



# BIOLOGY

## NEET & AIIMS

### Mock test 32

#### Example

1. Select odd one out w.r.t. autosomal recessive trait.

A. Cystic fibrosis

B. PKU

C. Sickle cell anaemia

D. Colour blindness

**Answer: D**



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2. Christmas disease is caused due to absence of

- A. Plasma thromboplastin
- B. Plasma thromboplastin antecedent
- C. Anti-haemoglobin
- D. Rh-antigen

**Answer: A**



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**3. Haemophilia is transmitted from normal carrier female to male progeny because it is**

- A. X-linked dominant trait
- B. X-linked recessive trait
- C. A recessive autosomal trait
- D. Y-linked dominant trait

**Answer: B**



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**4. Select correct statement w.r.t. thalassemia.**

- (a) It is a recessive autosomal genetic defect.
- (b) Alpha thalassemia is connected to the

deletion of 16p(short arm) chromosome. (c) Beta thalassemia is caused due to mutations in the HBB gene on chromosome 11. (d) About 30% of adult haemoglobin is made up of alpha and delta chains. (e) In beta thalassemia, excess B-chains form unstable tetramers which have abnormal oxygen dissociation curve.

A. (b), (c) & (d)

B. (a), (b) & (e)

C. All except (b) & (e)

D. All except (d) & (e)

**Answer: D**



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5. In phenylketonuria, the amino acid (i) is not converted into (ii). Select the correct option to fill in the blanks (i) & (ii)

- A. (i) Ketone, (ii) Urea
- B. (i) Phenylalanine, (ii) Urea
- C. (i) Phenoxy acetic acid, (ii) Ketone
- D. (i) Phenylalanine, (ii) Tyrosine

**Answer: D**



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**6.** Cytoplasmic male sterility in maize is due to defective

A. Chloroplasts

B. Mitochondria

C. Allosomes

D. Lysosomes

**Answer: B**



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7. Which of the following characters is/are not related to Down's syndrome?

A. Short stature and small round head

B. Furrowed tongue and partially open mouth

C. Big and wrinkled tongue



D. Gynaecomastia

**Answer: D**



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8. Which one is 6-membered single-ring structure with N at 1st and 3rd position?

A. Cytosine

B. Thymine

C. Adenine

D. Both (1) & (2)

**Answer: D**



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**9. Two nucleotides are linked through**

A. Glycosidic linkage

B. Phosphodiester linkage

C. H-bond

D. Peptide linkage

**Answer: B**



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**10.** Chargaff's rule is applicable to :

- A. Single stranded DNA
- B. Double stranded DNA
- C. Single stranded RNA
- D. All except (3)

**Answer: B**



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11. Vertical rise per bp of B-DNA is

A.  $3.3\text{\AA}$

B.  $3.8\text{\AA}$

C.  $3.4\text{\AA}$

D.  $2.56\text{\AA}$

**Answer: C**



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12. Central dogma of molecular biology was proposed by

A. F. Crick

B. H. Temin

C. D. Baltimore

D. M. Wilkins

**Answer: A**



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13. If the distance between two consecutive base pairs is 0.34 nm then the length of DNA for a human diploid cell is

A.  $6.6 \times 10^9 m$

B.  $6.6 \times 10^9 bpx0.34m$

C. *2.2metres*

D.  $6.6 \times 10^{-9} m$

**Answer: C**



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14. The number of base pairs in E.coli is

A.  $6.6 \times 10^9$

B.  $4.6 \times 10^6$

C.  $0.34 \times 10^6$

D.  $1.36 \times 10^9$

**Answer: B**



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15. Purine nucleosides have

A. 5-3 phosphodiester bond

B. 1-9 glycosidic linkage

C. 1-1' glycosidic linkage

D. H-bonds

**Answer: B**



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**16.** Cytidine is a

A. Nucleoside

B. Nucleotide

C. Dicyclic Nitrogen base

D. Monocyclic nitrogen base

**Answer: A**



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17. The packaged structure of DNA in prokaryotes is called as

A. Nucleosome

B. Nucleoid

C. Chromatin

D. Nucleolemma

**Answer: B**



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**18.** Reverse transcriptase can synthesise

A. DNA → DNA

B. DNA → RNA

C. RNA → Protein

D. RNA → DNA

**Answer: D**



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19. In prokaryotes, DNA is found in \_\_\_cytoplasm in which is maintained by\_\_\_\_\_

- A. Scattered, Acidic protein
- B. Super coiled stage, Polyamines
- C. Non-scattered stage, Histone
- D. Coiled stage, Acidic protein

**Answer: B**



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20. DNA was extracted from E.coli. The proportion of cytosine was found to be 30%, then what will be the amount of adenine?

