time
  - Simple Interest
  - Amount

That’s all for now…