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17/MHS01/074

Anatomy

Ana 308

Question 1

From our understanding of Teratogen, can we say corona virus is a teratogen and if No/Yes, Justify your answer?

Answer

No,

We can't say for sure if Corona virus is a teratogen because researchers haven't had enough time to study the virus and tell its short/long term effect on the child.

Also too we can't say Corona virus is a teratogen because according to WHO researchers haven't been able to tell if a pregnant mother with the virus can infect the unborn fetus during the period of the pregnancy or during delivery.

Also the virus has not been found in samples of amniotic fluid or breast milk.

Question 2

What are the impact of aging and environment in the outbreak of this novel Covid 19.

Answer

## Aging:

In many countries, older people are facing the most threats and challenges at this time. Although all age groups are at risk of contracting COVID-19, older people face significant risk of developing severe illness if they contract the disease due to physiological changes that come with ageing and potential underlying health conditions. Older people don't have as strong an immune system so they are more vulnerable to infectious disease. They're also more likely to have conditions such as heart disease, lung disease, diabetes or kidney disease, which weakens their body's ability to fight infectious disease. The elderly might also have isolation or mobility challenges. So because they're isolated, they can't get information about what to do, or they're not able to get food they need if stores are out of stock and things become more difficult. In many societies, seniors are more likely to live in poverty, which makes it more difficult for them to get the things they need and to take care of themselves.

So aging is a very important factor as the older the person the lower immunity system and the immunity system is what helps fight against diseases.

## Environment:

The main route of transmission of SARS infection is presumed to be respiratory droplets. However the virus is also detectable in other body fluids and excreta. The stability of the virus at different temperatures and

relative humidity on smooth surfaces were studied. The dried virus on smooth surfaces retained its viability for over 5 days at temperatures of 22–25°C and relative humidity of 40–50%, that is, typical air-conditioned environments. However, virus viability was rapidly lost ( $>3 \log_{10}$ ) at higher temperatures and higher relative humidity (e.g., 38°C, and relative humidity of  $>95\%$ ). The better stability of SARS coronavirus at low temperature and low humidity environment may facilitate its transmission in community in subtropical area (such as Hong Kong) during the spring and in air-conditioned environments. It may also explain why some Asian countries in tropical area (such as Malaysia, Indonesia or Thailand) with high temperature and high relative humidity environment did not have major community outbreaks of SARS.

In summary, cold environments tends to aid the spread of the virus while warm environments helps to control it a bit as the virus doesn't do well there.

### Question 3

Summarize the importance of Oogenesis and spermatogenesis

Answer

Oogenesis:

- (i) One oogonium produces one ovum and three polar bodies.
- (ii) Polar bodies have small amount of cytoplasm. It helps to retain sufficient amount of cytoplasm in the ovum which is essential for the

development of early embryo. Formation of polar bodies maintains half number of chromosomes in the ovum.

(iii) During meiosis first crossing over takes place which brings about variation.

(iv) Oogenesis occurs in various organisms. Therefore, it supports the evidence of basic relationship of the organisms.

Spermatogenesis:

(i) During spermatogenesis, one spermatogonium produces four sperms.

(ii) Sperms have half the number of chromosomes. After fertilization, the diploid chromosome number is restored in the zygote. It maintains the chromosome number of the species.

(iii) During meiosis I crossing over takes place which brings about variation.

(iv) Spermatogenesis occurs in various organisms. Thus it supports the evidence of the basic relationship of the organisms.

Question 4

Describe what you understand by personal hygiene and disaster;hence state their correlation if there is any

Answer

Personal hygiene refers to maintaining cleanliness of one's body and clothing to preserve overall health and well-being. It includes a number of different activities related to the following general areas of self-care:

washing or bathing, including cleansing oneself after using the toilet; taking proper care of the mouth; grooming and dressing; and keeping clothing clean. Bathing, dressing and undressing, and using the toilet are considered activities of daily living (ADLs), while doing one's laundry is considered an instrumental activity of daily living or IADL.

While

A disaster is a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources. Though often caused by nature, disasters can have human origins.

Correlation between personal hygiene and disaster:

- Designing, building and maintaining water and sanitation systems which include simple modifications to withstand the risks of disasters.
- Carrying out vulnerability assessments of community supplies of water and sanitation systems to assess ability to provide essential services in the event of a disaster.
- Engaging and consulting the community in planning WASH services to identify culturally and socially acceptable interventions which will be effective, long lasting and sustainable.
- Ensuring a multi-sectorial approach in all aspects of disaster risk management for WASH, including disaster response planning.

- Providing an adequate quantity of safe water and accessible sanitation services during a disaster to reduce risk of infections.
- Preventing infection spread through education, facilities and soap for hand washing to promote hygienic practices.
- Ensuring that people in shelters and temporary camps have access to safe water and sanitation.
- Ensuring health facilities and health care providers have adequate water supplies to support delivery of life-saving and quality health care services, infection prevention and hygiene promotion in emergency situations.
- Disinfection and treatment of water as per SPHERE or WHO recommendations.
- Preventing defecation, especially by children, in areas which could contaminate water supplies.
- Providing safe disposal of clinical waste and vaccinations to protect health care workers and waste handlers against prevalent infections such as Hepatitis B.