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Part III — MICROBIOLOGY

) Chlorine

in they is celebrated every year only

	(English Ve	rsion)
Time Allowed: 3 Hours	I was so up	[Maximum Marks : 150
Note: i)	Answer all the quest	tions from Part – A .
ii)	Answer any fifteen q	uestions from Part - B.
, iii)	Answer only six que No. 71 which is com	stions from Part - C including Question pulsory.
iv)	Answer only four que	estions from Part - D.
v)	Draw diagrams when	rever necessary.
1 100	d) - Murogen,	Alabamatic to
patholisi cell is mediated	genes to phurypgent	6. Athesica of Stractoroccus pro
	PART -	A gaswolfer of the following
Note: i)	Answer all the quest	ions.
ii)	Each question carrie	s one mark.
red in Riscundanc fever		olsen (usewolle) and the denoted the
I. Choose and write the	correct answer in the	e answer-book : $20 \times 1 = 20$
1. The discovery of	the microbial world o	f "animalcules" was made by
a) Robert Koch	b)	Edward Jenner
c) Anton von L	eeuwenhoek d)	Fleming.

-				4. [19] 전 10 전 1			
2.	Which	Which of the following is not a heavy metal?					
	a) Mo	ercury	b)	Chlorine			
	c) Si	lver	d)	Copper.			
3.	The Wo	orld Environment Day is ce	lebra	ted every year on			
	a) 5 ^t	h July	b)	5 th April			
	c) 5 ^t	^h June	d)	5 th May.			
4.	The hi	ghest percentage of gas pre	esent	in the atmosphere is			
	,a) C	O ₂ and another p	b)	O ₂ s reward (it			
et an	c) N	2 3 - Tas mon enotion					
5. Denitrification results in the formation of							
	a) N	litrate	b)	Nitrite			
	c) A	mmonia	d)	Nitrogen.			
6. Adhesion of Streptococcus pyogenes to pharyngeal epit				o pharyngeal epithelial cell is mediated			
by which of the following?							
	a) F	imbriae	b)	Lipoteichoic acid			
	c) L	iposaccharide	d)	Flagella.			
7.	Which	of the following major	anti	gens is involved in Rheumatic fever			
	episod	les?	i m	Choose and write the chateet sursus			
	a) A	lbumin	b)	Myosin			
	c) (Hobulin	d)	Flagellin.			
8.	The st	tool of cholera is					
	a) l	blood with mucous	b)	rice-water stool			
	0) 1	watery stool	d)	normal stool.			

9.	Wh	Which enters the body through the bite of lice?					
	a)	Borrelia recurrentis	b)	Salmonella			
	c)	Taenia solium	d)	Mycoplasma.			
10.	Sta	Staphylococcus aureus belongs to the family					
	a)	Enterobacteriaceae					
	b)	Micrococcaceae		14 July 1981			
	c)	Lentiviridae					
	d)	Picornaviridae.		eticinato placi diffasti	}		
11.	L. c	L. donovani is transmitted by					
	a)	Ticks					
	b)	Sand fly	EW. Sta	years needed their their e			
	c)	Mosquitoes		Watson and Crick			
	d)	Rat flea.					
12.	Wh	Which of the following is the habitat of adult F. hepatica?					
	a)	Lungs of the letters	b)	Liver			
	c)	Intestine	d)	Brain.			
13.	He	patitis A virus belongs to th	e family	y of			
	a)	Picornaviridae	b)	Caliciviridae			
	c)	Retroviridae	d)	Hepadnaviridae.			
4.	Lyme disease is caused by						
	a)	Borrelia burgdor feri	b)	Chlamydia psittaci			
	c)	Sand fly	d)	Mosquitoes.			
5.	Bru	Brucella species causes					
	a)	Typhoid fever	b)	Undulant fever			
	c)	Rat bite fever	d)	Viral fever.			

II.

