

General Science Model Test Questions 37 With Answers [Botany - 8]

1. Which one of the following is an underground stem?
(A) Ipomoea batatas (B) Manihot utilissima
(C) Dancus carota **(D) Zingiber officinale**
2. The term 'cauliform' refers to
(A) Root like (B) Stem like **(C) Flower like** (D) Bud like
3. Branchysclereids are also called as
(A) Stone cells (B) Root hairs (C) Damaged cells (D) Live cells
4. The nucleus of the cells was first discovered by
(A) Palade (B) Porter **(C) Robert Brown** (D) All of them
5. Proteins synthesis occurs in
(A) Mitochondria (B) Chloroplast **(C) Ribosome** (D) Golgi bodies
6. Which folds into a typical 'cloverleaf' like structure?
(A) m – RNA (B) r – RNA (C) c – RNA **(D) t – RNA**
7. Parthenocarpy refers to the formation of
(A) Seeds without fertilization (B) Fruits without pollination
(C) Seeds after fertilization **(D) Fruits without fertilization**
8. Glycolysis occurs in
(A) Cytoplasm (B) Mitochondria (C) Bubbles (D) Chloroplast
9. The mineral essential for the formation of DNA and ATP molecules in living cells is
(A) Phosphorus **(B) Sulphur** (C) Sodium (D) Calcium
10. Which of the following pigment maintains eye vision?
(A) Lutein (B) Chlorophyll
(C) Bacteriochlorophyll (D) Phycocyanin
11. Cellular respiration occurs in
(A) Centromeres (B) Micromeres (C) Nucleolus **(D) Mitochondria**

12. The study of spores, pollen and micro – organisms is known as
(A) **Polynology** (B) Agrostolgy (C) Anthology (D) Phycology
13. The viruses which attack algae are termed as
(A) Bacteriophages (B) Mycophages (C) **Cyanophages** (D) Coliphages
14. The enzyme used to unite DNA fragment is
(A) **DNA ligase** (B) DNA polymerase
(C) Ribozyme (D) Restriction endronuclease
15. Which of the following is a semi – autonomous organelle of a plant cell?
(A) Endroplasmic reticulum (B) Ribosome (C) **Chloroplast** (D) Dictyosome
16. Natural system of plant classificaction was proposed by
(A) Cronquist (B) Engler and Prantl
(C) Linnaeus (D) **Bentham and Hooker**
17. How did the Sithars call ‘Vallarai Keerai’?
(A) Keerai (B) **Saraswathi** (C) Maruthu (D) Lakshmi
18. The study of age of the trees by counting annual rings is called
(A) Dendrogram (B) **Dendrochronolgy**
(C) Entomology (D) Gerntology
19. A plant that lives in a pond is called as
(A) **Limnophyte** (B) Xerophyte (C) Mesophyte (D) Lithophyte
20. Which of the following has the smallest flower?
(A) **Wolffia microscopic** (B) Canna indica
(C) Azadiracta indica (D) Pyrus malus
21. Which of the following acts as biological control organism against glycotoxin producing soil pathogens?
(A) **Trichodrma virens** (B) Aspergillus niger
(C) Penicillium notatum (D) Chaetomium globosum
22. The organism used by T.H.Morgan to study mutation was

- (A) Chlorella **(B) Drosophilla** (C) Yeast (D) Neurospora
23. Unicellular plant and animals showing Eukaryotic cell structure are included under the kingdom
- (A) Monera (B) Fungi (C) Plantae **(D) Protista**
24. The structure observed by Robert Hooke in plant cell was
- (A) Protoplasm (B) Cell wall (C) Nucleus **(D) Tracheids**
25. Species plantarum was authored by
- (A) Hutchinson **(B) Carolus Linnaeus**
- (C) Englar and Prantl (D) Bentham and Hooker
26. Which of the following is wrongly matched?
- (A) Microporangial serus - Anthor
- (B) Microspore - Pollen grains
- (C) Megasporophyll** - **Ovule**
- (D) Microsporophyll - Stamen
27. Opsonin was discovered by
- (A) Jules Bordet (B) Christian Gram
- (C) Almroth Wright** (D) Louis Pasteur
28. One gene and one enzyme hypothesis was put forth by in
- (A) Beadle and Tatum, E.Coli **(B) Beadle and Tatum, Neurospora**
- (C) Jacob and Monad, Neurospora (D) Jacob and Monad, E.Coli
29. Position effect is the result of
- (A) Translations (B) Inversions (C) Transcriptions **(D) Deletions**
30. Study of the inter – relations between the individual plant and its environment is called
- (A) Synecology (B) Ecosystem (C) Autecology **(D) Biodiversity**
31. Which of the following is correctly matched?
- (A) Nepenthes - Stoneworts
- (B) Drosera - Hornworts

