

MICROBIOLOGY HSSC-I



Time allowed: 2:20 Hours

Total Marks Sections B and C: 40

E: Answer any thirteen parts from Section 'B' and any two questions from Section 'C' on the separately provided answer book. Use supplementary answer sheet i.e. Sheet-B if required. Write your answers neatly and legibly.

SECTION - B (Marks 26)

Q. 2 Answer any THIRTEEN parts. The answer to each part should not exceed 2 to 4 lines. (13 x 2 = 26)

- (i) How will you calculate the magnification of compound microscope?
- (ii) What do you mean by sterilization of an object in terms of Microbiology?
- (iii) Which precautions should be taken while using an autoclave?
- (iv) Which factors influence the action of chemical germicides?
- (v) Define enriched media.
- (vi) What are the methods used for the sterilization of culture media?
- (vii) Define antigenic structure of pneumococci.
- (viii) Name the toxins and enzymes produced by N. gonorrhoeae.
- (ix) Write down Nagler's Reaction.
- (x) Write down the morphology and staining behaviour of C.diphtheriae.
- (xi) Define minimum bactericidal concentration.
- (xii) Define facultative anaerobe.
- (xiii) Define interferon.
- (xiv) Enumerate the routes of transmission of human viruses.
- (xv) Write down the methods of classification of bacteria.
- (xvi) Write down habitat, morphology and staining behaviour of N. meningitidis.
- (xvii) Write down Mantoux Reaction.

SECTION - C (Marks 14)

Note: Attempt any TWO questions. All questions carry equal marks.

 $(2 \times 7 = 14)$

- Q. 3 Write down in detail the methods for moist heat sterilization.
- Q. 4 Describe antimicrobial resistance.
- Q. 5 Describe the ways of transmission, pathogenicity and laboratory diagnosis of M. tuberculosis.

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Answer Sheet No	47
Sig. of Invigilator.	

MICROBIOLOGY HSSC-I

SECTION - A (Marks 10)

Time al	lowed.	10 Minutes	

NOTE:	Section-A is compulsory. All parts of this section are to be answered on the question paper itself.
	It should be completed in the first 10 minutes and handed over to the Centre Superintendent.
	Deleting/overwriting is not allowed. Do not use lead pencil.

C	Circle the correct option i.e. A / B / C / D. Each part carries one mark.					
(1	i)	Whic	h of the following bacteria is catalase posit	tive and	d oxidase negative?	
		A.	Staphylococcus	B.	Streptococcus	
		C.	Neisseria	D.	Pseudomonas	
(ii)	The t	erm microbiology, as the study of living or	ganism	was used by:	
		A.	Antony van leeuwenhock	B.	Robert Koch .	
		C.	Louis Pasteur	D.	Edward Jenner	
(iii)	Incine	eration is an efficient method for:			
		A.	Destroying contaminated materials	B.	Sterilizing points of forceps	
		C.	Sterilizing_scalpel blades and needles	D.	Sterilizing all glass syringes	
(iv)	Phen	ol is bactericidal at a concentration of:			
		A.	0.1 %	B.	0.25 %	
		C.	0.5 %	D.	1.0 %	
(v)	The p	period between inoculation of bacteria in a	culture	medium and begining of multiplication is known	
		A.	Lag phase	B.	Log phase	
		C.	Stationary phase	D.	Decline phase	
(vi)	Peptone water and nutrient broth are:				
		A.	Basal media	B.	Enriched media	
		C.	Selective media	D.	Enrichment media	
(vii)	Crystal violet iodine complex is retained in G positive cells by:				
		A.	Thick peptidoglycan layer	B.	Techoic acid	
		C.	Lipid contents	D.	Lipopolysaccharides	
(viii)	As a result of post infection which bacteria causes rheumatic fever?				
		A.	Pneumococci	B.	eta haemolytic streptococci	
		C.	Meningococci	D.	Staphylococci	
(ix)					
	·	Α.	100°C for 30 minutes	B.	110°C for 25 minutes	
		C.	$121^{\circ}C$ for 20 minutes	D.	131°C for 15 minutes	
((x)	Which of the following organisms can be detected by CAMP test?				
		A.	S. aureus	B.	Streptococcus pneumoniae	
		C.	Streptococcus agalactae	D.	Streptococcus pyogenes	

Marks Obtained: