2019

MSc

4th Semester Examination

Bio Medical Laboratory Science & Management
(Theory)

PAPER – BML_402

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their Own words as far as practicable.

Illustrate the answers wherever necessary.

Answer Q. No. 1 and any *THREE* from the rest

1. Answer any ten questions : **1×10=10**

a) What is meant by fungal dimorphism?

b) What is soor?

c) What is onychomycosis ?

d) Name a pathogen having chinese letter microscopic morphology and its staining method.

e) How can a local infection be changed to a systemic infection?

f) What is the utility of coagulase test?

g) Citc an cxample of partially acid fast bacteria.

h) Write any two symptoms of taeniasis.

i) What is the basis of colour change of Mac Conkey Agar?

j) Cite an example of group A Streptococci and its type of haemolysis on blood agar.

k) What do you mean by acid-fast bacilli smear grading of 3^{+ve} by Ziehl-Neelsen staining under 1000X magnification?

l) Write the name of protozoa involved in transplacental transmission.

m) Why urogenital swab is collected?

n) What do you men by intermediate host?

o) Mention any two definitive host of bood flukes.

2.5+2+3.5+2=10

2. a) Explain the resolving power of microscope.

b) Why is mordant used in the Gram stain?

c) Write about Schaeffer-Fulton staining.

d) Differentiate between complex and chemically defined media.

1.5+4.5+2+2=10

3. a) 'A large hospital washes of burn patients are kept in a stainless steel tub. After each patient, the tub is cleaned with a quat. It was noticed that 14 of 20 burn patients acquired Pseudomonas infections after being bathed '- Provide an explanation for this high rate of infection.

b) Discuss about the application of moist heat as physical agent used to control microorganisms.

c) Thc D value of Clostridium botulinum spores is 0.204 at 121°C. Calculate the time required to reduce the number of spores from 10^{14} to one spore.

d) What is plasma sterilization?

4. a) Describe about the different asexual spores of fungi. **4+2+1.5+2.5=10**

b) Why is Coccidioides immitis considered as a typical dimorphic fungus?

c) 'Ergosterol is a potent target of most antifungal drugs'- Why?

d) Discuss about cutaneous mycosis.

5. a) What are the clinical symptoms of hook worm infection? **2+4+2+2=10**

b) Briefly state the life cycle of hook worm.

c) Write the collection procedure of stool specimen in the laboratory.

d) What are the precautions taken at the time of stool collection?

6. a) What are the clinical features of ' Giardiasis'? **2+4+2+2=10**

(b) Describe the life cycle of Toxoplasma gondii.

(c) Write the morphology and route of transmission of Taenia solium.