

1. A gene of operon which synthesizes a repressor protein is :
(a) promoter gene (b) structural gene
(c) operator gene (d) regulator gene
2. Match the excretory organs listed under column-I with the animals given under column-II. Choose the answer which gives the correct combination of alphabets of the two columns :

Column-I (Excretory organs)	Column-II (Animals)
A. Nephridia	p. <i>Hydra</i>
B. Malpighian tubules	q. Leech
C. Protonephridia	r. Shark
D. Kidneys	s. Flatworms
	t. Cockroach

- (a) A - q, B - t, C - s, D - r
(b) A - s, B - q, C - p, D - t
(c) A - t, B - q, C - s, D - r
(d) A - q, B - s, C - t, D - p
3. Compound saccular glands are :
(a) intestinal glands
(b) salivary glands
(c) gastric glands
(d) endocrine glands
4. The law of limiting factor was proposed by :
(a) F.F. Blackman (b) D. Arnon
(c) Robert Hill (d) R. Emerson
5. Aerosome is a part of :
(a) foetus (b) Graafian follicle
(c) human ovum (d) human sperm
6. An example of Pasteur effect is :
(a) *Penicillium* (b) *Pinnularia*
(c) *Saccharomyces* (d) *Nostoc*

7. One of the following is called Sewall Wright effect :
(a) genetic drift (b) isolation
(c) gene pool (d) gene flow
8. Match the types of cells listed under column-I with the secretions given under column-II. Choose the answer which gives the correct combination of alphabets of the two columns :

Column-I (Types of cells)	Column-II (Secretions)
A. Beta cells	p. Lysozyme
B. Mast cells	q. Mucus
C. Paneth cells	r. Histamine
D. Acinar cells	s. Insulin
	t. Pancreatic enzymes

- (a) A - s, B - q, C - p, D - t
(b) A - t, B - q, C - r, D - s
(c) A - s, B - r, C - p, D - t
(d) A - q, B - r, C - p, D - t
9. Which of the following is a mechanical barrier used in birth control ?
(a) Tubectomy (b) Dalcon shield
(c) vasectomy (d) Diaphragm
10. The gases used in the spark-discharge apparatus were :
(a) H_2 , CH_4 and NH_3
(b) CO , NH_3 and CH_4
(c) O_2 , CO_2 and NH_3
(d) NH_3 , CH_4 and O_2
11. The "power house" of cell is :
(a) mitochondria (b) lysosome
(c) ribosome (d) golgi complex



12. The young one of cockroach is called :
 (a) caterpillar (b) nymph
 (c) fingerling (d) maggot
13. The yellow coloured milk secreted by cattle soon after the birth of a calf is called :
 (a) chyme (b) chyle
 (c) cholesterol (d) colostrum
14. A bicollateral vascular bundle has the following arrangement of tissues :
 (a) outer phloem → outer xylem → middle cambium → inner xylem → inner phloem
 (b) outer cambium → outer phloem → middle xylem → inner phloem → inner cambium
 (c) outer phloem → outer cambium → middle xylem → inner cambium → inner phloem
 (d) outer xylem → outer cambium → middle phloem → inner cambium → inner xylem

15. Match the branches of Biology given under column-I with the field of study listed under column-II; choose the answer which gives the correct combination of alphabets of the two columns :

Column-I (Branch of Biology)	Column-II (Field of Study)
A. Malacology	p. Reptiles
B. Pomology	q. Fungi
C. Mycology	r. Fruits
D. Ornithology	s. Molluscs t. Birds

- (a) A - s, B - r, C - q, D - t
 (b) A - s, B - r, C - p, D - t
 (c) A - p, B - r, C - q, D - t
 (d) A - t, B - s, C - q, D - p
16. Choose the cat fish from the following :
 (a) *Cirrhina mrigala* (b) *Wallago attu*
 (c) *Labeo rohita* (d) *Catla catla*
17. Identify the plasmid :
 (a) Alu I (b) Hind II
 (c) Eco RI (d) pBR 322
18. Match the types of bacteria listed in column-I with their activity given in column-II. Choose the correct

combination of alphabets of the two columns :

