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QUESTIONS

1. From our understanding of teratology , can we say that corona virus is a teratogen justify your answer
2. What are the impact of ageing and environment in the outbreak of this corona virus
3. Summarize the importance of oogenesis and spermatogenesis
4. Describe what you understand by personal hygiene and disaster , hence state their correlation if there is any .

Answers

1. Coronavirus is not a teratogen .

Teratogen: Any agent that can disturb the development of an embryo or fetus. Teratogens may cause a birth defect in the child. Or a teratogen may halt the pregnancy outright. The classes of teratogens include radiation, maternal infections, chemicals, and drugs. Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes.

There appears to be some risk of premature rupture of membranes, preterm delivery, fetal tachycardia and fetal distress when the infection occurs in the third trimester of pregnancy. However, there is no evidence suggesting transplacental transmission based on very limited data, as the analysis of amniotic fluid, cord blood, neonatal throat swab, and breast milk samples available from six of the nine patients were found to be negative for SARS‐COV‐2. Whether virus shedding occurs vaginally is also not known. Limited data obtained from cases of pregnant women with COVID‐19 suggest that the transplacental transmission is unlikely in late pregnancy close to term, as the virus was not identified in the amniotic fluid, placenta, breast milk of these mothers or in the nasal secretions of their neonates. However, infection can occur in neonates via close contact.

1. IMPACT OF AGEING IN THE OUTBREAK OF CORONAVIRUS

Older people are greatly impacted by COVID-19 due to the physiological changes associated with ageing, decreased immune function and multimorbidity which expose older adults to be more susceptible to the infection itself and make them more likely to suffer severely from COVID-19 disease and more serious complications.

IMPACT OF THE ENVIRONMENT IN THE OUTBREAK OF CORONAVIRUS

There has been much progress about the potential climate impact of the coronavirus related shutdown . Data shows that nitrogen dioxide air pollutions level have plummeted across Europe since the pandemic . NO2 is emitted in most cases by burning fosils fuels at high temperature ,as in internal combustion engines.

Short term air pollution has dropped and this is considered appositive news. The pandemic has caused Italy to to ban infected patients from sorting their waste at all which has inhibited recycling.

3. **oogenesis** The production and growth of the ova (egg cells) in the animal ovary. Special cells (*oogonia*) within the ovary divide repeatedly by mitosis to produce large numbers of prospective egg cells (*primary oocytes*). When mature, these undergo meiosis, which halves the number of chromosomes. During the first meiotic division a *polar body* and a *secondary oocyte* are produced. At the second meiotic division the secondary oocyte produces an ovum and a second polar body. Oocytes may be present in the ovaries at birth and may represent the total number of eggs to be produced.

IMPORTANCE OF OOGENESIS

1. The gamete formed by oogenesis contains all the materials needed to initiate and maintain metabolism and development. Therefore, in addition to forming a haploid nucleus, oogenesis also builds up a store of cytoplasmic enzymes, mRNAs, organelles, and metabolic substrates. While the sperm becomes differentiated for motility, the egg develops a remarkably complex cytoplasm.
2. Provide haploid ovum
3. Variations may occur due to crossing over
4. One oogonium produces one ovum and three polar bodies
5. Oogenesis occurs in various organism . Therefore it supports the evidence of basic relathionship of organism

**Spermatogenesis** is the process by which haploid spermatozoa develop from germ cells in the seminiferous tubules of the testis. This process starts with the mitotic division of the stem cells located close to the basement membrane of the tubules.These cells are called spermatogonial stem cells. The mitotic division of these produces two types of cells. Type A cells replenish the stem cells, and type B cells differentiate into primary spermatocytes. The primary spermatocyte divides meiotically (Meiosis I) into two secondary spermatocytes; each secondary spermatocyte divides into two equal haploid spermatids by Meiosis II. The spermatids are transformed into spermatozoa (sperm) by the process of spermiogenesis. These develop into mature spermatozoa, also known as sperm cells. Thus, the primary spermatocyte gives rise to two cells, the secondary spermatocytes, and the two secondary spermatocytes by their subdivision produce four spermatozoa and four haploid cells.

IMPORTANCE OF SPERMATOGENESIS

1. Help in causing variations in off springs
2. Provide haploid motile sperm
3. During spermatogenesis , one spermatogonium produces four sperms

4. Personal hygiene is how you care for your body. This practice includes bathing, washing your hands, brushing your teeth, and more. Good personal hygiene is important for both health and social reasons. It entails keeping your hands, head and body clean so as to stop the spread of germs and illness. Your personal hygiene benefits your own health and impacts the lives of those around you, too.

DISASTER; 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.

The combination of hazards, vulnerability and inability to reduce the potential negative consequences of risk results in disaster.

A disaster is defined as a "sudden or great misfortune" or simply "any unfortunate event." More precisely, a disaster is "an event whose timing is unexpected and whose consequences are seriously destructive." These definitions identify an event that includes three elements:

* Suddenness
* Unexpectedness
* Significant destruction and/or adverse consequences

However, a fourth element, lack of foresight or planning, is sometimes added. Disasters occur with unnerving frequency. Their adverse consequences increase for those who do not prepare for predictable contingencies.

CORRELATION BETWEEN PERSONAL HYGIENE AND DISASTER

After or during a disaster your risk of becoming ill from diseases or infections go way up therefore it is important that the maintenance of personal hygiene and a hygienic environment are the biggest priority after or during the disaster.