Seat	Total No. of Pages: 12
No.	

M.Phil./Ph.D. Entrance Examination, September - 2019 MICROBIOLOGY

Day and Date : Friday, 20 - 09 - 2019 Total Marks : 100

Time: 1.00 p.m. to 3.00 p.m.

Instructions:

- 1) All questions are compulsory.
- 2) Each question carries 2 marks.
- 3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
- 4) Use black ball point pen only for marking the circle. Do not make any stray mark on the OMR Answer Sheet.
- 5) Follow the instructions given on OMR Sheet.
- 6) Rough work shall be done on the sheet provided at the end of question paper.
- 7) Only non programmable calculators are allowed.
- 1) Which of the following is not a limitation of Beer Lambert's law, which gives the relation between absorption, thickness and concentration?
 - A) Concentration must be lower
 - B) Radiation must have higher bandwidth
 - C) Radiation source must be monochromatic
 - D) Does not consider factors other than thickness and concentration that affect absorbance
- 2) Which of the following is not true about Absorption spectroscopy?
 - A) It involves transmission
 - B) Scattering is kept minimum
 - C) Reflection is kept maximum
 - D) Intensity of radiation leaving the substance is an indication of concentration

3)	In o soli	chromatography, the stationary phod.	ase c	an be	supported on a			
	A)	Solid or liquid	B)	Liquid or gas				
	C)	Solid only	D)	Liquid only				
4)		In which of the following type of paper, chromatography does the mobile phase move horizontally over a circular sheet of paper?						
	A)	Ascending paper chromatography	•					
	B)	Descending paper chromatograph	у					
	C)	Radial paper chromatography						
	D)	Ascending - descending chromato	grapl	ny				
5)		Which of the following detectors have high sensitivity to all organic compounds?						
	A)	Sulphur chemiluminescence detec	tor					
	B)	Thermionic emission detector						
	C)	Flame ionization detector						
	D)	Argon ionization detector						
6)	Der	nsity gradient centrifugation uses a j	princi	ple of	·			
	A)	molecular weight	B)	electric charge	e			
	C)	buoyancy	D)	molecular size				
7)	-	words listed below abstract are uabase.	ıseful	in	_ article in large			
	A)	Characterizing	B)	Indexing				
	C)	Selecting	D)	Copying				

8)	Cor	rect methodology enhances	of	research paper.
	A)	Smoothness	B)	Clarity
	C)	Reproducibility	D)	Preciseness
9)	——writ	of the following is correcting	t rega	rding use of tense in scientific
	A)	Past Tense Is for Specific Observ	ations	S
	B)	Past Tense Is for Generalized Obs	ervat	ions
	C)	Present Tense Is for Specific Obs	ervati	ons
	D)	Perfect Tense Is for Specific Obse	ervati	ons
10)	The	quality of research paper is approp	oriatel	ly defined by
	A)	Length of paper	B)	Impact factor of journal
	C)	Citation	D)	Acceptance factor of journal
11)	othe	section of research paper coer findings.	onsol	idates and connects results with
	A)	Conclusion	B)	Discussion
	C)	Results	D)	Summary
12)	Ora	l presentations are appropriate whe	n the	research has
	A)	Broad scope	B)	Complicated theme
	C)	Limited scope	D)	Wide applications

13)	A re	esearcher is generally expected to _		·
	A)	study the existing literature in a fiel	d	
	B)	generate new principles and theorie	es	
	C)	synthesize the ideas given by other	ſS	
	D)	evaluate the findings of the study		
14)		government of India conducts Censesearch in this process is		her every 10 years. The method
	A)	case study	B)	developmental
	C)	survey	D)	experimental
15)	Res	earch ethics do not include		
	A)	Honesty	B)	Subjectivity
	C)	Integrity	D)	Objectivity
16)	_	ne process of conducting research, f	ormu	lation of hypothesis is followed
	A)	Statement of objectives	B)	Analysis of data
	C)	Selection of research tools	D)	Collection of data

17)	How many 8s are there in the following sequence that are preceded by 5 but not immediately followed by 3 5837586385458476558358758285				
	A)	4	B)	5	
	C)	7	D)	3	
18)	Inse	ert the missing number from 4: 17; 7	: ?		
	A)	48	B)	49	
	C)	50	D)	51	
19)	Foll	owing is an open enrichment culture	e syst	em.	
	A)	enrichment of lactics in milk in an	open	container	
	B)	enrichment of lactics in milk in clo	sed c	ontainer	
	C)	enrichment of rhizobia in root node	ules		
	D)	enrichment of azotobacter in labora	atory	culture media	
20)	——bact	is not an example of different eria.	tial cu	ulture medium used in studies of	
	A)	Blood agar	B)	Mac Conkey's agar	
	C)	Milk agar	D)	Sabouraud's agar	
21)	Rob	pertson's cooked meat medium is us	sed in	enrichment of	
	A)	Clostridia	B)	Salmonella	
	C)	Staphylococci	D)	Bacilli	

