

A- Some Representative Questions on Lectures and their Answers

I- Multiple Choice Questions (MCQ) (Only one applicable answer):

- Q-1** Of all living organisms, the following combination of characteristics that applies to fungi only is:
- A) Eukaryotic, autotrophic, rigid cell wall
 - B) Eukaryotic, heterotrophic, rigid cell wall
 - C) Prokaryotic, heterotrophic, rigid cell wall
 - D) Prokaryotic or eukaryotic, heterotrophic, rigid cell wall
 - E) Eukaryotic or prokaryotic, heterotrophic or autotrophic, rigid cell wall
- Q-2** The nodule of piedra is:
- A) Pus accumulation
 - B) Swollen hair
 - C) Fungal elements
 - D) Tissue reaction
 - E) Acquired endogenously
- Q-3** Which of the followings does **NOT** apply to Dematophytes?
- A) Sensitive to greseofulvin
 - B) Opportunistic
 - C) Moniliaceous
 - D) Have septate hyphae
 - E) Identified mainly by their asexual spores
- Q-4** Of the followings, the obligately parasitic fungus is:
- A) *Ramichloridium mackenziei*
 - B) *Phialophora verrucosa*
 - C) *Sporothrix schenckii*
 - D) *Lacazia loboi*
 - E) *Exophiala jeanselmei*

Q-5 Which is **WRONG** on zygomycosis:

- A) The etiologic fungi are common in environment
- B) The etiologic fungi are fast growing
- C) Entomophthoromycosis is always opportunistic disease
- D) The rhinocerebral form is the frequently encountered type in mucoromycosis
- E) Chemotherapy alone is usually insufficient for management of mucoromycosis

Q-6 On aspergilloma which of the following is **NOT TRUE**:

- A) Lungs are the most commonly affected site
- B) More common in compromised individuals
- C) IgG against etiologic agent will be present
- D) No organisms will be present in the mass
- E) May progress to an invasive disease

Q-7 The **WRONG** on candidiasis is:

- A) Isolation of *Candida* from blood does not always mean infection
- B) Growth of 10^5 C.F.U/ml urine is significant
- C) Mycotic vaginitis in Saudi women is common
- D) In infected tissue the fungi will be only budding yeast cells
- E) Germ tube test is used for identification of the organisms

Q-8 The pathogenic fungus that is likely to be present in or around rodent burrows in the desert of an endemic area is:

- A) *Blastomyces dermatitidis*
- B) *Aspergillus niger*
- C) *Histoplasma capsulatum*
- D) *Coccidioides immitis*
- E) *Rhizopus arrhizus*

Q-9 Bat sites usually harbor the following primary pathogenic fungus:

- A) *Paracoccidioides brasiliensis*
- B) *Blastomyces dermatitidis*
- C) *Histoplasma capsulatum*
- D) *Madurella mycetomatis*
- E) *Phaeoannellomyces werneckii*

Q-10 Which of the following infections does not have serologic Diagnosis:

- A) Candidosis
- B) Aspergillosis
- C) Mycetoma
- D) Rinosporidiosis
- E) Cryptococcosis

II- Respond to each statement as true (T) or False (F)

- A-** Fungi obtain their nutrients from other living or dead organisms **T** **F**
- B-** Class Oomycetes is of the Gymnomycota **T** **F**
- C-** Most Human pathogenic fungi are nonmotile **T** **F**
- D-** The sexual stage of most human pathogenic fungi is not known **T** **F**
- E-** *Ramichloridium mackenziei* is known to cause brain abscesses **T** **F**
- F-** *Malassezia furfur* causes pityriasis versicolor **T** **F**
- G-** Hard, firm nodules on hair shaft is diagnostic of white piedra **T** **F**
- H-** In scrapings from tinea nigra the fungus is in the form of short hyphae and round cells **T** **F**
- I-** Dermatophyte infections are opportunistic diseases **T** **F**
- J-** In tinea corporis swab of the lesion is a good specimen for lab. diagnosis **T** **F**
- K-** Subcutaneous mycoses are contracted via trauma **T** **F**
- L-** The fungi causing subcutaneous mycoses are common in air **T** **F**

III- Short Answer Essay Questions:

- Q-1** Provide 2 differences between bacteria and fungi?
- Q-2** What are the types of mycetoma? What group of organisms that cause each type?
- Q-3** What is the possible fungal infection if you see each of the followings by direct microscopic examination of patient specimen?
- A) Pseudohyphae and budding yeasts
 - B) Encapsulated budding yeast cells
 - C) Broad nonseptate hyphae
 - D) Short hyphal segments and round yeast cells
 - E) Hyaline septate hyphae
- Q-4** Provide at least one species of the fungi causing each of the following infectious diseases:
- A) Aspergillosis
 - B) Lobomycosis
 - C) Rhinosporidiosis
 - D) Paracoccidioidomycosis
 - E) Oral thrush
 - F) Entomophthoromycosis
 - G) Phaeohyphomycosis
 - H) Blastomycosis
- Q-5** Draw and label the conidia of each of the dermatophyte genera (you could choose one species of each genus as representative)?
- Q-6** Indicate what antifungal agents are most commonly used for the treatment of each of the following mycotic diseases:
- A) Tinea nigra
 - B) Tinea pedis
 - C) Sporotrichosis
 - D) Histoplasmosis
 - E) Candidosis
 - F) Actinomycotic mycetoma

B- Some Representative Lab. Practical Examination Questions

Microscopic Slides and Materials:

Q-1 Identify the fungus?

