

MCB 2004
MICROBIOLOGY - R. H. REEVES
FINAL EXAM-sample

THERE ARE SEVENTY-FIVE QUESTIONS WORTH TWO POINTS EACH. THERE IS ONLY ONE CORRECT ANSWER FOR EACH QUESTION. PLEASE CIRCLE THE CORRECT LETTER OR PLACE THE CORRECT LETTER JUST TO THE LEFT OF THE QUESTION NUMBER. THEN TRANSFER ALL YOUR ANSWERS TO THE "ACCUSCAN" ANSWER SHEET.

3. THE VIRUS THAT CAUSES "INFECTIOUS HEPATITIS"
A. IS AN ENTEROVIRUS
B. IS ASSOCIATED WITH A SATELLITE VIRUS
C. BOTH OF THE ABOVE
D. NEITHER OF THE ABOVE
5. _____ IS A SATELLITE VIRUS OF _____ .
A. HEPATITIS A VIRUS HEPATITIS B VIRUS
B. HEPATITIS C VIRUS HEPATITIS B VIRUS
C. HEPATITIS D VIRUS HEPATITIS B VIRUS
D. HEPATITIS A VIRUS HEPATITIS D VIRUS
E. HEPATITIS D VIRUS HEPATITIS A VIRUS
10. THIS HIV-1 ENZYME IS AFFECTED BY ANTI-RETROVIRAL DRUGS
A. REVERSE TRANSCRIPTASE
B. PROTEASE
C. BOTH OF THE ABOVE
D. NEITHER OF THE ABOVE
17. THE USUAL CAUSE OF NOSOCOMIAL INFECTIONS IS
A. ENTEROCOCCUS FAECALIS
B. STREPTOCOCCUS PYOGENES
C. ESCHERICHIA COLI
D. PROTEUS VULGARIS
E. PSEUDOMONAS AERUGINOSA
19. ONE PATIENT IS INFECTED BY A PATHOGEN FROM ANOTHER PATIENT. THIS EVENT IS CALLED A(N):
A. COMMON SOURCE INFECTION
B. INFECTION CYCLE
C. NOSOCOMIAL TRANSFER
D. ENDOGENOUS INFECTION
E. OPPORTUNISTIC INFECTION
20. WHICH OF THE FOLLOWING PATIENTS WOULD MOST LIKELY BE ISOLATED?
A. ONE WITH EASTERN EQUINE ENCEPHALITIS
B. ONE WITH CREUTZFELDT JACOB DISEASE
C. ONE WITH PNEUMONIC PLAGUE
D. ONE WITH PARALYTIC POLIO
E. ONE WITH LYME DISEASE

KEY FOR QUESTIONS 21-24. THERE IS ONLY ONE CORRECT ANSWER BUT EACH KEY WORD MAY BE USED MORE THAN ONCE (OR NOT AT ALL).

- A. VIBRIO SPECIES
- B. STAPHYLOCOCCUS AUREUS
- C. PSEUDOMONAS SPECIES
- D. SALMONELLA TYPHIMURIUM
- E. ESCHERICHIA COLI

- _____ 21. OFTEN CONTAMINATES EGGS AND CAUSES GASTROENTERITIS
- _____ 22. CAUSES SPOILAGE OF A VARIETY OF FRESH FOODS (FRUITS, VEGETABLES, MEATS, FISH & EGGS)
- _____ 23. CERTAIN STRAINS COMMONLY CAUSE TRAVELERS' DIARRHEA
- _____ 24. MAY CAUSE SEPTICEMIA FROM EATING RAW OYSTERS

- 25. THE ORGANISM MOST LIKELY TO SPOIL HOME-CANNED VEGETABLES
 - A. ESCHERICHIA COLI
 - B. BACILLUS STEAROTHERMOPHILUS
 - C. PSEUDOMONAS AERUGINOSA
 - D. STAPHYLOCOCCUS EPIDERMIDIS
 - E. TREPONEMA PALLIDUM

- 26. IN THE GRAM STAIN THE MORDANT IS _____, AND THE SECONDARY STAIN IS _____:
 - A. ALCOHOL, BASIC FUCHSIN
 - B. IODINE, BASIC FUCHSIN
 - C. BASIC FUCHSIN, CRYSTAL VIOLET
 - D. IODINE, CRYSTAL VIOLET
 - E. ALCOHOL, CRYSTAL VIOLET

