

Rayat Shikshan Sanatha's
Mahatma Phule Arts, Science & Commerce College, Panvel
Semester IV Online Examination April 2021
Class: S. Y. B. Sc. Subject: Zoology
Paper: I (Evolution & Research Methodology)

QUESTION BANK

<p>1. The big bang theory applies to the initial formation of</p> <ul style="list-style-type: none">a. The universeb. Our solar systemc. Earth and the planetsd. The first protobionts
<p>2. According to scientist, the Big bang occurred approximately years ago.</p> <ul style="list-style-type: none">a. 11 millionb. 12 billionc. 13 billiond. 15 billion
<p>3. The earth is presumed to have originated about years ago.</p> <ul style="list-style-type: none">a. 4 millionb. 4-5 billionc. 6 billiond. 1-2 billion
<p>4. Mass of matter, diffused gases along with tremendous energy resulted in the formation of our solar system called.....</p> <ul style="list-style-type: none">a. Solar nebulab. Solar spherec. Solar coverd. Solar cap
<p>5. The concept of is based on the chemical reactions between the simple inorganic molecules.</p> <ul style="list-style-type: none">a. Organic evolutionb. Species evolutionc. Molecular evolutiond. Chemical evolution
<p>6. In Urey and miller's experiment, the ratio of methane: ammonia: hydrogen was</p> <ul style="list-style-type: none">a. 1:2:2b. 2:2:2c. 1:2:1d. 1:1:2

<p>7. Urey and Miller's spark discharge apparatus is a closed system of glass except</p> <ol style="list-style-type: none"> Water boiling flask tungsten electrodes vaccum pump cooling jacket
<p>8. In Urey and miller's experiment, what represented lighting?</p> <ol style="list-style-type: none"> Electric discharge Boiling of water Circulation of gases vaporization of water
<p>9. Who did an experiment to prove that the organic compounds were basis of life?</p> <ol style="list-style-type: none"> Darwin Melvin Calvin Sydney fox Miller and Urey
<p>10. Which compounds were used by miller in his experiment for obtaining amino acids and other organic substances?</p> <ol style="list-style-type: none"> Ammonia, methane, hydrogen and water vapour Carbon dioxide, water vapour and methane Ammonia, methane and carbon dioxide Methane, ammonia, water vapour and hydrogen cyanide
<p>11. The most common chemical compounds formed in Urey-Miller's experiment were</p> <ol style="list-style-type: none"> vitamins methane ammonia amino acids
<p>12. Finding of Miller's experiment on origin of life has provided evidences for</p> <ol style="list-style-type: none"> Theory of biogenesis Oparin- Haldane theory Theory of special creation Theory of organic evolution
<p>13. Coacervates</p> <ol style="list-style-type: none"> are colloid droplets contain nucleoprotein both A and B prtobiont

<p>14. Gradual accumulation of organic molecules in the warm oceanic water produced.....</p> <ul style="list-style-type: none">a. Oparin soupb. Haldane soupc. Fox soupd. Miller soup
<p>15. Organic molecules formed assemblies of lipid bound membranes called</p> <ul style="list-style-type: none">a. coacervatesb. dropletsc. protobiontsd. nebula
<p>16. According to oparin and Haldane, which biomolecules are said to be the fore-runners of the first form of life on earth?</p> <ul style="list-style-type: none">a. Proteinsb. Coacervatesc. nebulad. Protobionts
<p>17. According to the “ Theory of special creation”</p> <ul style="list-style-type: none">a. all the living beings on earth were created by God or supernatural power.b. all the living beings on earth were in the form of spores or micro-organisms.c. all the living beings on earth originated from non-living material.d. all the living beings originated form pre-existing living forms.
<p>18. Abiogenesis means</p> <ul style="list-style-type: none">a. spontaneous generationb. germplasm theoryc. origin of panspermiad. physico- chemical origin of life
<p>19. The idea that life originates from pre-existing life is referred as</p> <ul style="list-style-type: none">a. Special creation theoryb. biogenesis theoryc. Abiogenesis theoryc. Spontaneous generation theory
<p>20. “Hot dilute soup” was stated by</p> <ul style="list-style-type: none">a. Ureyb. Millerc. Oparin and Haldaned. Darwin