Q-2 Name the genus?

Q-3 Identify the species?

Q-4 What is this used for in the clinical Mycology Laboratory?

Q-5 Name the fungal structure pointed at?

Q-6 What is the infection caused by the organism shown under the microscope?

Q-7 Stained histologic section of a lung tissue:

A- What is the possible infection?

B- Provide one etiologic agent?

Answers of the Representative Questions

A- Lecture Questions:

I- MCQs:

1- B 2- C 3- B 4- D 5- C

6- D 7- D 8- D 9- C 10- D

II- True or False:

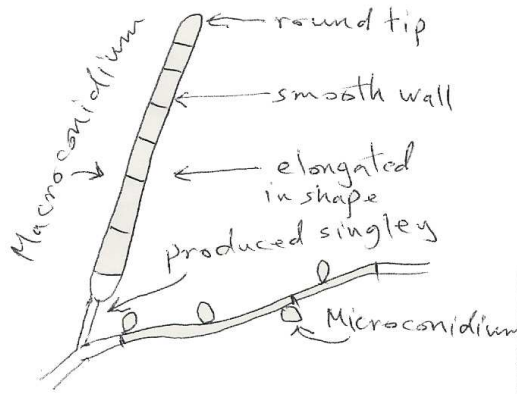
A- T B- F C- T D- T E- T F- T

G- F H- F I- F J- F K- T L- F

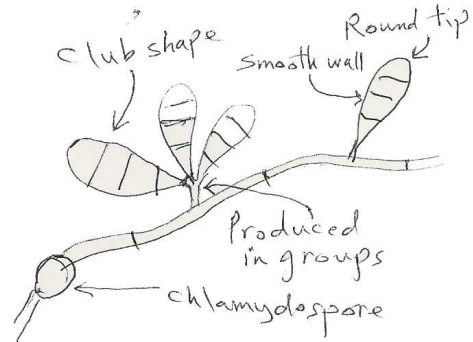
III- Short Answer Essay:

- 1-
 - i) Bacteria Prokaryotic while fungi Eukaryotic
 - ii) Bacteria small (1.0 μ wide or less) while fungi bigger
- 2- Types of Mycetoma and their cause:
 - i) Eumycetoma caused by fungi
 - ii) Actinomycetoma caused by actinomycetes
- 3-
 - A- Candidiasis or Trichosporonosis or Geotrichosis
 - B- Cryptococcosis
 - C- Zygomycosis
 - D- Pityriasis versicolor
 - E- Dermatophytoses or aspergillosis or few rare others
- 4-
 - A- *Aspergillus fumigatus* or other *Aspergillus* species
 - B- *Lacazia loboi*
 - C- *Rhinosporidium seeberi*
 - D- *Paracoccidioides brasiliensis*
 - E- *Candida albicans* or other species of *Candida*
 - F- *Conidiobolus coronatus* or few other zygomycetes
 - G- *Cladosporium*, *Ramichloridium* or other *dematiaceous fungi*
 - H- *Blastomyces dermatitidis*

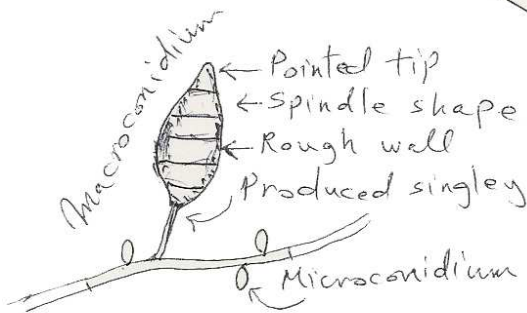
Q-5:



Trichophyton sp.



Epidermophyton sp.



Microsporum sp.

6- **Antifungals:**

- A- Salicylic acid ointment, whitfield's ointment, sulfur ointment
- B- Griseofulvin, Miconazole, Clotrimazole, Lamisil, Itraconazole, others
- C- KI or septrin
- D- Amphotericin B or Voriconazole or Caspofungin
- E- As in "D" plus" or fluconazole" for systemic infection,
For skin: Miconazole or clotrimazole Or nystatin
- F- Cotrimoxazole + Streptomycin sulfata or Dapsone + Streptomycin sulfata

B- Practical Questions:

The answers will be for the organisms or the object asked for and displayed. For example:

- 1- *Alternaria*
- 2- *Aspergillus niger*
- 3- A medium for example. It is used to culture patient specimens
- 4- Arthrospore
- 6- Cryptococcosis
- 7- A- The possible infection is blastomycosis
B- Etiologic agent: *Blastomyces dermatitidis*