



BIOLOGY

BOOKS - NEW JYOTHI BIOLOGY (TAMIL ENGLISH)

SAMPLE QUESTION PAPER

Question

1. Fill up the blanks after reading the statement .

The postfertilisation events in angiosperms.

Zygote : Embryo

Ovule :

Ovary :



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2. Destruction of forest leads to the increase of CO_2 in atmosphere. Recently Govt. of India instituted an award for individuals or communities from rural areas that have shown extraordinary courage and dedication in

protecting wildlife.

a. Identify the award.

b. Comment on deforestation and reforestation.



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3. Johny, a Plus Two student is from a tribal colony with lower level of vitamins, minerals and protein deficiency. He wishes to be a plant breeder to help the public by producing new

crops with high levels of vitamins, minerals, protein etc. Identify the phenomenon.



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4. Raju is searching blight resistant plants for his crossing experiments. Unfortunately no such varieties are available.

- a. Suggest a process to create such plants.
- b. Justify your suggested method.



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5. Rinku with a circular DNA contains sequence

5' ← GGATTCC → 3'

3' ← CCTTAAGG → 5'

She wishes to add a new segment of DNA into it.

- Identify the technology she planned.
- Suggest the specific enzyme to make a cut in the DNA with above sequence.
- Name the category of enzyme you suggested.
- How this enzyme identifies the sequence?

e. Draw the cut ends of the DNA with sequence.



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6. Rashid isolated a natural plasmid from a bacterium and is planning to facilitate cloning.

a. What are the minimum requirements for considering the isolated plasmid as a vector?

b. How he identifies whether a foreign DNA is inserted or not after cloning?



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7. Teacher asked Balan to write the principle of RNAi technology. Help him by describing the method.



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8. Gemini opened the fridge in her home and found that a small bottle labelled with rDNA insulin

a. Is it a natural insulin?

b. Identify the major steps involved in this rDNA insulin production.



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9. Given below is the diagram showing the transfer of pollen grains.



a. Identify i and ii with technical terms.

b. Critically evaluate i and ii.



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10. During a study tour teacher showed the primary colonisers on the banks of the river 'Nila'.

a. Identify the succession and justify your answer.

b. List the different stages of the identified succession.



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11. While learning trophic levels in class-room, teacher asked you to explain 'standing crop' to

Raman. Explain.



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12. Raman is learning the post fertilization changes of an angiosperm embryo sac with the help of slides. He identified the egg nucleus and polar nuclei with the help of his teacher.

(a) Name the other nuclei present in the embryo sac .

(b) Help Raman by listing the changes that

take place with egg nucleus and polar nuclei after fertilization .



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13. Industrial effluents and domestic sewage seriously affect fresh water bodies. For protecting aquatic life Govt. of India recently declared an animal as National aquatic animal .

a. Identify the animal.

b. Distinguish biomagnification from eutrophication.



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