

Sample Questions for TYBSc

1. Which region of chromatin is transcriptionally silent?
 - a. Nucleoid
 - b. Centromere
 - c. Euchromatin
 - d. Heterochromatin**

2. Name a natural cytokinin found in coconut milk.
 - a. Zeatin**
 - b. Tretin
 - c. Lignin
 - d. Retino

3. Which of the following parts of the nucleus makes ribosomes and RNA?
 - a. Nuclear envelope
 - b. Nucleolus**
 - c. Nucleoplasm
 - d. Chromatin

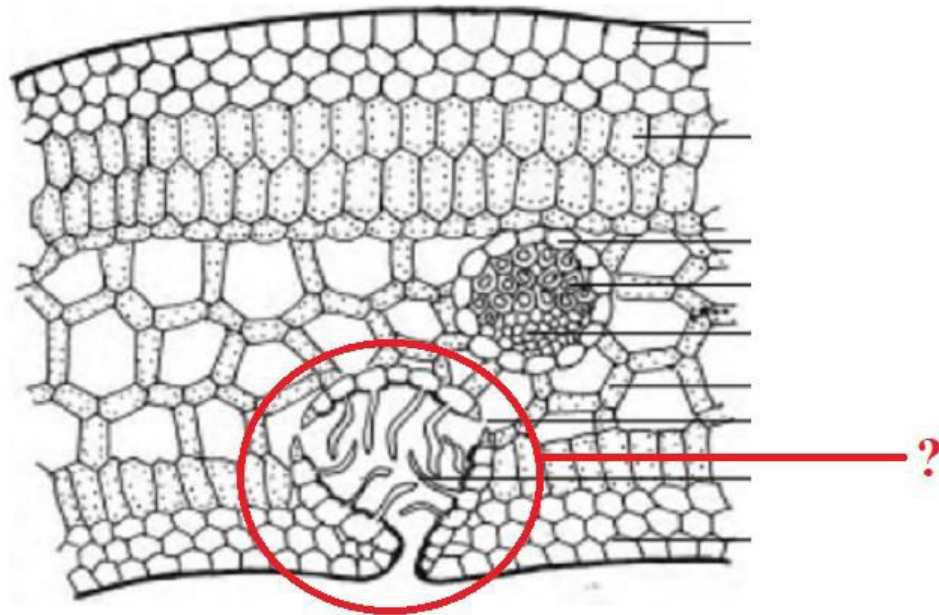
4. Cell sap is found inside
 - a. Protoplasm
 - b. Cytoplasm
 - c. Nucleoplasm
 - d. Vacuole**

5. Lampbrush chromosome was first discovered by
 - a. Ruckert**
 - b. Robert
 - c. Ammajan
 - d. Farenten

6. AUG codes for
 - a. Methionine**
 - b. Cytosine
 - c. Leucine
 - d. Alanine

7. UAG is
 - a. Start codon
 - b. Stop codon**
 - c. Open frame
 - d. End frame

8. The anatomical feature marked in the diagram is _____

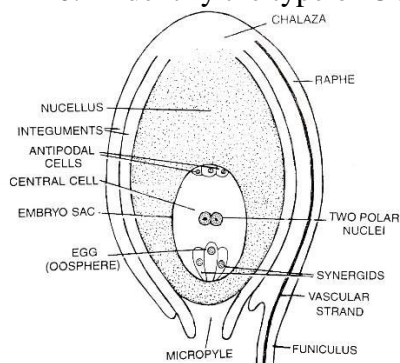


- a. Vascular bundle
- b. Sterigmata
- c. Pneumatophore
- d. Sunken stomata**

9. Pneumatophores are commonly found in _____

- a. Halophytes
- b. Hydrophytes
- c. Xerophytes
- d. Epiphytes

10. Identify the type of Ovule



- a. Orthotropous
- b. Anatropous**
- c. Hemianatropous
- d. Campylotropous

11. _____ is the precursor of Indole-3-acetic acid.
- Methionine
 - Tryptophan
 - Glycine
 - Isopentynyl pyrophosphate
12. Conversion of ammonia to nitrite and then to nitrates is called _____ .
- Ammonification
 - Denitrification
 - Assimilation
 - Nitrification
7. Who is called father of plant physiology?
- K.M.Thimann
 - Stephen Hales**
 - M. Calvin
 - E. Robinowich
8. ATP is called
- A nucleoside
 - Physiological currency**
 - An amino acid
 - Polynucleotide
9. Minerals in soil body come from
- Weathering of rocks**
 - Wind and water
 - Rains
 - Dead organic remains
10. Potential energy is produced during
- Photorespiration
 - Respiration
 - Photosynthesis**
 - ATP synthesis
11. Which element is macronutrient?
- Mo
 - Mn
 - Zn
 - Ca**

