

COMMON FIRST MID-TERM TEST - 2019

TC

Standard XII

Reg.No.

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Time: 1.30 hours.

BIOLOGY

Marks: 50

Part - I - Bio-Botany (25 marks)

I. Choose the correct answer:

8 x 1 = 8

1. First cell of male gametophyte in angiosperm is
 - a) microspore
 - b) megaspore
 - c) nucleus
 - d) primary endosperm nucleus
2. Parthenocarpic fruits lack
 - a) endocarp
 - b) epicarp
 - c) mesocarp
 - d) seed
3. Assertion (A) : Sporopollenin preserves pollen in fossil deposits.
Reason (R) : Sporopollenin is resistant to physical and biological decomposition
 - a) A is true, R is false
 - b) A is false, R is true
 - c) both A and R are not true
 - d) both A and R are true
4. Assertion (A) : Gametes are never hybrid.
Reason (R) : Law of independent assortment.
 - a) A is false, R is true
 - b) A is true, R is false
 - c) both A and R are true
 - d) both A and R are not true
5. Match the correct pair:
 - a) Plant height - Inflated
 - b) Seed shape - Tall
 - c) Pod colour - Wrinkled
 - d) Flower position - Axial
6. Which one of the following is an example of polygenic inheritance?
 - a) flower colour in mirabilis jalapa
 - b) production of male honey bee
 - c) pod shape in garden pea
 - d) skin colour in humans
7. If haploid number in a cell is 18, the double monosomic and trisomic number will be
 - a) 35 and 37
 - b) 34 and 38
 - c) 37 and 35
 - d) 17 and 18
8. In nucleotide substitution, purine to purine (A → G) or pyrimidine to pyrimidine (T → C) arrangement is
 - a) transition
 - b) insertion
 - c) transversion
 - d) deletion

II. Answer any 3 questions:

3 x 2 = 6

9. Define Protandy.
10. What are clones?
11. What is mellitophily?
12. What is back cross?
13. Define gene mapping.

III. Answer any 2 questions:

2 x 3 = 6

14. List out the three functions of tapeworm.
15. Draw and label the monocot seed - *Oryza sativa*.
16. Write any three reasons for Mendel's successes in his breeding experiment.
17. Define Crossing over.

IV. Answer any one of the following:

1 x 5 = 5

18. a) With a suitable diagram explain the structure of an Ovlule.

(or)

- b) Write the significance of Ploidy.

Part - II - Bio-Zoology (25 marks)

I. Choose the correct answer:

8 x 1 = 8

- Assertion (A) : Off springs produced by asexual reproduction are genetically identical to the parent.
Reason (R) : Asexual reproduction involves only by mitosis not meiosis.
a) Both (A) and (R) are true and (R) is correct explanation for (A)
b) Both (A) and (R) are true but (R) is not the correct explanation for (A)
c) If (A) is true but (R) is false
d) If both (A) and (R) are false
- In which of the following organism the process apolysis takes place?
a) taenia solium b) hydra c) planeria d) paramecium
- Select the correct option from the codes given below:
A) Copper releasing IUD - i) LNG - 20
B) Hormone releasing IUD - ii) Lippas loop IUD
C) Non-medicated IUD - iii) Saheli
D) Mini pills - iv) Multiload-375
a) A - iv, B - ii, C - i, D - iii b) A - iv, B - i, C - iii, D - ii
c) A - i, B - iv, C - ii, D - iii d) A - iv, B - i, C - ii, D - iii
- Genetal warts caused by
a) HPV b) HBU c) HIV d) HAV
- The foetal membrane that forms the basis of the umbilical cord is:
a) allantois b) amnion c) chorion d) yolksac
- Colostrum is rich in
a) IgE b) IgA c) IgD d) IgM
- The ovary remains attached to the pelvic wall and the uterus by an ovarian ligament called
a) mesarchium b) mesosalpinx c) mesovarium d) myometrium
- Which of the following hormone causes the "Let-Down Reflex"?
a) prolactin b) oxytocin c) relaxin d) hPL

II. Answer any 3 questions:

3 x 2 = 6

- What is inhibin? Mention its functions.
- Expand the following: FSH, LH, hCG, hPL
- In spermatogenesis, how many spermatozoa produced from 500 primary spermatocyte? Mention the type of cell division for that process.
- What is regeneration? Mention its types.
- List out different types of Natural contraception methods.

III. Answer any 2 questions:

2 x 3 = 6

- Draw and label the diagram of Human Ovum.
- Write the functions of Foetoscope.
- Differentiate: Ovulation and Spermiation
- Define : External fertilization and internal fertilization

IV. Answer briefly:

1 x 5 = 5

- Explain the process of Oogenesis with proper illustrations.

(or)

Explain any two Assisted Reproductive Technology.
