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No.	

### B.Sc. (Part - III) (Semenster - VI) (CBCS) **Examination, April 2024 ENGLISH (Compulsory) (Paper - IV)**

### **Ability Enhancement Compulsory Course**

		English for	Commu	nication	
		Sub. C	ode: 81	667	
Day and D	ate :	Monday, 01/04/2024		Total Marks:	40
Time: 2.30	0 p.m	a. to 4.30 p.m.			
Instruction	ns:	1) All questions are c	ompulsor	<b>y.</b>	
		2) Figures to the righ	t indicate	full marks.	
Q.1 A) Re	ewrite	e the following choosing	the corre	ct alternative:	[3]
1.	Buffa	alo Bill stays open	a day,	a week.	
	a.	12 hours, 3 days	b.	6 hours, 2 days	
	c.	24 hours, 7 days	d.	20 hours, 5 days	
2	Gran	ny's piaraing ayas aguld da	toot		

- Granny's piercing eyes could detect.....
  - any disease a.

- b. uneasiness
- deep buried pain c.
- d. unhappiness
- 3. The grass lifts its head into flat ..... by the frenzied machine.
  - a. tree

b. velvet

c. women

- d. grass
- Answer the following questions in one word/ phrase /sentence each. [3] В.

1

- Who is regarded as the Booker T. Washington of Maharashtra? 1.
- 2. What is Lachmi doing while chatting?
- Who cures Govind Singh of his madness? 3.

P.T.O.

<b>Q.</b> 2)A) A	nswer any two of the following questions in 3 to 4 sentences each. [4]
1.	What does the word 'pawn' mean? Which meaning fits this poem?
2.	How was the absence of Granny felt by the poetess?
3.	What does the grass do?
<b>B</b> )	Write a short note on any one of the following in about 7 to 8 sentences.[4]
1.	Anna's education mission
2.	Lachmi
<b>C</b> )	Do as directed [2]
Writ	te antonym of the following word.
	'Aggressive'
Writ	te synonym of the following word.
Q.3.A)	'Dirty'  Build up a short piece of group discussion on the following topics making use of expressions and interactions used in group discussion. [8]  Save Environment means Save the Earth.
	OR
	Terrorism is serious problem in our country.
B) Q.4.	You are planning a family trip to your favourite place. Make notes of what you must do to get most out of this trip. Use the 'mind mapping' technique for this purpose. [8]  Write a summing up or a part of a talk/discussion/Interview/Musical
<b>~···</b>	programme on television. [8]
	OR
	You happen to be the editor of an English newspaper published from Maharashtra. You are expected to write an editorial on death of a famous film personality.

Seat	
No.	

# B.Sc. (Part - III) (Semester - VI) (CBCS)

		<b>Examination</b>	ı, M	arch - 2024	
N		MICROBIOLO	OGY	(Paper-XIII)	
		Microbial Ger	netic	es (DSE F-49)	
		Sub. Co	de :	81704	
Day and	l Dat	e: Tuesday, 26-03-2024		Total Marks	: 40
Time: 0	2.30	p.m. to 04.30 p.m.			
Instructi	on:	1) All questions are com	puls	ory.	
		2) Figures to the right in	ıdica	te full marks.	
		3) Draw neat diagrams	wher	ever necessary.	
Q.1) Cho	ose 1	the correct alternative and	l rew	rite the sentence.	[8]
i)	Esc	herichia coli chromosome	is	DNA molecule.	
	a)	Circular double stranded	b)	Linear double stranded	
	c)	Circular single stranded	d)	Linear single stranded	
ii)	The	e method used for paternity	deter	mination is	
	a)	DNA fingerprinting	b)	PCR	
	c)	DNA sequencing	d)	Electrophoresis	
iii)	Gra	dient plate technique is use	d for	isolation of mutant.	
	a)	Auxotrophs	b)	Streptomycin resistant	
	c)	Lactose negative	d)	Tryptophan less	
iv)	•••••	is an organism which	requi	res one or more growth factors.	
	a)	Auxotroph	b)	Prototroph	
	c)	Autotroph	d)	Heterotroph	
v)	The	e method for DNA sequenci	ng w	as developed by	
	a)	Alek Jeffreys	b)	Sanger et. Al	
	c)	McClintock	d)	Warner Arber	

-1-

P.T.O.

