



অসম দক্ষতা বিশ্ববিদ্যালয়  
ASSAM SKILL UNIVERSITY  
(A Govt of Assam University)

**Assam Skill University Entrance Examinations 2026**  
**BIOLOGY (FOR INTEGRATED FOOD TECH. PROGRAM)**  
(Paper No. : 03)

Full Marks : 40

Time : 50 minutes

Total number of pages in this booklet : 8

**DO NOT OPEN THE QUESTION BOOKLET UNTIL YOU ARE INSTRUCTED**

All candidates are required to read the instructions given below, before starting to write the answers.  
Ensure to write your ROLL CODE AND ROLL NUMBER AT THE BOTTOM OF THIS PAGE.

**Instructions**

- Candidate should keep his/her admit card on the table with his/her latest photograph pasted on it.
- There are 40 MCQs of **Biology** in this Question Paper meant for applicants **for Integrated Five Year Food Technology Program**. All questions are compulsory.
- Each question carries 1 mark. There is no negative marking. **Full marks : 40.**
- The answers are to be given by making proper marking on the **OMR with ball point Black pen** only in separate OMR sheets.
- No loose sheet is allowed. Rough work, if required, may be done on the blank pages at the end of this question paper.
- Talking with any other candidate inside the examination hall may lead to disqualification of the candidate.
- OMRs must to be signed by the candidate and the invigilator. The candidate has to ensure the same, because lack of these signatures will lead to cancellation of the OMR.**
- Candidate has to put his/her signature on the attendance sheet. **No candidate is allowed to leave the examination hall before completion of 1 (one) hour from the commencement of examination.**
- Candidate needs to check the Question booklet after instructed by the invigilator and report if any discrepancies are noticed in the booklet regarding number of pages or damaged pages.
- Marking in more than one option against any question on the OMR will cancel that answer.** Instructions are given on the reverse of the OMRs.
- If any applicant (Roll Code : BFT) wants to appear in both Mathematics and Biology papers, it may be allowed. The first OMR will be collected after 50 minutes and the second OMR and QP will be issued for the next subject and additional 50 minutes will be allowed. **Correct Roll Code is to be written on the concerned OMR.**
- Handover the Question Paper and the OMR to the invigilator before leaving the exam hall.

Roll Code : Roll Number : 

Sl. No. of the OMR :

Signature of the candidate:.....



## Food Tech

1. Which of the following is correct ?
  - (A) Cells of all living organisms have a nucleus
  - (B) Both animal and plant cells have a well defined cell wall
  - (C) In prokaryotes, there are no membrane bound organelles
  - (D) Cells are formed de novo from abiotic material
2. Which is known to be the longest cell in human body
  - (A) Nerve cell
  - (B) Muscle cell
  - (C) Sperm cell
  - (D) Epithelial cell
3. The main regulatory enzyme of glycolysis is :
  - (A) Hexokinase
  - (B) Phosphofructokinase-I
  - (C) Pyruvate kinase
  - (D) Aldolase
4. Human blood group ABO is an excellent example of :
  - (A) Incomplete dominance and multiple alleles
  - (B) Co-dominance and epistasis
  - (C) Multiple allele and co-dominance
  - (D) Polygenic inheritance
5. The unidirectional transfer of genetic material from a donor bacterium to recipient bacterium by cell to cell contact is termed as :
  - (A) Transformation
  - (B) Conjugation
  - (C) Recombination
  - (D) Transduction
6. If the F factor is attached to the bacterial genome, the donor is called :
  - (A) F<sup>+</sup>
  - (B) F<sup>++</sup>
  - (C) F<sup>+</sup> super strain
  - (D) HfR strain
7. What is the primary disease that the BCG vaccine protect against ?
  - (A) Tetanus
  - (B) Tuberculosis
  - (C) Polio
  - (D) Measles
8. Which of the following immunoglobulins makes the largest percentage in breast milk ?
  - (A) IgM
  - (B) IgD
  - (C) IgG
  - (D) IgA

9. Percentage of crossing over is more when :
- (A) genes are located in a different cell
  - (B) genes are not linked
  - (C) linked genes are located close to each other
  - (D) linked genes are located far apart from each other
10. Sigma factor is a component of :
- (A) DNA ligase
  - (B) DNA polymerase
  - (C) Endonuclease
  - (D) RNA polymerase
11. Which of the following is the energy rich molecule required for the initiation and elongation of translation ?
- (A) AMP
  - (B) GTP
  - (C) CTP
  - (D) NADH
12. Transcription in eukaryotes is initiated when :
- (A) RNA strand is present
  - (B) RNA polymerase is present
  - (C) Core promoter sequence is present
  - (D) None of the above
13. First restriction endonuclease enzyme was :
- (A) Hind-II
  - (B) ECO R1
  - (C) Hou III
  - (D) Bam-I
14. What is the primary function of DNA ligase in gene cloning ?
- (A) To cut DNA specific palindromic sequences
  - (B) To separate the two-strands of the DNA double helix
  - (C) To join DNA fragments by forming phosphodiaster bond
  - (D) To synthesize a complementary DNA strand from an RNA template
15. Transgenic animals are widely used in medicine primarily to-
- (A) Produce pharmaceutical proteins in their milk
  - (B) Test the safety and efficacy of vaccines before humane use
  - (C) Study how human diseases progress and test gene functions
  - (D) All of the above
16. Which method of plant propagation involves the use of girdling ?
- (A) Grafting
  - (B) Cutting
  - (C) Layering
  - (D) Micropropagation

