Microbiology MCQs -- BS Nursing Semester 1 (Easy to Hard)

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Practice Microbiology MCQs organised for BS Nursing Semester 1 under the PNMC-HEC jointly revised 2024 curriculum. This expanded draft contains 15 original questions: 5 easy, 5 moderate and 5 hard, each with one answer and an explanation.

Faculty review pending: These questions are original revision material, not previous PNMC examination questions or an official PNMC test. Faizan's review of accuracy, alignment and wording is pending. Clinical decisions and procedures require supervision and current local protocols.

Subject scope and curriculum alignment

Semester 1 . 2 credit hours . Microbiology. Microorganism groups, modes of detection, microbial control, infection prevention and specimen integrity. These question topics are an educational interpretation of the stated curriculum and should be cross-checked with the university course outline.

How to practise

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Choose an answer before expanding Reveal correct answer and explanation. Record your score on paper and explain why the distractors are incorrect. This is a self-check question bank; it does not yet include automated scoring, a timer or saved progress.

Easy questions

Recall and correctly identify foundational concepts.

Q1. Which group is composed of acellular infectious agents that require host cells to reproduce?

Easy . Classification

- Bacteria
- Viruses
- Protozoa
- Fungi

Reveal correct answer and explanation

Correct: B -- Viruses.

Viruses are not cells and depend on host-cell machinery to replicate.

Q2. Which term means eliminating all forms of microbial life, including bacterial spores?

Easy . Microbial control

- Cleaning
- Sanitising
- Sterilisation
- Routine disinfection

Reveal correct answer and explanation

Correct: C -- Sterilisation.

Sterilisation targets all microbial life, including resilient spores; routine disinfection may not.

Q3. Standard Precautions are applied to which patients in healthcare?

Easy . Infection prevention

- Only people with confirmed infection
- Only patients in isolation rooms
- All patients, according to anticipated exposure
- Only patients prescribed antibiotics

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Reveal correct answer and explanation

Correct: C -- All patients, according to anticipated exposure.

CDC recommends Standard Precautions for all patient care, with PPE chosen through exposure-risk assessment.

Moderate questions

Apply knowledge to a new question or straightforward clinical context.

Q4. A specimen tube is found without reliable patient identification. What is the safest interpretation?

Moderate . Specimen integrity

- Its appearance is enough to identify it
- It may be clinically unreliable and requires resolution under specimen policy
- It should be labelled using the nearest chart
- It should be analysed without informing the laboratory

Reveal correct answer and explanation

Correct: B -- It may be clinically unreliable and requires resolution under specimen

policy.

A misidentified specimen can cause false clinical attribution. Follow the local rejection/recollection pathway rather than guessing.

Q5. A healthcare worker touches a contaminated surface and then touches a clean device without hand hygiene. What route does this illustrate?

Moderate . Transmission

- Indirect contact transfer
- Inherited transmission
- Vector-borne spread through an insect
- Genetic mutation

Reveal correct answer and explanation

Correct: A -- Indirect contact transfer.

Hands can transfer microorganisms from contaminated surfaces to a patient or device.

Q6. Which statement correctly distinguishes cleaning from disinfection?

Moderate . Microbial control

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- Cleaning always kills spores
- Cleaning removes soil; disinfection inactivates many microorganisms on surfaces
- Disinfection is the same as autoclaving
- Cleaning is unnecessary before processing visibly soiled equipment

Reveal correct answer and explanation

Correct: B -- Cleaning removes soil; disinfection inactivates many microorganisms on surfaces.

Soil removal and microbial inactivation are different processes; the required sequence depends on device and local policy.

Hard questions

Integrate evidence and decide between plausible alternatives; not an unsupervised treatment protocol.

Q7. After removing gloves used during a contaminated procedure, a student notices visible soil on the hands. Which principle should guide the next step?