Column-I (Types of bacteria)	Column-II (Activity)
A. <i>Streptomyces</i>	p. Food poisoning
B. <i>Rhizobium</i>	q. Source of antibiotics
C. <i>Nitrosomonas</i>	r. Nitrogen fixation
D. <i>Acetobacter</i>	s. Nitrification t. Vinegar synthesis

- (a) A - q, B - r, C - p, D = t
 (b) A - q, B - r, C - s, D - t
 (c) A - s, B - t, C - p, D - r
 (d) A - t, B - p, C - r, D - s

19. ATP was discovered by :
 (a) Blackman (b) Bowman
 (c) Lipmann (d) Karl Lohman
20. DNA finger printing technique was first developed by :
 (a) Jeffreys, Wilson and Thien
 (b) Boysen and Jensen
 (c) Schleiden and Schwann
 (d) Edward and Steptoe
21. Synthesis of testosterone by Leydig cells is stimulated by :
 (a) LTH (b) TSH
 (c) FSH (d) ICSH
22. Which of the following statements is right ?
 (a) Fronds are found in bryophytes
 (b) Multiciliate sperms are found in angiosperms
 (c) Diatoms produce basidiospores
 (d) Heterocysts are found in *Nostoc*
23. The biogenetic law was proposed by :
 (a) F. Redi (b) Richter
 (c) Weismann (d) Haeckel
24. Nodes of Ranvier are found in :
 (a) axon (b) sperm
 (c) muscle fibre (d) neuron
25. Which of the following animals is protected in Kaziranga sanctuary in Assam ?
 (a) Indian elephant
 (b) Indian rhinoceros
 (c) Indian lion
 (d) Indian bison



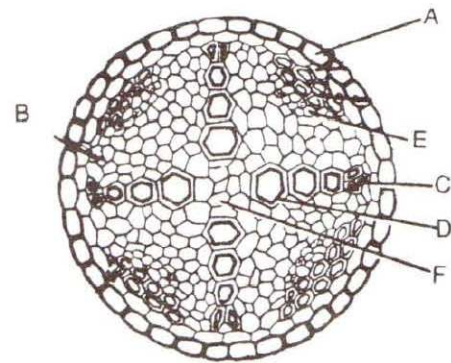
26. The first antibiotic was discovered by :
 (a) A. Flemming (b) W. Flemming
 (c) R. Koch (d) Louis Pasteur
27. A four chambered heart is not found in :
 (a) mammals (b) birds
 (c) snake (d) crocodile
28. Balance theory of sex determination was proposed by :
 (a) Calvin B. Bridges
 (b) Strasburger
 (c) T.H. Morgan
 (d) Waldeyer.
29. Elongation of a genetically dwarf plant is possible by application of :
 (a) cytokinin (b) ethylene
 (c) abscisic acid (d) gibberellins
30. The primary visual area is located in :
 (a) temporal lobe (b) occipital lobe
 (c) frontal lobe (d) parietal lobe
31. Respiratory quotient (RQ.) is represented by :
 (a) $\frac{N_2}{O_2}$ (b) $\frac{CO_2}{O_2}$
 (c) $\frac{O_2}{CO_2}$ (d) $\frac{C}{N}$
32. Bacterial photosynthesis involves :
 (a) both PS-I and PS-II
 (b) either PS-I or PS-II
 (c) PS-I only
 (d) PS-II only
33. One of the following is not the types of blood groups or blood factors :
 (a) Lewis and Duffy
 (b) Buffs and Kips
 (c) ABO and Rh
 (d) Rh and MN
34. Gynaecomastia is the symptom of :
 (a) Down syndrome
 (b) SARS
 (c) Turner's syndrome
 (d) Klinefelter's syndrome
35. The term ecology was coined by :
 (a) Reiter (b) Tansley
 (c) E. Munch (d) Odum
36. Bamboo and grasses elongate by the activity of :
 (a) secondary meristem
 (b) lateral meristem
 (c) apical meristem
 (d) intercalary meristem
37. The example for trimerous, unisexual flower is :
 (a) *Cocos nucifera* (b) *Hibiscus*
 (c) Tamarind (d) Pea
38. The term species was coined by :
 (a) Aristotle (b) Engler
 (c) John Ray (d) Linnaeus
39. Match the Biological molecules listed under column-I with their biological functions given under column-II. Choose the answer which gives correct combination of alphabets of the two columns.
- | Column -I
(Biological
molecules) | Column-II
(Functions) |
|----------------------------------------|--------------------------|
| A. Starch | p. Protein synthesis |
| B. Haemoglobin | q. Sex hormone |
| C. RNA | r. Storage product |
| D. Steroid | s. Transport of gases |
- (a) A - s, B - r, C - p, D - q
 (b) A - r, B - s, C - q, D - p
 (c) A - r, B - p, C - s, D - q
 (d) A - r, B - s, C - p, D - q
40. One of the following is a disease of poultry :
 (a) foot and mouth disease
 (b) pebrine disease
 (c) anthrax
 (d) ranikhet disease
41. Coacervates were experimentally produced by :
 (a) Urey and Miller
 (b) Jacob and Monod
 (c) Fischer and Huxley
 (d) Sidney Fox and Oparin
42. The scientific name of zebu is :
 (a) *Bos indicus* (b) *Bombyx mori*
 (c) *Bubalus bubalus* (d) *Gallus domesticus*

