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FACULTY OF ENGINEERING AND TECHNOLOGY

Soft Computing

LECTURE -26

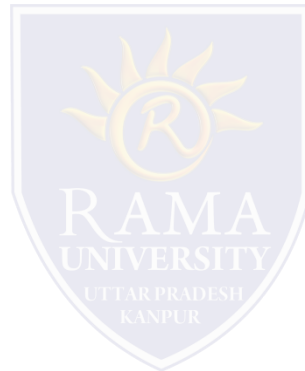
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OUTLINE

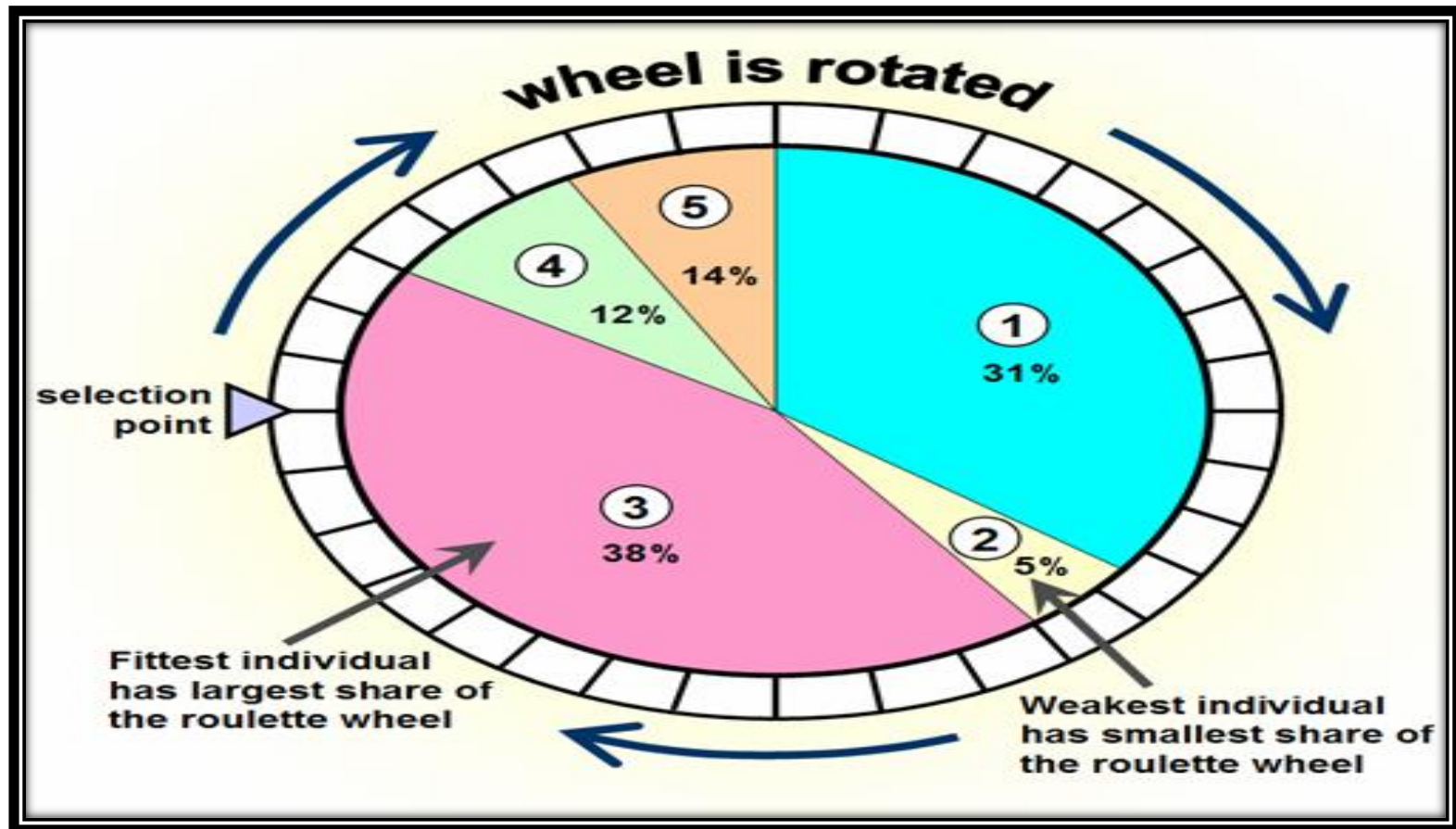
- **Selection**
- **Types of selection**
- **References**
- **MCQ**