	V1)	Pribi	now box is rich in	sequer	ice.	
		a)	AC	b)	GC	
		c)	AG	d)	TA	
	vii)	In pr	okaryotes, the con	sensus nucleo	tide sequence of Pribnow box is	
		a)	TATAAT	b)	GAGAAG	
	\	c)	TCTCCT	d)	GCGCCG	
N	viii)	The	nolymarasa chain :	reaction is		
	viii)	a)	polymerase chain in DNA sequencing		••••	
		a) b)		-		
			DNA degradation DNA amplification	-		
		<ul><li>c)</li><li>d)</li></ul>	None of these	on technique		
		u)	None of these			
<b>Q.2</b> )	Atte	mpt a	any TWO of the t	hree sub-que	stions:	[16]
	i) ii)	agric	culture.	3	n its applications in medicine and of isolation and detection of mutar	nts
	11)	* * 11a	e is matation. Exp	nam memous	of isolation and detection of matal	ites.
	iii)	Desc	cribe the technique	and application	ons of DNA fingerprinting.	
$\Omega$ 3)	Writ	ta sha	ort notes on : (An	w four)		[16]
<b>Q.</b> 3)	**110	ic silo	it notes on . (An	iy ioui)		LIUJ
	i)	Poly	merase chain react	tion		
	ii)	Cosr	nids		0-	
	iii)	Fold	ed fiber model of A	E. coli Chrom	osome	
	iv)	Type	es of transposable e	elements	702	
	v)	Vect	ors in genetic engi	neering		
	vi)	Orga	nization of tryptop	phan operon	▼	

Seat	
No.	

# B.Sc. (Part - III) (Semester - VI) (CBCS)

# **Examination, March - 2024**

N		MICROBIOLOG	Y (P	aper-XIV) (26 B)	
		Microbial	Bio	chemistry	
		Sub. C	ode :	81705	
Day and	l Dat	e : Wednesday, 27-03-2	024	Tota	l Marks : 40
<b>Time</b> : 0	2.30	p.m. to 04.30 p.m.			
Instructi	on:	1) All questions are con	npulso	ory.	
		2) Figures to the right	indica	te full marks.	
		3) Draw neat labelled of	liagra	ms wherever necessary.	
0.4) (1					
Q.1) Cho	oose t	he correct alternative an	d rew	rite the sentence.	[8]
i)	The	word enzyme was firstly	propos	sed by	
	a)	Lewis	b)	Koshland	
	c)	Kuhne	d)	Lederberg	
ii)	•••••	is the protein part of	f an en	zyme.	
	a)	Apoenzyme	b)	Cofactor	
	c)	Co-substrate	d)	Prosthetic group	
iii)		enzymes which are producalled as	iced in	the cell and function out	side the cell
	a)	Intracellular enzymes	b)	Inducible	X
	c)	Extracellular enzymes	d)	Holoenzymes	
iv)		pathway shows Amp	hibolic	e pathway.	
	a)	Glyoxylate	b)	TCA	
	c)	EMP	d)	Lipid Metabolism	
v)	Dur	ring RNA synthesis Thymi	ne is r	eplaced by in RNA	A.
	a)	Adenine	b)	Guanine	
	c)	Cytosine	d)	Uracil	

-1- P.T.O.

	vi)	Nucl	eotides are linked together	by		
		a)	peptide bond	b)	phosphodiester bond	
		c)	glycosidic bond	d)	hydrogen bond	
	vii)	The	primary acceptor of $CO_2$ is		in carbon assimilation.	
		a)	ribose-5-phosphate	b)	ribulose-5-phosphate	
	N	c)	ribulose-1-5-di-phosphate	d)	ribose-1-5-di-phosphate	
1	viii)	The 2	Z gene in Lac operon is tra	nscrib	ed for	
		a)	β-galactosidase			
		b)	β-galactoside permease			
		c)	β-galactoside transacetylas	se		
		d)	β-galactoside dehydrolase			
Q.2)	Atte	mpt a	any two of the following :	^	[:	16]
	i)	Write	e in brief about classes of e	nzym	es with their examples.	
	ii)		e an essay on enzyme regul polic repression.	ation	: positive control, negative control a	ınd
	iii)	Expl	ain in detail assimilation of	carbo	on.	
Q.3)	Writ	te sho	ort notes on : (Any four)		[:	<b>16</b> ]
	i)	Activ	ve site of enzyme			
	ii)	KM				
					, X	
	iii)	Effec	ct of temperature on enzym	e activ	vity	
	iv)	Struc	cture of mRNA			
	v)	Pepti	idoglycan			
	vi)	ED p	oathway			
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Seat	
No.	