(C) *Utricularia* - Pitcher plant

(D) *Dionea* - **Venus fly trap**

32. Biodiesel is obtained from which plant?

(A) Mango (B) Bamboo **(C) *Jatropha*** (D) Ficus

33. The famous Ethnobotanist in India is

(A) V.M. Meher – Homji (B) R.P.S. Katwal

(C) S.K. Jain (D) S.S. Bhojwani

34. Which of the following is not recycled in an eco – system?

(A) Water (B) Carbon (C) Nitrogen **(D) Energy**

35. Endothecium and endothelium are structures associated with

(A) Anther and Integument (B) Anther and Nucellus

(C) Integument and Anther (D) Anther and Ovary wall

36. Match List – I and List – II correctly and select your answer the codes given below:

List – I

List – II

- (a) Aqua culture
- (b) Floriculture
- (c) Sericulture
- (d) Viticulture

- (1) Silk
- (2) Grapes
- (3) Flower
- (4) Fish

Codes:

| | a | b | c | d |
|------------|----------|----------|----------|----------|
| (A) | 1 | 2 | 3 | 4 |
| (B) | 3 | 2 | 1 | 4 |
| (C) | 4 | 1 | 3 | 2 |
| (D) | 4 | 3 | 1 | 2 |

37. Which of the following structure is involved in the process of photo respiration?

(A) Lysosome (B) Golgi body **(C) Peroxisome** (D) Ribosome

38. An example of polycarpic plant is

- (A) Pea **(B) Mango** (C) Bamboo (D) Pigeon pea
39. The single membrane surrounding vacuoles in plant cells is known as
- (A) Apoplast (B) Symplast **(C) Tonoplast** (D) Chloroplast
40. The famous book 'Cell Biology' was written by
- (A) Odum **(B) De Roberties** (C) Strickberger (D) Berril
41. Botanical name of Turmeric is
- (A) Azadirachia indica (B) Hibiscus rosa sinensis
- (C) Curcuma domestica** (D) Ammonia baccifera
42. What are BSI and ZSI?
- (A) The Botanical Survey of India and Zoological Survey of India**
- (B) The Botanical Service of India and Zoological Service of India
- (C) The Basic Survey of India and Zonary Survey of India
- (D) The Basic Service of India and Zonary Service of India
43. Consider the following statements and choose the correct answer from the options given below:
- (a) Succulence in halophytes is to store water to be used in future.
- (b) Succulence in hydrophytes is due to absorption of more water to neutralize the effect of increased entry of salts in the cells.
- (c) Excess salts at times is deposited on the surface of leaves.
- Of these:
- (A) (a) and (c) are correct and (b) is wrong
- (B) (b) is correct and (a) and (c) are wrong
- (C) (c) is correct and (a) and (b) are wrong
- (D) (a) is wrong and (b) and (c) are correct**
44. Which of the following statements about hydrosere is true?
- (I) The phytoplankton stage consists of free floating species like Azolla, Lemna and Wolffia.
- (II) Forest stage is the climax community.

(III) Second stage in succession is rooted floating stage.

(IV) Woodland stage is invaded by terrestrial plants.