22)		is used to pick a single bacte	rial co	ell from a mixed culture.
	A)	Micromanipulator	B)	Macromanipulator
	C)	Pipette	D)	Wire loop
23)		is an example of oxidation-re	educt	ion indicator dye.
	A)	Resazurin	B)	Bromocresol purple
	C)	phenolphthaline	D)	Bromothymol blue
24)		is a mordent used in stud hods.	ies o	f microorganisms by staining
	A)	Congored	B)	Tannic acid
	C)	Phenol	D)	Acetic acid
25)	Gela	atin is used as solidifying agent in c	ulture	e media by
	A)	Luis Pasture	B)	Joseph Lister
	C)	John Tindal	D)	Robert Koch
26)	Pept	tide bond always prefers	confo	rmation.
	A)	trans	B)	cis
	C)	flexible	D)	non-helical

27)	НТТ	TP stands for		
	A)	Hyper Test Transport Protocol		
	B)	Hyper Text Transfer Protocol		
	C)	Hyper Test Transfer Protocol		
	D)	Hyper Text Training Programme		
28)	Hun	nan genome project was accomplish	ned d	uring
	A)	1989-2004	B)	1990-2003
	C)	1984-1999	D)	2003-2013
29)		Protein separation in chromatograp owing properties except;	hic te	echniques are often based on the
	A)	Solubility of protein		
	B)	Charge of protein		
	C)	Viscosity of protein		
	D)	Specific binding affinity of protein		
30)	An e	example of complement fixation tes	t is _	
	A)	Widal test	B)	Wasserman test
	C)	Weil-Felix test	D)	Kahn test

31)	Relationship between organisms of different species where one organism go benefit and other is harmed is called				
	A)	Commensalism	B)	Mutualism	
	C)	Parasitism	D)	Symbiosis	
32)		is due to acid produced by m	icroo	organisms in food.	
	A)	Putrefaction	B)	Rancidity	
	C)	Souring	D)	Ropiness	
33)	Rip	ening of cheese is done by using _			
	A)	Aspergillus Spp.	B)	Penicillium Spp.	
	C)	Mucor Spp.	D)	Rhizopus Spp.	
34)		is not an example of precurso	or.		
	A)	Phenyl acetic acid	B)	Cobalt	
	C)	Phenoxy acetic acid	D)	CaCO ₃	
35)		fermentation is an example	of du	nal fermentation.	
	A)	Penicillin	B)	Vinegar	
	C)	Amylase	D)	Alcohol	
36)	For	safe disposal of treated sewage, Bo	OD sl	nould be mglit.	
	A)	0	B)	10	
	C)	20	D)	5	

37)	Qua	antity of nutrients is moderate in		_ lakes.
	A)	mesotrophic	B)	oligotrophic
	C)	hetrotrophic	D)	eutrophic
38)	Moı	noclonal antibodies are also called		
	A)	magic bodies	B)	lymph bodies
	C)	oncogens	D)	larger segments
39)		result of numerical taxonomic analdiagram called	lysis	is often summarized with a tree
	A)	dendrogram	B)	similarity matrix
	C)	phenons	D)	matching coefficient
40)	The	term 'systematic' was proposed by	7:	
	A)	Robert Whittaker	B)	John Ray
	C)	James Cook	D)	Linnaeus
41)		ich of the following organism has a ome?	sing	le stranded positive sense RNA
	A)	Influenza virus	B)	Polio virus
	C)	Hepatitis B virus	D)	Pox virus

42)	RFL	LP serve as ideal genetic marker for	·	
	A)	PCR	B)	DNA extraction
	C)	DNA fingerprinting	D)	Northern Blotting
43)		phage is a female specific pl	nage.	
	A)	T4	B)	T3
	C)	T7	D)	T5
44)	In b	acteria, Okazaki fragments are abou	ıt	nucleotides long.
	A)	100 to 200	B)	1,000 to 2,000
	C)	200 to 400	D)	400 to 600
45)		A replication involves action of A structure created due to strand se		_
	A)	DNA Pol-I	B)	DNA Pol-II
	C)	topoisomerases	D)	helicase
46)	Rep	lication of mitochondrial as well as cl	hloroj	plast DNA takes place by
	A)	conservative and symmetric mode		
	B)	semiconservative and symmetric n	node	
	C)	conservative and asymmetric mod	e	
	D)	semiconservative and asymmetric	mode	

47)	_	aration of two parent DNA stran	ds d	uring replication is generally
	A)	helicases	B)	DNA Pol-I
	C)	DNA Pol-II	D)	DNA Pol-III
48)	MIF	PS is a		
	A)	Primary protein sequence database	;	
	B)	Structural Database		
	C)	Composite Database		
	D)	Secondary protein sequence Datab	ase	
49)	The	mode of action of sulfonamides is	by in	hibition of
	A)	cell wall synthesis	B)	folic acid metabolism
	C)	DNA replication	D)	sulphur metabolism
50)	Drib	now box lies usually bp up	stron	m of coding region
30)				
	A)	10	B)	70
	C)	35	D)	100

Rough Work