- 27. HIS OBSERVATION THAT GROWTH OF STAPHYLOCOCCUS WAS INHIBITED BY CERTAIN MOLDS LED TO THE DEVELOPMENT OF ANTI-BACTERIAL DRUGS
 - A. JONAS SALK
 - B. LOUIS PASTEUR
 - C. ALEXANDER FLEMING
 - D. PAUL EHRLICH
 - E. EDWARD JENNER

28. THE DOUBLING TIME OF *MYCOBACTERIUM BOVIS* IN BRAIN-HEART INFUSION BROTH AT 37° C IS 12 HOURS. THE INITIAL INOCULUM CONTAINED 3×10^5 CELLS. AFTER TWO DAY OF EXPONENTIAL GROWTH THE CULTURE CONTAINED
- A. 6×10^5 CELLS
 - B. 1.8×10^6 CELLS
 - C. 2.4×10^6 CELLS
 - D. 4.8×10^6 CELLS
 - E. 7.2×10^6 CELLS
31. THE BEST LIGHT MICROSCOPES HAVE _____ RESOLUTION, AND _____ MAGNIFICATION
- A. 0.4 mm, 400 X
 - B. 0.2 μm , 2000 X
 - C. 0.02 μm , 10,000 X
 - D. 2 nm , 100,000 X
32. THE SPORE STAIN IS AN EXAMPLE OF:
- A. DIFFERENTIAL STAINING
 - B. SPECIALIZED STAINING
 - C. BOTH OF THE ABOVE
 - D. NEITHER OF THE ABOVE
33. EXAMPLES OF GRAM NEGATIVE (PROTEOBACTERIA), GRAM POSITIVE AND ACID FAST BACTERIA, RESPECTIVELY
- A. ESCHERICHIA COLI, BACILLUS SUBTILIS, PSEUDOMONAS AERUGINOSA
 - B. MYCOBACTERIA TUBERCULOSIS, BACILLUS SUBTILIS, ESCHERICHIA COLI
 - C. PSEUDOMONAS PUTIDA, STREPTOCOCCUS PYOGENES, MYCOBACTERIUM LEPRAE
 - D. STAPHYLOCOCCUS AUREUS, BACILLUS SUBTILIS, ESCHERICHIA COLI
 - E. ESCHERICHIA COLI, MYCOBACTERIA TUBERCULOSIS, BACILLUS SUBTILIS

KEY FOR QUESTIONS 34-37. THERE IS ONLY ONE CORRECT ANSWER BUT EACH KEY WORD MAY BE USED MORE THAN ONCE.

- A. PEPTIDOGLYCAN
- B. LIPOPOLYSACCHARIDE
- C. RIBOSOME
- D. BACTERIAL FLAGELLUM
- E. PLASMA MEMBRANE

- _____ 34. FOUND IN THE ENVELOPES OF BOTH PROKARYOTES AND EUKARYOTES
- _____ 35. IT IS COMPOSED MAINLY OF SUGARS AND FATTY ACIDS
- _____ 36. IT IS MADE OF RNA AND PROTEIN THAT IS ASSEMBLED INTO A SMALL AND A LARGE SUBUNIT
- _____ 37. ITS BASAL BODY IS HELD IN THE LAYERS OF THE CELL ENVELOPE

40. THE FOLLOWING IS ONE INGREDIENT OF A DEFINED MEDIUM
- A. EGG YOLK
 - B. SHEEP BLOOD
 - C. YEAST EXTRACT
 - D. SUCROSE
 - E. BEEF EXTRACT
42. THE CONVERSION OF ONE GLUCOSE TO TWO PYRUVIC ACIDS (WITH THE PRODUCTION OF TWO ATPs AND TWO NADHs)
- A. GLYCOLYSIS
 - B. THE ELECTRON TRANSPORT CHAIN
 - C. LACTIC ACID FERMENTATION
 - D. THE TCA CYCLE
 - E. PYRUVATE DEHYDROGENASE

KEY FOR QUESTIONS 43-45. THERE IS ONLY ONE CORRECT ANSWER, BUT EACH ANSWER MAY BE USED MORE THAN ONCE (OR NOT AT ALL).

