

## Comparison of BMATS201 Question Papers

This document compares three question papers:

1. BMATS201.pdf - Model Question Paper-I
2. BMATS201-model-set-2-paper.pdf - Model Question Paper-II
3. BMATS201-regular-paper.pdf - Regular Exam Paper

Each question is listed by number and part (a, b, c) showing differences.

QNo	Prt	Model Set 1	Model Set 2	Regular
1	a	Triple int exp	Triple int $(x^2+y^2+z^2)$	Same as Set2
1	b	Double int exp polar	Double int xy $\sqrt{x}$	Same as Set2
1	c	Beta fn proof	$\Gamma(1/2) = \sqrt{\pi}$	Same as Set2
2	a	Double int $x/(x^2+y^2)$	Double int $(x^2+y^2)$	Same as Set2
2	b	Ellipse quadrant area	Parabola area	Same as Set2
2	c	Code tetrahedron vol	Code ellipse area	Same as Set2
3	a	grad phi $(x^3+y^3+z^3-3xyz)$	Dir deriv phi	Same as Set2
3	b	div curl grad exp	div curl grad $xy^3z^2$	Same as Set2
3	c	Vector to cylindrical	Spherical orthogonal	Same as Set2
4	a	Dir deriv again	Angle between surfaces	Same as Set2
4	b	Spherical orthogonal	Field solenoid & irrot	Same as Set2
4	c	Code grad	Code curl	Same as Set2
5	a	Subspace $x-3y+4z=0$	Subspace $(a, a^2, b)$	Same as Set2
5	b	Matrix combo M22	Basis dim R3	Same as Set2
5	c	Matrix of T	Kernel & range T	Same as Set2
6	a	Linear dependence set	$h(x)$ in $\text{Span}\{f, g\}$	Same as Set2
6	b	$T: P2 \rightarrow P1$ linear	$T(x, y) = (3x, x+y)$	Same as Set2
6	c	Rank-nullity	Orthogonal f & g	Same as Set2
7	a	NR: $3x = \cos x + 1$	Regula-Falsi $x e^x = 3$	Same as Set2
7	b	Lagrange interp	Newton divided diff	Same as Set2
7	c	Simpson 3/8	Trapezoidal $1/(1+x^2)$	Same as Set2
8	a	False pos cubic	$NR \cos x = x e^x$	Same as Set2
8	b	Interp $y@8, 22$	Newton fwd sin48	Same as Set2
8	c	Trap $\sqrt{\cos x}$	Simpson 1/3	Same as Set2
9	a	Mod Euler $3x+y^2$	Taylor $x^2y-1$	Same as Set2
9	b	RK4 $x+y$	RK4 $3e^x+2y$	Same as Set2
9	c	Milne $xy+y^2$	Milne $x-y^2$	Same as Set2
10	a	Taylor $2y+3e^x$	Mod Euler $x^2+y$	Same as Set2
10	b	$RK4 (y^2-x^2)/(y^2+x^2)$	$RK4 (y-x)/(y+x)$	Same as Set2
10	c	Code Taylor $dy/dx-2y$	Code RK4 $1+y/x$	Same as Set2