

Bachelor of Science (B.Sc.) Semester—V Examination
(Old & New)
MICROBIOLOGY—MEDICAL MICROBIOLOGY
Optional Paper—1
(Old Syllabus)

Time : Three Hours]

[Maximum Marks : 50

Note :— (1) All questions are compulsory and carry equal marks.

(2) Draw well labelled diagram wherever necessary

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|---|----|
| 1. Write an account on various stages of infectious diseases. | 10 |
| OR | |
| Describe control of communicable disease by controlling modes of transmission. | 10 |
| 2. (a) Discuss the factor responsible for microbial virulence. | 5 |
| (b) Describe normal microflora of gastrointestinal tract. | 5 |
| OR | |
| (c) Write a note on mechanism of invasiveness. | 5 |
| (d) Describe normal microflora of Respiratory tract. | 5 |
| 3. (a) Discuss prevention and transmission of <i>Treponema palladium</i> infection . | 2½ |
| (b) Describe morphology of <i>Salmonella</i> . | 2½ |
| (c) Explain quantitative Widal Test. | 2½ |
| (d) Write note on lab diagnosis of AIDS. | 2½ |
| OR | |
| (e) Draw life cycle of plasmodium. | 2½ |
| (f) Draw a well labelled diagram of Hepatitis B Virus. | 2½ |
| (g) Write note on transmission of HIV. | 2½ |
| (h) Write note on VDRL test. | 2½ |
| 4. Describe Kirby Bauer disc diffusion and E-Strip method for microbial susceptibility testing. | 10 |
| OR | |
| Write two mechanisms leading to development of drug resistance in the microorganism. | 10 |

5. Solve any 10 :—

- (i) What is meant by Quarantine ?
- (ii) What is chronic carrier ?
- (iii) Define the term Pandemic.
- (iv) Name two diseases of digestive system.
- (v) What is gnotobiotic life ?
- (vi) Define exotoxins.
- (vii) What are Acid-fast bacteria ?
- (viii) Name two tests used for diagnosis of Syphilis.
- (ix) What is the extended form of BCG ?
- (x) What is MRSA ?
- (xi) Give an example of antimetabolite.
- (xii) Give an example of drug inhibiting Protein synthesis.

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College Exam

College Exam 100

College Exam

**Bachelor of Science (B.Sc.) Semester—V Examination
(Old & New)**

MICROBIOLOGY—MEDICAL MICROBIOLOGY

Optional Paper—1

(Old Syllabus)

Time : Three Hours]

[Maximum Marks : 50

Note :— (1) All questions are compulsory and carry equal marks.

(2) Draw well labelled diagram wherever necessary

1. Write an account on various stages of infectious diseases. 10

OR

Describe control of communicable disease by controlling modes of transmission. 10

2. (a) Discuss the factor responsible for microbial virulence. 5

(b) Describe normal microflora of gastrointestinal tract. 5

OR

(c) Write a note on mechanism of invasiveness. 5

(d) Describe normal microflora of Respiratory tract. 5

3. (a) Discuss prevention and transmission of *Treponema palladium* infection . 2½

(b) Describe morphology of *Salmonella*. 2½

(c) Explain quantitative Widal Test. 2½

(d) Write note on lab diagnosis of AIDS. 2½

OR

(e) Draw life cycle of plasmodium. 2½

(f) Draw a well labelled diagram of Hepatitis B Virus. 2½

(g) Write note on transmission of HIV. 2½

(h) Write note on VDRL test. 2½

4. Describe Kirby Bauer disc diffusion and E-Strip method for microbial susceptibility testing. 10

OR

Write two mechanisms leading to development of drug resistance in the microorganism. 10

5. Solve any 10 :—

- (i) What is meant by Quarantine ?
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- (viii) Name two tests used for diagnosis of Syphilis.
- (ix) What is the extended form of BCG ?
- (x) What is MRSA ?
- (xi) Give an example of antimetabolite.
- (xii) Give an example of drug inhibiting Protein synthesis.

College Exam 100

College Exam 100

College Exam

Preliminary Examination
Winter - 2023
B.Sc. Sem-V
Subject: Microbiology
Paper : I

Time: Three Hours

Max. Marks: 50

Note:

- 1) All questions are compulsory and carry marks as indicated.
- 2) Draw neat and well labelled diagram wherever necessary.

