

APPENDIX- I

SYLLABUS

1. M. Tech (BT, CHE, CE, ME, CSIT, EC, EE, TE, ES and LS)

Part A- (i) General Aptitude (BT, CHE, CE, ME, CSIT, EC, EE, TE, ES and LS)

General Aptitude test is aimed at evaluating the verbal ability, quantitative aptitude, logical & abstract reasoning. Following is a brief description of contents of the test paper.

(i) English Language: Grammar, vocabulary, uncommon words, sentence completion, synonyms, antonyms, relationship between words & phrases and comprehension of passages.

(ii) Numerical Aptitude: Numerical calculation, arithmetic, simple algebra, geometry and trigonometry, Interpretation of graphs, charts and tables.

(iii) Thinking and Decision Making: Creative thinking, unfamiliar relationships, verbal reasoning, finding patterns trends and Assessment of figures & diagrams.

Part A- (ii) Mathematics (BT, CHE, CE, ME, CSIT, EC, EE, TE and ES)

Linear Algebra: Matrices and Determinants, Systems of linear equations, Eigen values and eigen vectors.

Calculus: Limit, continuity and differentiability; Partial Derivatives; Maxima and minima; Sequences and series; Test for convergence; Fourier series.

Vector Calculus: Gradient; Divergence and Curl; Line; surface and volume integrals; Stokes, Gauss and Green's theorems.

Differential Equations: Linear and non-linear first order ODEs; Higher order linear ODEs with constant coefficients; Cauchy's and Euler's equations; Laplace transforms; PDEs – Laplace, heat and wave equations.

Probability and Statistics: Mean, median, mode and standard deviation; Random variables; Poisson, normal and binomial distributions; Correlation and regression analysis.

Numerical Methods: Solutions of linear and non-linear algebraic equations; integration of trapezoidal and Simpson's rule; single and multi-step methods for differential equations.

Part B- Subject Domain

Subject Domain

Sl. No.	Paper	Syllabus
1	Bio Technology (BT)	GATE syllabus- Section 2 to Section 5 - Bio Technology http://gate.iitd.ac.in/Syllabus/BT.pdf
2	Chemical Engineering (CHE)	GATE syllabus Section 2 to Section 9 of Chemical Engineering http://gate.iitd.ac.in/Syllabus/CH.pdf
3	Civil Engineering (CE)	GATE syllabus Section 2 to Section 7 of Civil Engineering http://gate.iitd.ac.in/Syllabus/CE.pdf
4	Computer Science & Information Technology (CSIT)	GATE syllabus Section 2 to Section 10 of Computer Sc & Information Technology http://gate.iitd.ac.in/Syllabus/CS.pdf
5	Electronics & Communication (EC)	GATE syllabus Section 2 to Section 8 of Electronics & Communication Engg. http://gate.iitd.ac.in/Syllabus/EC.pdf
6	Electrical Engineering (EE)	GATE syllabus Section 2 to Section 10 of Electrical Engineering. http://gate.iitd.ac.in/Syllabus/EE.pdf
7	Textile Engineering & Fibre Science (TE)	GATE syllabus Section 1 to Section 5.0 of Textile Engg. & Fibre Science http://gate.iitd.ac.in/Syllabus/TF.pdf
8	Mechanical Engineering (ME)	GATE syllabus Section 2 to Section 4 of Mechanical Engineering. http://gate.iitd.ac.in/Syllabus/ME.pdf
9	ES_1: Fluid mechanics	GATE syllabus of Fluid Mechanics given at http://gate.iitd.ac.in/Syllabus/XE_B.pdf

10	ES_2: Materials Science	GATE syllabus of Materials Science given at http://gate.iitd.ac.in/Syllabus/XE_C.pdf
11	ES_3: Solid Mechanics:	GATE syllabus of Solid Mechanics given at http://gate.iitd.ac.in/Syllabus/XE_D.pdf
12	ES_4: Thermodynamics:	GATE syllabus of Thermodynamics given at http://gate.iitd.ac.in/Syllabus/XE_E.pdf
13	ES_5: Food Technology	GATE syllabus of Food Technology given at http://gate.iitd.ac.in/Syllabus/XE_G.pdf
14	Chemistry	GATE syllabus of XL-P Chemistry given at http://gate.iitd.ac.in/Syllabus/XL_P.pdf
15	LS_1: Bio Chemistry	GATE syllabus of Biochemistry given at http://gate.iitd.ac.in/Syllabus/XL_Q.pdf
16	LS_2: Botany	GATE syllabus of Botany given at http://gate.iitd.ac.in/Syllabus/XL_R.pdf
17	LS_3: Microbiology	GATE syllabus of Microbiology given at http://gate.iitd.ac.in/Syllabus/XL_S.pdf
18	LS_4: Zoology	GATE syllabus of Zoology given at http://gate.iitd.ac.in/Syllabus/XL_T.pdf
19	M. Pharm	GPAT syllabus given at https://ntagpat.nic.in and available at https://gpat.nta.nic.in/WebInfo/Handler/FileHandler.ashx?i=File&ii=103&iii=Y
20	M. Arch / MURP	GATE syllabus given for Architecture & planning at http://gate.iitd.ac.in/Syllabus/AR.pdf
21	M. Des	CEED syllabus given at http://www.ceed.iitb.ac.in/2020/downloads/CEED2020_Brochure.pdf#view=FitV