***Name……………………..Tahir khan***

***ID ……………………………15172***

***Subject………..clinical mycology and parasitology***

***Mam ……………………huma imtiaz***

***Ans.1***

Causative agent

Aspergillus fumigates

disease

Aspergillosis disease

Possible diagnosis

X ray or city scan

Complete blood count

Culture for fungus

Aspergillus antibody test

IgE blood level

Ans.2

**Definitive host:**

Definitive host is define as the host refers to the organism in which the parasite spreads its mature form.

Example, Human is the definitive host for the tape worm.

**Intermediate host:**

It can be define as the organism that support immature are non-reproductive form of parasite

Example, Human is the intermediate host for the plasmodium because plasmodium complete its asexual phase in human.

**Vector:**

Vector is define as an agent where the pathogen replicate or complete its cycle.

Example: mosquito that carry plasmodium.

Ans 3**. Transmission**

Mosquito is the main host for the transmission of malaria but it’s also transmitted by blood transfusion and transmitted through placenta.

**Life cycle**

The vector for the plasmodium is female Anopheles mosquito

* There are two phases in the life cycle sexual phase which occur in mosquito and asexual phase occur in human.
* The life cycle in humans begins when mosquito bite human and inject sporozoites into the blood from the saliva.
* The sporozoites are taken up by hepatocytes within 30 minutes.in hepatocytes it divide and differentiate into merozoites.
* Then merozoites release into the blood circulation and infect RBC.
* Within the RBC it differentiate into ring shape trophozoite
* The ring form grows and then differentiates into a schizont filled with merozoites
* When merozoites release from RBC it infect other RBC
* Then the merozoites develop into male and female gametophyte
* The gametocyte-containing red blood cells are ingested by the female *Anopheles* mosquito and, within her gut, produce a female macrogamete and eight sperm like male microgametes
* After fertilization in her gut the zygote differentiate into ookinete.ookinete burrow in the gut wall where it develop into oocyte within which haploid sporozoite are produce.
* Sporozoites are release and transfer to salivary gland which is transfer in the next bite.