CUET UG 2026 Biology May 20 Shift 1 Question Paper

Conducted by the National Testing Agency (NTA)

Time Allowed: 60 Minutes **Total Questions: 50** **Maximum Marks: 250**

General Instructions

(i) This is the **Biology** question paper of **CUET (UG) 2026**, conducted by the **National Testing Agency (NTA)** in Computer Based Test (CBT) mode.

(ii) The paper contains **50 multiple choice questions**. All questions are compulsory.

(iii) The duration of this test paper is **60 minutes**. The maximum score is **250 marks**.

(iv) Each question has **four options**. Select the **one correct answer** for each question.

(v) **Marking scheme: +5 marks** for a correct answer, **-1 mark** for an incorrect answer, and **0 marks** for an unanswered question.

(vi) For questions based on a passage or table, read the given material carefully and answer the questions that follow.

1. Identify the chemicals produced by *Calotropis* that provide defense against grazers and browsers.

(A) Strychnine
(B) Quinine
(C) Cardiac glycosides
(D) Caffeine

2. Match **List-I** with **List-II**

List-I (Organisms)	List-II (Trophic levels)
(A) Man, lion	(I) Third
(B) Zooplankton, cow	(II) First
(C) Phytoplankton, trees	(III) Fourth
(D) Birds, wolves	(IV) Second

Choose the **correct** answer from the options given below:

(A) (A) - (II), (B) - (III), (C) - (I), (D) - (IV)
(B) (A) - (IV), (B) - (I), (C) - (III), (D) - (II)
(C) (A) - (III), (B) - (IV), (C) - (II), (D) - (I)
(D) (A) - (I), (B) - (IV), (C) - (III), (D) - (II)

3. The species confined to a particular region and not found anywhere else is:

(A) Cosmopolitan
(B) Endemism
(C) Hot-spot
(D) Alien species

4. Identify the **correct** reasons for cutting and clearing of Amazon rain forest?
(A) Cultivating soyabeans
(B) Growing wheat and maize
(C) Setting up industries
(D) Conversion to grasslands for raising beef cattle
Choose the **correct** answer from the options given below:

(A) (A), (B) and (D) only
(B) (A) and (D) only
(C) (B) and (C) only
(D) (A) and (C) only

5. Which one of the following is a inhibitor genes in *lac* operon?

(A) Gene *i*
(B) Gene *z*
(C) Gene *y*
(D) Gene *a*

6. The scientist who developed a method for sequencing the DNA fragments was:

(A) Frederick Griffith
(B) Frederick Sanger
(C) George Gamow
(D) Har Gobind Khorana

7. Which one of the followings is **not** a terminator codon?

(A) UAA
(B) UAG
(C) UUC
(D) UGA

8. Select the correct statements regarding Hardy-Weinberg principle.
(A) Sum total of all the allelic frequencies is 1.
(B) Genetic drift affect Hardy-Weinberg principle.
(C) Allele frequencies in a population are stable and is constant from generation to generation.
(D) The gene pool continues changing generation after generation.
Choose the correct answer from the options given below:

(A) (B) and (D) only
(B) (A), (B) and (C) only
(C) (A) and (D) only
(D) (B) and (C) only

9. Identify the agencies which are involved in developing the technology of biogas production.
(A) Khadi and Village Industries Commission
(B) Indian Farmers Welfare Association
(C) Indian Biogas Production Institute
(D) Indian Agricultural Research Institute
Choose the correct answer from the options given below:

(A) (A), (B) and (D) only
(B) (B), (C) and (D) only
(C) (A) and (D) only
(D) (B) and (C) only

10. Identify the bacteria which can fix atmospheric nitrogen and are free-living in the soil.
(A) *Azotobacter*
(B) *Rhizobium*
(C) *Azospirillum*
(D) *Anabaena*
Choose the correct answer from the options given below:

(A) (A) and (C) only
(B) (B) and (D) only
(C) (B), (C) and (D) only
(D) (A), (B) and (C) only

11. Arrange the following steps involved in PCR in the correct sequence.
(A) Amplification
(B) Extension of primers
(C) Primer annealing
(D) Denaturation
Choose the correct answer from the options given below:

(A) (C), (B), (A), (D)
(B) (D), (B), (A), (C)
(C) (B), (A), (D), (C)
(D) (D), (C), (B), (A)

12. Which one of the following microorganisms is used as a cloning vector to deliver the genes of interest into a variety of plants?

