

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0124]

JANUARY 2024

Sub. Code :1491

D.M. – INFECTIOUS DISEASES

**PAPER I – PRINCIPLES OF INFECTION CONTROL, ANTIBIOTICS,
ANTIVIRALS AND ANTIFUNGALS AND ITS PHARMACOKINETICS –
PHARMACODYNAMICS, ANTIMICROBIAL RESISTANCE AND
ANTIBIOTIC STEWARDSHIP**

Q.P. Code: 161491

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. A 35yr old gentleman, recovering from organophosphate poisoning is on mechanical ventilation in ICU. On day 5 of ICU stay, he develops fever but is otherwise vitally stable. He notes increasing breathing difficulty and there is a new infiltrate on the chest x-ray. You are called in for a consultation.
 - a) How will you confirm the presence of a possible ventilator associated pneumonia (VAP) in this patient?
 - b) How will you confirm the diagnosis in this patient and what procedures can be employed to facilitate the same?
 - c) What preventive measures can be put in place to prevent development of a VAP?
 - d) Describe the common etiologies of VAP in India and what is the possible empiric therapeutic option will you choose.
2. Describe the resistance mechanisms, classification and newer therapeutic options for common gram negative organisms in clinical practice (mention at least 3 different organisms).

II. Write notes on:

(10 x 7 = 70)

1. Tetracycline resistance in Acinetobacter.
2. Remdesivir.
3. Isavuconazole.
4. Immunization in PBSCT recipient.
5. Methicillin resistant Staphylococcus aureus.
6. Transmission based precautions.
7. 16sRNA.
8. Antimicrobial Stewardship metrics and monitoring.
9. CLABSI prevention bundle.
10. PK-PD targets for efficacy in common antibiotics.
