



SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES & TECHNOLOGY

THIRUVANANTHAPURAM—695 011, INDIA.

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ROLL NUMBER

WRITTEN TEST FOR THE POST OF SCIENTIFIC ASST. (LAB)

DATE: 30/12/2024

Part – A

DURATION: 30 MINUTES

Total Marks: 25

INSTRUCTIONS TO THE CANDIDATES

1. Write your Roll Number on the top of the Question Booklet and in the answer sheet.
2. Each question carries 1 mark.
3. There will not be any Negative Marking.
4. Write legibly the alphabet of the most appropriate answer (A, B, C or D) in the separate answer sheet provided.
5. Over-writing is not permitted.
6. Candidate should sign in the question paper and answer sheet.
7. Candidate should hand over the answer sheet and question paper to the invigilator before leaving the examination hall.

Signature of the Candidate

Kan
30/12/24



श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, त्रिवेंद्रम, केरल- 695 011
(एक राष्ट्रीय महत्व का संस्थान, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार)
SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES AND TECHNOLOGY, TRIVANDRUM
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VOP : Scientific Assistant (Lab)- Biochemistry

Part A – Microbiology, Biochemistry and Pathology(25 marks)

1	Significant bacteriuria is also seen in:
a	Tuberculosis of the kidney
b	Delay in processing
c	Contamination during collection
d	Vaginal flora contamination
2	Biological indicator used for sterilization using autoclave is
a	<i>Bacillus subtilis</i>
b	<i>Bacillus atrophaeus</i>
c	<i>Geobacillus stearothermophilus</i>
d	<i>Clostridium tetani</i>
3	Which among the following organism is intrinsically resistant to colistin?
a	<i>Aeromonas veronii</i>
b	<i>Plesiomonas shigelloides</i>
c	<i>Burkholderia cepacia</i>
d	<i>Enterobacter cloacae</i>
4	One of three blood culture bottles drawn from a patient with unexplained fevers reveals gram-positive cocci growing in clusters. Which of the following tests would be most useful in determining whether this organism is a part of the normal skin flora?
a	Bacitracin resistance
b	Catalase
c	Coagulase
d	Novobiocin resistance
5	Quality System implemented in testing laboratories are based on
a	ISO 10993
b	ISO 17025
c	ISO 9001
d	All the above
6	The tube coagulase test that is used in the identification of Staphylococci is based on the production of :
a	Clumping Factor
b	Conversion of fibrinogen to Fibrin
c	Nucleases
d	Protein A
7	The red pigment produced by <i>Serratia marcescens</i> is
a	Prodigiosin
b	Flourescin
c	Pyoverdin
d	Pyorubrin

8	EQAS is conducted by:	
	a	Head of the Laboratory
	b	Head of a group of laboratories
	c	External certified agency
	d	Scientific Assistant
9	1M solution of NaCl contains how many grams of NaCl in 1 liter?	
	a	23 g
	b	35.5 g
	c	58.5 g
	d	100 g
10	Which type of error is associated with variations that affect the precision of laboratory results?	
	a	Random error
	b	Calibration error
	c	Analytical error
	d	Systematic error
11	Autoclaving is an example of:	
	a	Filtration
	b	Moist heat sterilization
	c	Dry heat sterilization
	d	Chemical sterilization
12	Sharps waste should be disposed of in:	
	a	Biohazard bags
	b	Cardboard boxes
	c	Regular trash bins
	d	Puncture-resistant containers
13	Specificity in a diagnostic assay refers to:	
	a	Identifying true positives
	b	Identifying true negatives
	c	Sensitivity to low concentrations
	d	Reproducibility of results
14	The Henderson-Hasselbalch equation is used to calculate:	
	a	Molarity of a solution
	b	Dilution factor
	c	Normality of a solution
	d	pH of a buffer solution
15	What is the term used to describe the ability of a diagnostic assay to identify individuals with a disease?	
	a	Sensitivity
	b	Accuracy
	c	Specificity
	d	Precision
16	Which of the following is a standard buffer used in biological assays?	
	a	KOH
	b	HCl
	c	NaH ₂ PO ₄ /Na ₂ HPO ₄
	d	NaCl

(Handwritten signature)

17	Which chemical is commonly used for disinfecting biological waste?	
	a	Sodium hypochlorite
	b	Methanol
	c	Ethanol
	d	Sodium hydroxide
18	During New methylene blue staining for reticulocytes in peripheral blood, the dye reacts with:	
	a	Golgi apparatus
	b	rRNA
	c	DNA
	d	Mitochondria
19	Thick smears are useful in assessment of:	
	a	Malarial parasite
	b	Leukemia
	c	Anemia
	d	Reticulocyte count
20	Femtogram is:	
	a	10^{-9} of a gram
	b	10^{-12} of a gram
	c	10^{-15} of a gram
	d	10^{-3} of a gram
21	Most commonly used embedding medium in histopathology is:	
	a	Paraffin wax
	b	Agar
	c	Resin
	d	Gelatin
22	For blood gas analysis, which vacutainer is suitable?	
	a	Sodium citrate coated
	b	EDTA coated
	c	Plain (no anticoagulant)
	d	Heparin coated
23	The principle of immunohistochemistry is:	
	a	Antigen-antigen interaction
	b	Antibody-antibody interaction
	c	Antigen-antibody interaction
	d	None of the above
24	The stain used to demonstrate melanin is:	
	a	Perl's Prussian blue
	b	Masson Fontana
	c	Congo red
	d	Gomori methenamine silver
25	During tissue processing in histopathology the process by which alcohol is replaced by xylene in the tissue is called:	
	a	Fixation
	b	Dehydration
	c	Clearing
	d	Embedding

(Signature)

Answer Key-VOP: Scientific Assistant Lab – Biochemistry
PART A – Microbiology, Biochemistry, Pathology

Question No.	Correct answer
1	B
2	C
3	C
4	C
5	B
6	B
7	A
8	C
9	C
10	A
11	B
12	D
13	B
14	D
15	A
16	C
17	A
18	B
19	A
20	C
21	A
22	D
23	C
24	B
25	C

Key
30/12/2024