NEET (UG) GRAND TEST

No. of Questions: 180 **Max. Marks: 720** **Time: 3 Hours**

[Each Question carries 4 marks. For each incorrect response, one mark will be deducted]

BIOLOGY

1. Which of the following elements are translocated easily from older leaves to young leaves?
1) S, Ca, K 2) S, N, P
3) K, N, P 4) K, P, Ca

2. How many of the following plants do not respond to the CO_2 concentration in their CO_2 fixation ability?
Tomato, Maize, Sugar cane, Bell pepper, Potato, Rice, Sorghum, Amaranthus
1) 4 2) 5 3) 6 4) 3

3. Character not belongs to Gymnosperms:
1) Ovules are orthotropous
2) Pollination is entomophilous
3) Eustelic
4) Dominant sporophyte

4. Find the incorrect matching from the following.

Enzyme	Co-factor	Function
1) Catalase	Haem	Break down of Hydrogen peroxide
2) Gluco kinase	Mg	Addition of phosphate
3) Carboxy peptidase	Zn	Proteolysis
4) Nitrate reductase	Mo	Nitrogen metabolism

5. Coconut fruit is:
1) Nut 2) Fleshy
3) Dry 4) Indehiscent

6. Anatomically dicot stem is distinguished instantly from monocot stem by its:
1) Stele
2) Vascular bundles
3) Cortex 4) Medulla

7. Closed vascular bundles are:
1) Enclosed by sclerenchymatous sheath
2) Surrounded by endodermis
3) Lacks cambium
4) Compactly arranged in the stele

8. Fabaceae is exemplified by:
1) Vexillary corolla
2) Zygomorphic flowers
3) Ten stamens
4) Hypogynous flowers

9. Which of the following is absent in the seed of Pisum sativum?
1) Cotyledons 2) Endosperm
3) Scutellum 4) Both 2 & 3

10. Find A, B, C correctly in the table given here.

Crop	Variety	Resistance to diseases
A	Himagiri	Leaf and stripe rot
Brassica	B	White rust
Cow pea	PusaKomal	C

	A	B	C
1)	Chilli	Pusa Gourav	Black rot
2)	Cauliflower	Pusa snow ball	Mosaic
3)	Wheat	PusaSwarnim	Bacterial blight
4)	Okra	Parbhani Kranthi	Powdery mildew

11. In plant breeding if three pairs of alleles are considered for the pure breeding, how many genotypes are expected in F_2 generation?
1) 9 2) 27 3) 64 4) 8

12. Which of the following propagates by adventitious buds?
1) Ginger
2) Agave
3) Bryophyllum
4) Both 2 & 3

13. Which one of the following factors do not influence the RUBISCO?
1) O_2 2) Light
3) CO_2 4) Mn

14. Incorrect statement regarding the selection of pea plant for his experiments by Mendel?
1) Hybridization is easy in pea plants
2) Pea plants are true breeding plants
3) Large number of offsprings are possible in pea plants
4) Flowers in pea plants are bisexual

15. Non-Mendelian inheritance from the following:
1) Incomplete dominance
2) Co-dominance
3) Sex Linkage
4) All the above

16. How many of the following characters are considered in the classification of Algae in Five Kingdom classification?
a) Nuclear membrane
b) Pigments
c) Cell wall composition
d) 30 S RNA
e) Flagella
f) Storage food material
g) Sporophyte structure
1) 3 2) 4 3) 5 4) 6

17. Two small fragments of DNA with same length may not have same:
1) Nucleotide sequence
2) Molecular weight
3) Melting point
4) All the above

18. Not true for a vacuole of a plant cell:
1) In some plants, the contents of the vacuole impart colour to the plant part
2) The membrane covering the vacuole allows only inward movement of ions and other materials
3) Gums, resins and tannins are stored inside the vacuoles
4) Vacuole occupy nearly 90% of the cell volume

19. In a metabolic reaction when substrate concentration is unlimited, which of the following is true?
I) The rate of the reaction is maximum
II) Energy of activation is maximum
III) All enzyme molecules are in the form of ES complex
IV) Product will limit the rate of the reaction
1) I & IV 2) I & III
3) II & III 4) III & IV

20. Turgidity develop in the plant cell due to:
1) Cell wall 2) Large vacuole
3) Amount of water
4) All the above

21. Consequence of absence of 'origin of replication' in the vector is:
1) Alien DNA cannot be inserted into the host organism using the vector
2) Alien DNA cannot be inserted into the vector
3) Cloning of alien DNA in the host is not possible
4) Transformed organisms cannot be identified

