PROPOSED TEST DESIGN:

NMIMS-CET – Engineering / Pharmacy

Subject	Topic	Item Count
Section 1: Mathematics (Time : 30 Minutes)	Sets and Functions	3
	Complex Number and Quadratic equation	3
	Matrices and Determinants	2
	Permutation and Combination	2
	Mathematical Induction	1
	Bionomial theorem and its Application	2
	Sequence and Series	1
	Limit , Continuity and Differentiability	3
	Integral Calculus	2
	Coordinate Geometry	3
	Three Dimensional Geometry	2
	Vector Algebra	1
	Statistics and Probability	2
	Trigonometry	3
	Sub Total (A)	**30**
Section 2: Physics (Time : 30 Minutes)	Physics and measurement	1
	Kinematics	2
	Thermodynamics	3
	Work, energy and power	3
	Rotational motion	1
	Gravitation	1
	Laws of motion	2
	Properties of solids and liquids	1
	Electronic devices	2
	Kinetic theory of gases	1
	Oscillations and waves	2
	Current electricity	3
	Magnetic effects of current and magnetism	2
	Electromagnetic induction and alternating currents, Electromagnetic waves	2
	Optics	**3**
	Electrostatics	1
	Sub Total (B)	**30**
Section 3: Chemistry (Time : 30 Minutes)	**Physical Chemistry**	**Item Count**
	Some basic concepts in chemistry, States of matter	1
	Atomic structure	2
	Chemical bonding and molecular structure	2
	Chemical thermodynamics	1
	Solutions ,Equilibrium	2
	Redox reactions and electrochemistry	1

Chemical kinetics	1
Sub Total (C1)	**10**
Organic Chemistry	**Item Count**
Purification and characterization of organic compounds	1
Hydrocarbons	2
Chemistry in everyday life	2
Principles related to practical chemistry	2
Organic compounds containing halogens, Oxygen & Nitrogen	**2**
Polymers	1
Sub Total (C2)	**10**
Inorganic Chemistry	**Item Count**
Classification of elements and periodicity in properties	2
Block elements (alkali and alkaline earth metals)	2
P Block elements group 13 to group 18 elements, d- and f - block elements	2
Co-ordination compounds	1
Environmental chemistry	**1**
General principles and processes of isolation of metals	2
Total (A+B+C)	**90**

	Constructs	Item Count
Section 4: Logical Intelligence (20 minutes)	**Critical Thinking:** Decision Making (Take into cognizance various rules/ conditions and take decisions based upon those rules / conditions) Problem Solving (To analyse the given information and condense all the information in a suitable form and answer the questions asked)	5
	Verbal-logical reasoning: Derive conclusions from logical premises or assess the validity of arguments based on statement of facts	5
	Numerical reasoning: Venn Diagram (Identify the class-sub class relationship among given group of items and illustrate it diagrammatically) Mathematical Equalities	5
	Data Interpretation: Be able to use the information given in graphs and charts to answer questions	5
	Total	**20**

	Construct	Item Count
Section 5: Proficiency in Language (Time: 10 minutes)	**Error Recongnition:** Recognising grammatical structure and usage.	2
	Applied Grammar: Using prepositions, determiners, connectives, tenses appropriately.	2
	Contextual Usage: Using appropriate words in the given context	1
	Sequencing of Ideas: Putting ideas into logical sequence by putting jumbled sentences in the correct order	1
	Reading Comprehension (1 Passages of maximum 350 words with 4 items): Locating Information, grasping ideas, identifying relationships, interpreting ideas, moods, characteristics of characters, tone of passage, inferring , getting the central theme, evaluating	4
Total		**10**

Subject	Topic	Item Count
Section 6: Biology (Time : 30 Minutes)	Inheritance and variation	3
	Physiology, experimental setup, mechanisms & observations	3
	Nervous system-Control and co-ordination	3
	Respiration and circulation	3
	Biotechnology- principles, processes and applications	3
	Human Health and Diseases	2
	Origin and Evolution of Life	2
	Applied Biology- role of microbes	2
	Plant Growth and Mineral Nutrition	2
	Ecosystem and energy flow	2
	Environmental issues, Biodiversity and conservation	2
	Food production	1
	Reproduction in Lower and Higher Animals	1
	Reproduction in Lower and Higher Plants	1
	Sub Total (A)	**30**