

Booklet Series Code : A

Important : Please consult your Admit Card / Roll No. Slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No.

*In Figures**In Words*

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate : _____

Subject : BIOLOGY

Time : 70 minutes

Number of Questions : 60

Maximum Marks : 120

DO NOT OPEN THE SEAL ON THE BOOKLET UNTIL ASKED TO DO SO

INSTRUCTIONS

1. Write your Roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
2. Enter the Subject and Series Code of Question Booklet on the OMR Answer Sheet. Darken the corresponding bubbles with **Black Ball Point / Black Gel pen**.
3. Do not make any identification mark on the Answer Sheet or Question Booklet.
4. To open the Question Booklet remove the staple(s) gently when asked to do so.
5. Please check that this Question Booklet contains **60** questions. In case of any discrepancy, inform the Assistant Superintendent within 10 minutes of the start of test.
6. Each question has four alternative answers (A, B, C, D) of which only one is correct. For each question, darken only one bubble (A or B or C or D), whichever you think is the correct answer, on the Answer Sheet with **Black Ball Point / Black Gel pen**.
7. If you do not want to answer a question, leave all the bubbles corresponding to that question blank in the Answer Sheet. No marks will be deducted in such cases.
8. Darken the bubbles in the OMR Answer Sheet according to the Serial No. of the questions given in the Question Booklet.
9. Negative marking will be adopted for evaluation i.e., 1/4th of the marks of the question will be deducted for each wrong answer. A wrong answer means incorrect answer or wrong filling of bubble.
10. For calculations, use of simple log tables is permitted. Borrowing of log tables and any other material is not allowed.
11. For rough work only the sheets marked "Rough Work" at the end of the Question Booklet be used.
12. The Answer Sheet is designed for **computer evaluation**. Therefore, if you do not follow the instructions given on the Answer Sheet, it may make evaluation by the computer difficult. **Any resultant loss to the candidate on the above account, i.e., not following the instructions completely, shall be of the candidate only.**
13. After the test, hand over the Question Booklet and the Answer Sheet to the Assistant Superintendent on duty.
14. In no case the Answer Sheet, the Question Booklet, or its part or any material copied/noted from this Booklet is to be taken out of the examination hall. Any candidate found doing so, would be expelled from the examination.
15. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent/Observer whose decision shall be final.
16. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.**

1. **Storage product of algae is :**
 - (A) Glycogen
 - (B) Fat
 - (C) Cellulose
 - (D) Proteins
2. **Chloroplasts of Ulothrix are :**
 - (A) Branched
 - (B) Girdle - shaped
 - (C) Brick shaped
 - (D) Unbranched
3. **Plasmodium is found in :**
 - (A) Myxomycetes
 - (B) Basidiomycetes
 - (C) Chytridiomycetes
 - (D) Oomycetes
4. **Black rust of wheat is caused by :**
 - (A) *Puccinia graminis tritici*
 - (B) *Albugo Candida*
 - (C) *Ustilago tritici*
 - (D) *Anguina tritici*
5. **Dolipore septum is present in :**
 - (A) Oomycota
 - (B) Basidiomycota
 - (C) Myxomycota
 - (D) Plasmodiophoromycota.
6. **Bacteria with flagella all around the periphery of cell is called :**
 - (A) Peritrichous
 - (B) Monotrichous
 - (C) Lophotrichous
 - (D) Amphitrichous
7. **The outer most sheath of TMV is termed as :**
 - (A) Plasmid
 - (B) Virion
 - (C) Capsid
 - (D) Peplomeres
8. **Storage zone of *Marchantia* is devoid of :**
 - (A) Oil cell
 - (B) Starch grains
 - (C) Nostoc
 - (D) Reticulate thickening
9. **Elaters are present in capsule of :**
 - (A) *Riccia*
 - (B) *Marchantia*
 - (C) *Anthoceros*
 - (D) *Funaria*
10. **Trabeculae in *Selaginella* represents modified :**
 - (A) Endodermal cells
 - (B) Pericycle cells
 - (C) Inner cortical cells
 - (D) Phloem cells
11. **Sex organs in Pteridophytes are :**
 - (A) Unicellular and Jacketed
 - (B) Multicellular and non Jacketed
 - (C) Multicellular and jacketed
 - (D) Unicellular and non Jacketed.
12. **Root system in fern is :**
 - (A) Primary and branched
 - (B) Primary and unbrached
 - (C) Primary and adventitious root
 - (D) Adventitious roots

