

KENDRIYA VIDYALAYA SANGATHAN.CHENNAI REGION
BIOLOGY

REVISION EXAMINATION.

DATE: 15/2/13.

Allowed: 3 hours]

[Maximum marks: 70

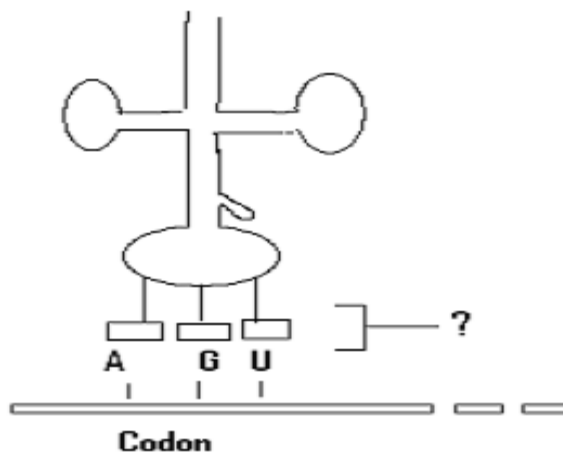
General Instruction:

- (i) All questions are compulsory.
- (ii) This question paper consists of four Sections A, B, C and D. section A contains 8 questions of one mark each, Section B is of 10 questions of two marks each, Section C is of 9 questions of three marks each and Section D is of 3 questions of five marks each.
- (iii) There is no overall choice. However, an internal choice has been provided in one question of 2 marks weightage. A student has to attempt only one of the alternatives in such questions.
- (iv) Wherever necessary, the diagrams drawn should be neat and properly labeled.

Section A

1. A bilobed dithecous anther has 100 microspore mother cells per microsporangium. How many microspores this anther can produce?
2. What are chasmogamous flowers? Can cross pollination occur in cleistogamous flowers? Give reasons.
3. Give the name of carcinogenic dye which is used to stain the gel to make DNA visible under UV.
4. If the sequences of Coding strand in a Transcription unit is written as follows.
5' --- ATGCATCATGCATGCATA 3'.
Write down the sequences of m RNA.

5. Why is the polar region not a suitable habitat for tiny humming birds?
6. What was the speciality of the milk produced by the Transgenic cow Rosie?
7. write the Anti codon .



8. .What is the Ecological principle behind the biological control method of managing with pest insects?

SECTION B

9. Mention the function and source of following bioactive molecules
 - 1) Cycosporin A
 - 2) Statin.
10. List the specific symptoms of Amoebiasis, name the causal organism.

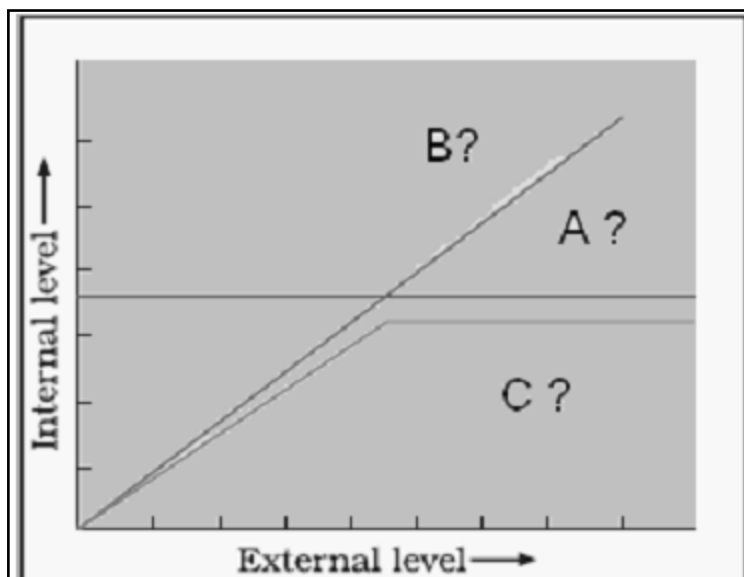
Or

Name the two types of immune systems in a human body.
Why are cell mediated and humoral immunities so called?

11. How does a test cross help to identify the genotype?
12. Why is the interaction of genetically engineered lymphocytes into a ADA deficient patient not a permanent cure? Suggest possible permanent cure.
13. Mention the three techniques that serve the purpose of early diagnosis. What does ELISA stand for.
14. How does RNA Interference help in developing resistance in tobacco plant against nematode infection?
15. Mention the reasons for difference in ploidy of zygote and primary endosperm nucleus in an angiosperm.
16. Fill A, B, C, & D correctly.