- Q.1. Describe various modes of disease transmission. 10
OR
A) Explain any two methods of controlling communicable diseases. 5
B) Write a note on susceptibility of host. 5
- Q.2. A) Write a note on Pathogenicity and virulence. 5
B) Write a note on microbial diseases of skin 5
OR
C) Explain microbial flora of skin and respiratory tract. 5
D) Write a note on Invasiveness. 5
- Q.3. Write a note on morphology, cultural characteristics and lab diagnosis of *Plasmodium vivax*. 10
OR
A) Draw well labelled structure of HIV virus. 2 1/2
B) Discuss laboratory diagnosis of *Staphylococcus aureus*. 2 1/2
C) Write a note on V.D.R.L test. 2 1/2
D) Describe laboratory diagnosis of syphilis. 2 1/2
- Q.4. A) Enlist basic mechanism of action of drugs. Describe any two. 5
B) Write a note on Epsilonometer test. 5
OR
C) Discuss Kirby-Bauer method of drug susceptibility test. 5
D) Discuss mechanism of action of Nalidixic acid. 5
- Q.5. Solve any **Ten** of the following :
I) Define viremia. 1
II) Define toxemia. 1
III) What is Nichols strain? 1
IV) Define LD₅₀. 1
V) Name any two disease causing bacteria of urogenital tract. 1
VI) What is zoonotic life? 1
VII) Name the test for diagnosis of hepatitis. 1
VIII) What is significance of Widal test? 1
IX) What is enteric fever? 1
X) What is antimetabolite? 1
XI) What is mode of action of floxacins? 1
XII) Define exotic disease? 1

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Bachelor of Science (B.Sc.) Semester—V Examination
(Old & New)
MICROBIOLOGY - MEDICAL MICROBIOLOGY
Optional Paper—1
(New Syllabus)

Time : Three Hours]

[Maximum Marks : 50

Note :—(1) All questions are compulsory and carry equal marks.

(2) Draw well labelled diagram wherever required.

1. Describe various reservoirs of disease transmission. 10

OR

Give a detail account of control of communicable diseases. 10

2. Write short notes on :—
- (a) Pathogenicity and virulence. 2½
- (b) Endotoxins. 2½
- (c) Normal microbial flora of respiratory tract. 2½
- (d) Infections of nervous system. 2½

OR

- (a) Exaltation and attenuation. 2½
- (b) Exotoxin. 2½
- (c) Invasiveness. 2½
- (d) Normal microbial flora. 2½
3. Describe Pathogenesis and Laboratory diagnosis of *Mycobacterium tuberculosis*. 10

OR

Discuss the life cycle and laboratory diagnosis of *Plasmodium vivax*. 10

4. Write notes on :—
- (a) Bacterial protein synthesis inhibitor. 5
- (b) Mechanisms of development of drug resistance. 5

OR

- (a) Bacterial DNA Synthesis inhibitor. 5
- (b) Kirby Bauer disc diffusion method. 5

5. Solve any TEN .---

- (i) What is epidemiology ?
- (ii) Define symptom and syndrome.
- (iii) Define acute and chronic infection.
- (iv) Write the role of Hyaluronidase.
- (v) Define Toxoid.
- (vi) What is resident and transient flora ?
- (vii) Name two growth media for *Salmonella typhi*.
- (viii) Which is intermediate host of Malaria Parasite ?
- (ix) What is AIDS ?
- (x) Name two drugs inhibiting cell wall.
- (xi) What is TRUST ?
- (xii) Give one example of antimetabolite.

CHITRA KUMAR

College Even 100

College

Bachelor of Science (B.Sc.) Semester-V Examination
MICROBIOLOGY - MEDICAL MICROBIOLOGY
Optional Paper—1 (OLD)

Time : Three Hours]

[Maximum Marks : 50

- N.B. :—** (1) All questions are compulsory and carry equal marks.
 (2) Draw suitable diagrams wherever required.
1. (A) Discuss the various methods of blocking the channels of transmission of communicable diseases. 5
 (B) What are Vector borne diseases ? Explain various types of Vectors involved in disease transmission. 5
- OR**
- (C) Discuss the various stages of infectious disease. 5
 (D) Write a note on sources of reservoir of infection. 5
2. Describe normal flora of skin, respiratory and digestive tract. 10
- OR**
- Explain pathogenicity and virulence. Add a note on various methods of attenuation and exaltation.
3. Describe in detail Morphology, Pathogenicity and Lab diagnosis of Hepatitis A. 10
- OR**
- Describe in detail morphology, cultural characteristics and biochemical characteristic of *Mycobacterium tuberculosis*.
4. (A) Explain cell wall synthesis inhibitors with suitable example. 10
 (B) Write mode of action of chloramphenicol. 2½
 (C) Discuss drug resistance by efflux pump mechanism. 2½
 (D) Describe E-Test method. 2½
- OR**
- (E) Discuss Kirby-Bauer method of drug susceptibility. 2½
 (F) Write a note on drug delivery vehicles. 2½
 (G) Give mode of action of Floxacin. 2½
 (H) Write short note on drug designing. 2½
5. Solve any **Ten** :
 - (A) What is quarantine ? 1
 - (B) What is primary infection ? 1
 - (C) Define Septicemia. 1
 - (D) Define LD₅₀. 1
 - (E) Name any two diseases of Reproductive tract. 1
 - (F) What is gnotobiotic life ? 1
 - (G) Give full form of VDRL. 1
 - (H) What is enteric fever ? 1
 - (I) What is exoerythrocytic schizogony ? 1
 - (J) What is MIC ? 1
 - (K) What is antimetabolite ? 1
 - (L) What is mode of action of Nalidixic acid ? 1

**Bachelor of Science (B.Sc.) Semester-V Examination
MICROBIOLOGY - MEDICAL MICROBIOLOGY
Optional Paper--I (NEW)**

Time : Three Hours]

[Maximum Marks : 50

- N.B. :-** (1) All questions are compulsory.
(2) All questions carry equal marks.
(2) Draw diagram & give examples wherever necessary.

