CHUKA  **UNIVERSITY**

UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN BIOCHEMISTRY

BMED 234: VIROLOGY

STREAMS: BSC (BIOCHEM) **TIME: 2 HOURS**

DAY/DATE: WEDNESDAY3/8/2016 **2.30 P.M. – 4.30 P.M.**

INSTRUCTIONS:

1.	(a)	Outline four mechanisms of virus evolution	[2 marks]
	(b)	What are permissive cells?	[2 marks]
	(c)	Name two types of viruses that emergences in new areas.	[2 marks]
	(d)	Describe how centrifugation is used to isolate virus.	[2 marks]
	(e)	Write short notes on infectivity assays.	[2 marks]
	(f)	How are viruses cultivated?	[2 marks]
	(g)	Explain how genome sequence data are used to classify viruses.	[2 marks]
	(h)	Describe how viral nucleic acid is detected.	[2 marks]
	(i)	Draw the structure of HIV virion.	[2 marks]
	(j)	How do viruses cause centre.	[2 marks]
	(k)	Explain two process of antiviral drugs development.	[2 marks]
	(l)	Summarize the progression of HIV infection.	[2 marks]
	(m)	Evaluate the type of virus vaccines in veterinary and medical use.	[2 marks]
	(n)	Explain the functions of Net and Rev auxiliary genes in HIV.	[2 marks]
	(o)	Explain the term ambisense genome.	[2 marks]
Q2.	(a)	Discuss viral capsids.	[7 marks]
	(b)	Explain the translation of virus from bicistronic mRNAs.	[6 marks]
	(c)	Discuss viral replications	[7 marks]

3. (a) Discuss the virion structure, genome and replication of phage Q x 174.[6 marks]
   (b) Describe the entry of animal virus into cells. [6 marks]
   (c) Discuss Kaposi's sarcoma and hepatocellular carcinoma cancers. [8 marks]

4. (a) Discuss the factors that affects the outcome of viral infections. [8 marks]
   (b) Draw the diagrammatic representation of T4 phages. [6 marks]
   (c) List and describe the chemical and physical agents that inactivates viruses. [6 marks]