(A) (I) , (II) and (IV)

(B) (II) and (IV)

(C) (IV) only

(D) (I) , (III) and (IV)

45. What were the colours of contrasting characters of seed coat studied by Mendal among the garden peas?

(A) Red and white

(B) Yellow and green

(C) Grey and white

(D) Pink and white

46. Who has not participated in the discovery of Mendel's experiments in 1900?

(A) Decries

(B) Morgan

(C) Correns

(D) Tschermak

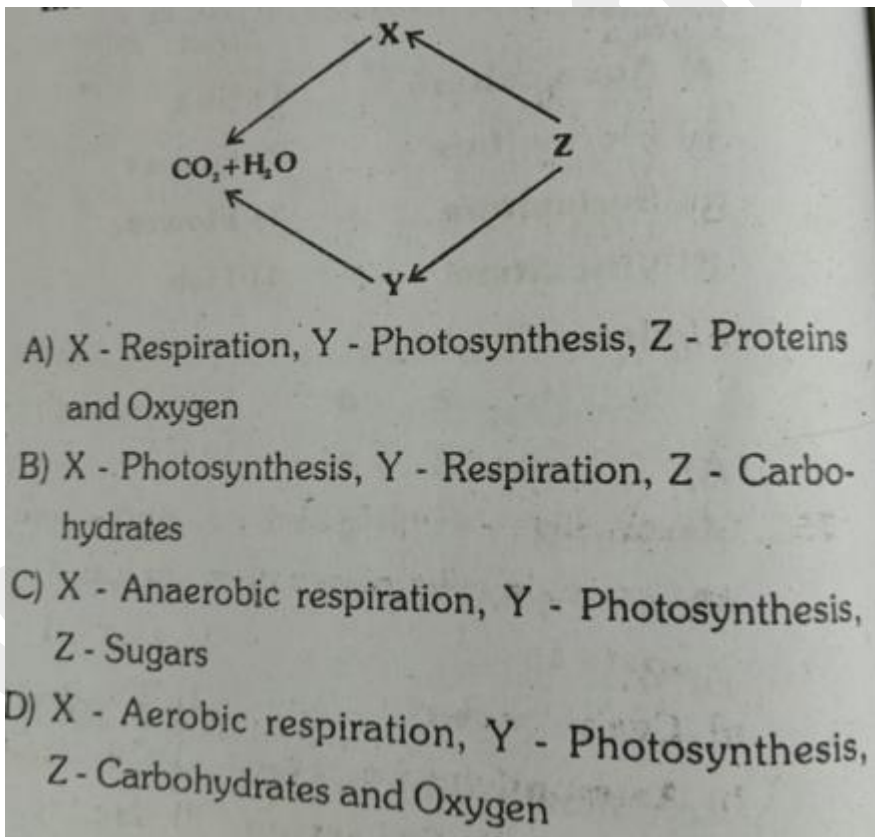
47. One of the following special inflorescence is the characteristic feature of Euphorbiaceae family

(A) Cyanthium

(B) Verticillaster

(C) Hypanthodium

(D) Coenanthium



48.

Ans: (D)

49. The younger leaves of a tomato plant in your garden shows interceinal chlorosis. Select supplement you will give?

- (A) Sulphur **(B) Iron** (C) Copper (D) Molybdenum

50. The soil zone is considered to be a great biological factory because,

(A) A great varieties of organic compounds are generated in the soil layers

(B) Necessary nutrients are made available to plants from the soil layers

(C) Soil layer holds water in storage which is used by plants and animals

(D) All of the above

51. Match list-I with list-II correctly and select your answer using the codes given below:

List-I

List-II

- | | |
|----------------------|------------------------|
| (a) Smallest flower | 1. Dischidia rafflesia |
| (b) Biggest flower | 2. Canna |
| (c) Irregular flower | 3. Phyllanthus |
| (d) Monochlamydous | 4. Wolfia |

Codes:

- | | a | b | c | d |
|------------|----------|----------|----------|----------|
| (A) | 2 | 1 | 3 | 4 |
| (B) | 1 | 2 | 3 | 4 |
| (C) | 3 | 4 | 1 | 2 |
| (D) | 4 | 1 | 2 | 3 |

