

## Ph.D. Entrance Exam 2022

<b>Course</b>	Ph.D.
<b>Branch</b>	Biology
<b>Subject Name</b>	Botany

SN	Question Text	Option 1	Option 2	Option 3	Option 4
1	Hypothesis is a _____	statement	explanation	declarative sentence form	all the above
2	The degree of challenge to the hypothesis will depend on the _____	type of problem	importance	significance	all the above
3	Median is _____	central value	Central tendency	Positional average	Central position
4	Mode can be located graphically with the help of _____	Bar	Histogram	Pie diagram	Line diagram
5	Electron microscope is useful to study _____	3D view	surface view	ultra structure	all the above
6	Validity of research can be improved by _____	eliminating extraneous factors	taking true representative sample	both the above measures	none of the above
7	The term _____ indicates death of cells, tissues or organs.	hypoplasia	hyperplasia	shot hole	necrosis
8	In _____ pathway, formation of organic acids temporarily and specially separated.	C4	C3	CAM	C2
9	Fungi growing on bark of trees are called _____	Saxicolous	Corticulous	Terricouls	Xylophyllus
10	The shikimic acid pathway converts carbohydrate precursors to _____	aliphatic amino acids	aromatic amino acids	vitamins	proteins
11	. National forest policy aims at bringing _____ of geographical area under forest cover.	) 15%	75%	75%	75%
12	Lenticels are involved in _____	Gaseous exchange	Food transport	Photosynthesis	Transpiration
13	Duplicates of holotypes are called _____	Mesotypes	Meotypes	Syntypes	Isotypes
14	. A species was defined as a population of interbreeding individuals and reproductively isolated from other populations by _____	Charles Darwin	J.B. Lamarck	Carol us Linneaus	Ernst Mayer
15	facilitates rapid transport of water across the plasma membrane	liquiporins	gasiporins	aquaporins	lithoporins
16	Genetic code was deciphered through experiments of _____	Watson	Nirenberg	Noller	Dirtzir
17	In prokaryotic organism _____ is without membrane.	chloroplast	mitochondria	nucleus	liposome
18	_____ is used in the industrial production of citric acid	Candida sp.	Aspergillus sp.	Streptococcus sp	Acetobacter sp
19	Source of metabolic energy is used in the form of _____	GTP	ADP	ATP	AMP
20	Which of the following plant hormones is incorrectly paired with its function?	ytokinin - promotes senescence	erellin - stimulates seed germination	cid - promotes seed and bud development	ethylene -promotes fruit ripening
21	If a cell with a solute potential of - 0.2 MPa and a pressure potential of 0.4 MPa is placed in a chamber filled with pure water that is pressurized with 0.5 MPa what will happen?	Water will flow out of the cell	Water will flow into the cell.	The cell will be crushed.	The cell will explode.

22	. Which one of the following is living but non-nucleated:	. Sieve tube	Companion cells	. Phloem fibre	Phloem parenchyma
23	. Protoplasts can be made from the plant cells using these enzyme combination	Cellulase and Pectinase	Replicase and Ligase	Protease and Chitinase	DNase and RNase
24	Roger Beachy is known for this landmark discovery in plant pathology.	Microcosm	. Global ecosystem	Biome	. Ecotone
25	A major route for biosynthesis of secondary products in plants is	phosphoribulokinase	Rubisco	phosphopentosepimerase	phosphopentoseisomerase
26	The largest family in the flowering plants is	Phosphomannose isomerase	Xyiose isomerase	loramphenicol acetyl transferase	Aminoglycoside adenyl transferase
27	The practice of reducing or eliminating tillage operations and leaving crop residues on the soil to prevent erosion.	pseudo gene which is predicted	It is colorless poisonous gas	a gene which is rich in phosph	It is a type antibiotic which inhibits bacterial gene expression
28	Fraction I protein in plants is also known as	Rubisco	cytochrome oxidase	polyphenol oxidase	nitrogenase
29	one of the following statements related to .phytoene, is wrong	Nuzvid seeds	Advanta India	. Raas Seeds	Mahyco
30	Biological modification that allows species to better exist in a specific environment for short term.	Apocyanaceae	Asteraceae	Rubiaceae	Lamiaceae
31	.Inhigher plants, cytochrome c is typically located in	plasma membrane	chloroplasts	mitochondria	cytoplasm
32	A column chromatography method that makes use of a specific ligand molecule that is attached to an insoluble matrix, and is .upuUi. of uirrAairg 6 tt. ,notrute being purified is known as	Ion exchange chromatography	Partition chromatography	Gel filtration chromatograph	Affinity chromatography
33	When leaves become water-stressed, they wilt, because.....	BA levels have caused the stom	mesophyll cells are no longer	prt has ceased leading to incre	their guard cells are no longer turgid
34	Husk of coconut is made of:	Schlerenchyma	Parenchyma	Collenchyma	Prosenchyma
35	Fatty acyl CoA in cytoplasm is transported to outer mitochondrial membrane for Beta-oxidation as	Glycolipids	Acyl carnitine	Acteyl CoA	Malonyl-CoA
36	The two-carbon compound which acts as substrate for photorespiration i	. glycine	glycolate	acetyl CoA	malate
37	Tabtoxin is toxic to plant cells because it inactivates the enzyme glutamine synthetase, which leads to depletion of glutamine levels, and accumulation of	Aspartate	Ammonia	Acetic acid	. Benzoic acid
38	Mutations that involve a change in single nucleotide resulting in a codon that code for a different aminoacid are	missense mutation	nonsense mutation	frameshift mutations	transversions
39	One of the following Scientists is associated with the development of gene gun	Hargobind Khorana	D. Baltimore	Eric Reeve	J.C. Sanford
40	An organism that lives part of its life as a parasite on another organism and the other part as a saprophyte is called	Biotroph	Halophyte	Lithophyte	Hemibiotroph
41	The entry of most of the bacterial pathogens into the plants occurs through the following.	irect penetration of the cell w	through the wounds made by	Natural openings of the plants	Physical contact with the infbcted plant

42	Which of the following is a site specific nuclease in T-DNA transfer	VirG	VirA	VirD1	VirE2
43	In isoelectric foccossing the following substances are used to give a pH gradient	Veronal	Tris	Polyamino polycarboxylic acid	Phosphate buffer
44	T <sub>m</sub> of a DNA molecule is high, whe	Its G+C content is low	Its A+T content is high	concentration in the DNA solut	It is in circular form
45	One of following is an antiviral drug	Acyclovi	Flucytosine		
46	Polynucleotide ligase joins two DNA molecules together by forming a covalent bond between	3' OH groups of adjacent strands	5' OH groups of adjacent nucleotides on	3' OH group and a 5' PO <sup>+</sup> group	A 3' PO <sup>+</sup> group and a 5' OH group
47	A plant hormone derived from cell wall fragments is called as	Extensin	Polyamine	Pectin	Oligosaccharins
48	in which form water is available to the plants?	Hygroscopic water	Gravitational water	Capillary water	Mineral water
49	Phycocyanin and phycoerythrin are characteristics of	Phaeophyceae	Chlorophyceae	Cyanophyceae	Cyanophyceae
50	In cyathium, the male flowers are represented by	a single stamen	two epipetalous stamens	four staminodes	numerous spirally arranged stamens