

Baba fateh Singh ji Govt. College, Assandh, Karnal

Department of \_\_\_\_\_

Class B.A. III (Sem. VI)

Session: 2023-2024

Lesson Plan Real and complex Analysis

Sr.No		
1	Week 1 1 Jan to 6 Jan.	* Jacobins
2		* Functional Dependence (or non
3		- independence)
4		* Beta Function
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7	Week 2 8 Jan to 13 Jan	* Properties of Beta Function
8		* Gamma Function
9		* Relation Between Beta and Gamma.
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11	Week 3 15 Jan to 20 Jan	* Recurrence formulae for Gamma
12		function.
13		* Duplication formula.
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17	Week-4 22 Jan to 27 Jan	* Double integral.
18		* Substitution method for double
19		Integrals.
20		* triple integral.
21	Week-5 29 Jan to 3 Feb.	* Substitution Method for triple
22		Integrals.
23		* Applications of double and
24		triple Integrals for finding Area and volm.
25	Week-6 5 Feb. to 10 Feb.	* Dirichlet's Integral
26		* Liouville's Extension of Dirichlet's
27		Integrals.
28		* Examples.
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31	* change of order of integration.	
32		* Examples.
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43	Week 7	<ul style="list-style-type: none"> <li>• Fourier series: For even and odd functions</li> </ul>	
44	12 Feb	Dirichlet's conditions.	
45	to		
46	17 Feb	<ul style="list-style-type: none"> <li>• Examples.</li> </ul>	
47	Week-8	<ul style="list-style-type: none"> <li>• Fourier expansion of functions having points of discontinuity.</li> </ul>	
48			Examples.
49			<ul style="list-style-type: none"> <li>• change of interval.</li> </ul>
50			- do -
51			19 Feb
52	to		
53	24 Feb		
54	Week-9	<ul style="list-style-type: none"> <li>• Half Range Series.</li> </ul>	
55			- do -
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58			26 Feb
59			to
60			2 March
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63	Week-10	<ul style="list-style-type: none"> <li>• stereographic projection of complex numbers.</li> </ul>	
64			examples.
65			<ul style="list-style-type: none"> <li>• Limit of a complex function</li> </ul>
66			continuity of a complex function.
67			4 March
68			to
69	9 March		
70	Week-11	<ul style="list-style-type: none"> <li>• Differentiability of a complex function</li> </ul>	
71			Analytic Function
72			- do -
73			
74			11 March
75			to
76			16 March
77	Week-12	<ul style="list-style-type: none"> <li>• Examples.</li> </ul>	
78			C-R eqn in polar form.
79			Orthogonal system.
80			<ul style="list-style-type: none"> <li>• Harmonic functions.</li> </ul>
81			Examples.
82			18 March
83	to		
84	23 March		
85	Week-13	<ul style="list-style-type: none"> <li>• Milne-Thompson's Method</li> </ul>	
86			- do -
87			- do -
88			1 April
			Elementary Functions.



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91	Week-14 8 April to 13 April	<ul style="list-style-type: none"> <li>• The exponential Function.</li> <li>• properties of Trigonometrical Functions.</li> <li>• Hyperbolic Functions.</li> <li>• Mapping by elementary functions.</li> </ul>
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98	Week-15 15 April to 20 April	<ul style="list-style-type: none"> <li>• translation, Rotation, Magnification.</li> <li>• Conformal Mapping.</li> <li>• Linear transformation, Mobius transformation.</li> <li>• Critical points.</li> </ul>
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105	Week-16 22 April to 27 April	<ul style="list-style-type: none"> <li>• Fixed point and invariant points.</li> <li>• examples.</li> <li>— do —</li> <li>— do —</li> <li>• cross ratio</li> </ul>
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112	Week-17 29, 30 April	<ul style="list-style-type: none"> <li>• Critical mapping</li> <li>• examples</li> <li>— do —</li> <li>— do —</li> <li>• Revision</li> <li>• class test</li> </ul>
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119	Week-18	
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126	Week-19	
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