

QUAID-I-AZAM UNIVERSITY
DEPARTMENT OF PLANT SCIENCES

P.h.D. Sample Entry Test Paper (General Botany)

Time : 1 Hr

Marks : 100

Roll No. _____ Name: _____ Father`s Name _____

Attempt all questions. Encircle the right question. Overwriting will not be given credit.

1. The process of DNA replication involves the breaking of bonds between
a) Bases, b) Sugar c) Phosphate and bases d) Sugar and phosphate e) All of above
2. Which of the following is the correct matching of base pairs in DNA?
a) Adenine–Guanine and Thymine–Uracil, b) Guanine–Cytosine and Adenine–Uracil
c) Guanine–Thymine and Adenine–Cytosine d) Uracil–Thymine and Guanine–Adenine e) Adenine–Thymine and Guanine–Cytosine
3. Considering the structure of double stranded DNA, what kinds of bonds hold one complementary strand to the other?
a) Ionic b) Covalent c) Hydrogen d) Hydrophobic and hydrophilic e) None of above
4. Which of the following nucleic acid serve as a template for translation?
a) DNA, b) rRNA c) tRNA d) mRNA e) all of above
5. Translation is the
a) Transfer of genetic code to a tRNA molecule, b) Transfer of genetic code from an mRNA to a sequence of amino acid in a polypeptide c) Movement of mRNA through nuclear membrane d) Transfer of genetic code to a mRNA molecule e) All of above
6. The cleavage of primary 30S transcript results in_____rRNAs.
a) 16S, 5S and 23S b) 5S, 28S and 16S c) 23S, 5.8S and 18S d) 18S, 5.8S and 28S e) 5.8S and 23S
7. Ribosomes have three tRNA-binding sites called as
a)Aminoacyl, phosphoryl and entry b) Phosphoryl, aminoacetyl and Exit c) Exit, aminoacyl and peptidyl d) Aminoacetyl, peptidyl and Exit e) None of above
8. The amino acids occurs in living organism only asform
(a) L, (b) D, (c) A&B (d) none of the above
9. The rhizosphere is area around.....
(a) Stem (b) Leaves (c) A&B (d) none of the above
10. The diazotrophs are.....
(a) Bacteria (b) fungi (c) A&B (d) none of the above
11. The interaction between plant and microbe is.....
(a) Positive (b) Negative (c) A&B (d) none of the above

12. The gram negative bacteria contain.....
 (a) Outer membrane (b) peptidoglycan (c) A&B (d) none of the above
13. In a eukaryotic cell transcription takes place in
 (a) ribosomes (b) Nucleus (c) Cytoplasm (d) Endoplasmic reticulum
14. The traits that do not follow the ratio 3:1 and 9:3:3:1 are called
 (a) Inherited traits (b) Non Mendelian traits (c) Mendelian traits (d) None of the above
15. Meiosis is a form of cell division that is associated with:
 a) Cell formation b. stem cell formation c. gamete formation d. none of the above
16. A cell defends itself from mutations using the mechanism of:
 a. Adaptive mutations b. DNA repairs c. transposons d. Autophagy e. none of the above
17. A change in one nucleotide to another in a DNA molecule is known as:
 a) Missense mutation b. silent mutation c. point mutation d. non-sense mutation e. none of the above
18. Mendel showed that traits are passed from parents to offspring in:
 a) predictable way b. in pairs c. calculated way d. none of the above
19. A nucleoside is:
 (a) purine/pyrimidine + phosphate (b) purine/pyrimidine + sugar (c) Pyrimidine + purine + phosphate
 (d) Purine + sugar + phosphate
20. Insectivorous plants grow in:
 (a) Nitrogen rich soil (b) Nitrogen deficient soil (c) Potassium deficient soil (d) Carbohydrate rich soil
21. Fungus without mycelium is:
 (a) Puccinia (b) Rhizopus (c) Saccharomyces (d) Mucor
22. The organelles involved in photorespiration are
 (a) Glyoxysomes, chloroplast and mitochondria (b) Chloroplast, peroxisome and glyoxysome (c) Mitochondria, peroxisome and glyoxysomes (d) Chloroplast, mitochondria and peroxisome
23. The hormone reducing transpiration rate by inducing stomatal closure is:
 (a) ABA (b) Ethylene (c) Cytokinin (d) Auxin
24. In bryophytes the female sex organ is called:
 (a) Archegonium (b) Antheridium (c) Carpogonium (d) Ascogonium
25. The components of an ecosystem are:
 (a) Trees and weeds (b) Plants and animals (c) Man and plants (d) Biotic and abiotic
26. Double fertilization is found in:

