	Sanjay Ghodawat University, Kolhapur Established as State Private University under Govt. of Maharashtra. Act No XL, 2017	2023-24 EXM/P/09/00
Year and Program **Second Year B.Pharm**	**School of Pharmaceutical Sciences**	**Department : Pharmacy**
Course Code : BP303T	**Course Title : Pharmaceutical Microbiology**	**Semester – III**
Date: 26/12/2023 **Day :Tuesday** **Time: 10.30-1.30**	**Examination: End Semester**	**Max Marks: 75**

		Marks	Bloom's Level	CLO
Q.1	**Objective Type Questions (20X1)**	**20**		
a)	Exponential phase is also known as …… (a) Log phase (b) Lag phase(c) Stationary phase (d) Death phase	1	1	CLO1
b)	Obligate anaerobes can grow in …… (a) Presence or absence of oxygen(b) Presence of oxygen(c) Presence of CO2(d) Absence of CO2Correct	1	1	CLO3
c)	The percentage of alcohol used in Gram-staining is a) 75% b) 90% c) 60% d) 25%	1	1	CLO2
d)	Gram positive bacteria appear as a) Pink b) Violet c) both a & b d) None of theseCorrect	1	1	CLO2
e)	Gram negative bacteria appear as a)Pink b) Violet c) both a & b d) None of theseCorrect	1	1	CLO2
f)	Which of the following is the most accurate method for microbial assay of antibiotics? a) Physical assay b) Chemical assay c) Biological assay d) Chemical and biological assay	1	1	CLO1
g)	Which of the following is used in electron microscope? a) electron beams b) magnetic fields c) light waves d) electron beams and magnetic fields	1	1	CLO1
h)	Which of the following is used as a solidifying agent for media? a) Beef extract b) Peptone c) Agar d) Yeast	1	1	CLO3
i)	Which of the following is a rich source of B vitamins? a) Peptone b) Yeast extract c) Beef extract d) Agar	1	1	CLO2

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j)	Nutrient broth, a liquid media contains beef extract and peptone respectively in how much amounts? a) 0.2%, 0.4% b) 0.1%, 0.6% c) 0.3%, 0.5% d) 0.7%, 0.3%	1	1	CLO2
k)	Which of the following instrument is used for sterilizing the media after it has been prepared? a) Autoclave b) Laminar Air Flow Chamber c) Inoculum Needle d) Incubator	1	1	CLO3
l)	Which of the following bacteria requires nicotinic acid as a growth factor in their media? a) Proteus vulgaris b) Nitrosomonas sp. c) E. coli d) Leuconostoc mesenteroides	1	1	CLO3
m)	Mesophiles are group of bacteria that grow within the temperature range of? a) 0-20 degree Celsius b) 25-40 degree Celsius c) 45-60 degree Celsius d) more than 60 degree	1	1	CLO4
n)	The bacterium Staphylococcus aureus is which type of bacteria? a) Psychrophile b) Mesophile c) Thermophile d) Mesophile and psychrophile	1	1	CLO4
o)	The portion of the growth curve where rapid growth of bacteria is observed is known as _____ a) Lag phase b) Logarithmic phase c) Stationary phase d) Decline phase	1	1	CLO4
p)	Lag phase is also known as _____ a) period of initial adjustment b) transitional period c) generation time d) period of rapid growth Correct	1	1	CLO5
q)	During exponential phase, growth rate is _____ a) same as generation time b) reciprocal of generation time c) time required for population to double d) rate of doubling population	1	1	CLO5
r)	In which of the following phase secondary metabolites	1	1	CLO5

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	are produced during growth? a) Lag phase b) Log/Exponential phase c) Stationary phase d) Death phase			
s)	Which phase shows the reproduction rate equal to the equivalent death rate? a) Log phase b) Stationary phase c) Death phase d) Lag phase	1	1	CLO3
t)	Which of the following is used to grow bacterial culture continuously? a) Chemostat b) Hemostat c) Coulter-Counter d) Turbidostat	1	1	CLO4
Q.2	**Long Answers (Answer 2 out of 3)**	**20**		
1	Explain different methods for evaluation of bacteriostatic disinfectant.	10	2	CLO2
2	Classify bacteria on the basis of nutritional requirements and add a note on raw materials used for Preparation of culture media.	10	2	CLO3
3	Describe bacterial growth curve. Add a note on physical factors affecting growth of bacteria.	10	2	CLO4
Q3	**Short Answers (Answer 7 out of 9)**	**35**	**Bloom's Level**	**CLO**
1	Explain IMVIC tests used for identification of bacteria.	5	2	CLO2
2	Write the procedure, merits and demerits of membrane filtration.	5	2	CLO2
3	Describe steps involved in replication of virus.	5	1	CLO3
4	Describe construction and working of laminar air flow.	5	2	CLO4

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5	Write about classification of virus.	5	1	CLO3
6	Write in detail about the construction and design of aseptic room.	5	1	CLO3
7	Explain different factors affecting microbial spoilage of Pharmaceuticals.	5	1	CLO5
8	Classify bacteria on the basis of morphological features.	5	1	CLO5
9	Describe bacterial growth curve.	5	1	CLO4

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