52. Match list-I with list-II correctly and select your answer using the codes given below:

List-I

List-II

- | | |
|-----------------------------|-------------------|
| (a) Cyano bacteria | 1. Rhodospirillum |
| (b) Ammonifying bacteria | 2. Thiobacillus |
| (c) Photosynthetic bacteria | 3. Bacillus |
| (d) Denitrifying bacteria | 4. Nostoc |

Codes:

- | | a | b | c | d |
|-----|---|---|---|---|
| (A) | 1 | 2 | 4 | 3 |

- | | | | | |
|------------|----------|----------|----------|----------|
| (B) | 1 | 2 | 3 | 4 |
| (C) | 4 | 3 | 2 | 1 |
| (D) | 4 | 3 | 1 | 2 |

53. Angiosperms differ from gymnosperms by

- (A) Being evergreen (B) Having compound leaves
- (C) Being smaller in size **(D) Having ovule enclosed in the ovary**

54. Which one of the following is a short day plant?

- (A) *Mirabilis*
- (B) *Nicotiana tobaccum*
- (C) *Beta vulgaris*
- (D) *Spinacea oleracea*

55. Edible mushroom are

- (A) *Agaricus bisporus* (B) *Rhizopus*
(C) *Mucor* (D) *Neurospora*

56. The method of respiration which takes place in euglena is

- (A) Contraction (B) Absorption **(C) Diffusion** (D) Conduction

57. Which one of the following is not a kind of cell of xylem tissue?

- (A) Tracheids (B) Tracheae **(C) Companion cells** (D) Wood fibres

58. Match list-I with list-II correctly and select your answer using the codes given below:

List-I

List-II

- (a) Fission
(b) Budding
(c) Fragmentation
(d) Pollination
1. Yeast
2. Flowering plants
3. Bacteria
4. Algae

Codes:

- | | a | b | c | d |
|-----|---|---|---|---|
| (A) | 3 | 1 | 4 | 2 |
| (B) | 1 | 4 | 2 | 3 |
| (C) | 4 | 2 | 3 | 1 |

(D) 2 3 1 4

59. Find out the correct composition of Honey.

- (A) Sugar, Mineral, Pollen, Vitamin (B) Sugar, Protein, Pollen, Vitamin
(C) Sugar, Mineral, Fat, Vitamin (D) Sugar, Mineral, Fat, Amino acid

60. Consider the following statements:

- I. Removal of trees and vegetation would affect both land and water ecosystems.
II. There will be a lot of food for organisms.

Of these:

- (A) I is correct, but II is wrong (B) I is wrong, but II is correct
(C) Both are correct (D) Both are wrong

61. Match list-I with list-II correctly and select your answer using the codes given below:

List-I

- (a) Brinjal
(b) Apple
(c) Pea
(d) Lady's finger

List-II

1. Legume
2. Berry
3. Septicidal capsule
4. Pome

Codes:

- | | a | b | c | d |
|-----|---|---|---|---|
| (A) | 2 | 4 | 1 | 3 |
| (B) | 4 | 1 | 3 | 2 |
| (C) | 3 | 1 | 2 | 4 |
| (D) | 1 | 2 | 3 | 4 |

62. Green manures can be obtained from which of the following?

- (A) Cowdung and plant wastage (B) Sun-hemp and cluster bean
(C) Sun-hemp and cowdung (D) Cowdung and animal wastage

63. Name the gas which is evolved during photosynthesis.

- (A) Carbondioxide (B) Nitrogen (C) Hydrogen (D) Oxygen

64. Consider the following statements:

Assertion (A): Insectivorous plants digest proteins of insect body.

Reason (R): Insectivorous plants growth in Nitrogen (N_2) deficient soil

Select your answer according to the coding scheme given below:

(A) (A) is true, but (R) does not explain (A)

(B) Both (A) and (R) are true, (R) explains (A)

(C) (A) is true, but (R) is false

(D) Both (A) and (R) are false

65. What is the study of Algae called?

(A) Physiology

(B) Phycology

(C) Mycology

(D) Pomology

66. Which one of the following phenomenon means “the formation of fertile botanic seed without any fusion of male and female gametes”?