- (a) Bryophytes (b) Angiosperms (c) Gymnosperms (d) Pteridophytes
27. A plant having two types of haploid structures in its life cycle is known as:
(a) Haplobiontic (b) Diplobiontic (c) Haplontic (d) Diplontic
28. Ribozyme is:
(a) enzyme (b) RNA with enzymatic activity (c) Hormone (d) Protein
29. Soil salinity is measured by:
(a) Potometer (b) Porometer (c) Conductivity meter (d) Calorimeter
30. Which one of the following is the earliest land plant?
(a) Rhynia (b) Cycas (c) Ulothrix (d) Synchytrium
31. The hormone responsible for ripening of fruits is
(a) Ethylene (b) Cytokinin (c) Auxin (d) ABA
32. *Datura* genus belongs to
(a) Cucurbitaceae (b) Solanaceae (c) Liliaceae (d) Cruciferae
33. Stem is reduced in
(a) Rhizome (b) Corm (c) Bulb (d) Tuber
34. Synandrous condition is the fusion of
(a) Filaments only (b) Both filaments and anthers (c) Anthers only (d) Petals
35. Golgi apparatus is absent in
(a) Higher plants (b) Yeast (c) Bacteria and blue-green algae (d) Liver cells
36. Which one is common amongst nucleus, chloroplast and mitochondria?
(a) Cristae (b) Thylakoids (c) Nucleic acid (d) Carbohydrate metabolism
37. Ergot is obtained from:
(a) Albugo (b) Yeast (c) *Claviceps Purpurea* (d) *Alternaria*
38. The site for light reaction of photosynthesis is:
(a) Grana (b) Stoma (c) ER (d) Cytoplasm
39. The species of *Pinus*, seeds of which are edible is/ chilgoza comes from:
(a) *P. roxburghii* (b) *P. gerardiana* (c) *P. monophylla* (d) *P. sylvestris*
40. Individuals of same species which occur in a particular area constitute:
(a) Flora (b) Fauna (c) Population (d) Flora and fauna
41. Transpiration differs from evaporation in:
(a) Rate of water loss (b) Transpiration is a physiological process while evaporation is physical process
(c) Transpiration is physical process while evaporation is physiological process (d) Frequency of water loss
42. Arrangement of leaves on a stem branch is:
(a) Venation (b) Venation (c) Ptyxis (d) Phyllotaxy
43. Cross between hybrid and recessive parent is:
(a) Back cross (b) Test cross (c) Monohybrid cross (d) Dihybrid cross

44. In angiosperm, triple fusion is necessary for the formation of:
(a) Embryo (b) Pollen (c) Endosperm (d) Leaf
45. Which division of fungi includes 'club fungi'?
(a) Zygomycota (b) Ascomycota (c) Deuteromycota (d) Basidiomycota
46. Calvin cycle is:
(1) C3 cycle (2) Reductive pentose-phosphate cycle (3) Common in cereals
uncommon in cereals
(4) Uncommon in cereals
47. The interaction between algae and fungi to form lichen is called:
(a) Parasitism (b) Mutualism (c) Commensalism (d) Amensalism (e) None of these
48. The actual location or place where a plant lives is called:
(a) Habitat (b) Ecosystem (c) Niche (d) Biome (e) None of these
49. Booklet or manual that describe the plants of a particular area is;
a). Vegetation b). Monograph c). Flora d). None of them
50. The largest family in terms of species number is;
a). Asteraceae b). Fabaceae c). Poaceae d). Solanaceae