Penicilium	A
Hydra	B
C	Gemmules
D	Bulbils

17. What does the graph A, B & C represent with reference to organismic response to Homeostasis



18. DDT content of the water of lake that supplies drinking water to the nearby villages is found to be 0.004 ppm . The Pelican of that area are reported to have 2.6 m of DDT.

Why has the concentration increased in these birds?

What possible harm will this cause to the bird population?

Name the phenomenon.

SECTION C

19. Draw a sectional view of somniferous tube of human and label the parts.

20. What is inbreeding depression and how is caused in organisms?

Write any two advantages of inbreeding.

OR

Name the type of human cell HIV attacks on its entry in to the body. Explain the events that occur in the cell which further leads to cause immuno deficiency syndrome.

21. Give reasons: a) Bottled juices bought from the market are clearer as compared to those made at home.

b) Large holes are found in 'swiss cheese'.

22. Describe the process of decomposition of detritus under following heads:

Fragmentation, Leaching, Catabolism, Humification, and Mineralization.

23



- i) Name the organism in which the vector shown is inserted to get copies of the desired gene.
- ii) Identify the selectable marker in the vector diagram shown above
- iii) How is the coding sequence of galactosidase considered a better marker than the ones identified by you in diagram? Explain.

24. A plant *Antirrhinum majus* with red flower was crossed with another plant of the same species with white flowers. The plants of the F₁ Generation bore pink flowers. Explain the pattern of inheritance with the help of a cross.

25. Explain the pleiotropy with suitable example.

26. a) Explain the process of mutational breeding. Give example.
- b) What are the desirable characters developed in Hybrids of Millets.

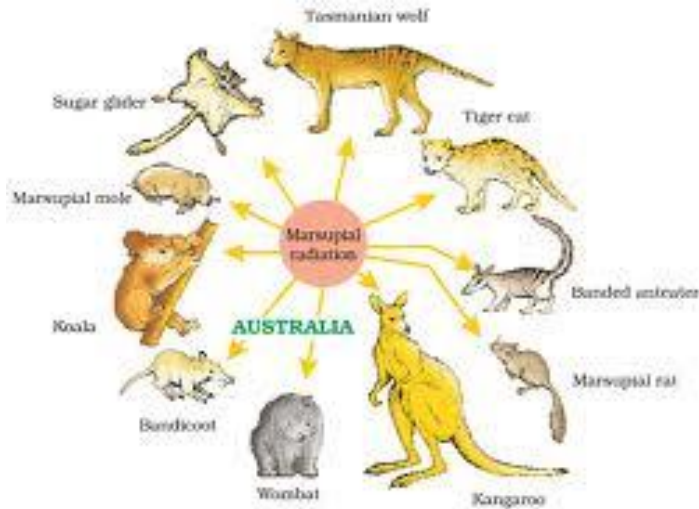


Figure 7.6 Adaptive radiation of marsupials of Australia

27)

- A) Mention the specific geographical region where these organisms are found.
- B) Name and explain the phenomenon that has resulted in the evolution of such diverse species in the region.
- C) Explain the given reasons that the existence of placental wolf and Tasmanian wolf sharing the same habitat

SECTION --- D

28) Give the schematic representation showing the events of the spermatogenesis in human male.

Describe the structure of human sperm and label the parts.

Or

Draw a labeled diagram of the human female reproductive system

Enumerate the events in the ovary of a human female:

- 1) Follicular phase
- 2) Luteal phase of menstrual cycle.

29) How did Alfred Hershey and Martha Chase arrive at the conclusion that DNA is the Genetic material?

Or

In a series of experiments with *Streptococcus* and mice F. Griffith concluded that R-strain bacteria had been transformed. Explain.

- 30) a) Name the metals that are used as catalyst in catalytic converters. b) Why are they fitted in automobiles? Give any two reasons .
- c) Why is CNG better than Diesel? Give reasons (any three)
- d) What is the main problem with switching over to CNG?

(Or)

During an excursion to a botanical garden, the teacher shows an old tree which was on the verge of extinction. As soon as the teacher advanced with the students, some enthusiastic students climbed up the branches ,collecting its leaves . Rajesh instead took photographs of the tree from various angles. The boys mocked at Rajesh while the teacher appreciated him.

- a. What value did Rajesh possess?
- b. Why should we conserve the biodiversity?
- c. How can we conserve the Biodiversity?
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