

NEET EVOLUTION — ORIGIN OF LIFE (OPARIN–HALDANE, MILLER'S EXPERIMENT) — PYQS

Max. Marks: 44

Questions: 11

Section A (MCQ) — 11 questions

Q.1 Panspermia, an idea that is still a favourite for some astronomers, means: [NEET (UG) 2022 (Phase 2)]

- (1) Transfer of spores as unit of life from other planets to Earth
- (2) Creation of life from dead and decaying matter
- (3) Creation of life from chemicals
- (4) Origin of sperm in human testes

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Q.2 From his experiments, S.L. Miller produced amino acids by mixing the following in a closed flask [NEET (UG) 2020]

- (1) CH₃, H₂, NH₃ and water vapor at 600°C
- (2) CH₄, H₂, NH₃ and water vapor at 800°C
- (3) CH₃, H₂, NH₄ and water vapor at 800°C
- (4) CH₄, H₂, NH₃ and water vapor at 600°C

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Q.3 Following are the two statements regarding the origin of life -

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

- 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

[NEET 2016 (Phase 1)]

- (1) Both A and B are false
- (2) Both A and B are correct
- (3) B is correct but A is false
- (4) A is correct but B is false

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Q.4 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

[NEET 2016 (Phase 2)]

(1) II, III, I, IV

(2) II, III, IV, I

(3) I, II, III, IV

(4) I, III, II, IV

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Q.5 Which one of the following is incorrect about the characteristics of protobionts (coacervates and microspheres) as envisaged in the abiogenic origin of life? [AIPMT 2008]

- (1) They could separate combinations of molecules from the surroundings
- (2) They were able to reproduce
- (3) They were partially isolated from the surroundings
- (4) They could maintain an internal environment

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Q.6 The concept of chemical evolution is based on-

[AIPMT 2007]

- (1) Crystallization of chemicals
- (2) Effect of solar radiation on chemicals
- (3) Possible origin of life by combination of chemicals under suitable environmental conditions
- (4) Interaction of water, air and clay under intense heat

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Q.7 Which one of the following amino-acids was not found to be synthesized in Miller's experiment?

[AIPMT 2006]

- | | |
|-------------------|-------------------|
| (1) Aspartic acid | (2) Alanine |
| (3) Glycine | (4) Glutamic acid |

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Q.8 Which one of the following experiments suggests that simplest living organisms could not have originated spontaneously from non-living matter?

[AIPMT 2005]

- (1) Meat was not spoiled, when heated and kept sealed in a vessel
- (2) Larvae could appear in decaying organic matter
- (3) Microbes appeared from unsterilized organic matter
- (4) Microbes did not appear in stored meat

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Q.9 According to Oparin, which one of the following was not present in the primitive atmosphere of the earth ? [AIPMT 2004]

- (1) Water vapour (2) Oxygen
- (3) Methane (4) Hydrogen

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Q.10 There is no life on moon due to the absence of -

[AIPMT 2002]

- (1) O₂ (2) Light
- (3) Water (4) Temperature

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Q.11 First life on earth was : - [AIPMT 2001]

- (1) Autotrophs (2) Photoautotrophs
- (3) Cyanobacteria (4) Chemoheterotrophs

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	1	2	2	1	2	3	4	1	2	3	4