SELECTION

Types of selection

1. Roulette Wheel Selection



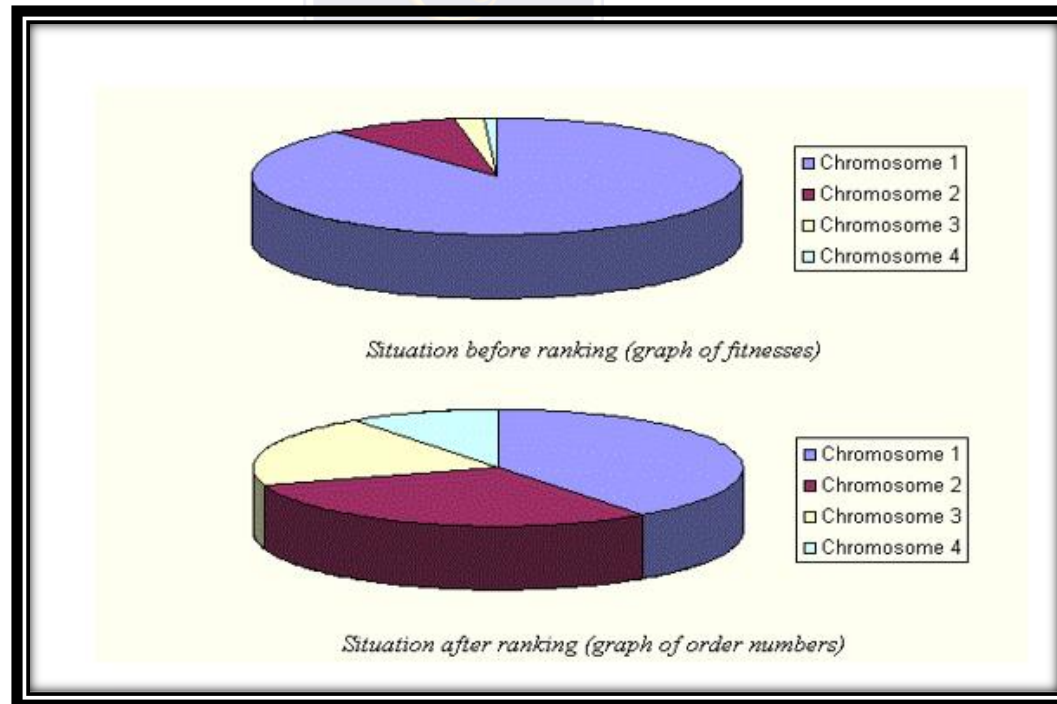
SELECTION

Types of selection

2. Random Selection

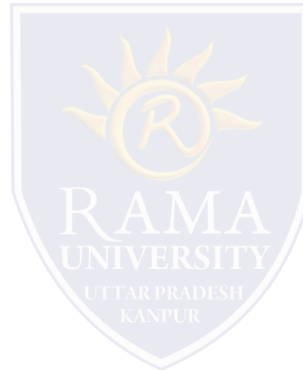
- ❑ This technique randomly selects a parent from the population.
- ❑ In terms of disruption of genetic codes, random selection is a little more disruptive, on average, than roulette wheel selection

3. Rank Selection



Tournament Selection

- ❑ An ideal selection strategy should be such that it is able to adjust its selective pressure and population diversity so as to fine-tune GA search performance.
- ❑ Unlike, the Roulette wheel selection, the tournament selection strategy provides selective pressure by holding a tournament competition among N_u individuals.



MULTIPLE CHOICE QUESTION

1. What happens if chain-termination mutation is in the S gene?
 - a) Cell lysis is blocked
 - b) Growth of cells containing low levels of packaging proteins is not allowed
 - c) The lysis of cells is not carried out artificially
 - d) Packaging is not carried out efficiently
2. Which of the following is used for blocking the phage-encoded recombination?
 - a) Mutation in D gene
 - b) Mutation in E gene
 - c) Red mutation
 - d) Mutation in S gene
3. Which of the following is not a consequence of deletion in the b region?
 - a) Excision of the prophage on induction is prevented
 - b) It reduces the amount of endogenous phage DNA in the packaging mix
 - c) It reduces the amount of exogenous phage DNA in the packaging mix
 - d) It reduces the level of background non-recombinant phage
4. If a single system is used for packaging, there are increased chances of endogenous material being packed.
 - a) True
 - b) False
5. The *cl* function can be scanned in order to check whether the recombinants are present or not. Which of the following doesn't hold true?
 - a) The *cl* protein is required for the formation of lysogen
 - b) The plaques formed are turbid in the case if the *cl* gene is active
 - c) The plaques formed are clear in the case if the *cl* gene is inactive
 - d) *hflA* mutant host reduces the amount of *clII* stability