A. 0.6

B. 0.7

C. 0.2

D. 0.4

**Answer: C**



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21. Nu-body has two copies of each

A.  $H_{2,A}$  &  $H_{2,B}$

B.  $H_1$  &  $H_2$

C.  $H_3$  &  $H_4$

D. All except (2)

**Answer: D**



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22. About \_\_\_\_ bp of DNA is wrapped over nucleosome to complete about \_\_\_\_ turns.

A. 200,  $3\frac{3}{4}$

B. 200,  $1\frac{3}{4}$

C. 80,  $\frac{1}{2}$

D. 80,  $3\frac{1}{2}$

**Answer: B**



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23. The diameter of a solenoid of chromatin is

A.  $2nm$

B.  $30nm$

C.  $700nm$

D.  $1400nm$

**Answer: B**



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24. Big bang theory explains



A. Origin of earth

B. Origin of universe

C. Origin of ocean

D. Origin of first life

**Answer: B**



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**25. Who gave the definite proof of life arising from pre-existing life?**

A. Redi

B. Spallanzani

C. Pasteur

D. Cuvier

**Answer: C**



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**26. Theory of Biogenesis explains**

A. origin of first life

B. Life arising from pre-existing life

C. Life coming from outer space

D. Creation of life by supernatural power

**Answer: B**



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**27. Theory of spontaneous generation explains**

A. Life came from outer space

B. Spontaneous generation of living organisms from pre-existing life on earth

C. Spontaneous generation of living organisms from living matter outside earth

D. Spontaneous generation of living organisms from non living matter on earth

**Answer: D**



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28. Theory of special creation was given by

A. Cuvier

B. Redi

C. Father Suarez

D. Arrhenius

**Answer: C**



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29. According to Big-Bang theory universe is very old and its origin took place almost

A. 10 billion years ago

B. 20 billion years ago

C. 30 billion years ago

D. 40 billion years ago

**Answer: B**



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30. Which of the following is correct regarding initial gaseous mixture used and final products which were obtained during Miller's experiment?

A. Methane, ammonia, hydrogen cyanide  
(Gaseous Mixture) Adenine, glycine  
aspartic acid (Final products)

B. Methane, hydrogen gas, Carbon dioxide  
(Gaseous mixture) Hydrogen cyanide,  
adenine, glycine (Final products)

C. Methane, hydrogen gas, ammonia, water vapour (Gaseous mixture) Alanine, glycine aspartic acid (Final products)

D. Ammonia, hydrogen gas, water, hydrogen cyanide (Gaseous mixture) Adenine, urea glycine (Final products)

**Answer: C**



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31. Which of the following living organisms originated first on primitive earth?

- A. Aerobic heterotrophs
- B. Aerobic autotrophs
- C. Anaerobic heterotrophs
- D. Anaerobic autotrophs

**Answer: C**



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**32.** Evolution of various forms of life is known as

A. Chemography

B. Biogeny

C. Both (1) and (2)

D. Cognogeny

**Answer: D**



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33. Which of the following is incorrect w.r.t. Controlled apparatus of Miller and Urey experiment?

A.  $800^{\circ}$

B. Electric sparks of 75,000 volt

C.  $CH_4 : NH_3 : H_2 = 2 : 2 : 1$

D. Devoid of energy source

**Answer: C**



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34. Which of the following cannot be considered as avian character of Archaeopteryx?

A. Presence of feathers on body

B. Forelimbs modified into wings

C. Modification of jaws into beak

D. Presence of teeth in beak

**Answer: D**



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**35.** The first form of life possibly originated on earth about

- A. 3 billion years ago
- B. 4 billion years ago
- C. 2000 million years ago
- D. 4.5 billion years ago

**Answer: B**



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**36.** Which of the following period is known as age of amphibians?

A. Ordovician

B. Devonian

C. Carboniferous

D. Cambrian

**Answer: C**



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**37.** Which of the following is a correct match between period and its associated event?

