

# KCET 2026 April 24 Biology

## Question Paper

Conducted by KEA



### General Instructions

- (i) **Duration:** The total duration of the examination is 80 minutes.
- (ii) **Total Marks:** The complete paper carries a maximum of 60 marks.
- (iii) **Compulsory Questions:** All 60 questions are compulsory.
- (iv) Each question has four options. Only **one** option is correct.
- (v) **Correct Answer:** +1 marks.
- (vi) **Incorrect Answer:** There is no Negative marking for incorrect answers.

1. A chromosome with an extremely short and a very long arm is called \_\_\_\_\_.

- (1) Metacentric
- (2) Telocentric
- (3) Acrocentric
- (4) Submetacentric

2. The following statements are the steps in the catalytic action of an enzyme. Arrange them in correct sequence.

- a) The active site of the enzyme, now in close proximity of the substrate, breaks the chemical bonds of the substrate and the new enzyme product complex is formed.
- b) The substrate binds tightly to the enzyme, inducing a change in the active site of the enzyme.
- c) The enzyme releases the products of the reaction and the free enzyme is ready to bind to another molecule of the substrate.
- d) The substrate binds to the active site of the enzyme.

- (1) c, a, b, d
  - (2) d, b, a, c
  - (3) a, b, c, d
  - (4) d, c, b, a
- 

**3. A diploid cell which has 8 chromosomes undergoes meiosis and produces 4 daughter cells. What is the number of chromosomes present in each daughter cell formed at the end of meiosis-I?**

- (1) 8 chromosomes
  - (2) 4 chromosomes
  - (3) 16 chromosomes
  - (4) 32 chromosomes
- 

**4. Cellulose is an important structural component in plants which is made up of**

- (1) Fructose
  - (2) Galactose
  - (3) Glucose
  - (4) Sucrose
- 

**5. In a healthy individual, the Glomerular Filtration Rate (GFR) is \_\_\_\_\_.**

- (1) 125 ml/minute
  - (2) 125 ml/hour
  - (3) 126 ml/minute
  - (4) 125 ml/second
- 

**6. A hormone that initiates flowering and synchronising fruit set in pineapples is \_\_\_\_\_.**

- (1) Ethylene
- (2) Abscissic Acid

- (3) Auxins
  - (4) Gibberellins
- 

**7. Identify the incorrect statement regarding respiratory system in man.**

- (1) Lungs are covered by double-layered membrane called pleura.
  - (2) The alveoli are surrounded by rich blood capillaries.
  - (3) The trachea, bronchi and bronchioles are supported by 'O' shaped cartilaginous rings.
  - (4) The right lung is slightly larger than the left lung.
- 

**8. Consider the following statements with respect to ECG [Electrocardiogram] and choose the correct answer.**

**Statement I : 'P' wave represents the depolarisation of ventricles.**

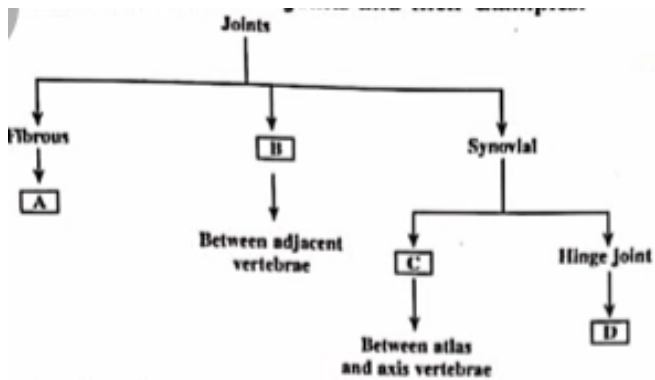
**Statement II : 'T' wave represents the repolarisation of ventricles.**

- (1) Statement I and Statement II are wrong.
  - (2) Statement I is correct but Statement II is wrong.
  - (3) Statement I is wrong but Statement II is correct.
  - (4) Statement I and Statement II are correct.
- 

**9. Aldosterone from adrenal cortex stimulates the reabsorption of water and Na<sup>+</sup> from \_\_\_\_\_.**

- (1) Proximal Convoluted Tubule (PCT)
  - (2) Ascending limb of loop of Henle
  - (3) Distal Convoluted Tubule (DCT)
  - (4) Descending limb of loop of Henle
- 

**10. Observe the flowchart with reference to joints and their examples.**



- (1) A - Cartilaginous joint, B - Pivot joint, C - Knee joint, D - Cranial sutures
  - (2) A - Pivot joint, B - Knee joint, C - Cranial sutures, D - Cartilaginous joint
  - (3) A - Saddle joint, B - Cranial sutures, C - Cartilaginous joint, D - Pivot joint
  - (4) A - Cranial sutures, B - Cartilaginous joint, C - Pivot joint, D - Knee joint
- 