12. When solute is added gradually in water which will go on decreasing?
- DPD
 - OP
 - SP
 - Water potential**
13. Which plant hormone helps in breaking the dormancy of plant?
- Cytokinin
 - Gibberellin
 - Auxin
 - Ethylene
14. Alkaptonuria is a human disease characterized by _____.
- urine that turns blue green upon exposure to the air
 - saliva that turns black upon exposure to the air
 - urine that turns black upon exposure to the air
 - saliva that turns blue green upon exposure to the air
15. Polymerase enzyme used in PCR is _____.
- Taq-poly
 - Poly I
 - Poly II
 - Poly III
16. Process of binding of primer is called _____.
- Annealing
 - Renaturation
 - Denaturation
 - Primer extension
17. The principle of Sanger's method relies on _____.
- Use of chemicals for base specific cleavage
 - Use of dNTPS for chain termination
 - Use of ddNTPs for chain termination
 - Use of P32 chain termination
18. Samples in Sanger sequencing after reaction are separated using _____.
- AGE
 - PAGE
 - PFGE
 - 2-D gel electrophoresis
19. Which of the following is an example of Homology and similarity tool?
- BLAST
 - RasMol
 - EMBOSS
 - PROSPECT

20. The identification of drugs through the genomic study is called _____.
- Genomics
 - Pharmacogenomics
 - Pharmacogenetics
 - Cheminformatics
21. Phylogenetic tree or analysis shows _____ among various biological species.
- evolutionary relationship
 - coding
 - bacterial analysis
 - growth analysis
22. The term 'phylogenetic' found by _____.
- Haeckel
 - Robert
 - Rachel Carson
 - E. O. Wilson
23. A very old technique popularized in France in 19th century for extracting the aromatic oil from flowers was _____.
- steam distillation
 - enfleurage
 - solvent extraction
 - maceration
24. Flax oil is obtained from dried ripened seeds of the _____.
- Linseed
 - Soyabean
 - Olive
 - Peanut
25. Natural production of _____ by fruits can cause problems in storage facilities.
- CO₂
 - N₂
 - NH₄
 - Ethylene
26. If 5BU is incorporated in its normal state, it pairs with _____.
- cytosine
 - guanine
 - adenine
 - uracil
27. Thymidine dimers are produced due to exposure to _____.
- uv rays
 - x-rays
 - gamma rays
 - visible light

28. Ringing experiment was first performed by:
- a. Godlewski
 - b. Strasburger
 - c. Hartig**
 - d. J.C.Bose
29. Phytoremediation is not an absolute solution on all types of toxic pollutants.
- a. Agree with the statement**
 - b. Disagree with the statement
 - c. Irrelevant statement
 - d. Unscientific statement
30. The most effective agents of bioremediation at ultra level will be
- e. Plants
 - f. Worms
 - g. Bacteria**
 - h. Insects
31. Agrochemicals are the most dangerous toxins as they circulate in
- i. Food chains**
 - b. Water bodies
 - c. Environment
 - d. Atmosphere
32. In bioremediation, bio-films are usually used
- a. At the source of pollutant**
 - b. After collection of pollutant
 - c. After treatment of pollutant
 - d. Before pollutant is produced
33. Treatment of the hazardous substances in the environment with the help of living organisms is called as
- e. Bioremediation**
 - f. Waste management
 - g. Waste control
 - h. Biodegradation
34. The pioneers of succession on terrestrial habitats are
- a. Higher plants
 - b. Lichens**
 - c. Mosses
 - d. Algae

35. Callus is
- Tissue that forms embryo
 - An insoluble carbohydrate
 - Tissue that grows to form embryoid
 - d. Unorganized actively dividing mass of cells maintained in cultured**
36. Hormone pair required for a callus to differentiate is
- a. auxin and cytokinin**
 - auxin and ethylene
 - auxin and abscisic acid
 - cytokinin and gibberellins
37. In the secondary culture, cells are obtained from
- a. primary culture**
 - the organism
 - organ culture
 - phenotypic culture
38. Mark the INCORRECT statement about agar, a gelling agent in plant tissue culture medium
- Not digested by plant enzymes
 - b. It does not use in micro-propagation work**
 - It does not react with media constituents
 - Remain stable at incubation temperature
39. What is Dimethyl sulfoxide used for?
- A gelling agent
 - b. Cryoprotectant**
 - Chelating agent
 - An Alkylating agent
40. To obtain haploid plants, we culture _____
- a. Entire anther**
 - Nucleus
 - Embryo
 - Apical bud