(A) Apomixis

(B) Apospory

(C) Diplospory

(D) Amphimixis

67. Consider the following statements and choose the correct answer from the options given below:

I. Flowers of wild banana and cacti open at night and are pale in colour

II. Squirrels pollinate wild banana and cacti.

III. Wild banana and cacti are pollinated by bats.

(A) II is correct answer for I

(B) II and III are correct and I is wrong

(C) III and II are correct answer for I

(D) I and III are correct and II is wrong

68. Match the following:

List-I

(a) Respiration

(b) Protein synthesis

(c) Photosynthesis

List-II

1. Chloroplast

2. Mitochondrion

3. Dictyosome

(d) Secretion

4. Ribosome

Codes:

| | a | b | c | d |
|------------|----------|----------|----------|----------|
| (A) | 1 | 3 | 2 | 4 |
| (B) | 4 | 2 | 3 | 1 |
| (C) | 3 | 1 | 4 | 2 |
| (D) | 2 | 4 | 1 | 3 |

69. To get a high yield, which gene from Bacteria can be introduced to non-leguminous crops?

- (A) T₂ gene (B) B₂ gene **(C) Nif gene** (D) Antisense gene

70. Consider the following statements and choose the correct answer from the options given below:

The maximum amount of protein, carbohydrate, fat, ash and water content in the matured anther occur in the following ratio:

Protein ↔ Carbohydrate ↔ Fat ↔ Ash ↔ Water

- (A) Protein > Carbohydrate > Fat > Ash > Water
(B) Protein < Carbohydrate < Fat < Ash < Water
 (C) Protein > Carbohydrate < Fat > Ash > Water
 (D) Protein < Carbohydrate < Fat > Ash > Water

71. Which of the following statements about Blue Green Algae is/are true?

- I. The cells of Blue Green Algae are Prokaryotic.
 II. The storage food product of Blue Green Algae is Laminarin.
 III. The membrane bound plastids are absent in the cells of Blue Green Algae.
 IV. Flagella are absent in Blue Green Algae.

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

72. One of the main source of Vitamin 'C' is

- (A) Citrus fruits (lemon)** (B) Eggs (C) Banana (D) Milk

73. Match list-I with list-II correctly and select your answer using the codes given below:

List-I

List-II

- | | |
|-------------|--------------------|
| (a) Light | 1. Traumatotropism |
| (b) Touch | 2. Phototropism |
| (c) Gravity | 3. Thigmotropism |
| (d) Wound | 4. Geotropism |

Codes:

| | a | b | c | d |
|-----|---|---|---|---|
| (A) | 2 | 3 | 1 | 4 |
| (B) | 3 | 2 | 4 | 1 |
| (C) | 2 | 3 | 4 | 1 |
| (D) | 4 | 1 | 3 | 2 |

74. Which one of the following phenomenon means “acquisition of the ability to flower by chilling treatment”?

- (A) Photoperiodism (B) Epinasty **(C) Vernalization** (D) Dormancy

75. Consider the following statements:

I. Oxygen is not required for glycolysis.

II. CO₂ is released during glycolysis.

Which one of the statements given above is/are wrong?

- (A) Both I and II (B) I only **(C) II only** (D) Neither I nor II

76. Consider the following statements and choose the correct answer from the options given below:

There are no special organs of excretion in plants because:

I. Plants use all the substances that enter their body completely.

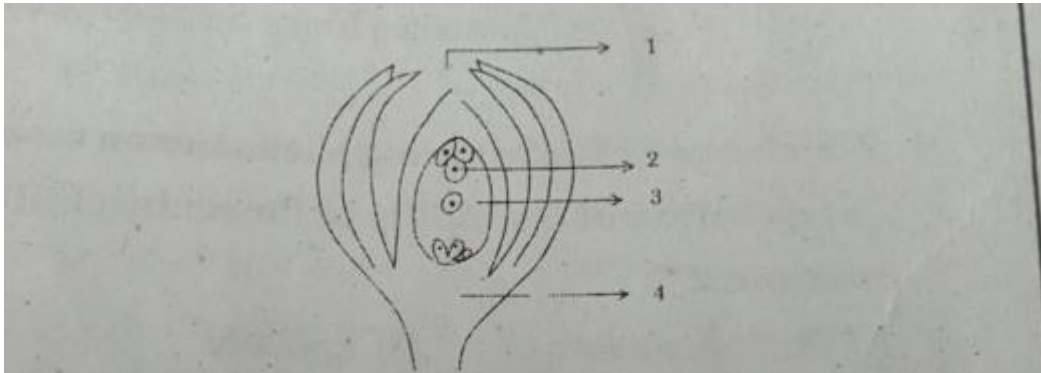
II. Plants break down substances very slowly when compared to animals.