43. Motor cells are found in :
 (a) monocot leaf
 (b) upper epidermis of monocot leaf
 (c) brain
 (d) spinal cord
44. These belong to the category of primary consumers :
 (a) snakes and frogs
 (b) water insects
 (c) eagle and snakes
 (d) insects and cattle
45. Bhopal gas tragedy of 1984 was caused by the leakage of gas :
 (a) methyl isocyanate
 (b) 2,4-dichlorophenoxy acetic acid
 (c) ammonia
 (d) hydrogen cyanide
46. Volkman's canals occur in :
 (a) internal ear (b) liver
 (c) cartilage (d) bone
47. The lacteals are found in :
 (a) salivary gland (b) villi
 (c) spleen (d) mammary gland
48. Match the theories given in column-I with the names of scientists listed in column-II. Choose the answer which gives the correct combination of the alphabets.

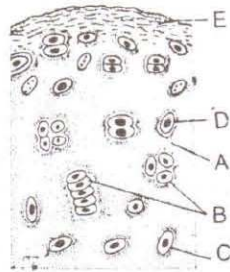
Column-I (Names of theories)	Column-II (Name of scientists)
A. Relay pump theory	p. Stocking
B. Transpiration cohesion theory	q. Sir J.C. Bose
C. Mass flow	r. Godlewski
D. Pulsation theory	s. Dixon and Jolly
	t. Ernst Munch
(a) A - r, B - s, C - t, D - q	
(b) A - s, B - r, C - p, D - q	
(c) A - r, B - q, C - t, D - q	
(d) A - q, B - p, C - t, D - r	

