



Padalsalai's Telegram Groups!

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FIRST HALF TEST – 1 (JAN)**Date:****XII Standard -****Max. Marks: 70****Exam No.:****Subject : BIOLOGY****Time: 2.30 Hrs.****SECTION – A (BIO-BOTANY)****I. Choose the correct answer:****8 x 1 = 8**

- Choose the correct statement(s) about tenuinucellate ovule
 - Sporogenous cell is hypodermal
 - Ovules have fairly large nucellus
 - sporogenous cell is epidermal
 - ovules have many layer of nucellus tissue
- Choose the incorrect pair.
 - Self pollination - Allogamy
 - Monocliny - Bisexual
 - Cicer - Dicot
 - Maize - Scutellum
- Which one of the following is an example of polygenic inheritance?
 - Flower colour in *Mirabilis Jalapa*
 - Production of male honey bee
 - Pod shape in garden pea
 - Skin Colour in humans
- ABO blood group in human is an example of
 - Co dominance
 - Incomplete dominance
 - Dominant epistasis
 - Complementary gene interaction
- The point mutation sequence for transition, transition, transversion and transversion in DNA are
 - A to T, T to A, C to G and G to C
 - A to G, C to T, C to G and T to A
 - C to G, A to G, T to A and G to A
 - G to C, A to T, T to A and C to G
- Self sterility caused by multiple alleles has been reported in -----
 - Pea
 - Drosophila*
 - Maize
 - Nicotiana*
- Some of the characteristics of Bt cotton are
 - Long fibre and resistant to aphids
 - Medium yield, long fibre and resistant to beetle pests
 - High yield and production of toxic protein crystals which kill dipteran pests.
 - High yield and resistant to boll worms
- Solidifying agent used in plant tissue culture is
 - Nicotinic acid
 - Cobaltous chloride
 - EDTA
 - Agar

II. Answer any four of the following questions:**4 x 2 = 8**

- What is epiphyllous bud?
- Define Atavism.
- What are the significances of ploidy?
- Draw a diagram of pBR322.
- What is triple fusion?
- How will you sterilize Explant?

III. Answer any three of the following: (Q.No. 19th is compulsory)**3 x 3 = 9**

- Draw and label the parts of T.S of anther.
- Explain types of crossing over.
- What are restriction enzymes? Explain its types.
- What are the different types of Blotting techniques?
- Write any three applications of biotechnology.

IV. Answer the following:**2 x 5 = 10**

- Explain the events of fertilization. (OR) Describe Dominant epistasis.
- Explain the steps of rDNA technology with diagram. (OR) Explain the protoplast culture with diagram.

SECTION – B (BIO-ZOOLOGY)**I. Choose the best answer****8 x 1 = 8**

1. **Assertion:** Viviparous animals give better protection to their offsprings.
Reason: They lay their eggs in the safe places of the environment.
 - a. If both A and R are true and R is correct explanation for A
 - b. If 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.
2. Colostrum is rich in
 - a. Ig E
 - b. Ig A
 - c. Ig D
 - d. Ig M
3. Select the incorrect action of hormonal contraceptive pills from the following
 - (a) Inhibition of spermatogenesis.
 - (b) Inhibition of ovulation.
 - (c) Changes in cervical mucus impairing its ability to allow passage and transport of sperms.
 - (d) Alteration in uterine endometrium to make it unsuitable for implantation.
4. Turners' syndrome has
 - a) Small uterus
 - b) Rudimentary ovaries
 - c) Underdeveloped breasts
 - d) All of these
5. DNA and RNA are similar with respect to
 - a) Thymine as a nitrogen base
 - b) A single-stranded helix shape
 - c) Nucleotide containing sugars, nitrogen bases and phosphates
 - d) The same sequence of nucleotides for the amino acid phenyl alanine
6. Evolutionary history of an organism is called
 - a) ancestry
 - b) ontogeny
 - c) phylogeny
 - d) paleontology
7. The first life on earth originated
 - a) in air
 - b) on land
 - c) in water
 - d) on mountain
8. **Assertion:** Head of the sperm consists of acrosome and mitochondria.
Reason: Acrosome contains spiral rows of mitochondria.
 - a. If both A and R are true and R is correct explanation for A
 - b. If 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.

II. Answer any four of the following.**4 x 2 = 8**

9. What is Gemmule?
10. What is the role of inhibin?
11. What is coitus interrupts?
12. What is the role of galactose transferase?
13. What is triplet code?
14. What are the periods seen in Mesozoic era?

III. Answer any three of the following. Q.No. 19 is compulsory.**3 x 3 = 9**

15. What is paedogenetic parthenogenesis?
16. What is the reason for the complexity of female reproductive system?
17. What is male infertility?
18. Write the formation of Melanin pigment.
19. What is lagging strand?

IV. Answer the following.**2 x 5 = 10**

20. Describe Menstrual cycle. **(OR)** Describe Assisted Reproduction technology.
21. Describe ABO system of blood grouping. **(OR)** Describe the mechanism of translation.

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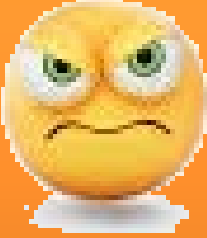


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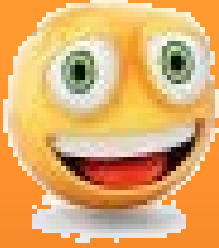


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