



BIOLOGY

BOOKS - ARIHANT PUBLICATION

PRACTICE SET 3

Question Bank

1. Which of the following is the correct sequence of events in the origin of life

I. Formation of protobionts

II. Synthesis of organic monomers

III. Synthesis of organic polymers

IV. Formation of DNA-based genetic systems

A. I, II, III, IV

B. I, III, II, IV

C. II, III, I, IV

D. II, III, IV, I

Answer: C



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2. Biochemical Oxygen Demand (BOD) may not be a good index for pollution in water bodies receiving effluents from

- A. domestic sewage
- B. dairy industry
- C. petroleum industry
- D. sugar industry

Answer: C



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3. Select the incorrect statement.

A. LH and FSH triggers ovulation in ovary

B. LH and FSH decrease gradually during
the follicular phase

C. LH triggers secretion of androgens from
the Leydig cells

D. FSH stimulates the Sertoli cells which
help in spermatogenesis

Answer: B





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4. Pick out the correct statements.

I. Haemophilia is a sex-linked recessive disease.

II. Down's syndrome is due to aneuploidy.

III. Phenylketonuria is an autosomal recessive gene disorder.

IV. Sickle-cell anaemia is an X - linked recessive gene disorder.

A. II and IV

B. III and IV

C. I, II and III

D. I and IV

Answer: C



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5. Match the terms in Column I with their description in Column II and choose the

correct option

Column I

Column II

- | | |
|---------------------------|--|
| (a) Dominance | (i) Many genes govern a single character |
| (b) Codominance | (ii) In a heterozygous organism only one allele expresses itself |
| (c) Pleiotropy | (iii) In a heterozygous organism both alleles express themselves fully |
| (d) Polygenic inheritance | (iv) A single gene influences many characters |

A.

Codes	
A B C D	A B C D
(1) 2 3 4 1	(2) 4 1 2 3
(3) 4 3 1 2	(4) 2 1 4 3

B.

Codes	
A B C D	A B C D
(1) 2 3 4 1	(2) 4 1 2 3
(3) 4 3 1 2	(4) 2 1 4 3

C.

Codes	
A B C D	A B C D
(1) 2 3 4 1	(2) 4 1 2 3
(3) 4 3 1 2	(4) 2 1 4 3

D.

Codes	
A B C D	A B C D
(1) 2 3 4 1	(2) 4 1 2 3
(3) 4 3 1 2	(4) 2 1 4 3

Answer: A



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6. Seed formation without fertilization in flowering plants involves the process of

- A. budding
- B. somatic hybridisation
- C. apomixis
- D. sporulation

Answer: C



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7. Assertion: Ecological sanitation is a sustainable system for handling human excreta.

Reason: It is a practical and hygienic method of using dry composting toilets.

A. Both Assertion and Reason are true and

Reason is the correct explanation of the

Assertion

- B. Both Assertion and reason are true but Reason is not the correct explanation of the Assertion
- C. Assertion is true, but Reason is false
- D. Both Assertion and Reason are false

Answer: A



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8. Select the correct statement.

A. Salvinia, Ginkgo and Pinus are gymnosperms

B. Sequoia is one of the tallest trees

C. The leaves of gymnosperms are not well adapted to extremes of climate

D. Gymnosperms are both homosporous and heterosporous

Answer: B



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9. Which of the following is not a characteristic feature during mitosis in somatic cells?

- A. Disappearance of nucleolus
- B. Chromosome movement
- C. Synapsis
- D. Spindle fibres

Answer: C



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10. Spindle fibres attach on to

- A. kinetochore of the chromosome
- B. centromere of the chromosome
- C. kinetosome of the chromosome
- D. telomere of the chromosome

Answer: A



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11. In a chloroplast the highest number of protons are found in

A. lumen of thylakoids

B. intermembrane space

C. antennae complex

D. stroma

Answer: B



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12. Which of the following statements is not true for cancer cells in relation to mutations

A. Mutations destroy telomerase inhibitor

B. Mutations inactivate the cell control

C. Mutations inhibit production of telomerase

D. Mutations in proto-oncogenes accelerate the cell cycle

Answer: C





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13. Which of the following most appropriately describes haemophilia?

