

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2022

Course: B.Pharm.

Program: Pharmaceutical Microbiology

Course Code: BP303T

Semester: III

Time 03 hrs.

Max. Marks: 75

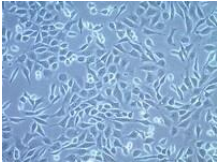
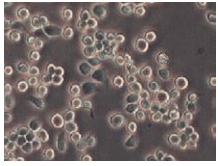
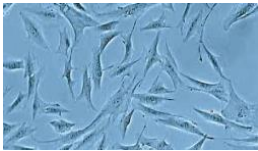
Instructions:

SECTION A

S. No.	CO	Multiple Choice Questions (Attempt all questions)	Marks
		Multiple Choice Questions (each answer carry one marks)	1 × 20
Q1	CO1	Prokaryotes have more than one mitochondrion. a) True b) False	1
Q2	CO1	Mesosomes are characteristics of prokaryotic cell. a) Mitochondria b) Endoplasmic reticulum c) Golgi apparatus d) Mesosome	1
Q3	CO2	Tyndallization is a sterilization process a) True b) False	1
Q4	CO1	Dr. Koch use TB bacilli to describe Koch's postulate a) Tuberculosis b) Diphtheria c) Anthrax d) Syphilis	1
Q5	CO1	Which microscope is suitable to observe viruses?	1
Q6	CO1	Resolving power of a microscope is a) the ability of a microscope to distinctly separate two small objects b) magnification power of a microscope c) a measure of working distance d) an equation that measure microscopic diffraction	1
Q7	CO1	Dipicolinic acid in high amount is found in a) Vegetative cell b) Endospore c) Heterocyst d) Cell membrane	1
Q8	CO1	Which of the following would lead to the improvement of the resolving power of a lens? a) Increasing the wavelength of light	1

		<ul style="list-style-type: none"> b) Decreasing the wavelength of light c) Increasing the number of lenses d) Decreasing the NA 	
Q9	CO1	<p>Which of the following bacterial cells arranged themselves like Grapes</p> <ul style="list-style-type: none"> a) <i>Staphylococcus aureus</i> b) <i>E. coli</i> c) <i>Streptococcus mutans</i> d) <i>Klebsiella</i> sp. 	1
Q10	CO1	<p>Which of the following bacteria is cell-wall deficient</p> <ul style="list-style-type: none"> a) <i>Bacillus</i> b) <i>Klebsiella</i> c) <i>Mycoplasma</i> d) <i>Clostridia</i> 	1
Q11	CO1	<p>External cell membrane is found in</p> <ul style="list-style-type: none"> a) Gram+ve bacteria b) Gram –ve bacteria c) All types of bacteria d) It is found only in plants 	1
Q12	CO2	<p>The ultra-high temperature method used....</p> <ul style="list-style-type: none"> a) Holding liquid at 134 °C for 1-2 sec b) Holding at 62.8 °C for 30 min c) Holding at 71.7°C for 15sec d) None of the above 	1
Q13	CO2	<p>Incineration is used to sterilize the</p> <ul style="list-style-type: none"> a) Media b) Glassware c) Inoculation loop d) Paper 	1
Q14	CO3	<p>DOP test is used for the validation of</p> <ul style="list-style-type: none"> a) Membrane filter b) Aseptic room c) HEPA d) Autoclave 	1
Q15	CO4	<p>Test microorganism used for the microbiological assay of Neomycin is</p> <ul style="list-style-type: none"> a) <i>Staphylococcus aureus</i> b) <i>Bacillus subtilis</i> c) <i>Staphylococcus epidermidis</i> d) <i>Saccharomyces cerevisiae</i> 	1
Q16	CO4	<p>Titrimetric and turbidometric methods are used for the assay of B12.</p> <ul style="list-style-type: none"> a) True b) False 	1
Q17	CO4	<p>Phenol co-efficient is used as a standard for evaluation of disinfectants</p> <ul style="list-style-type: none"> a) True b) False 	1
Q18	CO4	<p>Agar diffusion assays are used to standardize unknown drug</p> <ul style="list-style-type: none"> a) True 	1

		b) False	
Q19	CO5	HEK-293, HeLa, HL-60 all these are cell line from human origin a) True b) False	1
Q20	CO5	Viability of animal cell line is determined by trypan blue. a) True b) False	1
SECTION B : Long Answers (Answer any 2 out of 3)			
			2 × 10
Q1	CO1	a) Compare electron and light microscope b) Calculate number of number of generation (n) and generation time (G) of a bacterial species if it produces 10^{12} cells in just 30 min and the initial bacterial cell count was 10^3 .	(4+6)=10
Q2	CO3	a) Write ideal properties of disinfectants b) Write details about the Phenol coefficient test. c) Write short note on factors that can affect properties of antimicrobial agent	3+4+3=10
Q3	CO2	a) Write mode of action of ethylene oxide and moist heat sterilization b) Write short note on chemical indicator for heat sterilization c) Write advantages and disadvantages of membrane filter based sterilization process	4+3+3=10
SECTION C : Short Answers (Answer any 7 out of 9)			
			7 × 5
Q1	CO 1	a) Who propose germ theory of disease b) Write the Germ theory of disease	(2+3)=5
Q2	CO 1	a) Describe Gram negative cell wall b) What are the functions of a cell membrane in prokaryotes?	(3+2)=5
Q3	CO1	a) Write short note on eukaryotic ribosome b) What is define and complex media with example	(2+3)=5
Q4	CO 3	a) Write some factors that affect the microbial spoilage of pharmaceutical products	(2+3)=5
Q5	CO 3	a) What is 'microbial limit test' b) How you will detect <i>Candida albican</i> contamination in a pharmaceutical preparation	(2+3)=5
Q6	CO2	i. Match the following a. Spectrophotometer 1. Sterilization b. Autoclave 2. Isothermal growth system c. Laminar air flow 3. Measurement of bacterial growth d. Incubator 4. Observation of tiny microbes e. Microscope 5. Sterilized work station	5
Q7	CO4	What are the Ideal properties of a disinfectant	5

Q8	CO5	<p>a) Identify which one of the following cells are epithelial, lymphoblast and fibroblast types of cells?</p> <p>I  II  III </p> <p>b) Write two media that used for animal cell culture</p>	3+2=5
Q9	CO4	Define Class 100 and class 10000 for a aseptic area standard.	5