# B.Sc. (Part - III) (Semester - VI) (CBCS)

### **Examination, March - 2024**

N	I	MICROBIOLOGY	Y (Par	per-XV) (DSE F51)
		Environme	ntal M	<b>licrobiology</b>
		Sub. C	Code:	81706
Day and	l Dat	e : Thursday, 28-03-20	24	Total Marks: 40
Time: 0	2.30	p.m. to 04.30 p.m.		
Instructi	on :	1) All questions are co	mpulso	ory.
		2) Figures to the right	indicat	e full marks.
Q.1) Cho	ose t	the correct alternative a	nd rewi	rite the sentence. [8]
i)		is a measure of combi vastewater.	ned con	tent of all inorganic and organic matter
	a)	Total solids	b)	Total dissolved solids
	c)	Total volatile solids	d)	Total suspended solids
ii)		occurs when sewage	is disch	narged into the water.
	a)	Eutrophication	b)	Biosparging
	c)	Increase in oxygen	d)	Bioremediation
iii)		ekling filter contains the terial, which is called as		of organisms developed over inert
	a)	paragleal	b)	phytogleal
	c)	zoogleal	d)	mesogleal
iv)	The	value of Secchi depth (n	netres) i	s usually low in case of lakes.
	a)	oligotrophic	b)	mesotrophic
	c)	eutrophic	d)	both oligo and mesotrophic
v)	The	anaerobic biological me	thod use	ed in wastewater treatment is
	a)	septic tank	b)	activated sludge process
	c)	trickling filter	d)	all of these

-1- P.T.O.

	vi)	Bioc	degradable organic matter	in sew	age is measured by test.	
		a)	MPN	b)	Flask	
		c)	BOD	d)	COD	
	vii)		process of assessing the pronment is called as		e effects of a proposed project on	
		a)	EPA	b)	EBA	
	N	c)	EIA	d)	EDA	
	viii)		t zone technology, a methes where biodegradation o		vastewater treatment contains	••••
		a)	aerobic	b)	anoxic	
		c)	anaerobic	d)	aerobic, anoxic and anaerobic	
Q.2)	Lon	g ans	swer questions (Any two)	):		[16]
	i)	Desc	cribe physical, chemical a	nd bio	logical characteristics of sewage.	
	ii)		cribe in detail, characterist llery industry.	tics and	d treatment of waste generated by	
	iii)		ine bioleaching. Explain in eaching.	n detail	l microbiology and chemistry of	
<b>Q.3</b> )	Wri	te sho	ort notes on : (Any four)	)		[16]
	i)	Goo	d laboratory practices			
	ii)	Clas	ssification of hospital wast	te		
	iii)	Roo	t zone technology			
	iv)	Proc	cess of eutrophication			
	v)	App	lications of bioremediatio	n	100	
	vi)	Clea	nn room classification			

							Total No. of Pages : 2
Seat							
No.				]			
			I	B.Sc. (Part	- III) (Sen	10	enster - VI)
				Examin	ation, Ma	r(	ch 2024
		2		MICROBI	OLOGY (	Pa	aper- XVI)
				DSE F52 N	<b>Iedical M</b> i	ic	erobiology
		•		Sub	. Code : 82	17	707
Day and Date: Saturday, 30/03/2024						Total Marks: 40	
Time	: 2.3	30 p.r	n. to 4.30 j	p.m.			
Instru	uctio	ons:	ŕ	questions ar	-	•	
			2) Fig	ures to the ri	ight indicat	te	full marks.
Q1) 1	Rew	rite 1	the follow	ing sentences	s by selectin	ng	g correct answer from given
		rnati					[8]
ä	a)		from	erythrocytes	enter in mos	qι	uito while feeding on blood of infected
		pers	on.				
		i)	Gametoc	ytes	ii)	,	Sporozoites
		iii)	Merozoit	es	iv)	(	Ookinete
1	b)	Reit	er and Nich	ols strain are ı	used in diagn	109	sis of disease by Wasserman's
		test.					
		i)	Leptospii	osis	ii)	]	Pneumonia
		iii)	Tuberculo	osis	iv)	, ;	Syphilis
(	c)		is a ti	ssue degradin	g enzyme pr	00	duced by Pseudomonas pathogen.
		i)	Staphylo	kinase	ii)	(	Coagulase
		iii)	Kinase		iv)	(	Collagenase
Ó	d)	Cho	lera toxin p	oroduced by V	ibrio cholera	a c	converts ATP to