- A. CHLAMYDIA
- B. BACILLUS
- C. RICKETTSIA
- D. ESCHERICHIA
- E. SPIROCHETE

- _____ 43. ONE OF THE LOW GC GRAM POSITIVE BACTERIA
- _____ 44. ALTERNATES BETWEEN RETICULATE BODY AND ELEMENTARY BODY
- _____ 45. MOVES BY THE MEANS OF AXIAL FILAMENTS
50. THIS VIRUS GROUP IS KNOWN FOR "COMPLEX" MORPHOLOGY
- A. PARVOVIRUSES
 - B. PAPOVAVIRUSES
 - C. ADENOVIRUSES
 - D. HERPESVIRUSES
 - E. POXVIRUSES
51. THE GENOMES OF THESE SMALL RNA VIRUSES ALL CODE ONLY FOR A SINGLE POLYPROTEIN
- A. RHABDOVIRUSES
 - B. TOGAVIRUSES
 - C. ORTHOMYXOVIRUSES
 - D. RETROVIRUSES
 - E. PICORNAVIRUSES

56. INTERFERON IS A PROTEIN THAT
- A. IS MADE BY CELLS INFECTED BY BACTERIA
 - B. OPSONIZES BACTERIAL CELLS
 - C. PROTECTS CELLS AGAINST VIRAL MULTIPLICATION
 - D. CAUSES INFLAMMATION
 - E. INTERACTS WITH ANTIGEN
57. POLYSACCHARIDE VACCINES ARE AVAILABLE FOR
- A. HEMOPHILUS INFLUENZAE MENINGITIS
 - B. STREPTOCOCCUS PNEUMONIAE INFECTIONS
 - C. BOTH OF THE ABOVE
 - D. NEITHER OF THE ABOVE

KEY FOR QUESTIONS 58-60. EACH QUESTION HAS ONLY ONE ANSWER, BUT EACH ANSWER MAY BE USED MORE THAN ONCE (OR NOT AT ALL).

- A. IgA
- B. IgD
- C. IgE
- D. IgG
- E. IgM

_____ 58. THE "AGGLUTINATING" ANTIBODY

_____ 59. THE SECRETORY ANTIBODY

_____ 60. THE MAJOR ANTIBODY OF THE BLOOD

61. THIS PHAGOCYtic CELL FROM THE MONOCYTE LINE FINALLY MATURES AFTER IT LEAVES THE BLOOD
- A. ERYTHROCYTE
 - B. LYMPHOCYTE
 - C. THROMBOCYTE
 - D. MACROPHAGE
 - E. NEUTROPHIL
67. YELLOW FEVER
- A. IS AN INFECTION OF THE NERVOUS SYSTEM
 - B. IS DUE TO A VIRUS TRANSMITTED BY MOSQUITOES
 - C. BOTH OF THE ABOVE
 - D. NEITHER OF THE ABOVE

68. THE YEARLY EPIDEMICS CAUSED BY INFLUENZA VIRUS ARE THOUGHT TO BE A RESULT OF MODIFIED VIRUSES DUE TO
- A. INFECTION OF ONE CELL BY TWO VIRUSES
 - B. RECOMBINATION BETWEEN HOMOLOGOUS RNA STRANDS
 - C. ANTIGENIC DRIFT
 - D. RANDOM ASSORTMENT OF RNA STRANDS
 - E. APPEARANCE OF NEW NEURAMINIDASE PROTEINS
69. STREPTOCOCCAL SORE THROAT MAY BE ASSOCIATED WITH
- A. SCARLET FEVER
 - B. RHEUMATIC FEVER
 - C. BOTH OF THE ABOVE
 - D. NEITHER OF THE ABOVE

KEY FOR QUESTIONS 70-73. EACH QUESTION HAS ONLY ONE ANSWER, BUT EACH ANSWER MAY BE USED MORE THAN ONCE (OR NOT AT ALL).

- A. ACYCLOVIR
- B. TETRACYCLINE
- C. CEPHALOSPORIN
- D. AUGMENTIN
- E. SULFAMETHOXAZOLE

- _____ 70. MIMICS PABA (PARA-AMINOBENZOIC ACID)
- _____ 71. A COMBINATION OF TWO BETA LACTAM DRUGS
- _____ 72. IT INHIBITS PROTEIN SYNTHESIS
- _____ 73. OFTEN USED WITH TRIMETHOPRIM