

HIGHER SECONDARY EXAMINATION SY-2023

SUBJECT -BOTANY

Max. mark-30

Part 1

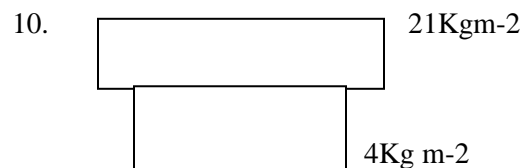
A. Answer any three questions from 1 to 5 Each carry 1 score (3 x 1=3)

1. Innermost wall layers of microsporangium is
a) Epidermis b) Endothecium c) Tapetum d) Middle layers
2. Bt stands for
3. The dye used for visualizing DNS is
4. Phytophagous is an example for which interaction
5. Interconnected food chain is called.....

B. Answer any 9 questions from 6 to 16, Each carry 2 score

6. Select the features of water pollinating plants
a) Feathery stigma
b) Ribbon shaped pollen grains
c) Coloured and attractive flowers
d) Presence of mucilage covering
7. What are restriction sites. Write the restriction site of Eco R1
8. Expand GEAC. Mention its objectives
9. Mortality, Natality, Emigration and Immigration are the factors affecting the population density.

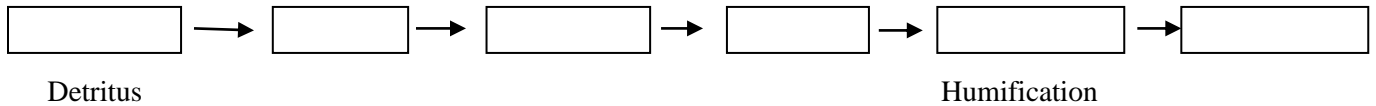
Explain any two factors



Identify the above pyramid and justify your answer

11. Steps involved in the process of decomposition are given below. Construct flow chart showing the correct sequence

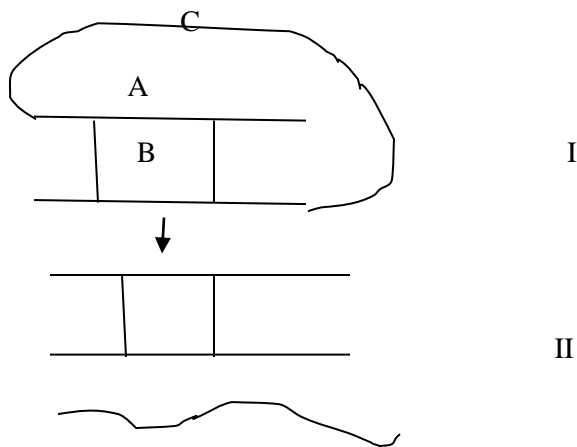
(Detritus, Catabolism, Humification, Fragmentation, Leaching, Mineralisation)



12. Certain seeds are formed without fertilisation. Name the method and give reason

13. Mention any two methods of gene transfer in plants

14.



Observe the above figure

- a) Identify 1 and 2
- b) Distinguish 1 and 2

15. Fill in the blanks with appropriate symbols

SPECIES A	SPECIES B	NAME OF INTERACTION
a	b	Mutualism
+	c	Parasitism
+	0	d

16. Observe the equation given below

$$NPP = GPP - \text{Respiration}$$

- a) What does NPP and GPP stands for
- b) Define Secondary productivity

C Answer any three questions from 17 -20 Each carry 3 mark

17. Double fertilisation and triple fusion are two terms associated with fertilisation in angiosperms

- a) What is double fertilisation
- b) explain triple fusion
- c) Give the ploidy level of endosperm and zygote

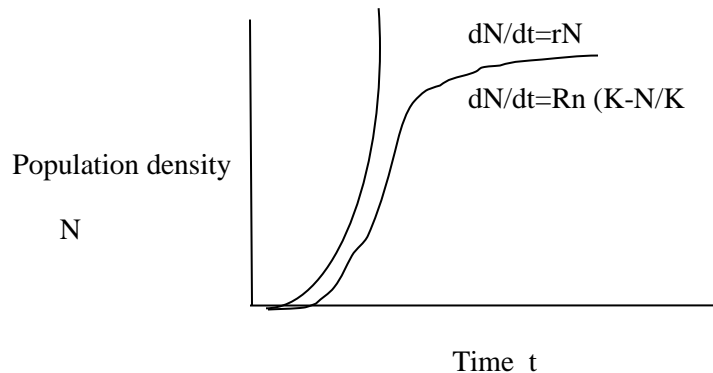
18. Amplification of gene of interest is done using PCR

- a) Expand PCR
- b) The polymerase enzyme used in PCR
- c) In which step the DNA Primer is fixed in template DNA

19. One of the biotechnological method to control parasite infection is RNAi

- a) Explain RNA i
- b) Name the nematode which infect the root of tobacco plant
- c) Name the vector used in this method

20. The following graph shows two types of population growth curve



- a) Name the growth curve
- b) What does r and K stands for the equation given in the figure

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