ii) cADP

iv) cGMP

i)

cAMP

iii) cATP

e)	•••••	antibiotic blocks DNA rep	licat	ion process		
	i)	Penicillin	ii)	Quinolones		
	iii)	Bacitracin	iv)	Piperacillin		
f)	Keto	oconazole blocks synthesis of	•••••	in cell membrane.		
	i)	Squaline	ii)	Acetyl Co-A		
	iii)	Lanosterol	iv)	Ergosterol		
g)		is a narrow spectrum antibio	otic.			
	i)	Penicillin	ii)	Ciprofloxacin		
	iii)	Streptomycin	iv)	Tetracycline		
h)	•••••	is a antiprotozoal drug				
	i)	Metronidazole	ii)	Nystatin		
	iii)	Griseofulvin	iv)	Cycloserine		
				)		
Answ	er an	y two of the following.		[16]		
	Describe in brief Causative agent, Mode of transmission, Pathogenesis, Prevention and control of disease caused by Mycobacterium tuberculosis.					
a)				_		
a) b)	and o	control of disease caused by Myo	coba	_		
,	what Quir	control of disease caused by Myout is chemotherapy? Discuss in bactoones and AZT	coba rief 1 ode o	ncterium tuberculosis.  mode of action of Ketoconazole and  f transmission, Pathogenesis, Prevention		
b) c)	What Quire Description	control of disease caused by Myout is chemotherapy? Discuss in brolones and AZT cribe in brief Causative agent, Mo	coba rief 1 ode o	ncterium tuberculosis.  mode of action of Ketoconazole and  f transmission, Pathogenesis, Prevention		
b) c)	and of What Quire Description and of wer a	control of disease caused by Myont is chemotherapy? Discuss in brolones and AZT cribe in brief Causative agent, Mocontrol of disease caused by Trep	coba rief 1 ode o	mode of action of Ketoconazole and ftransmission, Pathogenesis, Prevention ma pallidum		
b) c) Answ	wer a	control of disease caused by Myont is chemotherapy? Discuss in brolones and AZT cribe in brief Causative agent, Mocontrol of disease caused by Trepony four of the following.	coba rief 1 ode o	mode of action of Ketoconazole and ftransmission, Pathogenesis, Prevention ma pallidum		
b) c) Answ a)	and of What Quire Description and of Wer a Mod	control of disease caused by Myont is chemotherapy? Discuss in brolones and AZT cribe in brief Causative agent, Mocontrol of disease caused by Trepony four of the following.	coba rief 1 ode o	mode of action of Ketoconazole and ftransmission, Pathogenesis, Prevention ma pallidum		
b) c) Ansv a) b)	and of What Quire Description and of Wer a Mod Buff	control of disease caused by Myont is chemotherapy? Discuss in brolones and AZT cribe in brief Causative agent, Mocontrol of disease caused by Trepony four of the following.  The description of penicillin description of Metronidazole	coba rief 1 ode o	mode of action of Ketoconazole and ftransmission, Pathogenesis, Prevention ma pallidum		
b) c)  Answ a) b) c)	and of What Quire Description and of wer a Mod Mod Buff	control of disease caused by Myont is chemotherapy? Discuss in brolones and AZT cribe in brief Causative agent, Mocontrol of disease caused by Treport of the following.  The description of penicillin description of Metronidazole ficoat test	rief i	mode of action of Ketoconazole and  f transmission, Pathogenesis, Prevention ma pallidum  [16]		
	f) g) h)	<ul> <li>i)</li> <li>iii)</li> <li>f) Keto</li> <li>i)</li> <li>iii)</li> <li>g)</li> <li>i)</li> <li>iii)</li> <li>h)</li> <li>i)</li> <li>iii)</li> </ul>	<ul> <li>i) Penicillin</li> <li>iii) Bacitracin</li> <li>f) Ketoconazole blocks synthesis of</li> <li>i) Squaline</li> <li>iii) Lanosterol</li> <li>g)is a narrow spectrum antibio</li> <li>i) Penicillin</li> <li>iii) Streptomycin</li> <li>h)is a antiprotozoal drug</li> <li>i) Metronidazole</li> </ul>	i) Penicillin ii) iii) Bacitracin iv)  f) Ketoconazole blocks synthesis of i) Squaline ii) iii) Lanosterol iv) g)is a narrow spectrum antibiotic. i) Penicillin ii) iii) Streptomycin iv) h)is a antiprotozoal drug i) Metronidazole ii) iii) Griseofulvin iv)		