

COMMON QUARTERLY EXAM-2022

A

3.00 hrs

Standard XII BIOLOGY

Reg No. _____

Marks : 75

Part - I (Bio-Botany) - 35 marks

Section - I

I. Choose the correct answer:
 $8 \times 1 = 8$

1. The radicle including root cap is covered by a protective sheath called _____
 - a) scutellum
 - b) coleoptile
 - c) coleorhizae
 - d) plumule
2. An eminent Indian embryologist is
 - a) S.R.Kashyap
 - b) P.Maheswari
 - c) M.S.Swaminathan
 - d) K.C.Mehta
3. Which one of the following is an example of polygenic inheritance?
 - a) production of male honey bee
 - b) flower colour in *mirabilis jalapa*
 - c) pod shape in garden pea
 - d) skin colour in humans
4. Triticale, the First Man Made cereal is an
 - a) octoploid
 - b) hexaploid
 - c) (a) and (b)
 - d) diploid
5. ECORI cleaves DNA at
 - a) AGGGTT
 - b) GTATATC
 - c) GAATTTC
 - d) TATA-GC
6. Which are degradable biopolymers?
 - a) Cry 1 AC and DMH-11
 - b) PHAs and PHB
 - c) GFP and PGA
 - d) DMH and HT
7. Virus free plants are developed from
 - a) organ culture
 - b) meristem culture
 - c) protoplast culture
 - d) cell suspension culture
8. The term mutation was introduced by
 - a) Wilhelm Roux
 - b) Hugo de Vries
 - c) T.Boveri
 - d) W.S.Sutton

Section - II

II. Answer any 4 questions.
 $4 \times 2 = 8$

9. What are multiple alleles?
10. Draw and label the parts of Mature Pollengrain.
11. What is genetic mapping?
12. What is Bioremediation?
13. What is embryoids?
14. Write any two benefits of genetically modified foods.

Section - III

 $3 \times 3 = 9$

- III. Answer any 3 questions. (Q.No.19 is compulsory)
15. Describe incomplete dominance.
16. Give the significance of ploidy.
17. Briefly describe PBR 322 plasmid.
18. Draw and label the parts of structure of ovule.
19. Write any three applications of plant tissue culture.

Section - IV

 $2 \times 5 = 10$

- IV. Answer all the questions.
20. a) Discuss the steps involved in microsporogenesis. (OR)
 b) What is crossing over? Give importance of it.
21. a) Describe the applications of Bio-Technology. (OR)
 b) Explain the basic concepts of tissue culture.

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Part - II (Bio-Zoology) - 35 marks

Section - I

Total Marks

8x2=16

1. Choose the correct answer:

1. The site of embryo implantation is the
 a) peritoneal cavity b) uterus c) vagina d) fallopian tube
2. A contraceptive pill prevents ovulation by
 a) blocking fallopian tube b) stimulating release FSH and LH
 c) inhibiting the release of FSH and LH
 d) causing immediate degeneration of released ovum
3. In an accident, there is a great loss of blood and there is no time to analyse the blood group, which blood group can be safely transferred?
 a) O and Rh negative b) O and Rh positive
 c) B and RH negative d) AB and RH positive
4. An operon is a
 a) cluster of structural genes with related functions
 b) protein that suppresses gene expression
 c) protein that accelerates gene expression
 d) gene that switches other genes on or off
5. The age of fossils can be determined by
 a) electron microscope b) carbon dating
 c) weighing the fossils d) analysis of bones
6. DNA finger printing technique was first developed by
 a) Jacob and Monad b) Francis Crick
 c) Robert Holley d) Alec Jeffreys
7. The sporozoites of plasmodium vivax are formed from
 a) gametocytes b) sporoblasts c) oocysts d) sporozoites
8. Allergy involves
 a) IgE b) IgG c) IgA d) IgM

Section - II

4x2=8

II. Answer any 4 questions.

9. What are conjugants?
 10. What is colostrum? Write its significance.
 11. Write about Amniocentesis.
 12. What are Holandric genes?
 13. Write the central dogma of protein synthesis in molecular biology.
 14. What is Kala-azar.

Section - III

3x3=9

III. Answer any 3 questions. (Q.No.19 is compulsory)

15. Draw a neat diagram of structure of mature sperm and label the parts.
 16. Reproductive and Child Health Care (RCH). Write a 3 major tasks of this programme.
 17. Write any 3 objections to Darwinism.
 18. Write the Table of Genetic basis of the human ABO blood group.
 19. What are the Applications of Karyotyping?

Section - IV

2x5=10

IV. Answer all the questions.

20. a) Define spermatogenesis and oogenesis and Describe the process with neat diagram. (OR)
 b) Explain the Autosomal Aneuploidy in human being.
 21. a) Write the salient features of Genetic code. (OR)
 b) Explain any 5 viral diseases. (Tabular column)