<p>21. Symbiotic association seen in the prokaryotic cells by which eukaryotic cells were formed is termed as</p> <ul style="list-style-type: none">a. Exo-symbiosisb. Endo-symbiosisc. Trans-biosisd. Biogenesis
<p>22. Endosymbiotic theory was proposed by</p> <ul style="list-style-type: none">a. Darwinb. Lamarckc. Oparind. Lynn Margulis
<p>23. organelle originated from endosymbiotic theory.</p> <ul style="list-style-type: none">a. Mitochondriab. Lysosomec. Nucleusd. Ribosome
<p>24. The eukaryotes developed billion years ago.</p> <ul style="list-style-type: none">a. 1b. 2.7c. 3.5d. 4.2
<p>25. The earliest forms of life must have been of nature</p> <ul style="list-style-type: none">a. anaerobicb. aerobicc. Heterotrophicd. Saprophytic
<p>26. The first organisms were</p> <ul style="list-style-type: none">a. Chemoautotrophsb. Chemoheterotrophsc. autotrophsd. eukaryotes
<p>27. Means study of fossils.</p> <ul style="list-style-type: none">a. Paleontologyb. Geologyc. Biologyd. Immunology

<p>28. Breakup of landmass of the earth led to the distribution of</p> <ul style="list-style-type: none">a. Animalsb. Waterc. Environmentd. Sunlight
<p>29. Is known as the father of paleontology.</p> <ul style="list-style-type: none">a. Darwinb. Lamarckc. Leonardo da vincid. Cuvier
<p>30. Is known as the father of modern paleontology.</p> <ul style="list-style-type: none">a. Darwinb. Lamarckc. Leonardo da vincid. Cuvier
<p>31. Is the fossils of organisms who lived about 50,000 years ago at cold</p> <ul style="list-style-type: none">a. Petrificationb. castc. Impressiond. Entire organisms
<p>32. is the types of fossils in which only hard remains of organisms get preserved while the soft parts decay.</p> <ul style="list-style-type: none">a. Petrificationb. Impressionc. Castd. Entire organisms
<p>33. The impressions which are left due to burying organisms under high pressure are called</p> <ul style="list-style-type: none">a. Castb. Entire organismsc. Impressiond. Petrification
<p>34. is the plant fossils in which the outline of thin carbon film of the internal structure of plant body preserved in sedimentary rocks.</p> <ul style="list-style-type: none">a. Impressionb. Castc. Compressiond. Petrification

35. The foot prints fossilized due to the hard pressure exerted by the foot on the ground are called

- a. Impression
- b. Cast
- c. Compression
- d. Petrification

36. Organs which are structurally similar but functionally dissimilar are called

- a. Homologous organs
- b. Analogous organs
- c. Vestigial organs
- d. Non-homologous organs

37. Which of the following are homologous organs?

- a. Wings of butterfly, wings of flying fish and wings of birds.
- b. Tail of scorpion, tail of bird and tail of monkey.
- c. Sting of honey bee, sting of scorpion and poison fangs of snakes.
- d. Paddles of whale, front legs of horse and arms of man.

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39. Which of the following are analogous organs?

- a. Forelimbs of frog and lizards
- b. Tail of scorpion and tail of humans
- c. Wings of birds and insects.
- d. Vermiform appendix of birds and humans.

40. The organs which are functionless and are not useful to animals are termed as

- a. Homologous organs
- b. Analogous organs
- c. Vestigial organs
- d. Non-homologous organs

41. is the remnant of a tail in humans.

- a. Vermiform appendix
- b. Nictitating membrane
- c. Coccyx
- d. Patagium

<p>42. Forelimbs of cat, lizard used in walking; forelimbs of whale used in swimming and forelimbs of bats used in flying are an example of</p> <ol style="list-style-type: none"> Analogous organs Adaptive radiation Homologous organs Convergent evolution
<p>43. A pair of analogous organ is</p> <ol style="list-style-type: none"> Wing of bird- flipper of whale Forelimbs of horse and man Wing of bird- forelimb of horse Wing of insect and wing of bird
<p>44. Analogous structures are a result of</p> <ol style="list-style-type: none"> Shared ancestry Stabilizing selection Divergent evolution Convergent evolution
<p>45. <i>Archaeopteryx</i> is a connecting link between</p> <ol style="list-style-type: none"> pisces and amphibian amphibian and reptiles reptiles and birds birds and mammals
<p>46. An intermediate or transitional stage between two organisms is called</p> <ol style="list-style-type: none"> paleontology connecting link fossil ornithology
<p>47. Called birds as glorified reptiles.</p> <ol style="list-style-type: none"> Andreas Wagner Sewall Wright Huxley Kettlewell
<p>48. Reptilian characters of <i>Archaeopteryx</i> are</p> <ol style="list-style-type: none"> jaws with heterodont teeth forearms modified into wings presence of long tail fused skull bones.