**11. Unipolar neurons are found usually in the embryonic stage. They have**

- (1) One axon and one dendrite
  - (2) Cell body and one axon
  - (3) Cell body with one axon and many dendrites
  - (4) Neither axon nor dendrites.
- 

**12. Gastrin is a hormone secreted by gastrointestinal (GI) tract, which stimulates the secretion of**

- (1) Hydrochloric acid and pepsinogen
  - (2) Pancreatic enzymes and bile juice
  - (3) Water and bicarbonate ions
  - (4) Bicarbonate ions and pepsinogen
- 

**13. Choose the correct sequence of wall layers in a microsporangium of an angiosperm.**

- (1) Epidermis, Middle layer, Endothecium, Tapetum
- (2) Epidermis, Endothecium, Middle layer, Tapetum
- (3) Epidermis, Tapetum, Middle layer, Endothecium
- (4) Epidermis, Middle layer, Tapetum, Endothecium

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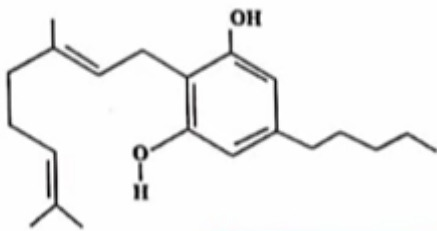
14. Which of the following statement is/are correct for cleistogamous flowers?

- a) They have exposed anthers and stigma
- b) They produce assured seed set
- c) They need pollinators for pollination
- d) Variations in traits are not seen in next generation

- (1) Only Statement (b) is correct
- (2) Statements (a) and (c) are correct
- (3) Statements (b) and (d) are correct
- (4) Statements (b) and (c) are correct

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15. Identify the drug molecule from the skeletal structure shown below.



- (1) Opioid
- (2) Cannabinoid
- (3) Coca-alkaloids
- (4) Morphine

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16. Identify the correct path of milk secretion by the mammary glands.

- (1) Alveoli → mammary duct → ampulla → mammary tubule → lactiferous ducts
- (2) Alveoli → mammary tubules → mammary duct → ampulla → lactiferous ducts
- (3) Alveoli → ampulla → mammary duct → mammary tubules → lactiferous ducts
- (4) Alveoli → lactiferous ducts → mammary duct → ampulla → mammary tubule

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17. Match items in Column-I with Column-II and choose the correct

Column-I	Column-II
a) Acrosome	i) Contains numerous mitochondria which produce energy
b) Head	ii) Facilitates sperm motility
c) Middle piece	iii) Filled with enzymes that help in fertilization
d) Tail	iv) Contains elongated haploid nucleus

Codes:

- (1) a - iii, b - i, c - iv, d - ii  
 (2) a - iv, b - ii, c - iii, d - i  
 (3) a - iii, b - ii, c - iv, d - i  
 (4) a - iii, b - iv, c - i, d - ii
- 

**18. Which of the following does NOT produce seminal plasma?**

- (1) Epididymis  
 (2) Bulbourethral glands  
 (3) Seminal vesicles  
 (4) Prostate gland
- 

**19. Which of the following Sexually Transmitted Infections (STIs) are not completely curable?**

- (1) AIDS, Genital warts  
 (2) Chlamydia, Gonorrhoea  
 (3) Genital warts, Hepatitis B  
 (4) AIDS, Genital herpes
- 

**20. Which of the following statements is NOT true about 'Saheli'?**

- (1) It is a non-steroidal preparation  
 (2) It is a 'once-a-week' pill  
 (3) It has low contraceptive value  
 (4) It has fewer side effects
- 

**21. A woman, unable to conceive after many years of regular unprotected coitus, went to a specialized clinic. On complete examination, the woman was found to be normal, while the**

male partner was diagnosed with Infertility and was unable to inseminate the female due to low sperm count. Suggest the appropriate Assisted Reproductive Technology (ART).

- (1) ZIFT – Zygote Intra Fallopian Transfer
  - (2) IUI – Intra Uterine Insemination
  - (3) AI – Artificial Insemination
  - (4) GIFT – Gamete Intra Fallopian Transfer
- 

22. The genotypes of husband and wife are  $I^A I^B$  and  $I^A I^O$ . Among the blood groups of their children, how many different genotypes and phenotypes are possible?