49. The World Environment Day is celebrated on :
 (a) 5th May (b) 6th August
 (c) 5th June (d) 6th June

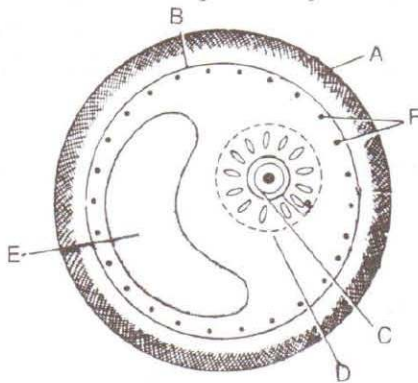
50. One of the following is called pitcher plant :
 (a) *Nepenthes* (b) *Aristolochia*
 (c) *Drosera* (d) *Utricularia*
51. Choroid plexus is a network of :
 (a) capillaries (b) muscle fibres
 (c) nerves (d) lymph vessels
52. Chiropteriphily means :
 (a) pollination by snails
 (b) pollination by bats
 (c) pollination by wind
 (d) pollination by insects
53. In the diagram of T.S. of stele of dicot root, the different parts have been indicated by alphabets choose the answer in which these alphabets correctly match with the parts they indicate :



- (a) A - Endodermis, B - Conjunctive tissue, C - Metaxylem, D - Protoxylem, E - Phloem, F - Pith
- (b) A - Endodermis, B - Pith, C - Protoxylem, D - Metaxylem, E - Phloem, F - Conjunctive tissue
- (c) A - Pericycle, B - Conjunctive tissue, C - Metaxylem, D - Protoxylem, E - Phloem, F - Pith
- (d) A - Endodermis, B - Conjunctive tissue, C - Protoxylem, D - Metaxylem, E - Phloem, F - Pith
54. In the diagram of section of hyaline cartilage, the different parts have been indicated by alphabets; choose the answer in which these alphabets correctly match with the parts they indicate :



- (a) A – Perichondrium; B – Chondrocyte; C – Lacuna, D – Capsular matrix, E – Chondrin
- (b) A – Capsular matrix, B – Chondrocyte, C – Lacuna, D – Perichondrium, E – Chondrin
- (c) A – Chondrin, B – Chondrocyte, C – Lacuna, D – Capsular matrix, E – Perichondrium
- (d) A – Chondrin, B – Lacuna, C – Chondrocyte, D – Capsular matrix, E – Perichondrium
55. In the diagram of section of Graafian follicle, different parts are indicated by alphabets; choose the answer in which these alphabets have been correctly matched with the parts they indicate :



- (a) A – Theca externa, B – Theca interna, C – Ovum, D = Cumulus oophorus, E – Antrum, F – Membrana granulosa
- (b) A – Membrana granulosa, B = Theca externa, C – Ovum, D – Cumulus oophorus, E – Antrum, F – Theca interna

- (c) A – Membrana granulosa, B – Theca interna, C – Ovum, D – Cumulus oophorus, E – Antrum, F – Theca externa
- (d) A – Theca externa, B – Theca interna, C – Ovum, D – Membrana granulosa, E – Antrum, F – Cumulus oophorus

56. Murein is not found in the cell wall of :
(a) *Nostoc* (b) Eubacteria
(c) Cyanobacteria (d) Diatoms
57. Largest gametophyte is found in :
(a) Angiosperm (b) *Polytrichum*
(c) *Nephrolepis* (d) *Cycas*
58. Match the names of diseases listed under column-I with the meanings given under column-II; choose the answer which gives the correct combination of alphabets of the two columns :

Column-I (Names of disease)	Column-II (Meanings)
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- | | |
|--------------|------------------------------------------|
| A. Jaundice | p. Allergic inflammation of nose |
| B. Stenosis | q. Loss of motor functions |
| C. Rhinitis | r. Heart valve defect |
| D. Paralysis | s. Increase in bile pigment in the blood |
| | t. Septal defect of heart |

- (a) A – q, B – t, C – r, D – q
(b) A – s, B – p, C – q, D – r
(c) A – s, B – r, C – p, D – q
(d) A – s, B – t, C – p, D – q

59. Ganong's respiroscope is used to demonstrate :
(a) production of carbon dioxide during aerobic respiration
(b) production of heat during aerobic respiration
(c) evolution of oxygen during photosynthesis
(d) evolution of carbon dioxide during fermentation
60. Balbiani rings are found in :
(a) all chromosomes
(b) Lampbrush chromosome
(c) dicot stems
(d) polytene chromosomes

Answer – Key

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