III. Waste products are stored in leaves that fall off.

IV. Waste products are exuded in the form of resins, saps and latexes

- (A) I is correct and II and III are wrong
 (B) I and II are correct and III and IV are wrong
 (C) II and III are correct and I and IV are wrong
(D) I is wrong and II – IV are correct

77.



- A) (1) Chalaza (2) Micropyle, (3) Egg, (4) Embryo sac
 B) (1) Micropyle, (2) Embryo sac, (3) Egg, (4) Chalaza
 C) (1) Micropyle, (2) Egg, (3) Embryo sac, (4) Chalaza
 D) (1) Synergid, (2) Egg, (3) Embryo sac, (4) Chalaza

Ans: (C)

78. In anaerobic respiration, the respiratory quotient of glucose is infinity. Give the reason.

(A) CO_2 is evolved but O_2 is not consumed

(B) CO_2 is consumed also O_2 is consumed

(C) CO_2 and O_2 is evolved

(D) CO_2 only consumed

79. Father of taxonomic Botany or Modern Botany is:

(A) John Ray

(B) Carlous Linnaeous

(C) A.P. Candole

(D) Theorphrastus

80. Consider the following statements:

A) Flowering hormone is synthesized in the leaves and is transported to the apical tips of the branch where it results flowering.

(B) Flowering hormone cannot be translocated from one plant to another.

(A) Both (A) and (B) are correct

(B) (B) alone is correct

(C) (A) alone is correct

(D) Both (A) and (B) are wrong

81. Match list-I with list-II correctly and select your answer using the codes given below:

| List-I | List-II |
|-----------------|---------------|
| (a) Morphine | 1. Tobacco |
| (b) Nicotine | 2. Cinchona |
| (c) Quinine | 3. Cocoa bean |
| (d) Theobromine | 4. Poppy |

Codes:

| | a | b | c | d |
|-----|---|---|---|---|
| (A) | 4 | 1 | 2 | 3 |
| (B) | 3 | 4 | 2 | 1 |
| (C) | 2 | 3 | 4 | 1 |
| (D) | 4 | 2 | 1 | 3 |

82. Consider the following statements and choose the correct answers from the options given below:

- (A) Hidden nectries and suitably designed flowers are adaptations to attract specific pollinators.
- (B) Plants communicate to pollinators by developing exclusive arrangement with just one species of messenger, that can deliver pollens only to other flowers of the same species.
- (C) Pollinators are not species specific and they transfer pollen to flowers that may not belong to same species.
- (A) A and B are wrong and only C is correct
- (B) A and B are correct and C is wrong**
- (C) B and C are correct explanations to A
- (D) C and A are correct explanations to B

83. Arrange the following divisions of the classification of the plant kingdom in descending order:

- I. Division Pteridophyta II. Division Thallophyta
- III. Division Spermatophyta IV. Division Bryophyta
- (A) IV, II, III, I **(B) III, I, IV, II** (C) II, I, IV, III (D) I, IV, II, III

84. Identify the kind of movement exhibited by Mimosa pudica (sensitive plant).

- (A) Nyctinastic movement (B) Thigmonastic movement
- (C) Photonastic movement **(D) Seismonastic movement**

85. Consider the following statements:

Assertion (A): Insectivorous plants digest proteins of insect body.

Reason (R): Insectivorous plants grown in nitrogen (N_2) deficient soil.

(A) (A) is true but (R) does not explain (A)

(B) Both (A) and (R) are true, (R) explains (A)

(C) (A) is true but (R) is false

(D) Both (A) and (R) are false

86. Consider the following statements:

Assertion (A): Sclerenchyma cells provide mechanical support to the plants.