17. Match the following :

**Column-I**

- (a) Chlorophyll a
- (b) Chlorophyll b
- (c) Xanthophyll
- (d) Carotenoids
- (A) A-2, B-4, C-1, D-3
- (B) A-3, B-4, C-2, D-1
- (C) A-4, B-3, C-2, D-1
- (D) A-4, B-2, C-1, D-3

**Column-II**

- 1. Yellow
- 2. Bright or blue green
- 3. Yellow or yellow orange
- 4. Yellow green

18. The products of light dependent reactions are :

- (A)  $CO_2$  and ATP
- (B)  $NADPH_2$ , ATP and  $CO_2$
- (C)  $O_2$ , ATP and  $NADPH_2$
- (D)  $O_2$  and  $FADH_2$

19. PS-II transfer its electrons to

- (A) Chloroplast
- (B) Mitochondria
- (C) PS-I
- (D) None of these

20. Vascular bundles of monocotyledons are considered 'closed' because :

- (A) A thick bundle of sheath surrounds them
- (B) Xylem completely surrounds the phloem
- (C) Cambium is absent
- (D) Do not have vessels

21. Depolarisation of axolemma during nerve conduction takes place between :

- (A) equal amount of  $Na^+$  and  $K^+$  move out across axolemma
- (B) Only  $Na^+$  moves inside
- (C) More  $Na^+$  moves outside than  $K^+$  moving inside
- (D) None of the above

22. Gigantism and dwarfism are the disease related to

- (A) Prolactin hormone of mammary gland
- (B) Growth hormone of adenohipophysis
- (C) Luteinizing hormone of pituitary gland
- (D) Thyroid stimulating hormone of thyroid

23. Cancerous cells are often more easily damaged by radiation than normal cells because they :

- (A) differ in cellular structure
- (B) undergo rapid uncontrolled cell division
- (C) are nutrition starved
- (D) have abnormal nuclei

- 24.** Choose the mismatched part of nephron with its functions :
- (A) Bowman's capsule – Glomerular filtration
  - (B) PCT – Reabsorption of  $Na^+$  and  $K^+$
  - (C) DCT– Reabsorption of glucose
  - (D) Loop of Henle–Urine concentration
- 25.** Resolving power of microscope is a function of :
- (a) Wavelength of light used
  - (b) Numerical aperture of lens system.
- Which of the above statement(s) is/are correct :
- (A) Only statement (a) is correct
  - (B) Only statement (b) is correct
  - (C) Both statements (a) and (b) correct
  - (D) Both statements (a) and (b) incorrect
- 26.** What does 'g' represent when a centrifuge is described as spinning at  $500\times g$  ?
- (A) Grams
  - (B) Centrifugal force is 500 times less than earthly gravitational force
  - (C) Centrifugal force is 500 times greater than earthly gravitational force
  - (D) The speed of the rotor in rotation per minute
- 27.** In a paper chromatography the  $R_f$  value is calculated by which of the following formula ?
- (A) Distance moved by solvent front  $\div$  Distance moved by solute
  - (B) Distance moved by solute  $\div$  Distance moved by solvent front
  - (C) Width of the spot  $\div$  Distance moved by solvent
  - (D) Distance of origin  $\div$  Distance of the final spot
- 28.** In forensics, PCR is extensively used for :
- (A) Determining of age of a deceased individual
  - (B) Analysing blood proteins to find the victim's blood type
  - (C) Amplifying trace amount of DNA from crime scene for profiling
  - (D) Synthesizing artificial skin cells for a suspect
- 29.** According to Lindemands 10% law, what percentage of energy is transferred from one trophic level to the next ?
- (A) 1%
  - (B) 10%
  - (C) 50%
  - (D) 90%

30. How much of the original habitat must be lost for a region to qualify as a “hotspot” ?  
(A) At least 30% (B) At least 70%  
(C) At least 50% (D) Less than 50%
31. Cryopreservation is a key method for which type of biodiversity conservation ?  
(A) In situ preservation (B) Ex situ preservation  
(C) Tissue protection (D) Ecological restoration
32. Which type of ecological pyramid indicates the role of a single tree supporting a large number of herbivores and parasite ?  
(A) upright pyramid of biomass (B) inverted pyramid of biomass  
(C) upright pyramid of number (D) inverted pyramid of energy
33. The most serious form of malaria known as malignant malaria is caused :  
(A) Plasmodium falciparum (B) P. vivax  
(C) P. malaria (D) All of these
34. HIV parasitizes \_\_\_\_\_  
(A) Y-helper cells (B) T-helper cells  
(C) K-helper cells (D) None of these
35. Which of the following disorder is an example of point mutation ?  
(A) Sickle cell anaemia (B) Down’s syndrome  
(C) Night blindness (D) Thalassemia
36. How many Barr bodies are typically present in the cells of an individual with Klinefelter syndromes ?  
(A) 0 (B) 1  
(C) 2 (D) 3
37. What type of rot indicates an early stage bacterial decomposition in eggs, producing sour tastes and odd flavour  
(A) Green rot (B) White rot  
(C) Red rot (D) Black rot
38. Which temperature range is commonly known as the “Danger zone” for bacterial growth in food ?  
(A) 0 °C to 10 °C (B) 5 °C to 60 °C  
(C) 40 °F to 140 °F (D) 15 °C to 35 °C
39. Which of the following acid will have higher bacteriostatic effect at a given *pH* .  
(A) Acetic acid (B) Tartaric acid  
(C) Citric acid (D) Malic acid
40. What is the normal average freezing point of raw milk ?  
(A) -0.55 °C (B) -1.0 °C  
(C) 0 °C (D) +100 °C

**SPACE FOR ROUGH WORK (IF REQUIRED)**