Hard . Infection control case

- Gloves replace the need for hand hygiene
- Use handwashing with soap and water for visibly soiled hands
- Wait until the next patient to clean hands
- Use a clean glove over the soil

Reveal correct answer and explanation

Correct: B -- Use handwashing with soap and water for visibly soiled hands.

Visible soiling calls for soap-and-water handwashing; hand hygiene is still required after glove removal.

Q8. A sterile field is touched by a nonsterile object just before use. What is the correct safety conclusion?

Hard . Aseptic practice

- The field remains sterile if contact was brief
- Apply an antibiotic to the field
- Treat the contacted field as contaminated and replace affected supplies
- Use the field if the patient has no fever

Reveal correct answer and explanation

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Correct: C -- Treat the contacted field as contaminated and replace affected supplies.

Aseptic status is lost after contamination; do not rely on duration or patient symptoms.

Q9. A positive culture is reported, but the collected specimen may have been contaminated. Which inference is most defensible?

Hard . Clinical reasoning

- The organism is certainly causing the patient’s illness
- Culture results must be interpreted with collection quality and clinical findings
- All antimicrobial therapy must immediately be stopped
- Contamination can only occur in a laboratory

Reveal correct answer and explanation

Correct: B -- Culture results must be interpreted with collection quality and clinical findings.

A culture result is not independently definitive: specimen quality, symptoms, collection site and clinical context affect interpretation.

Additional topic-based practice -- faculty review pending

Q10. Which organism is prokaryotic? (Easy)

- Yeast
- Bacterium
- Protozoan
- Helminth

Reveal answer and explanation

B -- Bacterium. Bacteria lack a membrane-bound nucleus; the other groups are eukaryotes.

Q11. A culture specimen has an uncertain patient label. What is safest? (Moderate)

- Use the nearest chart
- Resolve identity under specimen policy
- Ignore the label
- Assume a normal result

Reveal answer and explanation

B -- Resolve identity under specimen policy. Incorrect identification can misattribute results. Follow the laboratory's discrepancy policy.

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Q12. A swab from nonsterile skin grows several organisms. What is the best conclusion? (Hard)

- Every organism caused infection
- Interpret alongside sampling and clinical findings
- Treatment is always required
- Collection quality is irrelevant

Reveal answer and explanation

B -- Interpret alongside sampling and clinical findings. Skin flora and contamination can affect cultures. A positive result alone does not prove invasive infection.

Q13. Which process destroys all microbial life including bacterial spores? (Easy)

- Routine cleaning
- Sterilisation
- Wiping with water
- Hand drying

Reveal answer and explanation

B -- Sterilisation. Sterilisation is designed to eliminate all forms of microbial life, including spores. Routine cleaning alone does not.

Q14. A reusable device is visibly dirty. Which principle is most appropriate before disinfection? (Moderate)

- Apply a label only
- Remove soil through required cleaning
- Assume it is sterile
- Store it immediately

Reveal answer and explanation

B -- Remove soil through required cleaning. Organic soil can interfere with disinfection. Follow the device's validated cleaning and processing instructions.

Q15. After glove removal, hands are visibly soiled. What is indicated? (Hard)

- Wear new gloves without cleaning
- Wash hands with soap and water
- Wait until the next shift
- Use a paper towel alone

Reveal answer and explanation

B -- Wash hands with soap and water. Visible soil requires soap-and-water handwashing. Gloves do not substitute for hand hygiene.

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Sources and curriculum references

- S1. 2024 BSN scheme and microbiology course learning outcomes
- S2. CDC Standard Precautions for All Patient Care

Continue learning

Introduction to microbiology for nurses Semester 1 study guide All nursing practice MCQs

Coverage: 15 questions for this subject form an expanded review draft, not a complete representation of its entire curriculum. Further units and question sets should be expanded after qualified academic review and performance analysis.

Review the concepts behind these questions

- Contamination, Colonisation and Infection: Nursing Microbiology
- Chain of Infection: How Transmission Can Occur
- BS Nursing Semester 1 subject guide

Source: https://mynursinghub.com/microbiology-mcqs-semester-1/