SARDAR PATEL UNIVERSITY B.Sc IV SEMESTER EXAMINATION FRIDAY, 22nd APRIL 2016 10:30 A.M. TO 12:30 P.M. BIOTECHNOLOGY: US04EMIC01 FUNDAMENTAL MICROBIOLOGY

Total Marks:70 [10]Multiple Choice Questions. Q.1 The mode of nutrition related to fungi in five kingdom classification is i) Photosynthesis b) Absorption a) d) Chemosynthesis Ingestion c) Procaryotes that lack cell wall is placed in _____ division in ii) Bergey's Manual. Gracilicutes b) Protista d) Tenericutes Monera In adult female, due to ovarian activity accumulation iii) take place in vagina. Acetic acid b) Glycogen a) Citric acid Glutaric acid d) c) microorganism is associated with tooth decay in iv) Staphylococcus mutans Streptococcus mutans b) d) Streptobacter mutans Streptomyces mutans A physician induced infection is known as v) Fulminating infection Inapparent infection b) None of these Iatrogenic infection d) Berkefield filter is made up of material used as vi) bacteriological filters. Porcelain Asbestos pad b) Diatomaceous d) Agarose c) . is the mode of action for U.V. rays on bacterial cell. vii) b) Inhibiton of enzyme action Damage to cell wall a) None of these Damage to nucleic acid d) c) method is used to sterilize biological material sensitive to viii) temperature above 100 °C. b) Fractional sterilization Steam under pressure d) All of these Incineration scientist proved that phenol can be used to reduce ix) infection. b) Louis Pasteur Robert Koch Joseph Lister d) Robert Brown Streptomycin is characterized chemically as an x) antibiotic. b) Polyene Aminoglycoside d) Nitrobenzene ring P.T.O.

B-lactum ring

	Q.2	Answer the following questions in short. (Attempt any 10)	[20]
	i)	What is Plasmid? Give its importance	
	ii)	What is difference between first and second edition of Bergey's Manual?	
	iii)	Define: Gnotobiotic life	
•	iv)	Name normal flora of eye of human body. Give differences between exotoxins and endotoxins.	
	v)		
	vi)	What is LD ₅₀ and LD ₁₀₀ ? What is Postourization? Give its significance	
	vii)	What is Pasteurization? Give its significance Define: Thermal death time and Decimal reduction time	
	viii)	Give the role of X-rays used as antimicrobial agents.	
	ix) x)	Define: Sanitizer and Sterilization	
	xi)	Write practical applications of Quaternary Ammonium compounds	
	xii)	Give the mode of action of Formaldehyde.	
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	Q.3 a)	Briefly discuss a role of Bergey's Manual used to classify micro-	[05]
	Q.S a)	organisms.	լսոյ
	b)	When and who gave the five kingdom concept? Give elaborative note	[05]
	۵)	on it.	[oo]
		OR	
	Q.3 a)	Which major characters are used to classify micro-organisms? Explain	[07]
	Q.0)	in detail.	[07]
	b)	Write a note on Haeckel's classification.	[03]
	٠,	The division of the state of th	[UJ]
	Q.4	Write in detail the factors affecting occurrence of diseases.	[10]
	v ··	OR	(LV)
	Q.4 a)	Which sources are responsible for transmission of diseases?	[05]
,	b)	Describe normal flora of respiratory tract.	[05]
	~,		[00]
	Q.5 a)	Depict on conditions influencing antimicrobial action.	[06]
	b)	Give an account on effect of Gamma rays to micro-organisms.	[04]
	-/	OR	[, .]
	Q.5 a)	Write the use of Filtration used to remove micro-organisms.	[05]
	b)	Give the use of Dry heat sterilization and Low temperature as physical	[05]
		antimicrobial agent.	[00]
•	Q.6 a)	Write ideal characteristics of antimicrobial chemical agents.	[06]
	b)	How heavy metals act on growth of micro-organisms?	[04]
		OR	
	Q.6	Write a note on following antimicrobial agent:	[10]
	-	i) Alcohols ii) Penicillins	. ,