(A) *Bacillus thuringiensis*
(B) Rhino viruses
(C) *Agrobacterium tumifaciens*
(D) Nucleopolyhedrovirus

13. Which one of the following organisms has been disarmed and used to deliver desirable genes into animal cells?

(A) Retroviruses
(B) Cyanobacteria
(C) Yeast
(D) Baculoviruses

14. Arrange the following steps which are involved in action of Bt toxin proteins on insects in correct sequence.
(A) Conversion of inactive toxin into active one by alkaline pH of the gut of insect
(B) Creation of pores that cause cell swelling and lysis which leads to death of insect
(C) Inactive protoxins is ingested by insect
(D) Activated toxin binds to the surface of midgut epithelial cells of insect
Choose the correct answer from the options given below:

(A) (A), (D), (C), (B)
(B) (D), (B), (C), (A)
(C) (C), (A), (D), (B)
(D) (C), (B), (A), (D)

15. Which one of the following techniques serve the purpose of early diagnosis of diseases?

(A) Stool analysis
(B) Enzyme linked immuno-sorbent assay
(C) Urine analysis
(D) Serum analysis

16. When the pistils are fused together, this state is called:

(A) Apocarpous
(B) Syncarpous
(C) Monocarpellary
(D) Multicarpellary

17. Pollination is **not** carried out by water in -

(A) *Zostera*
(B) Water lily
(C) *Hydrilla*
(D) *Vallisneria*

18. Identify the structures which have the potency to give rise to all the tissues and organs.

(A) Stem cells
(B) Trophoblast
(C) Chorionic villi
(D) Placenta

19. Which one of the following structures is **not** essential for maturation and motility of sperms?

(A) Epididymis
(B) Cervix
(C) Seminal vesicle
(D) Prostate

20. Match List-I with List-II.

List-I (Contraceptive methods)	**List-II (Examples)**
(A) Non-medicated IUD	(I) Multiload 375
(B) Copper releasing IUD	(II) LNG-20
(C) Hormone releasing IUD	(III) Vaults
(D) Barrier method	(IV) Lippes loop

Choose the correct answer from the options given below:

(A) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
(B) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)
(C) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)
(D) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

21. Which one of the following diseases is completely curable if detected early and treated properly?

(A) Hepatitis-B
(B) Gonorrhoea
(C) Genital herpes
(D) HIV

22. "Two closely related species competing for the same resources cannot co-exist indefinitely and the competitively inferior one will be eliminated eventually." This statement was given by:

(A) Malthus theory of population growth
(B) Gause's competitive exclusion principle
(C) Verhulst-Pearl logistic growth
(D) Darwin's theory of natural selection

23. The trophic level that has a certain mass of living material at a particular time is called as:

(A) Standing crop
(B) Productivity
(C) Stratification
(D) Respiration loss

24. Match List-I with List-II.

List-I (Sacred Groves)	**List-II (States)**
(A) Khasi and Jaintia Hills	(I) Rajasthan
(B) Western Ghat regions	(II) Karnataka and Maharashtra
(C) Sarguja and Bastar areas	(III) Madhya Pradesh
(D) Aravalli Hills	(IV) Meghalaya

Choose the correct answer from the options given below:

(A) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
(B) (A)-(I), (B)-(IV), (C)-(III), (D)-(II)
(C) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)
(D) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

25. Arrange the following steps involved in the regulation of gene expression in correct sequence.
(A) Processing level
(B) Translational level
(C) Transcriptional level
(D) Transport of mRNA from the nucleus to the cytoplasm
Choose the correct answer from the options given below:

(A) (B), (A), (D), (C)
(B) (D), (B), (A), (C)
(C) (C), (A), (D), (B)
(D) (A), (D), (B), (C)

26. Identify the organism whose genome has **not** been sequenced.

(A) *Caenorhabditis elegans*
(B) *Arabidopsis*
(C) *Drosophila*
(D) Sea urchin

27. Which one of the following statements is the correct fact about human genome project?

(A) The average gene consists of 30000 bases.
(B) The functions are unknown for less than 20 percent of the discovered genes.
(C) Less than 2 percent of the genome codes for proteins.
(D) Chromosome Y has the most genes (2968), and 1 has the fewest (231).

