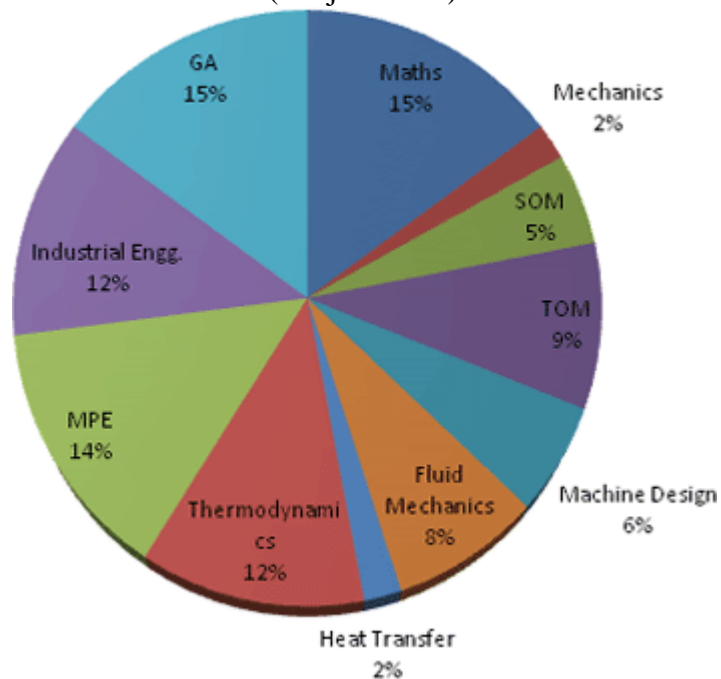


Analysis of GATE 2010 – Mechanical Engineering paper

Analysis of GATE 2010 – Mechanical Engineering paper
(Subject Wise)



SUBJECTS	QUESTION NO	MARKS RELATED TO THAT QUESTIONS	TOTAL MARKS
Maths	1,2,3,4,5,26,27,28,29,30	1+1+1+1+1+2+2+2+2+2	15
Mechanics	6,7	1+1	2
SOM	8,52,53	1+2+2	5
TOM	9,10,11,33,34,36	1+1+1+2+2+2	9
Machine Design	31,32,35	2+2+2	6
Fluid Mechanics	12,13,14,17,37,38	1+1+1+1+2+2	8
Heat Transfer	41	2	2
Thermodynamics	15,16,39,40,42,48,49	1+1+2+2+2+2+2	12
MPE	18,19,20,21,43,44,45,54,55	1+1+1+1+2+2+2+2+2	14
Industrial Engg.	22,23,24,25,46,47,50,51	1+1+1+1+2+2+2+2	12
GA	56,57,58,59,60,61,62,63,64,65	1,1,1,1,1,2,2,2,2	15
SUM TOTAL			100

Mathematics in Mechanical Engineering

Topic name	QUESTION NO	MARKS RELATED TO THAT QUESTIONS	TOTAL MARKS
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Linear Algebra	27	2	2
Probability & distribution	30	2	2
Numerical Method	26	2	2
Calculus	1,5,28	1+1+2	4
Differential Equations	2	1	1
Complex Variables	4	1	1
Laplace Transforms	29	2	2

Engineering Mechanics in Mechanical Engineering

Topic name	QUESTION NO	MARKS RELATED TO THAT QUESTIONS	TOTAL MARKS
FBD & Equilibrium			
Trusses & Frames	6	1	1
Kinematics & Dynamics of particles & rigid bodies in plane motion	7	1	1

Strength of Materials(SOM) in Mechanical Engineering

Topic name	QUESTION NO	MARKS RELATED TO THAT QUESTIONS	TOTAL MARKS
Stress & Strain			
SFD & BMD	52	2	2
Bending & Shear Stress	53	2	2
Deflection of beams			
Torsion of circular shafts			
Mohr's circle	8	1	1
Strain Energy Methods			
Euler's Theory of columns			

Theory of Machines(TOM) in Mechanical Engineering

Topic name	QUESTION NO	MARKS RELATED TO THAT QUESTIONS	TOTAL MARKS
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Mechanism	9,36	1+2	3
Gear Trains	11,34	1+2	3
Flywheels			
Vibrations	10,33	1+2	3

Machine Design in Mechanical Engineering

Topic name	QUESTION NO	MARKS RELATED TO THAT QUESTIONS	TOTAL MARKS
Failure Theories			
Fatigue			
Design of bolted, riveted & welded joints	32	2	2
Design of shafts, gears & Bearings	35	2	2
Design of Brakes & Clutches	31	2	2

Fluid Mechanics in Mechanical Engineering

Topic name	QUESTION NO	MARKS RELATED TO THAT QUESTIONS	TOTAL MARKS
Fluid properties	13	1	1
Fluid statics	12	1	1
Fluid Kinematics			
Fluid Dynamics	37	2	2
Boundary layer	14,38	1+2	3
Hydraulic Machines	17	1	1

Heat Transfer in Mechanical Engineering

Topic name	QUESTION NO	MARKS RELATED TO THAT QUESTIONS	TOTAL MARKS
Conduction	41	2	2
Convection			
Radiation			
Heat Exchanger			

Thermodynamics & Power Engineering in Mechanical Engineering

Topic name	QUESTION NO	MARKS RELATED TO THAT QUESTIONS	TOTAL MARKS
Basic thermodynamics			
Properties of pure substances			
Irreversibility & Availability			
Work, heat & entropy	16,39,40	1+2+2	5
Psychrometrics	42	2	2
Power Engineering	48,49	2+2	
Refrigeration & Air-conditioning			
I.C. Engines	15	1	1

Manufacturing Process & Engineering(MPE) in Mechanical Engineering

Topic name	QUESTION NO	MARKS RELATED TO THAT QUESTIONS	TOTAL MARKS
Engineering Materials	18	1	1
Metal casting	19	1	1
Forming	54,55	2+2	4
Joining	43	2	2
Machining & Machine Tool Operations	44	2	2
Metrology & Inspections	20,45	1+2	3
Computer Integrated Manufacturing	21	1	1

Industrial Engineering in Mechanical Engineering

Topic name	QUESTION NO	MARKS RELATED TO THAT QUESTIONS	TOTAL MARKS
Production planning & control	22,24,47,50,51	1+1+2+2+2	8
Inventory Control	23,46	1+2	3
Operations Research	25	1	1

General Aptitude (GA) in Mechanical Engineering

Topic name	QUESTION NO	MARKS RELATED TO THAT QUESTIONS	TOTAL MARKS
Numerical Ability	56,61,62,64,65	1,2,2,2,2	9
Verbal Ability	57,58,59,60,63	1,1,1,1,2	6

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