

2012

MEDICAL MICROBIOLOGY

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words

as far as practicable.

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following :

10 × 1 = 10

i) Diseases acquired in hospitals or from health care

workers are termed as

a) Nosocomial diseases

b) Infectious diseases

c) Airborne diseases

d) Respiratory infection.

ii) Non-venereal infection of gonococci is

a) Salpingitis

b) Urethritis

c) Respiratory infection

d) Ophthalmia.

iii) Toxin involved in Staphylococcal food poisoning is

a) Enterotoxin b) Cytotoxin

c) Endotoxin d) Neurotoxin.

iv) Tetracycline is the usual antibiotic of choice for

a) Cholera b) TB

c) AIDS d) Amoebiasis.

- v) Toxin which acts on the extracellular matrix of connective tissue is
- a) collagenase b) tetanolysin
 - c) cholera toxin d) M protein.
- vi) Hepatitis virus is
- a) Picornavirus b) non-enveloped
 - c) Retrovirus d) all of these.
- vii) The spirochete which grows in dental plaque is
- a) *Fusobacterium* sp b) *Borrelia* sp
 - c) *Streptococcus mutans* d) *Streptococcus mitis*.
- viii) A period of time elapses between infection and the appearance of disease symptom is called
- a) Infection period b) Latent period
 - c) Incubation period d) Acute period.
- ix) The AB toxin which blocks the release of glycine from inhibitory interneuron is
- a) Diphtheria toxin b) Tetanus toxin
 - c) Cholera toxin d) Botulinum toxin.
- x) Which of the following is not a zoonotic disease ?
- a) Hantavirus syndrome b) Rabies
 - c) Bird flu d) Cholera.
- xi) A drug which inhibits lipid biosynthesis is
- a) Daptomycin b) Gatifloxacin
 - c) Platensimycin d) None of these.
- xii) Enfuvirtide, an antiretroviral drug is a/an
- a) Protease inhibitor b) Fusion inhibitor
 - c) Nucleoside inhibitor d) Integrase inhibitor.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. Define epidemiology and environmental epidemiology. 3 + 2
3. Explain attack rate and incident rate.
4. Write down the mode of actions of sulphonamides.
5. 'Normal microbiota is both a friend and a foe.' Explain. 2.5 + 2.5
6. Differentiate cyst from trophozoites. What is the diagnostic procedure to determine chronic amoebiasis ? Write in brief the symptoms and treatment of Giardiasis. 1 + 2 + 2

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. Name the normal microflora on the skin. Give an account on epidemiology and mode of infection of Rhabdovirus. 4 + 3 + 8
8. A patient suspected for peptic ulcers and duodenal ulcers, was recommended for urea breath test.
 - a) Explain why he or she was recommended for this test with brief explanation of the test conclusion.
 - b) Why does *Mycobacterium* sp. are called acid fast bacteria ?
 - c) What is Mantoux test and its purpose ?
 - d) Write a short note on hepatitis virus. 5 + 3 + 3 + 4
9. Describe the mode of action that characterizes β -lactam antibiotic. Why are these antibiotics more effective against gram-positive bacteria than gram-negative bacteria ? How drug resistance is acquired in bacteria ? Why drug resistance is a threat to society ? 3 + 2 + 5 + 2 + 3

10. Write in short the mode of transmission, pathology, symptoms and treatment for any *three* of the following disease : 5 + 5 + 5

a) Pertusis

b) Diphtheria

c) Peptic ulcer

d) Syphilis

e) HIV/AIDS.

11. Why is typhoid called an enteric fever ? What is Hantavirus pulmonary syndrome and how can it be prevented ? Identify the three major categories of organisms that cause Rickettsial diseases. What are the guidelines for treating possible human exposure to rabies virus ? Differentiate Amoebiasis from Giardiasis. 2 + 3 + 2 + 3 + 5

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