

UNIVERSITY OF RUHUNA - FACULTY OF MEDICINE

Allied Health Sciences Degree Programme Second Bpharm Part 1 Examination - November 2012

PH 2153 - Pharmaceutical Microbiology

Short Essay Questions

INDEX NO:

2 hours

NSTRUCTIONS	
Answer all questions. Use labeled diagramme whenever necessary. Part A	
1.	
1.1. Classify organisms according to three domains and five kingdoms.	
Domains –	(2 marks)
Kingdoms –	(2 marks)
1.2. Mention three structural differences between Archaea and Bacteria.	(6 marks)
Archaea Bacteria	
1	
2	
3anelosy	microp
1.3. "Arrangement of bacterial cells in colonies is a distinctive chara-	acter", mention
	(5 marks)
 Name three major differences between Gram's positive and Gran walls of bacteria. 	n's negative cell (6 marks)
Gram's Positive Gram's Negative	tive
1	
2	
3	

1.5.	What are plasmids? Give three functions.	(22 marks)
	Zaningdonika industriació in i	
	он хэсэн	
		•••••
1.6.	Name three virulence factors of bacterial pathogens which responsible	for damaging the
h	ost.	(9 marks)
	1.	
	2.	
	3.	
17	State three differences between endotoxins and exotoxins of pathogenic	
2.,,	microorganisms.	(15 marks)
	Endotoxins Exotoxins	(13 11181 K3)
	1	
	2	
	3	
1.8.	What is toxigenecity in terms of pathogenicity of microorganisms?	(3 marks)
******	verstages" s "marju g	
•••••		
1.9.	What are toxoids? State practical applications of toxoids giving an examp	ole. (3 marks)
• •		
••	•	

10	Catego	rize virus	es accord	ing to the	arrangen	nent of thei	r genome.		(15 ma
			••••••				•••••		
1	With a	schemati	c diagran	n outline t	the transc	ription strat	tegies of vir	uses (d	detail
	descrip	otion is no	t expecte	ed).					(12 mar
		7			(x)		*		
				*					
					Part B	mis aco est	alify v	46.00	
Def	fine the	following	terms.						
2	.1.	efinitive	Host						(10 mark

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2.2. An Ectoparasite	(10 marks)
2.2. Match the diagram with the second	MATES UILE
2.3. Match the diagram with the parasite. 2.3.1 2.3.2	(30 marks
2.3.4	
3.5	
a) Balantidium coli b) Entamoeba coli c) Giardia lamblia d) Trichomonas vaginalis e) Trypanosoma brucei f) Leishmania tropica g) Entamoeba histolytica h) Trichomonas hominis	
2.4 Discuss in brief the common symptoms caused by the infection of <i>Asca</i> .	ris lumbricoides. (30 marks)

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	The state of the s	*****************
2.5. List four diagnostic techniques used for	the detection of filariasis.	(20 marks
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Part C

3.	
3.1. Explain briefly the principle of agar diffusion microbiological assays.	(30 marks)
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	•••••
3.2. State two drugs that can be assayed by agar diffusion assay.	(10 marks)
	••••••
3.3. Name Describe the factors influencing the microbial spoilage of pharma	aceutical
products.	(30 marks)
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3.4. Explain Sources of microbial contaminants.	(30 marks)
2 C A sq Cherry My My may	er elees

4. 4.1 Define thermal death point. (10 marks) 4.2 Define thermal death time. (10 marks) 4.3 Name three physical agents used for microbial control in a pharmaceutical industry. (15 marks) 4.4. Briefly indicate the microbiological properties of *Pseudomonas aerugenosa*. (20 marks) 4.5 Name three virulent factors of *Pseudomonas aerugenosa*. (15 marks)

4.6 Name the three distinct stages of <i>Pse</i>	rudomonas infection in a human.	(10 marks)
SA NOTIFICATION OF THE PROPERTY OF THE PROPERT	Java desti punt	
4.7 Name the bacteria producing respirate	ory tract infection with ciliary bindir	ng of mucosal
Lobratio (M)	se caused by this organism. espiratory tract lumen Ciliary stasis	(20 marks)
CIII	ated epithelial cells	
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