

English

1. An example of colonial coenocytic alga is:

- (A) Zygnuma
- (B) Oedogonium
- (C) Hydrodictyon
- (D) Volvox

Correct Option(s): D

English

2. The Manoxylic wood refers to:

- (A) Single ring of xylem
- (B) Hard and compressed
- (C) Loose and soft
- (D) Many rings of xylem

Correct Option(s): C

English

3.

The end product of glycolysis is:

- (A) Acetyl coenzyme A
- (B) $\text{CO}_2 + \text{H}_2\text{O}$
- (C) Pyruvic acid
- (D) Fructose 6 phosphate

Correct Option(s): C

English

4. Bast fibers are:

- (A) Structural fibers of leaf
- (B) Cotton and Kapok fibers
- (C) Surface fibers of stem, leaves, fruits and seeds
- (D) Fibers of flax, jute and hemp

Correct Option(s): D

English

5. Colchicine treated cells are arrested in

- (A) S phase
- (B) Prophase
- (C) G1 phase
- (D) Metaphase

Correct Option(s): D

English

6. Which of the following is cytoplasmic stain?

- (A) Eosin
- (B) Crystal violet
- (C) Carmine
- (D) Orcin

Correct Option(s): A

English

7. Which positions of a codon is said to wobble?

- (A) First
- (B) Second
- (C) Third
- (D) Fourth

Correct Option(s): C

English

8. Which of the following is not considered as zoosporic fungi?

- (A) Oomycetes
- (B) Chytridiomycetes
- (C) Hypochytridiomycetes
- (D) Myxomycetes

Correct Option(s): A

English

9. Hormogonia are found in

- (A) Nostoc
- (B) Vaucheria
- (C) Chara
- (D) Chlamydomonas

Correct Option(s): A

English

10. When DNA is exchanged via cytoplasmic bridges between two bacteria, the process is called as

- (A) General transduction
- (B) Restricted transduction
- (C) Transformation
- (D) Conjugation

Correct Option(s): D

English

11. Glucose-6-phosphate inhibits the ----- enzymes:

- (A) Glucokinase
- (B) Hexokinase
- (C) Phosphorylase kinase
- (D) Fructose-1-6-bisphosphate

Correct Option(s): B

English

12. The root-like and leaf-like structure of a moss and the roots and leaves of a vascular plant are:

- (A) Analogous structure
- (B) Homologous structure
- (C) Vestigial structure
- (D) Embryonic structure

Correct Option(s): B

English

13. Red rust of tea is caused by:

- (A) Puccinia
- (B) Cephaleuros
- (C) Ectocarpus
- (D) Sargassum

Correct Option(s): B

English

14. In Pinus male and female cones occur on different branches of same plant. Thus, Pinus is:

- (A) Monoecious and autoicous
- (B) Dioecious and autoicous
- (C) Bisexual and pleurocarpus
- (D) Diploid and gametophytic

Correct Option(s): A

English

15. Terrestrial biodiversity is greater near:

- (A) North pole
- (B) South pole
- (C) Equator
- (D) Tropic of cancer

Correct Option(s): C

English

16. Calvin Benson cycle is also known as:

- (A) CAM
- (B) Photorespiration
- (C) C3 cycle
- (D) C4 cycle

Correct Option(s): C

English

17.

If the mean of distribution is 24 and standard deviation is 6, then what is the value of variance coefficient?

- (A) 50%
- (B) 25%
- (C) 100%
- (D) 75%

Correct Option(s): B

English

18. During replication of DNA, which one of the following enzymes polymerize the Okazaki fragments:

- (A) DNA polymerase I
- (B) DNA polymerase II
- (C) DNA polymerase III
- (D) DNA ligase

Correct Option(s): D

English

19. Alkaloid found in Opium is:

- (A) Morphine
- (B) Galantamine
- (C) Quinidine
- (D) Quinine

Correct Option(s): A

English

20. Ntangki national park is situated at:

- (A) Chandrapur (Maharashtra)
- (B) Peren (Nagaland)
- (C) Sawai Madhopur (Rajasthan)
- (D) Shivpuri (Madhya pradesh)

Correct Option(s): B

English

21. A non-protein organic part attached firmly by covalent linkage to apoenzyme is known as:

- (A) Prosthetic group
- (B) Activator
- (C) Co-factor
- (D) Co-enzyme

Correct Option(s): D

English

22. Edible part of ripe mango is known as:

- (A) Epicarp
- (B) Pericarp
- (C) Mesocarp
- (D) Endocarp

Correct Option(s): C

English

23. Caspary strips are present on the anticlinal walls of:

- (A) Epidermis
- (B) Endodermis
- (C) Pericycle
- (D) Cortex

Correct Option(s): B

English

24. The pigment that plays a key role in photomorphogenesis is:

- (A) Chlorophyll
- (B) Phytochrome
- (C) Cytochrome
- (D) Anthocyanin

Correct Option(s): B

English

25. Atropa belladonna is a member of ----- family.

- (A) Papilionaceae
- (B) Rutaceae
- (C) Solanaceae
- (D) Ranunculaceae

Correct Option(s): C

English

26. Sulphur containing amino acid is:

- (A) Isoleucine
- (B) Glycine
- (C) Methionine
- (D) Arginine

Correct Option(s): C

English

27. Monodelphus stamen is found in the ----- family.

- (A) Malvaceae
- (B) Fabaceae
- (C) Acanthaceae
- (D) Solanaceae

Correct Option(s): A

English

28. Restriction endonuclease are:

- (A) Used for in vitro DNA synthesis
- (B) Synthesized by bacteria as part of their defence mechanism
- (C) Present in mammalian cells for degradation of DNA when cell dies
- (D) Used in genetic engineering for ligation of two molecules.