- (1) 4 genotypes and 4 phenotypes
  - (2) 4 genotypes and 3 phenotypes
  - (3) 3 genotypes and 4 phenotypes
  - (4) 2 genotypes and 3 phenotypes
- 

23. The classical example of point mutation is

- (1) Haemophilia
  - (2) Sickle cell anaemia
  - (3) Cystic fibrosis
  - (4) Phenyl ketonuria
- 

24. Read the following statements.

**Statement I :** In a typical test cross, an organism showing a dominant phenotype is crossed with the recessive parent.

**Statement II :** The ratio of organisms showing dominant and recessive traits in  $F_1$  generation of a test cross indicates that the organism with unknown genotype is homozygous dominant.

Choose the correct option.

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false

- (3) Statement I is true but Statement II is false  
(4) Statement I is false but Statement II is true
- 

**25. Thalassaemia and Sickle cell anaemia are due to a problem in globin molecule synthesis. Select the correct statement.**

- (1) Sickle cell anaemia is due to a quantitative problem of globin molecule.  
(2) Both are due to qualitative defects in globin chain synthesis.  
(3) Both are due to quantitative defects in globin chain synthesis.  
(4) Thalassaemia is due to less synthesis of globin molecules.
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**26. Who amongst the following scientist/s had no contribution in the development of the double-helix model for the structure of DNA?**

- (1) Maurice Wilkins  
(2) Rosalind Franklin  
(3) Meselson and Stahl  
(4) Erwin Chargaff
- 

**27. In a DNA molecule, cytosine is 28%. Calculate the percentage of adenine.**

- (1) 56%  
(2) 36%  
(3) 22%  
(4) 18%
- 

**28. Arrange the below given steps of DNA fingerprinting in sequence by selecting the appropriate option.**

- a) Digestion of DNA by restriction endonucleases  
b) Autoradiography  
c) Blotting of DNA fragments to nitrocellulose membrane  
d) Isolation of DNA
-

**e) Separation of DNA fragments by electrophoresis**

- (1) (a), (e), (d), (c), (b)
  - (2) (e), (a), (d), (b), (c)
  - (3) (d), (a), (e), (c), (b)
  - (4) (c), (b), (a), (e), (d)
- 

**29. Select the statement which is 'NOT' true about Big Bang Theory.**

- (1) Big Bang Theory explains the origin of Universe.
  - (2) As Universe expanded, the temperature came down.
  - (3) Hydrogen and Helium gases formed before the explosion.
  - (4) The gases condensed under gravitation and formed the galaxies.
- 

**30. According to Hugo De Vries, speciation is due to**

- (1) Accumulation of small variations
  - (2) Intraspecific breeding
  - (3) Interspecific breeding
  - (4) Single-step large mutation
- 

**31. Identify the correct order of stages in Human evolution.**

- a) **Homo habilis**
- b) **Homo erectus**
- c) **Australopithecus**
- d) **Neanderthal man**
- e) **Dryopithecus**

- (1) c → e → a → d → b
- (2) e → c → a → b → d
- (3) d → e → b → c → a
- (4) d → c → a → e → b

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**32. Pollen grains are well preserved as fossils because of the presence of \_\_\_\_\_.**

- (1) Cellulose
- (2) Sporopollenin
- (3) Lignocellulose
- (4) Pectocellulose

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**33. The causative organism of Pneumonia is \_\_\_\_\_.**

- (1) Wuchereria malayi
- (2) Haemophilus influenza
- (3) Salmonella typhi
- (4) Trichophyton

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**34. Select the option that contains only secondary lymphoid organs.**

- (1) Spleen, Tonsils, Thymus
- (2) Lymph nodes, Appendix, Tonsils
- (3) Peyer's patches, Tonsils, Bone marrow
- (4) Tonsils, Thymus, Lymph nodes

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**35. Identify the biological response modifier substance which activates the immune system and helps in destroying the tumor.**

- (1) Histamine
- (2)  $\alpha$ -Interferon
- (3) Serotonin
- (4)  $\alpha$ -Lactalbumin

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**36. The conversion of milk into curd by LAB increases the nutritional value by producing \_\_\_\_\_.**

- (1) Vitamin A
  - (2) Vitamin B<sub>12</sub>
  - (3) Vitamin C
  - (4) Vitamin D
- 

**37. BOD of polluted water is estimated by measuring the amount of \_\_\_\_\_.**

- (1) Total organic matter
  - (2) Oxygen evolution
  - (3) Oxygen consumption
  - (4) Biodegradable organic matter
- 

**38. Given below are two statements.**

**Statement I: Baculoviruses are pathogens that attack nematodes.**

**Statement II: Baculoviruses are used as biological control agents in ecologically sensitive areas as they are species-specific in their action.**