Sample Questions of Lower Examinations

1. Ascomycetes has a reproductive structure known as
 - a. **Ascus**
 - b. Spore
 - c. Fragment
 - d. None of the above

2. Which is a good example of unicellular ascomycota
 - a. **Yeast**
 - b. Bacteria
 - c. Fungi
 - d. Algae

3. Plant pathology is
 - a. Study of algae
 - b. Study of fungi
 - c. **Study of diseases in plants caused by pathogens**
 - d. Study of fossil plant

4. *Peltigera canina* is
 - a. **Dog lichen**
 - b. Fish lichen
 - c. Cat lichen
 - d. Horse lichen

5. Which are incapable of photosynthesis
 - a. Algae
 - b. **Fungi**
 - c. Fern
 - d. None of the above

6. Resurrection plant is
 - a. *Spirogyra*
 - b. ***Selaginella***
 - c. Lichen
 - d. *Rhynia*

7. Heterosporus means
- Spores of two different sizes and sexes**
 - Spores of the same sizes and sexes
 - Spores which are sterile
 - None of the above
8. *Rhynia* is a
- Fungi
 - Lichen
 - Pteridophyta**
 - None of the above
9. Which type of fossil is the rarest
- Octopus fossil**
 - Plant fossil
 - Carbon fossil
 - None of the above
10. The full form of GTS is
- Geological Time Scale**
 - Geographical Temperature Survey
 - Geometric Time Scale
 - None of the above
11. Which one of the following is a fact about *Pinus* leaves?
- Leaf dimorphism**
 - Dorsi-ventrally flat leaves
 - Succulent leaves
 - Broad lamina
12. In *Pinus* plant, stomata are
- Sunken**
 - Bulged out
 - Absent
 - Rarely present
13. The seeds of *Pinus* plant are
- Unitegmic**
 - Bitegmic
 - Ategmic
 - Abortive

14. The seeds of *Pinus* plant show
- Polyembryony**
 - One embryo
 - No embryo
 - Redundant embryo
15. Genus *Cordaites* is an extinct plant from category of
- Conifers**
 - Cycads
 - Angiosperms
 - Pteridophytes
16. Secondary growth occurs in
- Trees**
 - Algae
 - Fungi
 - Bryophytes
17. Dendrochronology is also called as
- Tree-ring dating**
 - Shrub-ring dating
 - Fossil ring dating
 - None of the above
18. Heart wood is
- Darker**
 - Lighter
 - Neutral
 - None of the above
19. Radial vascular bundle is present in
- Stem
 - Root**
 - Rhizome
 - Flower
20. Exarch xylem means

- a. Protoxylem towards centre
- b. Protoxylem towards periphery**
- c. Protoxylem is absent
- d. None of the above

21. TCA also known as

- a. Kreb's Cycle**
- b. Glycolysis
- c. Acetolysis
- d. None of the above

22. Anaerobic respiration is

- a. Respiration using electron acceptors other than molecular oxygen**
- b. Respiration using neutron acceptors other than molecular hydrogen
- c. Respiration using proton acceptors other than molecular nitrogen
- d. None of the above

23. Photorespiration is

- a. C₁ photosynthesis
- b. C₂ photosynthesis**
- c. C₃ photosynthesis
- d. C₄ photosynthesis

24. Vernalization is

- a. Cooling of seed during germination to accelerate flowering**
- b. Warming of seed during germination to accelerate flowering
- c. Boiling of seed during germination to accelerate flowering
- d. None of the above

25. SDP and LDP stands for

- a. Short day plant and Long day plant**
- b. Small day plant and Little day plant
- c. Simple day plant and Long day plant
- d. None of the above

26. Maximum loss of water from the plants occurs due to

- a. Transpiration**
- b. Evaporation
- c. Guttation
- d. Respiration

27. The most important element involved in the food preparation of plants is
- Nitrogen
 - Oxygen
 - Carbon dioxide**
 - Sulphur
28. The most determinant factor of soil which affects the plant growth is
- pH**
 - Soil composition
 - Soil Texture
 - Soil moisture
29. Alphonso Mango plantation requires _____ soil
- Black
 - Alluvial
 - Lateritic**
 - Alpine
30. Black soil is best for
- Cotton cultivation**
 - Wheat cultivation
 - Rice cultivation
 - Maize cultivation