Correct Option(s): B

English

29. Which part of the light microscope controls the intensity of light entering the viewing area?

- (A) Coarse adjustment
- (B) Fine adjustment
- (C) Diaphragm
- (D) Condenser lens

Correct Option(s): C

English

30. A water fern capable of fixing atmospheric nitrogen and used as biofertilizer is:

- (A) Azolla
- (B) Nostoc
- (C) Salvinia
- (D) Spirulina

Correct Option(s): A

English

31. Which of the following structure helps in respiration of Lichens?

- (A) Soredia
- (B) Cephalodia
- (C) Cyphella
- (D) Isidia

Correct Option(s): C

English

32. Pollinium is found in which of this family?

- (A) Rubiaceae
- (B) Solanaceae
- (C) Myrtaceae
- (D) Asclepiadaceae

Correct Option(s): D

English

33. The bicollateral vascular bundles are characteristic feature of the plants belonging to ----- family:

- (A) Malvaceae
- (B) Cruciferae
- (C) Liliaceae
- (D) Cucurbitaceae

Correct Option(s): D

English

34. The science of studying the entire collection of mRNA molecules produced by cells, allowing scientists to monitor differences in gene expression patterns between cells, is called:

- (A) Genomics
- (B) Proteomics
- (C) Transcriptomics
- (D) Pharmacogenomics

Correct Option(s): C

English

35. Which of the following methods brings about cell lysis due to cavitation induced by rapid localized pressure changes?

- (A) Gamma irradiation
- (B) Microwaving
- (C) Ultraviolet radiation
- (D) Sonication

Correct Option(s): D

English

36. Which of the following microbial control methods does not actually kill microbes or inhibit their growth but instead removes them physically from samples?

- (A) Filtration
- (B) Desiccation
- (C) Lyophilization
- (D) Non-ionizing radiation

Correct Option(s): A

English

37. Which biosafety level is appropriate for research with microbes or infectious agents that pose moderate risk to laboratory workers and the community, and are typically indigenous?

- (A) BSL-1
- (B) BSL-2
- (C) BSL-3
- (D) BSL-4

Correct Option(s): B

English

38. In India (1914), first quarantine regulation was passed by government under the title-----

- (A) Destructive Insects & Pests Act (DIP ACT)
- (B) Federal Quarantine Acts
- (C) Seed certification Act
- (D) Flower certification Act

Correct Option(s): A

English

39. Transmission of bean mosaic virus and necrotic ring spot virus in plants takes place through

- (A) Rhizomes
- (B) Pollen grains
- (C) Corms
- (D) Suckers

Correct Option(s): B

English

40. What is protoplast?

- (A) Cell wall + Plasma membrane
- (B) Plant cell – Cell wall
- (C) Cytoplasm + Cell wall
- (D) Plasma membrane – Cytoplasm

Correct Option(s): B

English

41. A gene for insulin has been inserted into a vector for the purpose of obtaining its protein product only. Such a vector is called as -----

- (A) Expression vector
- (B) Suppression vector
- (C) Storage vector for genomic library
- (D) Repression vector

Correct Option(s): A

English

42. Agar agar is added to tissue culture media as:

- (A) Carbon source
- (B) A growth regulator
- (C) Nitrogen source
- (D) Solidifying agent

Correct Option(s): D

English

43. Explant is -

- (A) Any cut part of the plant used in tissue culture
- (B) A plant extract used in tissue culture
- (C) A source of growth regulators added to media
- (D) Solidifying agent

Correct Option(s): A

English

44. Which of the following lab equipment is used for maintaining a sterile environment while working?

- (A) Inverted microscope
- (B) Centrifuge
- (C) Cell Culture hood
- (D) Magnetic Stirrer

Correct Option(s): C

English

45. Only morphological characters are used for the identification and classification of plants in:

- (A) Omega taxonomy
- (B) Alpha taxonomy
- (C) Delta taxonomy
- (D) Beta taxonomy

Correct Option(s): B

English

46. ----- refers to the varying ability of stem cells to differentiate into specialized cell types.

- (A) Cell-regeneration
- (B) Cell viability
- (C) Cell-therapy
- (D) Cell potency

Correct Option(s): D

English

47. A replacement for extracellular matrix in artificial cell culture mediums are

- (A) Bones
- (B) Hydrogels
- (C) Meshes
- (D) Muscles

Correct Option(s): B

English

48. Who introduced techniques of sterilization?

- (A) Robert Koch
- (B) John Needham
- (C) Joseph Lister
- (D) Louis Pasteur

Correct Option(s): D

English

49. Some cyanobacteria produce potent neurotoxins that, if ingested, will kill humans. These cyanobacteria are most likely to contaminate

- (A) Water rich in organic carbon wastes but poor in phosphate
- (B) Water rich in phosphate wastes but poor in organic carbon
- (C) Water that are anoxic
- (D) Water that are aerobic

Correct Option(s): B

English

50. The biogeochemical cycle of which of the following elements is based on changes in solubility rather than redox chemistry?

- (A) Carbon
- (B) Sulfur
- (C) Nitrogen
- (D) Phosphorus

Correct Option(s): D