13. Which of the following is not present in leaf of *Slaginella* ?
 (A) Xylem (B) Phloem
 (C) Palisade parenchyma (D) Stomata
14. Neck canal cells are absent in the archegonium of :
 (A) *Dryopteris* (B) *Cycas*
 (C) *Funaria* (D) *Sphagnum*
15. Vascular bundles in *Cycas* are :
 (A) Conjoint, collateral and closed (B) Conjoint, collateral and open
 (C) Conjoint, bicollateral and open (D) Conjoint, bicollateral and closed
16. A membranous layer between edible part and seed coat of *Pinus* seed is a remnant of :
 (A) Integument (B) Nucellus
 (C) Wall of megaspore (D) Endosperm
17. Female gametophyte in gymnosperm is analogous to which part of angiosperms ?
 (A) Carpel (B) Nucellus
 (C) Embryo sac (D) Thalamus
18. In dicot stem, vascular bundles are :
 (A) Scattered (B) Closed
 (C) Concentric (D) Arranged in rings
19. Which of the following is an insectivorous plant ?
 (A) *Cycas* (B) Sunflower
 (C) *Cuscuta* (D) *Nepenthes*
20. Which structure in embryo sac of angiosperms represent archegonium ?
 (A) Antipodal cell (B) Egg
 (C) Synergids (D) Both egg and synergids
21. Scutellum of maize is called :
 (A) Cotyledon (B) Coleorrhiza
 (C) Coleoptile (D) Hypocotyle
22. Plants which prefer extreme sunlight are called :
 (A) Halophytes (B) Heliophytes
 (C) Sciophytes (D) Xerophytes
23. Which of the following is a submerged hydrophyte ?
 (A) *Ceratophyllum* (B) *Utricularia*
 (C) *Hydrilla* (D) *Lemna*
24. Soil brought along with river water is called :
 (A) Aeolian (B) Colluvial
 (C) Glacial (D) Alluvial

25. **Chromosomes are concerned with :**
- (A) Respiration (B) Growth
(C) Transmission of heredity characters (D) Assimilation
26. **Which of the following is not bounded by cell membrane ?**
- (A) Sphaerosomes (B) Mitochondria
(C) Ribosomes (D) Lysosomes
27. **Crossing over occurs at :**
- (A) Two strand stage (B) Four strand stage
(C) Three strand stage (D) One strand stage
28. **Stomata open at night and close during day time in :**
- (A) Mesophytes (B) Hydrophytes
(C) Shrubs (D) Succulents
29. **An inflorescence with branched axis is :**
- (A) Umbel (B) Panicle
(C) Head (D) Corymb
30. **Casparian strips contain :**
- (A) Cutin (B) Pectin
(C) Suberin (D) Wax
31. **A prokaryotic cell lacks :**
- (A) Cell wall (B) Cell membrane
(C) Cytoplasm (D) Nucleolus
32. **The two subunits of 70 S ribosomes are :**
- (A) 50 S and 30 S (B) 45 S and 25 S
(C) 50 S and 20 S (D) 40 S and 30 S
33. **Gigantism and acromegaly are two defects produced due to improper functioning of :**
- (A) Thyroid (B) Pituitary
(C) Thyroid and pituitary (D) Thyroid, pituitary and thymus
34. **Male cockroach differs from female because of the presence of :**
- (A) Long antennae (B) Amphids
(C) Anal styles (D) Anal cerci
35. **Which of the following cranial nerves in man is mixed ?**
- (A) Optic (B) Vagus
(C) Trochlear (D) Olfactory
36. **Distance between two strands of DNA is :**
- (A) 20 Å (B) 34 Å
(C) 3.4 Å (D) 340 Å