- | | |
|---|----|
| 1. (A) Describe the role of vector in disease transmission. | 5 |
| (B) What is carrier and explain different types of carrier. | 5 |
| OR | |
| (C) Describe various portals of entry of pathogen in detail. | 5 |
| (D) Describe various sources of reservoir of endogeneous infections. | 5 |
| 2. Define normal flora of human body and explain microbial flora of digestive and respiratory tract system with suitable example. | 10 |
| OR | |
| Describe the role of capsule, enzyme and exotoxins in virulence. | 10 |
| 3. Describe the cultural, biochemical characteristic and lab diagnosis of Staphylococcus aureus. | 10 |
| OR | |
| Describe morphology, life cycle, pathogenesis and diagnosis of HIV. | 10 |
| 4. (A) Explain the mechanism of cell wall synthesis inhibitors with suitable example. | 2½ |
| (B) Explain the principle of Kirby-Bauer disc diffusion method. | 2½ |
| (C) Discuss mode of action of Nalidixic acid. | 2½ |
| (D) Explain automated in vitro drug susceptibility testing. | 2½ |
| OR | |
| (E) Explain E-strip method for drug susceptibility test. | 2½ |
| (F) Explain the mechanism of protein synthesis inhibitor. | 2½ |
| (G) Explain anti-metabolites with one example. | 2½ |
| (H) Write any one mechanism of development of drug resistance. | 2½ |
| 5. Solve any Ten : | |
| (i) Define symptoms and syndrome of disease. | 1 |
| (ii) What is Septicaemia ? | 1 |
| (iii) Define Pandemic. | 1 |
| (iv) Define LD ₅₀ . | 1 |
| (v) What is Gnotobiotic life ? | 1 |
| (vi) Define MID and MLD. | 1 |
| (vii) What is the causative agent of malaria ? | 1 |
| (viii) What is the causative agent of syphilis ? | 1 |
| (ix) Which media is used for the isolation of Salmonella typhi ? | 1 |
| (x) Write the role of Penicillin. | 1 |
| (xi) Write the role of sulfamethoxazole. | 1 |
| (xii) Name the drug which inhibits cell wall synthesis. | 1 |

NRT/KS/19/2147

Bachelor of Science (B.Sc.) Semester—V Examination

MEDICAL MICROBIOLOGY

Optional Paper—1

(Microbiology)

Time : Three Hours]

[Maximum Marks : 50

- N.B. :—** (1) All questions are compulsory and carry equal marks.
(2) Draw well labelled diagrams wherever necessary.

1. Describe different modes of disease transmission. 10
OR
Explain the methods of blocking the channels of transmission. 10
2. Describe pathogenicity and virulence. Add a note on various methods of attenuation and exaltation. 10
OR
Explain microbial flora of skin, digestive and urinary tract. 10
3. (a) Discuss the cultural characteristics and lab diagnosis of *M. tuberculosis*. 5
(b) Schematically draw the life cycle of *plasmodium vivax*. 5
OR
(c) Describe the pathogenicity of HIV virus. 5
(d) Describe laboratory diagnosis of syphilis. 5
4. (a) Discuss Kirby-Bauer method of drug susceptibility test. 2½
(b) Describe E-Test method. 2½
(c) Give mode of action of Nalidixic acid. 2½
(d) Discuss drug resistance by efflux pump mechanism. 2½
OR
(e) Discuss drug resistance by drug inactivating enzyme. 2½
(f) Describe sulphonamide as inhibitor of microbial growth. 2½
(g) Write about liposomes as drug delivery system. 2½
(h) Explain cell wall synthesis inhibitors with suitable example. 2½
5. Write on any **TEN** of the following :
 - (i) Define exotic disease.
 - (ii) Define septicemia.
 - (iii) What is endemic ?
 - (iv) Define LD₅₀.
 - (v) Name any two disease causing bacteria of urogenital tract.
 - (vi) What is gnotobiotic life ?
 - (vii) Name the test for diagnosis of hepatitis.
 - (viii) What is significance of Widal test ?
 - (ix) What is enteric fever ?
 - (x) What is antimetabolite ?
 - (xi) What is mode of action of floxacine ?
 - (xii) What is MIC ?1×10