49. Avian characters of *Archaeopteryx* are

- a. feathery exoskeleton
- b. claws digits
- c. toothed beak
- d. wing claw

50. Which concept is supported by the paleontological evidence

- a. Spontaneous creation
- b. Darwinism
- c. Organic evolution
- d. Natural creation

51. Deals with the study of changes from fertilization to development of embryo.

- a. Embryology
- b. Cardiology
- c. Oncology
- d. Evolution

52. The organisms with two layers are called

- a. triploblastic
- b. diploblastic
- c. holotype
- d. monoblastic

53. The organisms with three layers are called

- a. triploblastic
- b. diploblastic
- c. holotype
- d. monoblastic

54. The basic structural and functional unit of all living organisms is

- a. Tissue
- b. Cell
- c. Organ
- d. Bones

55. Experimentally the physiological relationship between the various classes of animals can be confirmed by the Test.

- a. Agglutination
- b. Oxidation
- c. PCR
- d. Precipitin

56. Precipitin test designed by

- a. George Nottal
- b. Darwin
- c. Lamarck
- d. Kimura

57. All the animals possess And RNA as their nucleic acids.

- a. Protein
- b. Enzyme
- c. Carbohydrate
- d. DNA

58. has helped in tracing the evolutionary lineage.

- a. Protein sequencing
- b. Lipid sequencing
- c. DNA sequencing
- d. RNA sequencing

59. The can be constructed that can clearly give the evidence of how the groups of animals have evolved from a common ancestor.

- a. Protein tree
- b. Lipid tree
- c. Phylogenetic tree
- d. RNA tree

60. Analogous organ represent

- a. Divergent evolution
- b. Convergent evolution
- c. Fixed evolution
- d. Mixed evolution

61. The credit of 'Natural selection Theory' goes to

- a. Charles Darwin
- b. Oparin
- c. Haldane
- d. Huxley

62. The struggle amongst the individuals of the same species is called

- a. intra specific struggle
- b. inter specific struggle
- c. intra genetic struggle
- d. inter genetic struggle

<p>63. The struggle between deer and giraffe for grass is type of struggle.</p> <ul style="list-style-type: none">a. intra specific struggleb. inter specific strugglec. intra genetic struggled. inter genetic struggle
<p>64. Struggle of all organisms against natural calamities such as earthquake, volcanic eruption is said to be</p> <ul style="list-style-type: none">a. intra specific struggleb. inter specific strugglec. intra genetic struggled. Environmental struggle
<p>65. Darwin theory of evolution CANNOT explain</p> <ul style="list-style-type: none">a. Arrival of fittestb. Natural selectionc. Prodigality of productiond. Struggle for existence
<p>66. Industrial melanism is an example of</p> <ul style="list-style-type: none">a. mutationb. natural selectionc. reproductive isolationd. speciation
<p>67. Which organism was studied for industrial melanism?</p> <ul style="list-style-type: none">a. <i>Apis dorsata</i>b. <i>Bombyx mori</i>c. <i>Rana tigrina</i>d. <i>Biston betularia</i>
<p>68. Theory of inheritance of acquired characters is given by</p> <ul style="list-style-type: none">a. Lamarckb. Darwinc. Huxleyd. Kimura
<p>69. In 1859 Charles Darwin published theory of natural selection in the book</p> <ul style="list-style-type: none">a. Arival of Speciesb. Removal of Speciesc. Origin of Speciesd. Death of Species

70. is a modified form of Darwinism.

- a. Neo-Darwinism
- b. Ex-Darwinism
- c. Lio-Darwinism
- d. Q-Darwinism

71. Hugo de Vries proposed that new species arise due to sudden change and transformation called as

- a. Replication
- b. Recombination
- c. Deletion
- d. Mutation

72. proposed that new species arise due to sudden change and transformation called as mutation.

- a. Lamarck
- b. Darwin
- c. Hugo de Vries
- d. Kimura

73. Mutations are

- a. heritable
- b. non heritable
- c. non transferable
- d. non movable

74. was a German embryologist.