**In the light of the above statements, choose the correct answer from the options given below.**

- (1) Both Statement I and Statement II are true
  - (2) Both Statement I and Statement II are false
  - (3) Statement I is true, but Statement II is false
  - (4) Statement I is false, but Statement II is true
- 

**39. Technique to alter the chemistry of genetic materials, DNA and RNA, to introduce these into host organism and change the phenotype of the host is**

- (1) Bioprocess engineering
  - (2) Cloning
  - (3) Genetic engineering
  - (4) Transformation
-

40. Given below are two statements.

Statement I: Restriction enzyme BamHI has its recognition site in tet<sup>R</sup> region of pBR322.

Statement II: E.coli having pBR322 with a desired DNA if inserted at BamHI site can grow in medium containing tetracycline.

In the light of the above statements, choose the correct answer from the options given below.

- (1) Both Statement I and Statement II are true
  - (2) Both Statement I and Statement II are false
  - (3) Statement I is true, but Statement II is false
  - (4) Statement I is false, but Statement II is true
- 

41. Match List I with List II

List I

- a) Visualization of DNA in gel electrophoresis
- b) Precipitation of DNA
- c) Breaking of cell wall of bacteria
- d) Breaking of cell wall of fungus

List II

- i) Chitinase
- ii) Lysozyme
- iii) Chilled ethanol
- iv) Ethidium bromide

Codes:

- (1) a - iv, b - iii, c - ii, d - i
  - (2) a - iii, b - i, c - i, d - ii
  - (3) a - iv, b - i, c - ii, d - iii
  - (4) a - iii, b - ii, c - iv, d - i
- 

42. The human protein obtained from transgenic animals used to treat emphysema is

- (1) Insulin
- (2)  $\alpha$  - Lactalbumin

- (3)  $\alpha$  - 1 antitrypsin
  - (4)  $\beta$  - Lactalbumin
- 

**43. Given below are the sequence of events in the production of human insulin by Eli Lilly.**

- a) Preparation of two DNA sequences corresponding to chain A and B of human insulin.**
- b) Production of chain A and B separately.**
- c) Introduction of chains in plasmids of E.coli.**
- d) Extraction of chain A and B combining them by creating disulphide bonds.**

**Choose the correct sequence of events.**

- (1) (a), (b), (c), (d)
  - (2) (a), (c), (b), (d)
  - (3) (a), (b), (d), (c)
  - (4) (a), (d), (b), (c)
- 

**44. Given below are two statements**

**Statement I: Adenosine deaminase is crucial for the immune system to function.**

**Statement II: Adenosine deaminase deficiency can be cured only by bone marrow transplantation.**

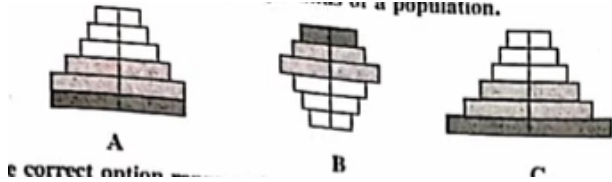
**In the light of the above statements, choose the correct answer from the options given below.**

- (1) Both Statement I and Statement II are true
  - (2) Both Statement I and Statement II are false
  - (3) Statement I is true, but Statement II is false
  - (4) Statement I is false, but Statement II is true
- 

**45. Which of the following is not correct with reference to exponential growth model?**

- (1) Resources are limited
  - (2) Population grows in a geometric fashion
  - (3) A stationary phase is never reached
  - (4) Population grows beyond carrying capacity
-

46. The following graphs represent age pyramids of a population.



- (1) A - stable, B - expanding, C - declining  
 (2) A - expanding, B - stable, C - declining  
 (3) A - stable, B - declining, C - expanding  
 (4) A - declining, B - stable, C - expanding

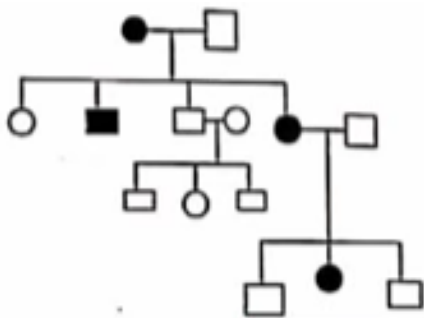
47. Which one of the following options represents the steps of decomposition in sequence?