28. Arrange the following stages of human evolution in correct chronological order.
(A) *Australopithecines*
(B) *Homo erectus*
(C) *Ramapithecus*
(D) *Homo sapiens*
Choose the correct answer from the options given below:

(A) (C), (A), (B), (D)
(B) (A), (C), (B), (D)
(C) (D), (A), (B), (C)
(D) (C), (D), (A), (B)

29. Which one of the given terms states that mutations caused speciation?

(A) Variation
(B) Genetic recombination
(C) Gene migration
(D) Saltation

30. Match List-I with List-II.

List-I (Biocontrol agents)	**List-II (Affected organisms)**
(A) Ladybird	(I) Mosquitoes
(B) *Bacillus thuringiensis*	(II) Aphids
(C) Dragonflies	(III) Plant pathogens
(D) *Trichoderma*	(IV) Caterpillars

Choose the correct answer from the options given below:

(A) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)
(B) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)
(C) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)
(D) (A)-(I), (B)-(III), (C)-(II), (D)-(IV)

31. Match List-I with List-II.

List-I (Applications)	**List-II (Microorganisms)**
(A) Immunosuppressive agent	(I) *Propionibacterium sharmanii*
(B) Blood-cholesterol lowering agents	(II) *Trichoderma polysporum*
(C) Nitrogen fixation	(III) *Monascus purpureus*
(D) Holes in 'Swiss cheese'	(IV) *Oscillatoria*

Choose the correct answer from the options given below:

(A) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
(B) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
(C) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)
(D) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

32. Select the correct methods to introduce the recombinant DNA into the host cells.
(A) Biolistics or gene gun for plant cells
(B) Micro-injection for an animal cell
(C) 'Disarmed pathogen' vectors
(D) By heating the host cell at 100°C and then cooling to 70°C
Choose the correct answer from the options given below:

(A) (A), (B) and (C) only
(B) (B) and (D) only
(C) (B), (C) and (D) only
(D) (A) and (C) only

33. Arrange the following steps which are involved in the process of recombinant DNA technology in correct sequence.
(A) Fragmentation of DNA by restriction endonucleases
(B) Transferring the recombinant DNA into the host
(C) Ligation of desired DNA fragment into a vector
(D) Isolation of DNA
Choose the correct answer from the options given below:

(A) (A), (C), (B), (D)
(B) (B), (D), (C), (A)
(C) (C), (A), (D), (B)
(D) (D), (A), (C), (B)

34. Identify the Bt toxin gene which controls the corn borer.

(A) *cryIAc* (B) *cryIIAb*

(C) *cryIAb* (D) *cryIIAc*

35. Select the **incorrect** statement about the insulin hormone produced by rDNA technique.

(A) Two DNA sequences corresponding to A and B chains of insulin were prepared and introduced in *E. coli*.

(B) Chains A and B were produced separately.

(C) Two chains were extracted and combined with C chain.

(D) In 1983, Eli Lilly, an American company, prepared the first human insulin.

36. Intine of the pollen grain is made up of:

(A) Starch and agarose (B) Heparin and lignin

(C) Cellulose and pectin (D) Glycogen and collagen

37. At maturity, a typical angiosperm embryo sac is:

(A) 6-nucleate and 8-celled (B) 7-nucleate and 7-celled

(C) 7-nucleate and 8-celled (D) 8-nucleate and 7-celled

38. Which one of the following hormones is **not** involved in the process of parturition?

(A) Estrogens (B) Cortisol

(C) Oxytocin (D) Prolactin

39. Which one of the following structures provide energy for sperm movement?

(A) Acrosome (B) Head

(C) Middle piece (D) Tail

40. Which one of the following hormones is at its peak during ovulation?

(A) Progesterone (B) Estrogen

(C) Luteinising hormone (D) Follicle stimulating hormone

Read the passage and answer Questions 41-45.