- a. Lamarck
- b. Weismann
- c. Hugo de Vries
- d. Kimura

75. Protoplasm of somatic cells is called as

- a. Germplasm
- b. Somatoplasm
- c. Protoplasm
- d. Nucleoplasm

76. The individuals with mutation are known as

- a. Wild type
- b. Mutant
- c. Mitogen
- d. Carcinogen

<p>77. The fertilized egg undergoes segmentation division to produce a solid structure called the</p> <p>a. Blastula b. Gastrula c. Zygote d. Morula</p>
<p>78. The morula develops into a single layered hollow</p> <p>a. Blastula b. Gastrula c. Zygote d. Morula</p>
<p>79. The blastula changes into two or three layered</p> <p>a. Blastula b. Gastrula c. Zygote d. Morula</p>
<p>80. Abiogenesis means</p> <p>a. Spontaneous generation b. Germplasm theory c. origin of panspermia d. Biogenesis theory</p>
<p>81. Any person who pursues the process of science systematically is considered as a</p> <p>a. Scientist b. Geologist c. Paleologist d. Ornithologist</p>
<p>82..... of the scientist determines the method to be used in finding answers to questions regarding natural phenomena</p> <p>a. Positivity b. Negativity c. Creativity d. Possibility</p>
<p>83..... method demands logic and objective procedure.</p> <p>a. Biological b. Scientific c. Mathamatical d. Chemical</p>

<p>84..... is an abstract method consisting of priori reasoning and drawing conclusion from certain fundamental assumption</p> <ol style="list-style-type: none"> Deductive reasoning Inductive reasoning Analytic reasoning Synthetic reasoning
<p>85Deduction means moving from</p> <ol style="list-style-type: none"> General to specific Complex to simple Simple to complex Specific to general
<p>86 Method begins with a collection of facts and draws conclusion through posteriori reasoning called.</p> <ol style="list-style-type: none"> Deductive reasoning Inductive reasoning Analytic reasoning Synthetic reasoning
<p>87..... means moving from “specific to general”.</p> <ol style="list-style-type: none"> Deduction Induction Explanation Presentation
<p>88. Critical thinking means making, reasoned judgement.</p> <ol style="list-style-type: none"> Clear Classical Critical Proper
<p>89. Thirty to fifty percent of scientific discoveries are</p> <ol style="list-style-type: none"> Fortutous Unexpected Accidental Serendipitous
<p>90. Example of serendipity is the discovery of</p> <ol style="list-style-type: none"> Ampicillin Tetracycline Penicillin Paracetamol
<p>91. comprise experiments, tests, survey, study of various other results of experiments.</p> <ol style="list-style-type: none"> Analytical methods Physical methods Research methods Chemical methods

<p>92 is multidimensional and has a wider scope than research methods.</p> <ul style="list-style-type: none"> a. Research methodology b. Chemical methodology c. Descriptive methodology d. Physical methodology
<p>93. Research should have clearly defined purpose and finding must be.....</p> <ul style="list-style-type: none"> a. Useful b. Harmful c. Beneficial d. True
<p>94. Refers to the degree of precision of the investigation.</p> <ul style="list-style-type: none"> a. Objectivity b. Reproducibility c. Rigor d. Possibility
<p>95. Possibility to generalize refers to the extent of of the research finding.</p> <ul style="list-style-type: none"> a. Possibility b. Applicability c. Reproducibility d. Testability
<p>96 comprises different kinds of survey and fact finding investigations.</p> <ul style="list-style-type: none"> a. Fundamental research b. Applied research c. Descriptive research d. Conceptual research
<p>97. In investigator uses already available facts which are analyzed and critically evaluated.</p> <ul style="list-style-type: none"> e. Analytical research f. Fundamental research g. Conceptual research h. Descriptive research
<p>98. is an action based research which is focused on finding a practical solution for an immediate problem faced by the society and industry.</p> <ul style="list-style-type: none"> a. Analytical research b. Applied research c. Conceptual research d. Descriptive research

99. is concerned with gathering knowledge and aims at generalizing and formulating theories.

- a. Applied research
- b. Conceptual research
- c. Analytical research
- d. Fundamental research

100is applied to phenomena that can be quantified.

- a. Quantitative research
- b. Conceptual research
- c. Qualitative research
- d. Applied research