22. Bt cotton is resistant to:
1) Herbicide 2) Insects
3) Nematodes 4) Bacteria

23. Find the correct statement regarding the secondary treatment in STPs:
1) Sludge from secondary treatment is treated aerobically
2) BOD is constantly increases in this stage
3) Activated sludge is treated anaerobically
4) Sedimentation is the final stage of secondary treatment

24. Statins are produced by:
1) Monascus purpureus
2) Saccharomyces cerevisiae
3) Trichoderma polysporum
4) Propionibacterium shermanii

25. In an experiment with bacteria if a foreign DNA is inserted within the coding sequence of an enzyme whose substrate is chromogenic:
1) The transformed colonies are without any colour
2) Transformed colonies produce colour
3) Non-transformants are colourless
4) It is not possible to identify the transformants from non-transformants

26. Correct statements from the following
I) Complete combustion of glucose in laboratory or complete oxidation of glucose within the living cells releases same amount of energy
II) During respiration energy released is utilised in synthesis of ATP
III) Green cells do not respire during day time
IV) All tissues of plant respire at the same rate in a day
1) I & II are correct
2) Except III all are correct
3) I & IV are incorrect
4) Only II is correct.

27. How many ATP molecules are released during one Kreb's cycle?
1) 32 2) 4 3) 2 4) 34

28. Match the following.

List-I	List-II
A) Auxin	I) Increase in the length of internode
B) Gibberellin	II) Inhibits seed germination
C) Ethylene	III) Growth of lateral buds
D) Cytokinin	IV) Xylem differentiation
	V) Promotes root hair formation

	A	B	C	D
1)	III	I	V	II
2)	IV	I	V	III
3)	III	V	IV	I
4)	II	IV	I	III

29. In certain cereals where winter and spring varieties exist, winter varieties if planted in spring:
1) Fail to flower
2) Flowers but do not set seed
3) Flowers but killed in hot summer
4) Flowers and set seed in next autumn

30. The DNA of Salmonella typhi is approximately 4.8×10^5 base pairs. The approximate length in millimetres:
1) $4.8 \times 10^5 \times 0.34 \times 10^{-6}$
2) $4.8 \times 10^5 \times 3.4 \times 10^{-6}$
3) $2.4 \times 10^5 \times 0.34 \times 10^{-9}$
4) $2.4 \times 10^5 \times 3.4 \times 10^{-6}$

31. Correct sequence of structural genes and their expression of enzymes in *lac operon:*
1) y-permease; z-β galactosidase; a - transacetylase.
2) z - β galactosidase; y - permease; a - transacetylase.
3) z - permease; y - transacetylase; a - β galactosidase.
4) a - transacetylase; z - β galactosidase; y - permease.

32. Female gametophyte in flowering plants refers to:
1) Ovule 2) Nucellus
3) Embryosac
4) Gynoecium

33. Sulphur containing amino acids are:
1) Methionine
2) Cysteine 3) Tryptophan
4) Both 1, 2

34. Incorrect statement from the following:
1) Bisexual flowers prevent both geitonogamy and xenogamy
2) Unisexual flowers prevent autogamy
3) In bisexual flowers autogamy, allogamy, geitonogamy and xenogamy can occur
4) In monoecious plants geitonogamy or xenogamy cannot be prevented.

35. Match the following.

List-I	List-II
A) Pachytene	I) Terminalization
B) Zygotene	II) Recombination nodules
C) Leptotene	III) Second stage of prophase-I
D) Diakinesis	IV) Synaptonemal complex
	V) Compaction starts

	A	B	C	D
1)	IV	V	I	II
2)	II	IV	III	I
3)	II	III	V	I
4)	V	III	I	II

36. Which of the following is responsible for Gram's staining?
1) Capsule
2) Glycocalyx
3) Cell envelope
4) Cell membrane

37. Read the following statements and choose the correct option.
a) Mitochondria divide by binary fission
b) Mitochondria resembles a prokaryotic cell
1) Both (a) and (b) are incorrect
2) (a) is correct (b) is incorrect
3) Both (a) and (b) are correct
4) (a) is incorrect (b) is correct

KEY

1) 3	2) 1	3) 2	4) 2	5) 2
6) 1	7) 3	8) 1	9) 4	10) 3
11) 2	12) 3	13) 4	14) 2	15) 3
16) 2	17) 4	18) 2	19) 2	20) 3
21) 3	22) 2	23) 3	24) 1	25) 1
26) 1	27) 3	28) 2	29) 1	30) 1
31) 2	32) 3	33) 4	34) 1	35) 3
36) 3	37) 3			

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