A. Permian (Period) Age of invertebrates

(Event)

B. Cambrian (Period) Age of vertebrates

(Event)

C. Triassic (Period) Radiation of mammals (

Event)

D. Devonian (Period) Age of fishes (Event)

**Answer: D**



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**38. Coprolite is**

- A. Fossilized faeces
- B. Fossilized pollen grain
- C. Fossilized bone
- D. Plant fossil

**Answer: A**





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**39.** Fossils are most frequently formed in

- A. Igneous rock
- B. Sedimentay rock
- C. Metamorphic rock
- D. Both (2) and (3)

**Answer: B**



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**40.** Match the column Hyracotherium (Column- I) Oligocene epoch (Column- II) Pliohippus (Column- I) Pleistocene epoch (Column- II) Equus (Column- I) Eocene epoch (Column- II) Miohippus (Column- I) Pliocene epoch (Column- II) Choose the correct option

A. a(i), b(ii), c(iv), d(iii)

B. a(i), b(iv), c(ii), d(iii)

C. a(iii), b(iv), c(ii), d(i)

D. a(iii), b(ii), c(iv), d(i)

**Answer: C**



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**41.** Life cannot originate from inorganic materials at present because of

- A. High pollution
- B. High atmospheric temperature
- C. Oxidising environment
- D. Absence of raw materials

**Answer: C**



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**42.** Consider the following characteristics (a) 120 cm high at shoulders (b) Forelimb and hindlimb had one complete finger and toe and two hidden splints (c) evolved from *Merychippus* (d) Teeth adapted for eating grass which of the following ancestral horse is best described by the above mentioned characteristics?

A. Pilohiphhus

B. Mesohippus

C. Hyracotherium

D. Callipus

**Answer: A**



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**43. Coacervates were**

- A. Membrane bound spheres containing proteinoids
- B. Colloidal aggregates of carbohydrate and proteins
- C. Colloidal aggregate of carbohydrates only
- D. Both (1) and (2)

**Answer: B**



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**44.** Biogenetic law as given by Haeckel states that

A. Haeckel

B. Spencer

C. Darwin

D. Mayer

**Answer: A**



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**45.** Coelacanth is considered a connecting link between

- A. Amphibians and reptiles
- B. Fish and amphibians
- C. Chordate and non- chordate
- D. Birds and mammals

**Answer: B**



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**46.** Birbal Sahni Institute of Palaeobotany is situated in :

A. Allahabad

B. Himachal Pradesh

C. Lucknow

D. Meerut

**Answer: C**



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47. Which of the following show restricted distribution?

A. Elephants

B. Pouched mammals

C. Alligators

D. Lung fishes

**Answer: B**



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**48.** Sudden reappearance of certain ancestral characters which had either disappeared or were reduced is known as

- A. Adaptive radiation
- B. Atavism
- C. Convergent evolution
- D. Phylogeny

**Answer: B**



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49. Which of the following is true w.r.t homologous structures?

A. They show similarity in anatomy

B. They have similar function

C. They are the result of convergent evolution

D. They are the result of parallel evolution

**Answer: A**



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50. The similarity in anatomy of forelimbs of different organisms like man, chhetah, whale and bat explains

- A. Common ancestry
- B. Convergent evolution
- C. Parallel evolution
- D. Adaptive radiation

**Answer: A**



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51. The process of evolution of different species in a given geographical area starting from a point and literally radiating to other areas of geography (habitats) is called

- A. Divergent evolution
- B. Adaptive radiation
- C. Convergent evolution
- D. Punctuated equilibrium

**Answer: B**



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52. The structures in different organisms which are not similar anatomically though they perform similar functions are called

A. Homologous organs

B. Analogous organs

C. Vestigial organs

D. Connecting organs

**Answer: B**



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**53.** Analogous structures are the result of

- A. Adaptive radiation
- B. Parallel evolution
- C. Convergent evolution
- D. Both (2) and (3)

**Answer: D**



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54. Which of the following is not an example vestigial organ humans?

- A. Muscles of external ear
- B. Nictitating membrane of eye
- C. Appendix of caecum
- D. Second molar teeth

**Answer: D**



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55. Which of the following is an example of analogous organ?

- A. Flippers of penguins and dolphin
- B. Fins of shark and whale
- C. Eye of octopus and of mammal
- D. All of these

**Answer: D**



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**56.** Koala and Bandicoot show

- A. Adaptive radiation
- B. Convergent evolution
- C. Parallel evolution
- D. Both (2) and (3)

**Answer: A**



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57. Which of the following evidences help us to find systematic position of animals like Sacculina and Herdmania?

- A. Morphological and anatomical evidences
- B. Palaentological evidences
- C. Embryological evidences
- D. Geographical evidences

**Answer: C**



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58. Thorn of Bougainvillea and tendrils of Cucurbita represent all of the following except

- A. Homology
- B. Divergent evolution
- C. Convergent evolution
- D. Common ancestry

**Answer: C**



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