

Kandi Raj College

Internal Assessment for 3rd Year Hons. & General, 2020

Subject: Mathematics

Full Marks: 20 + 20 + 20 + 20 = 80 (for Hons.) ; 20 (for Gen.)

Last Date of Submission: 12.07.2020

Name of Paper	Project's Topic/questions	Teacher's Name	email id
Paper: V (Hons.)	<ol style="list-style-type: none"> 1. Deduce Energy test of stability in a conservative field of force and hence find the condition/s of stability for a body with one degree of freedom. (10) 2. A smooth ellipse is fixed with its major axis vertical and in it is placed a beam with its end resting on the arc of the ellipse. Discuss the stability of possible equilibrium positions. (10) 	Jayanta Basu	basujayanta0@gmail.com
Paper: VI (Hons.)	<ol style="list-style-type: none"> 1. Write a short note on open set in a metric space. (10) 2. Evaluate $f(x)$ when $\frac{df(x)}{dx} = 3 - \int_1^x \frac{f(u)}{u^2} du$ given that $f(1) = 1$. (10) 	Dr. Ananta Patra	me_anantapatra@yahoo.com
Paper: VII (Hons.)	<ol style="list-style-type: none"> 1. Write a short note on Distribution function. (10) 2. Verify stokes theorem for $\vec{A} = (y - z + 2)\vec{i} + (yz + 4)\vec{j} - xz\vec{k}$ over the surface of the cube $x = y = z = 0$ and $x = y = z = 2$ above the xy plane. (10) 	Dr. Ananta Patra	me_anantapatra@yahoo.com
Paper: VIII (Hons.)	<ol style="list-style-type: none"> 1. Write a short note on Gauss Elimination Method with Pivoting Process. (10) 2. Write a Program in C – language to add two given 4×4 matrices A and B whose elements are all natural numbers; then print only those elements of $A + B$ that are even numbers. (10) 	Jayanta Basu	basujayanta0@gmail.com
Paper: IV (Gen.)	<ol style="list-style-type: none"> 1. Write a Fortran program to compute $S = \sum_{n=1}^{10} x^n$ for $x = 1.1, 1.5(0.1)$. (10) 2. Deduce differential equations of a central orbit in both Polar and Pedal forms. (10) 	Jayanta Basu	basujayanta0@gmail.com

N.B. 1. On the top of the Project Title each student must write his/her Name, Registration No. & Roll No. of Part II (2nd Year) Exam. and submit to their concerned teacher within due date.