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| A picture of a winding road and trees  Mycology and parasitology  Assignment #01 | submitted to: ma’am huma imtiaz  Submitted by: Naseer Ullah  Class ID: 15108  E-mail: [naseerullahkhattak144@gmail.com](mailto:naseerullahkhattak144@gmail.com)  IQRA NATIONAL UNIVERSITY PESHAWAR |

**Q1:**

**Ans:**

1. **Causative agent =** Aspergillus fumigates
2. **Disease name =** Allergic bronchopulmonary aspergillosis
3. **Diagnosis =**

* **Chest x-ray**
* **Lungs CT scan**
* **Blood test**

**Q2: Define the following**

1. **Definitive host**
2. **Intermediate host**
3. **Vector**

**Ans:**

1. **Definitive host:**

The host in which the sexual reproduction of parasite occurs

* In definitive host the parasites reach its mature form and spends its developmental stages.

1. **Intermediate host:**

The host in which larval developments occur

* The organism that supports the non-reproductive or immature forms of parasite.

**Example**:

* Like plasmodium which cause malaria
* The definitive host is mosquito and intermediate host is Human being.

1. **Vector:**

* Vector is that organism which itself not cause any disease but act as a medium and spreads infection by transferring pathogens from one host to another host.

**Example:**

In case of malaria a mosquito is the vector that carrying and transfers infections material

Vector may be a virus or anything else.

**Q3: Explain the transmission and life cycle of plasmodium in your own words?**

**Ans: Transmission:**

Malarial transmission occurs through a several ways. But the primary way through which it transmits is the mosquito bites. Secondly it can also transmit through placenta, blood transfusion, and intravenous drugs abuse.

**Life cycle:**

There are two phases in the life cycle

1. Sexual cycle
2. A-sexual cycle

* Sexual cycle occurs in mosquito which is called sporogony because sporozoites are produced and A- sexual cycle occurs in human which is called Schizogony because schizonts are produced.
* The life cycle starts when female anopheles mosquito bits a human and injects the sporozoites to the human from the saliva of mosquito.
* Now these sporozoites travels to the liver by hepatocytes.
* The sporozoites multiply will make a merozoites
* The many merozoites are collectively called schizonts.
* The merozoites are then released to the blood stream.
* In blood these merozoites invade the erythrocytes until it burst.
* In this erythrocyte phase it differentiated to a ring-shaped trophozoites
* Trophozoites multiply to make many merozoites.
* Due to many merozoites the red blood cells burst and release merozoites to blood stream, so the cycle will repeat more and more which cause chills, fever, and sweating.
* There are two types of gametocytes in red blood cells. The male gametocytes and female gametocytes. If non-infected mosquito comes and sucking these gametes from infected male.
* After fertilization the zygote differentiate into a oocyte
* In oocyte many sporozoites are produced. These sporozoites are released and migrate to the salivary gland
* The cycle now ready to completion of the mosquito takes her next blood meals.