REVA UNIVERSITY

Ph D Entrance Examination Model Question Paper-2014

MATHEMATICS

Duration: 2.00 Hours. **Total Marks = 100**

Note :

1) The question paper is in **TWO** parts, viz: Part-I and Part-II.
2) **Part-I** consists 50 questions of objective type carrying 1 mark each (50 x 1 = 50 marks)
3) **Part-II** consists of 25 questions of objective type carrying 2 marks each (25 x 2 = 50 marks)
4) All questions are compulsory.

PART-I **(50 x 1 = 50)**

1.	If f: N$\rightarrow$R is a sequence, what is $f(x)$ for each x$\in$N? (a) $f(x)$ is a real number (b) $f(x)$ is a natural number (c) $f(x)$ is a complex number (a) none
2.	A function of bounded variation is (a) Not necessarily continuous (b) necessarily continuous (c) both a and b (d) none

PART-II

(25 x 2 = 50)

1. A set A is said to be denumerable if A~N i.e., if there exist one-one and onto map f: A$\rightarrow$N. The following have the same meaning:

(a) numerable, denumerable, countably finite, countable
(b) enumerable, denumerable, countably infinite, countable
(c) numerable, finite denumerable, countably finite, uncountable
(d) none

2.If x={ 4^n –3n–1: n$\in$N} and y={9(n–1: n$\in$N}, then x $\cup$y is equal to

(a) x
(b) y
(c) n
(d) none