- A. X-linked recessive gene disorder
- B. Chromosomal disorder
- C. Dominant gene disorder
- D. Recessive gene disorder

Answer: A



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14. Following are the two statements regarding the origin of life :

A. The earliest organisms that appeared on the earth were non-green and presumably anaerobes.

B. The first autotrophic organisms were the chemoautotrophs that never released oxygen.

Of the above statements which one of the following options is correct ?

A. II is correct, but I is false

B. Both I and II are correct

C. Both I and II are false

D. I is correct, but II is false

Answer: B



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15. Assertion: Ureotelism occurs when there is excess availability of water.

Reason: Elasmobranches are ureotelic.

- A. Both Assertion and Reason are true and Reason is the correct explanation of the Assertion
- B. Both Assertion and reason are true but Reason is not the correct explanation of the Assertion
- C. Assertion is true, but Reason is false
- D. Both Assertion and Reason are false

Answer: D



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16. A river with an inflow of domestic sewage rich in organic waste may result in

A. increased population of aquatic food web organisms

B. an increased production of fishes due to biodegradable nutrients

C. death of fishes due to lack of oxygen

D. drying of the river very soon due to algal bloom

Answer: C



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17. Select the incorrect statement.

A. Bacterial cell wall is made up of peptidoglycan

B. Pili and fimbriae are mainly involved in motility of bacterial cells

C. Cyanobacteria lack flagellated cells

D. Mycoplasma is a wall-less microorganism

Answer: B



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18. Select the mismatch.

A. Gas vacuoles- Green bacteria cells

B. Large central vacuoles- Animal cells

C. Protists- Eukaryotes

D. Methanogens- Prokaryotes

Answer: B



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19. The process which makes major difference between C_3 and C_4 plants is

- A. glycolysis
- B. Calvin cycle
- C. photorespiration
- D. respiration

Answer: C



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20. During cell growth, DNA synthesis takes place in



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21. Which one of the following statements is not correct?

A. Offspring produced by the asexual reproduction are called clone

B. Microscopic, motile asexual reproductive structures are called zoospores

C. In potato, onion, and ginger, the plantlets arise from the internodes present in the modified stem

D. Water hyacinth, growing in the standing water, drains oxygen from water that leads to the death of fishes

Answer: C



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22. study the four statements (A-D) given below and select the two correct ones out of them

(A) Definition of biological species was given by Ernst mayr

(B) photoperiod does not affect reproduction in plants

© Binomial nomenclature system was given by

Ernst Whittaker

(D) In unicellular organisms, reproduction is synonymous with growth

The two correct statements are

A. I and II

B. II and III

C. I and IV

D. I and IV

Answer: C



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23. Match the stages of meiosis in Column-I to their characteristic feature in Column-II and select the correct option using the codes given below:

Column-I	Column-II
(a) Pachytene	(i) Pairing of homologous chromosomes
(b) Metaphase-I	(ii) Terminalization of chiasmata
(c) Diakinesis	(iii) Crossing over takes place
(d) Zygotene	(iv) Chromosomes align at equatorial plate

A.

Codes	
A B C D	A B C D
(1) 3 4 2 1	(2) 1 4 2 3
(3) 2 4 3 1	(4) 4 3 2 1

B.

Codes	
A B C D	A B C D
(1) 3 4 2 1	(2) 1 4 2 3
(3) 2 4 3 1	(4) 4 3 2 1

C.

Codes	
A B C D	A B C D
(1) 3 4 2 1	(2) 1 4 2 3
(3) 2 4 3 1	(4) 4 3 2 1

D.

Codes			
A	B	C	D
(1)	3	4	2 1
(3)	2	4	3 1

A	B	C	D
(2)	1	4	2 3
(4)	4	3	2 1

Answer: A



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24. Read the following statement and choose the correct option.

A. Acrosome of sperm contains lysins

B. Spirally arranged mitochondria are

found in the midpiece of sperm

C. teleost sperms have acrosome

D. Acrosome does not have nucleus

Answer: B



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