INDIRA GANDHI DELHI TECHNICAL UNIVERSITY FOR WOMEN

(EstablishedbyGovt.ofDelhivideAct9of2012)

Proposed Syllabus for CET (Common Entrance Test /MCA Entrance Examination)2024-25

1. **MATHEMATICS: (20Questions)**

   - **Set Theory**: Concept of sets–Union, Intersection, Cardinality, Elementary counting; permutations and combinations.

   - **Probability and Statistics:** Basic concepts of probability theory, Averages, Dependent and independent events, frequency distributions, measures of central tendencies and dispersions.

   - **Algebra:**Fundamentaloperationsinalgebra,expansions,factorization,simultaneous linear /quadratic equations, indices, logarithms, arithmetic, geometric and harmonic progressions, determinants and matrices

   - **Coordinate Geometry:** Rectangular Cartesian coordinates, distance formulae, equation of a line, and intersection of lines, pair of straight lines, equations of a circle, parabola, ellipse, and hyperbola.

   - **Calculus:** Limit of functions, continuous function, differentiation of function, tangents and normals, simple examples of maxima and minima. Integration of functions by parts, by substitution and by partial fraction, definite integrals, applications of definite integrals to areas.

2. **ANALYTICAL ABILITY AND LOGICAL REASONING :(20Questions):**
   The questions in this section will cover logical situation and questions based on the facts given.

3. **COMPUTER AWARENES : (20Questions)**
   Computer Basics: Organization of a computer, Central Processing Unit (CPU), structure of instructions in CPU, input/output devices, computer memory, and back-up devices.
   Data Representation: Representation of characters, integers and fractions, binary and hexadecimal Representations, binary arithmetic: addition, subtraction, multiplication, division, simple arithmetic and two's complement arithmetic, Floating point representation of numbers, Boolean algebra, truth tables, Venn diagrams.

4. # Basics of Programming using C or C++ (20 Questions)

   Fundamentals Data Types , Variables, Arrays, Operators, Control of Flow, Conditional statements (if, if-else, nested if-else, switch-case), Looping constructs (for, while, do-while), Jump statements (break, continue, goto), Function prototypes, Call by value and call by reference, Recursion
   Scope and lifetime of variables

5. **GENERAL ENGLISH: (20 Questions)**
   Questions in this section will be designed to test the candidates' general understanding of the English language. There will be questions on the following topics: Comprehensions, Sentence Correction, Fill in the Blanks, Synonyms, Antonyms etc