16.	Nurs	se cells are present in which	organ	1?	awana.	
	a)	Skin	b)	Intestine		
	c)	Liver	d)	Thymus.		
17.	Whi	ch antibody appears first afte	r a p	rimary infection ?		
	a)	IgA	b)	IgG		
	c)	IgM	d)	All of these.		
18.	The	genetic code consists of how	many	y codons ?		
	a)	64	b)	32		
	c)	16	d)	128.		
19.	The	EcoRI restriction enzyme wa	s isol	ated by		
	a)	Watson and Crick	b)	Khorana		
	c)	Ames	d)	Herbert Boyer.		
20.	20. The first attempt to culture animal cells was done by					
	a)	Ross Harrison	b)	Stanley Cohen		
	c)	Werner Arber	d)	Hamilton.		
Fill i	in th	e blanks :	uta os	Fepalitis A Vinis belongs	8 × 1 = 8	
21.	Pha	se contrast microscope was f	irst d	lescribed by		
22.	asiz tyaching H					
23.	. Common cold is caused by virus.					
24.	. The tetanus bacilli with spores give the appearance of					
	enditives the sand fly					
26.	18. Brucella apedies canses					
27.	Typhioid fever b) Undahali leser					
27.		isonic determining site of an		c) Not bite fever		
5 2 6 2	13 44 6	TARRIA GETERMINING SHE (II 21)	C 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	THE TOTAL COLUMN TO A CONTROL OF THE		

III. Answer the following questions by writing True or False:

 $10 \times 1 = 10$

- 29. The lethal effect by certain metals on bacteria is known as oligodynamic action.
- 30. Bacillus thuringiensis is not a biopesticide.
- 31. Treponema pallidum gets transmitted from the mother to the foetus and causes congenital syphilis.
- 32. Rebecca Lancefield introduced a classification of streptococci.
- 33. Diphtheria does not cause bull neck appearance.
- 34. Mycoplasma are cell wall bacteria.
- 35. Niclosamide and Praziquantel are effective for taeniasis.
- 36. RNA is the genome in Herpes Virus.
- 37. Substances which exhibit the phenomenon of fluorescence are called fluorochromes.
- 38. Tuberculin type of hypersensitivity was described by Robert Koch.

IV. Match the following :

 $6 \times 1 = 6$

39. Streptomycin

a) Photo-reactivation

40. Sodium benzoate

b) Reduviid bug

41. T. cruzi

c) Transduction

42. Taenia solium

d) Selman Walksman

43. Pyrimidine dimer

e) Preservative

44. Bacteriophage

f) Intestinal parasite.

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V. Answer the following questions in one sentence each:

6'x 1 = 6

- 45. What is called Bactericide?
- 46. What is Opisthotonos?
- 47. Name the enzymes produced by Vibrio.
- 48. What is Candida?
- 49. What is the genetic material of HIV?
- 50. Which enzyme joins the DNA fragments?

PART - B

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Note: i) Answer any fifteen questions.

ii) Each question carries two marks.

 $15 \times 2 = 30$

- 51. What are the types of electron microscope?
- 52. Give two uses of fluorescent microscope.
- 53. Define Glycolysis.
- 54. What is Chemotherapy?
- 55. Define biogas.
- 56. Define aerosol.
- 57. Define Pasteurization.
- 58. What is alpha haemolysis?
- 59. What are the four species of genus Shigella?
- 60. Give the structure of Tetanus bacilli.
- 61. What is the action of exfoliative toxin?
- 62. What is lyme borreliosis?
- 63. Explain the two species of Brucella and their infected animals.

- 64. Where is Candida albicans present in the body? When does it cause an infection?
- 65. What are the modes through which HIV is not spread?
- 66. What is Erythroblastosis foetalis?
- 67. State the beneficial role of IgE.
- 68. Define Immunization.
- 69. Why should a codon have at least three nucleotides?
- 70. What is Wobble hypothesis?

PART - C

- Note: i) Answer any six questions including Question No. 71 which is compulsory.
 - ii) Each question carries five marks.

 $6 \times 5 = 30$

 Give at least five points to differentiate eumycetes from actinomycetes which cause mycetoma.

OR

Describe Ti plasmid with diagram.

- 72. List out the controlling methods of microorganisms by chemical agents.
- 73. What are the raw materials required for penicillin production?
- 74. Write a short note on oxidation pond.
- 75. Write a short note on Shiga toxin.
- 76. Write a short note on general characters of Vibrio.
- 77. Describe the laboratory diagnosis of Chaga's disease.
- 78. What are the differences between immediate and delayed type hypersensitivity reactions?
- 79. Describe conjugation in bacteria.

PART - D

- Note: i) Answer any four questions.
 - ii) Each question carries ten marks.

 $4 \times 10 = 40$

- 80. Elaborate on the work of Louis Pasteur.
- 81. Elucidate electron microscopy.
- 82. What are the methods adopted for composting? Mention the important factors influencing the compost making.

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- 83. Discuss the source, spread and control of bacillary dysentery.
- 84. List the differences between elementary and reticulate bodies.
- 85. Write the methods of laboratory diagnosis of herpes simplex virus.
- 86. Describe the development of T-cells in thymus.
- 87. Describe the production of Transgenic animals. Draw diagram.