



Technical University of Mombasa

Faculty of Applied and Health Sciences

DEPARTMENT OF MEDICAL SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF
MEDICAL LABORATORY SCIENCES
BMLS 12S REGULAR

AML 4307 : MEDICAL MYCOLOGY

SEMESTER EXAMINATION

APRIL 2014 SERIES

2 HOURS

Instructions to candidates:

This paper consists of **TWO** sections **A** and **B**

Section A -Contains MCQS, Answer **ALL** questions in **Section B**.

SECTION A - MCQs - (30marks)

1. Most fungi are?
 - a) Saprophytic
 - b) Microscopic
 - c) Photosynthetic
 - d) Inactive
 - e) Inert

2. Most fungi infections can be referred to as?
 - a) Opportunistic
 - b) Chronic
 - c) Motile
 - d) Genetic
 - e) Stagnant

3. Yeast is a _____ of fungi

- a) Class
 - b) Species
 - c) Family
 - d) Genus
 - e) Form
4. Dimorphic fungi are ?
- a) Capable of growing as yeast only
 - b) Gram in nature
 - c) Able to grow as yeast or mycelia
 - d) Tube like when growing as yeast only
 - e) None of the above
5. The following are fungal diseases except
- a) Aspergilosis
 - b) Candidiasis
 - c) Histoplasmosis
 - d) Tuberculosis
 - e) Sporotrichosis
6. Which one is NOT an advantage of non culture based technique in fungal diagnosis
- a) High sensitivity
 - b) Quantitative result
 - c) Results rapidly available
 - d) High specificity
 - e) Very cheap
7. Most fungi start growing as ?
- a) Spores
 - b) Moulds
 - c) Yeast
 - d) Mycelium
 - e) Hyphae
8. Which of the following is NOT used to distinguish fungi from other kingdoms?
- a) Nutrition
 - b) Structural organization
 - c) Growth
 - d) Reproduction
 - e) Respiration
9. Which of the following does NOT describe the way fungi acquire nutrients?
- a) Saprotrophs
 - b) Phototrophs
 - c) Chemoheterotrophs
 - d) Parasitic
 - e) Mutualistic

10. Which one is NOT a beneficial effect of fungi?
- Decomposition
 - Biosynthetic factories
 - Important sources of antibiotics
 - Source of food
 - Toxin production
11. Transport of nutrients in fungi's is through?
- Diffusion
 - Transduction
 - Osmosis
 - Conflagration
 - Active transport
12. Fungal cell wall is composed of:
- Dectrose
 - Chitin
 - Xylem
 - Phloem
 - Peptidoglycan
13. Which one is NOT a biological importance of spores?
- Rapid identification
 - Allows for reproduction
 - Allows the fungus to move to new food source
 - Means of introducing new genetic combinations into a population
 - Allows fungus to survive periods of adversity
14. Which of the following does NOT constitute host defence factors against fungal infections?
- Normal Flora
 - Fatty acid content of the skin
 - Humidity of the skin
 - Epithelial cell turnover
 - Physical barrens, such as skin and mucus membranes
15. Which of the following is NOT a predroposing factor to fungal infections?
- Prolonged antibiotic therapy
 - Obesity
 - Transplants
 - Consumption of fermented foods
 - Immuno suggressive drugs
16. Which of the following is NOT a cutaneous mycoses?
- Tinea pedis
 - Tinea corporis
 - Tinea capitis
 - Tinea conea
 - Tinea cruses

17. System mycosis refers to
- Fungal infections affecting deep tissue within the body
 - Fungal infections found on arms and hands
 - Fungal infections affecting the skin and hair
 - Fungal infections affecting the scalp
 - None of the above
18. The traditional method of classifying fungi depends on
- Mycelia
 - Hyphae
 - Colonies
 - DNA
 - Fruiting boding
19. Which of the following is NOT an example of systemic (deep) mycoses?
- Candidiasis
 - Blastomycosis
 - Histoplasmosis
 - Coccidioimycosis
 - Para coccidioldomycosis
20. Which one is NOT a fungal pathogenicity / virulence factor
- Exhibiting thermal dimorphism
 - Ability to acquire iron from red blood cells
 - Ability to secrete mycotoxins
 - Surface hydrophilic tendency
 - Production of capsules allowing them to resist phagocytosis
21. Which of the following is NOT a hyphae character that aids in identification
- Spiral hyphae
 - Pectinate body
 - Favic chandelier
 - Rhizoides
 - Teething hyphae
22. The following are characteristics of opportunistic fungi EXCEPT?
- They are generally harmless
 - May cause disease in immuno compromised individuals
 - They are painless
 - They may cause mycosis
 - May cause systemic mycosis
23. What percentage of potassium hydroxide is used for fungal microscopy
- 20% potassium hydroxide
 - 34% potassium hydroxide
 - 40% potassium hydroxide
 - 70% potassium hydroxide

- e) None of the above
24. Each of the following statements concerning candida albicans is correct except
- C. Albicans is a budding yeast that forms pseudohyphae when it invades tissue
 - C. Albicans causes thrush
 - C. albicans is transmitted primarily by respiratory aerosols
 - Impaired cell mediated immunity is an important predisposing factor to disease
 - C. albicans can invade the vagina
25. Infection with dermatophyte is most often associated with
- Intravenous drug abuse
 - Inhalation of the organism from contaminated bird feces
 - Adherence of the organism to perspiration moist skin
 - Feecal-oral transmission
 - None of the above
26. Most of the medically important fungi belong to which group?
- Phycomycetes
 - Zygomycetes
 - Fungi imperfecti
 - Ascomycetes
 - Basidiomycetes
27. Bat sites usually harbor the following primarily pathogenic fungus
- Paracoccidioides brasiliensis
 - Blastomyces dermatitidis
 - Histoplasma capsulatum
 - Madurella mycetomatis
 - Phaeoannellomyces werneckii
28. What is the function of KOH in fungal diagnosis
- Destroy the epithelial cells
 - Destroy the fungi
 - Disinfection of the microscope
 - Disinfection of the slide
 - Prevention of PCR contamination
29. Which of the following is NOT a type of candidiasis
- Oral thrush
 - Diaper
 - Mycotic vulvovaginitis
 - Cutaneous osmotitis
 - Paronychia
30. Each of the following is characteristic of histoplasmosis except
- Transmission by inhalation of spores
 - Granulomatous lesion in the lungs
 - Endemic in the southwest sunoran belt

- d) Skin tests are positive for life
- e) Reticulo endothelial involvement

SECTION B ESSAY
(ANSWER ALL QUESTION IN THIS SECTION)

- 1. Discuss fungi under the following topics
 - a) General characteristics **(10marks)**
 - b) Molecular diagnosis of fungi **(10marks)**
- 2. Discuss the classification of fungi based on:
 - a) Sexual reproduction **(8marks)**
 - b) Morphology **(8marks)**
 - c) How they acquire nutrients **(4marks)**