

CITY SCHOOL OF EDUCATIONAL INSTITUTE PANDHURNA

OPEN BOOK EXAMINATION 2020-21

CLASS-12TH

SUBJECT :-BIOLOGY

Time :- 3hr

Marks :- 70

Q .1 Choose the correct option :

(5 Mark)

1. Which of the following groups is formed only of the hermaphrodite organisms?
(a) Earthworm, tapeworm, housefly, frog
(b) Earthworm, tapeworm, sea horse, housefly
(c) Earthworm, leech, sponge, roundworm
(d) Earthworm, tapeworm, leech, sponge
2. Which of the following options shows bisexual animals only?
(a) Amoeba, sponge, leech
(b) Sponge, cockroach, Amoeba
(c) Earthworm, sponge, leech
(d) Tapeworm, earthworm, honeybee
3. Meiosis does not occur in
(a) asexually reproducing diploid individuals
(b) sexually reproducing haploid individuals
(c) sexually reproducing diploid individuals
(d) all of these.
4. Which of the following organisms has the highest number of chromosomes?
(a) Housefly
(b) Butterfly
(c) Ophioglossum
(d) Onion
- 5 In flowering plants, both male and female gametes are non-motile. The method to bring them together for fertilisation is
(a) water
(b) air
(c) pollination
(d) apomixes

Q 2 Fill in the blanks:

(5 MARK)

1. of the pollen grain divides to form two male gametes
2. What is the function of germ pore.....
3. Megasporangium along with its protective integuments is called.....
4. When micropyle, chalaza and hilum lie in a straight line, the ovule is said to be.....
5. Part of the gynoecium which receives the pollen is called.....

Q 3 Answer in one word/sentence:

(5 MARK)

1. After ovulation Graafian follicle regresses into.
2. A human female reaches menopause around the age of.
3. In oocyte secondary maturation occurs in.
4. Write law to place of Fera?
5. Which one of the following is not a male accessory gland ?

Q 4 Match the following :

(5 MARK)

- | | |
|------------------------|----------------------|
| ‘A’ | ‘B’ |
| 1. Intrauterine device | (a) Male sterility |
| 2. Vasectomy | (b) Venereal disease |

- | | |
|---------------------------------|------------------------|
| 3. Syphilis | (c) MTP |
| 4. sexually transmitted disease | (d) copper-T |
| 5. Induced abortion | (e) Treponema pallidum |

Q 5 True/False

(5 MARK)

1. Wild type of allele ids always recessive.
2. All the gametes of recessive parent have recessive genes.
3. Genes are not located on chromosomes in a linear fashion.
4. Sometimes the organism having deferent genotype, has the same phenotype.
5. Lamp brush chromosomes are found in the salivary gland of drosophila.

Q 6.Very short answer type question :-

(ANY FIVE 2 MARK)

- i.) What are the two inherent characteristics of amoeba and yeast that favour asexual reproduction in them?
- ii) The offsprings produced by asexual reproduction are referred to as clones". Why?
- iii). Among the annual and the perennial plants, which one has a shorter juvenile period. Explain.
- iv.) Is sexual reproduction hindered by the presence of a large number of chromosomes in an organism?
- v.) What is common in the function performed by nucellus and cotyledon?
- vi.) Which regions of pistil form fruits and seeds?

Q 7.Short answer type question :-

(Any five 4 MARK)

- i.) Explain about the pollination occurring in the chasmogamous flowers.
- ii.) What are the characteristics of wind, water and insect-pollinated flowers?
- iii.) What are the functions of a flower?
- iv.) What is foetal ejection reflex? How does it cause parturition?
- v.) Why is breastfeeding recommended during the initial stages of infant growth?
- vi.) Write the main functions each of testis and ovary?
- vii.) Which reproduction related aspects, should be taught at the school level?

Q 8.Long answer type question:-

(Any three 5 Mark)

- i.) Describe the individuals with the following chromosomal abnormalities:
 1. Trisomy at chromosome 21
 2. XXY
 3. XO
- ii.) .Why did scientists select fruit flies for his genetics experiments?
- iii) Explain in detail the difference between the meiotic division of oogenesis and spermatogenesis.
- iv) Explain in detail the various developmental stages of the zygote until implantation with suitable diagrams.
- v) Describe any three assisted reproductive techniques practised to treat infertility.?
- vi) Why should sex education be introduced to school-going children? List any five reasons?
- vii.) Explain the process of gametogenesis in animals with suitable examples?