## **PARUL UNIVERSITY** FACULTY OF APPLIED SCIENCE B.Sc / IMSC., Winter 2017-18 Examination

Semester: 3 Subject Code: 11101203 Subject Name: Applied Microbiology		Date: 27-12-2017 Time: 10:30AM to 01:00PM Total Marks: 60
Instructions:		
1. All questions are compulsory.		
2. Figures to the right indicate full marks.		
3. Make suitable assumptions wherever necessary	у.	
4. Start new question on new page.		
Q.1. A) Brief note (Each of 04 marks)	nt of municipal courses treatmon	(08)
(a) Explain primary or physical treatme	nt of municipal sewage treatmen	a process with a now
(h) Write a short note on water horne di	access coursed by bactoria?	
(0) while a short hole on water bonne dis	two)	
Q.1. <b>b</b> ) Answer the following questions (Any ) (a) $Drief note (2x2)$	two)	(04)
(a) Brief note $(2X2)$		(04)
1. What are BOD and COD?		
2. Water reclamation		· · · · · · · · · · · · · · · · · · ·
(b) Short note on Water Purification and	explain the physical type of pur	(04)
(c) Short note on sources of contaminati	on of milk.	(04)
Q.2. A) Answer the following questions.		
(a) Fill in the blanks. (Each of 02 marks	s)	(04)
1. In a low temperature long time pa	asteurization of milk involves ho	lding of milk at°C
for <u>minutes</u>		
2. In the composition of milk water	is approximately% and fat	is approximately
<u>%</u> .		
(b) Short note on milk and composition	of milk.	(04)
Q.2. B) Answer the following questions (Any t	two)	
(a) Multiple choice questions. (Each of	of 01 marks)	(03)
1. Eosin methylene blue agar is incl	uded in	× /
a) Selective media	b) Differential media	
c) Enrichment media	d) Both A and B	
2. Chicken pox is caused by		
a) Varicella-zoster virus	b) Influenza virus	
b) Variola virus	d) Henatitis virus	
3 Common cold is caused by	d) Heputtis virus	
a) Rhino virus	h) Henstitis virus	
b) Polio virus	d) Variola virus	
(b) Short note on Domestic services	d) variota virus	(03)
(b) Short note on Domestic sewage field	micus matheds of postaurization	2 (03)
(c) while a note on Pasteurization and va $\mathbf{O}(2, \mathbf{A})$ Brief note (Each of $0$ 4 more $\mathbf{A}$ )	arrous methods of pasteurization	· (03)
Q.3. A) Brief note (Each of 04 marks)		(08)
(a) Bacteriological examination of milk		ta sta
(b) Describe the Physical method of hea	at for control of microorganisms	in air.
Q.3. B) Answer the following questions (Any f	two)	
(a) Short note (2x2)		(04)
1. Define droplet and droplet nuclei		
2. Reductase test for milk		
(b) Short note on advanced treatment of	municipal sewage treatment pro	cess? (04)
(c) Short note on different sources of mi	croorganisms in air?	(04)
Q.4. A) Answer the following questions.		
(a) Fill in the blanks. (Each of 02 marks)	)	(04)
1. Sewage consists of approximately	ywater and% inc	organic and organic
matter, either in suspended or dis	solved form.	
2. Artificial ponds of shallow depth	constructed for the retention of a	sewage for sufficient
time are known as	or	
(b) Write short note on Milk borne disea	uses?	(04)

Q.4. B) Answer the	e following questions (Any	v two)	
(a) Multiple	choice questions.	(Each of 01 marks)	(03)
1. A fin	ne organic or inorganic part	icle suspended in air is called?	
a) F	Particulate pollutant	b) Gaseous pollutant	
c) A	Aerosol	d) None of the above	
2	was first to identify <i>I</i>	Mycobacterium tuberculosis as the casual agent of	
tuberculo	osis.		
a) Robert	t Koch	b) Louis Pasteur	
c) Robert	t Hook	d) David Bruce	
3. Full fo	orm of HEPA filters is	?	
a) High E	Efficiency Pure Air	b) High Energy Particulate Air	
c) High E	Efficiency Particulate Air	d) None of the above	
(b) Short no	ote on air borne diseases cau	used by bacteria?	(03)
(c) Write a s	short note on significance of	of microorganisms in water?	(03)