- (1) Fragmentation → Humification → Leaching → Catabolism → Mineralization  
 (2) Fragmentation → Leaching → Catabolism → Humification → Mineralization  
 (3) Fragmentation → Humification → Mineralization → Leaching → Catabolism  
 (4) Fragmentation → Catabolism → Humification → Mineralization → Leaching

48. The Annual Net Primary Productivity on land and ocean respectively are \_\_\_\_\_ and \_\_\_\_\_ billion tons.

- (1) 170, 107  
 (2) 115, 55  
 (3) 55, 115  
 (4) 107, 170

49. In a practical examination, the below given pedigree chart was given as spotter for identification.



- (1) Autosomal recessive

- (2) Autosomal dominant
  - (3) Sex-linked dominant
  - (4) Sex-linked recessive
- 

50. Given below are two statements.

**Statement I:** There is less species biodiversity in tropical latitudes than in temperate region

**Statement II:** Tropical environments unlike temperate ones are less seasonal, relatively more constant and predictable.

In the light of the above statements, choose the correct answer from the options given below.

- (1) Both Statement I and Statement II are true
  - (2) Both Statement I and Statement II are false
  - (3) Statement I is true, but Statement II is false
  - (4) Statement I is false, but Statement II is true
- 

51. A student was given a bisexual, actinomorphic pentamerous, gamosepalous and gamopetalous with 5 stamens in epipetalous condition and bicarpellary syncarpous superior ovary and asked to state the floral formula. Which one of the following is the correct floral formula for the given flower?

- (1)  $\oplus$  Bisexual  $K_{(5)}C_{(5)}A_5\bar{G}_{(2)}$
  - (2)  $\oplus$  Bisexual  $K_c \overbrace{CA} G \dots$
  - (3)  $\oplus$  Bisexual  $K_{(5)}C_{(5)}A_5\overline{G}_{(2)}$
  - (4)  $\oplus$  Bisexual  $K_{(5)}\overbrace{C_{(5)}A_5} \underline{G}_{(2)}$
- 

52. A student was asked to identify a permanent slide of mitosis. He made the following observations.

- (i) Splitting of centromere and formation of daughter chromatids.
- (ii) Chromatids are migrating towards the opposite poles.

The stage would be

- (1) Metaphase
- (2) Telophase

- (3) Anaphase
  - (4) Prophase
- 

**53. With respect to binomial nomenclature, identify the incorrect statement.**

- (1) Biological names are generally in Latin and written in italics.
  - (2) The first word in the name represents specific epithet and the second component denotes genus.
  - (3) Both the words in the name when handwritten are separately underlined.
  - (4) The first word starts with capital letter, while the second word starts with small letter.
- 

**54. Organism 'X' is a multicellular, heterotrophic, eukaryote with a chitinous cell wall. In which kingdom will you place it?**

- (1) Monera
  - (2) Animalia
  - (3) Protista
  - (4) Fungi
- 

**55. Read the following statements about Funaria and select the options which are correct.**

- a) Gametophyte is the dominant plant body.
- b) The sporophyte is differentiated into foot, seta and capsule.
- c) The gemmae are asexual, green, multicellular buds found on the thallus.
- d) The sporophyte has independent existence.

- (1) a and b
  - (2) a and c
  - (3) b and c
  - (4) c and d
- 

**56. Match the animals given in List-I with their excretory organs in List-II.**

List-I	List-II
a) Leech	i) Flame cells
b) Locust	ii) Proboscis gland
c) Liver fluke	iii) Nephridia
d) Balanoglossus	iv) Malpighian tubules

- (1) a - ii, b - i, c - iv, d - iii  
 (2) a - i, b - ii, c - iii, d - iv  
 (3) a - iii, b - iv, c - i, d - ii  
 (4) a - iv, b - iii, c - ii, d - i
- 

**57. Identify the flower with polyadelphous condition.**

- (1) Mustard  
 (2) Chinrose  
 (3) Citrus  
 (4) Pea
- 

**58. The large empty colourless cells seen on the upper epidermis in grasses which facilitate the curling of leaves to minimise water loss are \_\_\_\_\_**

- (1) Guard cells  
 (2) Bulliform cells  
 (3) Subsidiary cells  
 (4) Mesophyll cells
- 

**59. Find the incorrect statement among the following with respect to digestive system of frog.**

- (1) Food is captured by a bilobed tongue.  
 (2) Oesophagus is a long tube that opens into the stomach and continues as intestine.  
 (3) Liver secretes bile that is stored in gall bladder.  
 (4) The undigested solid waste moves into rectum and passes out through cloaca.
- 

**60. Which of the following is not the function of plasma membrane?**

- (1) Endocytosis
  - (2) Formation of intercellular junctions
  - (3) Secretion
  - (4) DNA synthesis
-