Reason (R): Sclerenchyma cells have thin cell wall.

(A) Both (A) and (R) are individually true and (R) is the correct explanation of (A)

(B) Both (A) and (R) are individually true and (R) is not the correct explanation of (A)

(C) (A) is true, but (R) is false

(D) (A) is false, but (R) is true

87. Which of the following is/are correctly matched?

I. Hard resin - Cocaine

II. Oleo resin - Canada balsam

III. Latex - Rubber

IV. Alkaloid - Asafoetida

(A) I only

(B) II and III

(C) III only

(D) I and IV

88. Which one of the following statement(s) about Blue Green Algae (BGA) is/are not correct?

(A) They are green negative photosynthetic cyanobacteria

(B) They have survived for about 3 billion years

(C) Spirulina is the edible form of BGA

(D) Sargassum belongs to BGA

89. The chromonema is a coiled structure, which can be easily separated in case of

(A) Paranemic coil

(B) Plectonemic coil

(C) Chromonemic coil

(D) Telonemic coil

90. The enzyme discovered by CSIR to increase shelf life of fruits and vegetables is

(A) Kinase super oxidase

(B) Ethyl glyconase

(C) Phenyl aldolase

(D) Super oxide dismutase

91. Consider the following statements:

Assertion (A): Cuscuta is a parasitic animal.

Reason (R): Cuscuta depends on the host plant for its organic food, water and mineral salts.

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A)

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

(C) (A) is true, but (R) is false

(D) (A) is false, but (R) is true

92. Consider the following statements:

I. Chlorofluro carbons have been widely used as super coolants in aerosols and insecticides.

II. Methoprene is harmful to plants and animals.

III. Photobacterium phosphoreum is an example of bioluminescence.

IV. Pedology is the study of soil in the natural atmosphere.

Find the correct statements.

(A) I, II, III are correct

(B) I, III and IV are correct

(C) I and III are correct

(D) III and IV are correct

93. The colour of tomato fruits is due to the presence of

(A) Anthocyanins

(B) Carotenoids

(C) Flavonoids

(D) Tannins

94. Which of the following is odd one out?

(A) Fillicophyta

(B) Hysterophyta

(C) Lycophyta

(D) Psilophyta

95. Which of the following statements about plant cells are true?

I. Plant cells contain centrioles.

II. Plant cells have chloroplasts.

III. Plant cells possess cell walls.

IV. Plant cells have small vacuoles.

(A) I and IV

(B) II and III

(C) I and III

(D) II and IV

96. Point out the wrong statement in the following:

Statements:

I. Vitamins A is Fat soluble.

II. Vitamin C is Water soluble

III. Glycogen is animal starch.

IV. Vitamin E is also known as calciferol.

(A) I (B) II (C) III **(D) IV**

97. Choose the correct equation of aerobic respiration:

(A) $C_6H_{12}O_6 + 6 O_2 \rightarrow 6 CO + 6 H_2O$

(B) $C_2H_5O_{10} + 6 CO_2 \rightarrow 6 O_2 + 5 H_2O_2 + 2 CO_2$

(C) $C_6H_{12}O_6 + 6 CO_2 \rightarrow 6 CO_2 + 6 H_2O$

(D) $C_6H_{12}O_6 + 6 O_2 \rightarrow 6 CO_2 + 6 H_2O$

98. Consider the following statement.

I) Equisetum is a hydrophyte

II. Equisetum is commonly known as Horsetail

III. Equisetum is a pteridophytic plant

IV. Equisetum belongs to angiosperms

Which of the above statements are correct?

(A) I and II **(B) II and III** (C) III and IV (D) IV and I

99. Find the odd one out

(A) Vitamin A **(B) Vitamin B** (C) Vitamin D (D) Vitamin E

100. Which of the following is/are common in both aerobic and anaerobic respiration?

I) Glycolysis

II) Krebs's cycle

III) Lactic acid fermentation

IV) Alcoholic fermentation

(A) II only (B) I and III (C) II and IV **(D) I only**