Drugs and Drug Abuse

Read the following passage carefully and answer the given questions.

Use of drugs has been on the rise, especially among the youth. This is really a cause of concern as it could result in many harmful effects. Proper education and guidance would enable young people to safeguard themselves against these dangerous behaviour patterns and follow healthy lifestyles. The drugs which are commonly abused are opioids, cannabinoids and coca alkaloids. The majority of these are obtained from flowering plants. Some are obtained from fungi. Various plants, fruits and seeds having hallucinogenic properties have been used for hundreds of years in folk-medicine, religious ceremonies and rituals all over the globe. When these are taken for a purpose other than medicinal use or in amounts/frequency that impairs one's physical, physiological or psychological functions, it constitutes drug abuse. These days, some drugs are also being abused by some sports-persons.

41. Chemically, heroin is:

(A) Dichloroacetylene (B) Diacetylmorphine

(C) Acetyl-pentene (D) Di-methylacetylene

42. Which one of the following drugs is **not** produced from *Cannabis* plant?

(A) Marijuana (B) Hashish

(C) Smack (D) Charas and ganja

43. A very effective sedative and painkiller, which is very useful in patients who have undergone surgery is:

(A) Morphine (B) Heroin

(C) Cocaine (D) Kanamycin

44. Which one of the following drugs is **not** normally used as medicine to help patients cope with mental illnesses?

(A) Chloramphenicol
(B) Amphetamines
(C) Benzodiazepines
(D) Barbiturates

45. Which one of the following plants does **not** have hallucinogenic properties?

(A) *Atropa*
(B) *Erythroxylum*
(C) *Datura*
(D) *Rauwolfia*

Read the passage and answer Questions 46-50.

Mendelian Disorders

Read the following passage carefully and answer the given questions.

Genetic disorders may be grouped into two categories - Mendelian disorders and Chromosomal disorders. Mendelian disorders are mainly determined by alteration or mutation in a single gene. These disorders are transmitted to the offspring on the same lines as in the principle of inheritance. The pattern of inheritance of such Mendelian disorders can be traced in a family by pedigree analysis. Most common and prevalent Mendelian disorders are Haemophilia, Cystic fibrosis, Sickle-cell anaemia, Colour blindness, Phenylketonuria, Thalassemia, etc. The Mendelian disorders may be dominant or recessive. By pedigree analysis, one can easily understand whether the trait in question is dominant or recessive. Similarly, the trait may also be linked to the sex chromosome or an autosome.

46. Which one of the following diseases is an autosomal dominant disorder?

(A) Sickle-cell anaemia
(B) Myotonic dystrophy
(C) Phenylketonuria
(D) Thalassemia

47. Which one of the following substitutions is a cause of sickle-cell anaemia?

(A) Substitution of valine by aspartic acid at the sixth position of the beta globin chain.
(B) Substitution of glutamic acid by alanine at the sixth position of the beta globin chain.
(C) Substitution of glutamic acid by valine at the sixth position of the beta globin chain.
(D) Substitution of glycine by methionine at the sixth position of the beta globin chain.

48. Which one of the followings is an example of an inborn error of metabolism and inherited as autosomal recessive trait?

(A) Phenylketonuria
(B) Thalassemia
(C) Haemophilia
(D) Colour Blindness

49. α-thalassemia is controlled by the genes:

(A) HBB and HB1 on chromosome 11 of each parent
(B) HAA1 and HAB1 on chromosome 16 of each parent
(C) HBA1 and HBA2 on chromosome 16 of each parent
(D) HBB and HAA on chromosome 11 of each parent

50. Failure of segregation of chromatids during cell division results in:

(A) Apomixis
(B) Aneuploidy
(C) Polyploidy
(D) Parthenocarpy

- End of Question Paper -