B.R.A.Bihar University Muzaffarpur
M.Phil Mathematics
Session -2015-16
Assignment Questions
Paper –I
Full Marks-30
किन्ही तीन प्रश्नों का जबाव दें | सभी प्रश्नों का मान बराबर है |

1. Give your understanding of a good research design.

2. Define Mean, Median and Mode of Central Tendency of a given data.

3. Explain Windows operating system. Discuss three types of windows operating system.

4. Write the meaning of slides. How can we create a new presentation?

Paper –II

1. Let K be normal extension of field F of characteristics O. Then show that there is one-one correspondence between the subfield of K which contain F and the set of subgroups of G (K, F).

2. Define stability of Null solution and asymptotic stability. Explain how the stability of motion of a dynamical system is reducible to Null solution of a system of differential equation.

3. Prove that every absolutely continuous function f define on [a, b] is of bounded variation.

4. Discuss the stability of a dynamical system represented by a system of differential equations. Examine the stability of the trivial solution of the dynamical system define by: $\dot{x}= -y-x^3$ and $\dot{y}= -x- y^3$

Paper –III

1. State and prove Bianchi identity.

2. Write short notes on (a) Principle of covariance (b) Principle of iquivalence.

3. Obtain isotropic time element in Cartesian form.

4. State and prove Lyapunov first theorem of Stability of an autonomous system.

5. State and prove Lyapunov theorem on asymptotic stability.

6. State and prove fourth theorem on stability of an autonomous system.

******