PARUL UNIVERSITY FACULTY OF AGRICULTURE B.Tech. Dairy Technology, Summer 2018 - 19 Examination

Semester: Subject C Subject N	9/04/2019 2:00pm to 4:00pm Aarks: 50				
Instructions 1. All questions are compulsory. 2. Figures to the right indicate full marks. 3. Make suitable assumptions wherever necessary. 4. Start new question on new page.					
Q.1					
A)		n the blanks (Each of 0.5 Mark)	(05)		
	i)	are cell structure that make protein.			
	ii)	serve as storage vessels, it stored glycogen as source of carbohydrate and energy			
	iii)	Thick layer of peptidoglycan layer present in			
	iv)	Father of Microbiology			
	v)	Bacterial cell wall made up of			
	vi)	Abbreviate PDA			
	vii)	Peptidoglycan tetrapeptide of Gram Positive contain amino acid.			
	viii)	Gram negative bacteria appear as after gram staining.			
	ix)	Virus composed protein coat called			
	x)	is typical well-studied example of helical symmetry			
		virus.			
B)	Mult	ple Choice Questions (Each of 0.5 Mark)	(10)		
	i)	Function of cell wall			
		a) Maintain cell sahpe b) Attachment site for bacteriophage			
		c) Protection d) All of the above			
	ii)	Cell wall of fungi made up of			
		a) Peptidoglycan b) Chitin			
		c) Glucosamine d) Cellulose			
	iii)	Who first isolate deoxyribonucleic acid or DNA, from cell nuclei			
		a) Fedrick Meischer b) Dimitri Iwanowsk			
		c) Gregor Mendel d) Robert Hooke			

iv)	Virus composed of genetic material				
	a) DNA	b) RNA			
	c) both DNA or RNA	d) None of these			
v)	Function of gas vacuole				
	a) Attachment site	b) Buoyancy for flo	ating in aquatic environment		
	c) Protein Synthesis	d) Movement			
vi)	Gram negative bacteria havelayer of cell wall				
	a) 2 layer b) 3	layer			
	c) 4 layer d) N	one of these			
vii)	Size of Poliovirus				
	a) 30 nm b) 10 nm	c) 41 nm	d) 50 nm		
viii)	Staining to differentiate grar	n positive and gram neg	gative bacteria		
	a) Simple staining	b) Differential staining	7		
	c) Gram staining	d) Negative staining			
ix)	Causative organism for bube	onic plague			
	a) Yersinia Pestis b) Escherichia coli				
	c) Salmonella	d) Shigella			
x)	Example of cell wall less ba	cteria.			
	a) Mycoplasma	b) Ureaplasma			
	c) Spiroplasma	d) All of the abov	e		
xi)	Virus structure is studied by				
	a) Transmission Electron Microscopy (TEM)		b) X-ray diffraction		
	c) Neutron Scattering		d) All of the above		
xii)	When the layer is well organ	nized and not easily was	hed off, it is called		
	a) Capsule	b) Slime layer			
	c) Glycocalyx	d) fimbrae			
xiii)	Father of immunology				
	a) Gregor Mendel	b) Dimitri Iwan	owsk		
	c) Edward Jenner	d) Louis Pasteur			

xiv)	Intrinsic factor which affect the growth of microorganism							
	a) pH b) Water activity						
	c) Oxidation-reduction potential d) All of the above							
xv)	Fermentation is often result of							
	a) Protein + proteolytic micro organisms — amino acids + amines + ammonia + H2S							
	b) Carbohydrates + fermenting microorg	anism's —acids + alcohols + gases						
	c) Fatty foods + lypolytic micro organisms — fatty acids + glycerol							
	d) All of the above							
xvi)	Example of fermented dairy product							
	a) Tofu b) Yoghurt							
	c) Sauerkraut d) Idli							
xvii)) Stain used in negative staining							
	a) Nigrosine b) Methylene b	lue						
	c) Crystal violet d) Saffranine							
xviii)	Which of the following is Spore-former							
	a) Lactobacillus	b) Coliform						
	c) Bacillus and clostridium	d) Salmonella						
xix)	Who published his study of lactic fermen cause of milk souring	tation of milk, demonstrating specific						
	a) Joseph Lister b) Edward J	enner						
	c) Dimitri Iwanowsk d) Louis Pas	steur						
xx)	In non-enveloped virus provide site	for attachment to host cell						
	a) Envelope b) Capsi	d						
	c) DNA d) RNA							
Define the following (Any five out of seven questions) Fermentation 								
(2)	Taxonomy							

Q.2 A)

- (2)
- Taxonomy Dichotomous key (3)
- (4) Growth
- DNA (5)
- Water activity (6)

	(7)	DNA replication	
B)	Answer the following (Any five out of seven questions)		
	(1)	Name the amino acid present in RNA.	
	(2)	Enlist the cell wall less bacteria.	
	(3)	What is the linkage between NAM and NAG present in cell wall of bacteria?	
	(4)	Who introduce "Central dogma of life" ?	
	(5)	Enlist Carl Woese's three domain system.	
	(6)	Why gram positive bacteria appear dark blue?	
	(7)	Who is the father of genetics?	
Q.3	Write Short notes (Any five out of six questions)		(10)
	(1)	What is numerical taxonomy	
	(2)	Enlist function of cell wall of bacteria.	
	(3)	Describe chemical structure of Lypopolysaccharide.	
	(4)	What are the L-forms?	
	(5)	What is okazaki fragment?	
	(6)	Give DNA replication model.	
Q.4	Long	g Questions (Any three out of four questions)	(15)
	(1)	Application of microorganism in food industry.	05
	(2)	A) Give the factor affecting growth of bacteria.	03
		B) Difference between gram positive and gram negative bacteria.	02
	(3)	A) Difference between bacteria and viruses.	02
		B) Write central dogma of life.	03
	(4)	Describe the history and structure of DNA	05

Describe the history and structure of DNA (4)