37. Which one is not an essential amino acid ?
 (A) Leucine (B) Lysine
 (C) Methionine (D) Alanine
38. The term protoplasm was coined by :
 (A) Purkinje (B) Leeuwenhoek
 (C) Schleiden & Schwann (D) Dujardin
39. Chiasmata are first seen in :
 (A) Leptotene (B) Zygotene
 (C) Pachytene (D) Diplotene
40. During muscle contraction :
 (A) Size of A-bands remains the same (B) Size of H-zone becomes smaller
 (C) Size of I-bands decreases (D) Diameter of fibre increases
41. Nerve transmission is :
 (A) Mechanical process (B) Chemical process
 (C) Biological process (D) Physical process
42. The term heterochromatin was coined by :
 (A) Morgan (B) Heitz
 (C) Warburg (D) Hammerling
43. Esterases belong to the category of :
 (A) Lyases (B) Ligases
 (C) Transferases (D) Hydrolases
44. Respiratory mechanism is controlled by :
 (A) Central nervous system (B) Sympathetic nervous system
 (C) Parasympathetic nervous system (D) Autonomic nervous system
45. An organism with two identical alleles is :
 (A) Dominant (B) Hybrid
 (C) Homozygous (D) Heterozygous
46. Tendon connects :
 (A) Bone to bone (B) Bone to muscle
 (C) Muscle to muscle (D) Nerve to muscle
47. In human beings 45 chromosomes/single X/XO abnormality causes :
 (A) Down's syndrome (B) Klinefelter's syndrome
 (C) Turner's syndrome (D) Edward's syndrome
48. Nucleolus takes part in synthesis of :
 (A) rRNA (B) tRNA
 (C) mRNA (D) DNA

49. Which one is not related to chromosomal abnormality ?
 (A) Aneuploidy (B) Euploidy
 (C) Klinefelter's syndrome (D) AIDS
50. Release of pancreatic juice is stimulated by :
 (A) Cholecystokinin (B) Secretin
 (C) Enterokinase (D) Trypsinogen
51. Head of humerus is articulated with pectoral girdle by a joint :
 (A) Hinge (B) Ball and socket
 (C) Immovable (D) Pivot joint
52. Hypophysis is the alternate name of :
 (A) Pituitary (B) Thyroid
 (C) Thymus (D) Pineal gland
53. Concave lens is employed to correct :
 (A) Presbiopia (B) Hypermetropia
 (C) Cataract (D) Myopia
54. Complete haploid set of chromosomes of a species is :
 (A) Genotype (B) Genome
 (C) Genetic code (D) Allele
55. Plasma membrane is made of :
 (A) Proteins and carbohydrates (B) Proteins and lipids
 (C) Proteins, lipids and carbohydrates (D) Proteins, some nucleic acid and lipids
56. Genetic code was discovered by frameshift mutation by :
 (A) Crick (B) Watson
 (C) Franklin (D) Khorana
57. Which one is carrier of microfilariae ?
 (A) *Aedes* (B) *Anopheles*
 (C) *Tabanus* (D) *Culex*
58. Kidney stone is produced due to :
 (A) Deposition of sand particles (B) Precipitation of proteins
 (C) Crystallisation of oxalates (D) Blockage of fats
59. Universal recipient blood group is :
 (A) A (B) AB
 (C) B (D) O
60. Net gain of ATP in glycolysis is :
 (A) 6 (B) 2
 (C) 4 (D) 8

Panjab University, Chandigarh
CET(UG)-2015

FINAL ANSWERS / KEY

Subject: BIOLOGY

Booklet Series Code: A

1	2	3	4	5	6	7	8	9	10
A	B	A	A	B	A	C	C	B	A
11	12	13	14	15	16	17	18	19	20
C	D	C	B	B	B	C	D	D	D
21	22	23	24	25	26	27	28	29	30
A	B	X	D	C	C	B	D	B	C
31	32	33	34	35	36	37	38	39	40
D	A	B	C	B	A	D	A	D	A
41	42	43	44	45	46	47	48	49	50
B	B	D	A	C	B	C	A	D	B
51	52	53	54	55	56	57	58	59	60
B	A	D	B	C	A	D	C	B	D

Note: An 'X' in the key indicates that either the question is ambiguous or it has printing mistake. All candidates will be given credit for this question.