



BIOLOGY

BOOKS - SARAS PUBLICATION

GOVT. MODEL SOLVED QUESTION PAPER 2019-20 (4)

Exercise

1. In a male gametophyte, the chromosomal number of generative nucleus is (A) and tube

nucleus is (B).

A. (A) - (n) (B) - (2n)

B. (A) - (2n) (B) - (n)

C. (A) - (2n) (B) - (2n)

D. (A) - (n) (B) - (n)

Answer:



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2. Which one of the following is incorrect regarding chromosomal behaviour during cell division?

A. The alleles of a genotype are found in the same locus of a homologous chromosome.

B. In the S phase of meiotic interphase each chromosome replicates forming two copies of each allele, one on each chromatid.

C. The homologous chromosomes

segregate in metaphase, I thereby

separating two different alleles.

D. In anaphase II of meiosis, separation of

sister chromatid of homologous

chromosomes takes place.

Answer:



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3. Which one of the following is a secondary metabolite?

A. Ethanol

B. Acetic acid

C. Citric acid

D. Toxic pigments

Answer:



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4. Which one of the following is a correct set?

A. Vincristine-Cinchona officinalis- Anti
carcinogen

B. Capsaicin- catharanthus roseus-
Antimalarial

C. Digoxin - Digitalis purpuria-Cardiac tonic

D. Codeine-Capsicum annum -Analgesic

Answer:



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5. Assertion (A): Hypolimnetic layer of water is always cold. Reason(R): The water holds the temperature of soil at the bottom of pond.

A. (A) correct, (R) wrong

B. Both (A) and (R) are correct, but (R) is not the correct explanation of (A)

C. Both (A) and (R) are correct, (R) is not the correct explanation of (A)

D. Both (A) and (R) are wrong.

Answer:



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6. Which plant pods explodes with a loud noise like cracker?

A. Boerhaavia

B. Cleome

C. Bauhinia vahlii

D. Ecballium elaterium

Answer:



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7. Which one of the following food chain refers inverted pyramid?

A. Grasses → Rats *raar* Snake *raar* Hawk

B. Banyan tree *raar* Bird *raar* Beetles *raar*

Fungi

C. Phytoplanktons *raar* Zooplanktons*raar*

Fishes *raar* Snakes

D. Plants*raar* Rabbits *raar* Fox*raar* Hawk

Answer:



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8. Which one of the following is a live fence of fodder?

A. *Gliricidia sepium*

B. Nerrium

C. Aloe vera

D. Chrysanthemum

Answer:



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9. Which method of artificial vegetative reproduction is good in plants? Give reason for Your answer.



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10. Differentiate tetrasomy from tetraploidy.



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11. Define electroporation method of gene transfer.



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12. By using gene manipulation research we produce varieties of organisms. What is the need of biosafety in it?



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13. In different food chains of different ecosystem the placement of man is not mentioned you give placement in a suitable food chain and give reason for your answer.



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14. Grafting is a method of production of hybrid plants but not the method of reproduction. Do you agree this statement? Give logic reason for your answer.



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15. How does Rhytidome protect the plant against forest fire?



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16. In animals, loss of energy occurs due to evaporation of heat. How?



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17. Write the direct and indirect effects of ozone depletion on man.



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18. Explain the pattern of inheritance of a dominant gene suppressed by another one dominant gene.



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19. Explain the role of *Agrobacterium* as a vector in gene transfer.



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20. Compare mass selection with pure line selection with the help of a schematic diagram.



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21. What are the King and Queen of spices?
Explain about them their uses.



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22. In Hydra, the buds develop from

A. Ectoderm layer only

B. Ectoderm and endoderm layers

C. Ectoderm , mesoderm and endoderm
layers

D. ectoderm and mesoderm layers

Answer:



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23. Which one of the following is an incorrect statement regarding uterus?

A. Is is an inverted pear shaped structure

B. It lies between urinary bladder and rectum

C. The uterus opens into the vagina through fundus

D. The wall of uterus has three layers.

Answer:



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24. Assertion(A): Tubectomy is the surgical sterilisation in women. Reason(R): It blocks the transport of the gametes and prevents conception.

A. (A) Correct, (R) Wrong

B. (A) Wrong, (r) correct

C. (A) correct, but (R) does not explain (A)

D. (A) correct, (R)explains (A)

Answer:



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25. What is the sex of *Drosophila*, which contains 12 autosomes and 3 X chromosomes?

A. Male

B. Female

C. Gynandromorphs

D. Super male

Answer:



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26. What type of immunity, when interferons are produced by WBCs in our body?

- A. Interferons are not produced in our body it is a synthetic drug
- B. It is a type of passive immunity
- C. IT is a natural immunity

D. IT is and artificial immunity.

Answer:



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27. During sporulation *Bacillus thuringiensis* produces a crystal protein called (A) which is encoded by (B).

A. A-Enterotoxin: B- lac operon genes

B. A-neurotoxin, B- Fab genes

C. A-Alpha toxin , B PCR genes

D. A-delta endotoxin, B Cry genes

Answer:



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28. Ecosphere means.

A. All the physical and biological environment of an ecosystem

B. All the biological organisms of the earth which interact with the physical environment.

C. The physio-chemical environment of the earth.

D. Smallest part of an ecosystem in which organisms interact with physical environment.

Answer:



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29. Rich biodiversity is seen near equator. The reason is.

A. most suitable temperature for metabolism of living things.

B. Cyclone does not occur periodically.

C. extreme temperature (@40c) during the summer is favourable for plants.

D. Lengthy photoperiodism is useful for photosynthesis.

Answer:



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30. Why do we call parthenogenesis as a special type of sexual reproduction in animals?



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31. Write the tertiary stage symptoms of syphilis.



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32. There are no tRNAs for stop codons. Give reason.



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33. A 10 year old child is suffering from chicken pox. Is this infection good or bad? Give reason for your answer.



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34. Why do we call some strains of bacteria as 'super bug'?



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35. Ecosan toilets are an excellent substitute for chemical fertilizers. How?



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36. Write about Wiener hypothesis?



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37.5 → 3 direction of a nucleic acid. Write the meaning of 5 and 3 in the above Statement.



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38. Why is typhoid called as enteric fever?



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39. How are the different fish communities living in a pond ecosystem?



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40. Describe species-area relationship on log scale.



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41. Explain the role of placenta during pregnancy.



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42. What does 'RNA world' refer to?



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43. Explain natural selection through industrial melanism.



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44. What is basis of PCR in clinical diagnosis.



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