



BIOLOGY

BOOKS - ARIHANT PUBLICATION

SOLVED PAPER 2017

Question Bank

1. During the light dependent reactions of photosynthesis (photophosphorylation) light energy is converted to the chemical energy through the process of chemiosmosis in the chloroplast. Which of the following statement is false?

- A. The electron carriers of photophosphorylation are located in the thylakoid membrane of the chloroplast
- B. Protons diffuse through protein channel, which are ATP synthase molecule
- C. During photophosphorylation, the chloroplast stroma become more acidic than the interior of the thylakoid membrane
- D. ATP is synthesised from ADP and P_i on the stroma side of the thylakoid membrane in chloroplast

Answer: C



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2. How many meiotic divisions are necessary to form 200 seeds?

A. 200

B. 250

C. 300

D. 350

Answer: A



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3. How many Calvin cycles are required to produce 5 Molecules of glucose ?

A. 60

B. 15

C. 30

D. 90

Answer: C



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4. Which of the following ,reduction of NAD does not occur?

A. Isocitric acid \rightarrow α -ketoglutaric acid

B. Malic acid \rightarrow oxaloacetic acid

C. Pyruvic \rightarrow acetyl coenzyme

D. Succinic acid \rightarrow fumaric acid

Answer: D



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5. Which of the following is a purely motor nerve?

- A. Vagus
- B. Facial
- C. Abducens
- D. Trigeminal

Answer: C



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6. Genetic drift operates in

- A. small isolated population
- B. large isolated population
- C. fast reproductive population
- D. slow reproductive population

Answer: B



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7. Which of the following is characteristic of phospholipids of plasma membrane ?

- A. One non-polar head and two polar tails

B. One polar head and two non-polar tails

C. Two non-polar heads and one polar tail

D. Two polar heads and one non-polar tail

Answer: A

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8. Assertion : 7-celled, 8 nucleate and monosporic embryo sac is called polygonum type of embryo sac

Reason : It was discovered by Hofmesister for the first time in polygonum.

A. Both Assertion and Reason are true and Reason is the correct explanation of Assertion

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

Answer: A

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9. A sewage treatment process in which a part of decomposer bacteria present in the waste is recycled into the starting of the process is called as

- A. cyclic treatment
- B. activated treatment

C. primary treatment

D. tertiary treatment

Answer: A



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10. Which of the following three statements is correct about RBC in mammals?

I.Red blood cells circulating in the blood have nucleus.

II. Red blood cells have similar function to white blood cells.

III. Red blood cells are produced by the bone marrow.

A. I and II

B. II and III

C. Only III

D. I,II and III

Answer: C



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11. Formation of non-functional mehtaemoglobin causes blue-baby syndrome. This is due to:

A. excess of arsenic concentration in drinking water

B. excess of nitrates in drinking water

C. deficiency of Iron in food

D. increased methane content in the atmosphere

Answer: B



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12. Which of the following are correctly matched ?

Animal	Morphological Features
I. Crocodile	→ Four-chambered heart
II. Sea urchin	→ Parapodia
III. <i>Lemur</i>	→ Metagenesis
IV. <i>Obelia</i>	→ Thecodont

A. I, III and IV

B. II , III and IV

C. I and IV

D. only I

Answer: D



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13. Which cells of crypts of Lieberkuhn secrete antibacterial lysozyme

- A. Argentaffin cells
- B. Paneth cells
- C. Zymogen cells
- D. Kupffer cells

Answer: B



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14. Which one from those given below is the period of Mendel's hybridisation experiments?

A. 1856-1863

B. 1840-1850

C. 1857-1869

D. 1870-1877

Answer: A



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15. Flowers which have single ovule in the ovary and are packed into inflorescence are usually pollinated by

A. water

B. bee

C. wind

D. bat

Answer: B



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16. Among the following characters, which one was not considered by Mendel in his experiment on pea

A. Stem-Tall or Dwarf

B. Trichomes-Glandular or Non-glandular

C. seed- Green or Yellow

D. Pod-Inflated or Constricted

Answer: B

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17. Receptor sites for neurotransmitters are present on :

- A. membranes of synaptic vesicles
- B. pre-synaptic membrane
- C. tips of axons
- D. post-synaptic membrane

Answer: D

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18. The function of copper ions in copper releasing IUD's is
- A. they suppress sperm motility and fertilising capacity of sperms
 - B. they inhibit gametogenesis
 - C. they make uterus unsuitable for implantation
 - D. they inhibit ovulation

Answer: A



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19. Lungs are made up of air-filled sacs, the alveoli . They do not collapse even after forceful expiration because of

A. Residual Volume (RV)

B. Inspiratory Reserve Volume (IRV)

C. Tidal Volume (TV)

D. Expiratory Reserve volume (ERV)

Answer: A

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20. An example of colonial alga is

A. Chlorella

B. Volvox

C. Ulothrix

D. Spirogyra

Answer: B



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21. Zygotic meiosis is characteristic of

A. Marchantia

B. Fucus

C. Funaria

D. Chlamydomonas

Answer: D



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22. Induction of flowering by low temperature treatment is

A. vernalisation

B. cryobiology

C. photoperiodism

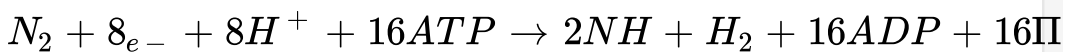
D. pruning

Answer: A



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23.



The above equation refers to

A. ammonification

B. nitrification

C. nitrogen-fixation

D. denitrification

Answer: C



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