Z-12

ENTRANCE EXAMINATION – 2021

M.Sc. Molecular Microbiology

Time: 2 hours Maximum Marks: 100

HALL TICKET NO.

INSTRUCTIONS

Please read carefully before answering the questions:

1. Enter your Hall Ticket number both on the top of this page and on the OMR answer sheet.

2. Answers are to be marked only on the **OMR answer sheet** following instructions provided there upon.

3. Hand over the OMR answer sheet to the Invigilator before leaving the examination hall.

4. The question paper contains **100** questions (**Part-A**: Question Nos. **1-25** and **Part-B**: Questions Nos. **26-100**) of multiple-choice printed in **16** pages, including this page. One OMR answer sheet is provided separately. **Please check.**

5. The marks obtained in **Part-A** will be used for resolving the tie cases.

6. Each question carries one mark.

7. There is **Negative marking** for wrong answers, in **Parts A and B**. For each wrong answer, 0.33 mark will be deducted.

8. Calculators and mobile phones are NOT allowed.

PART – A

1. Match the entries listed in the Group I with the Group II.

Group I	Group II
P. Ion exchange Chromatography	1. Decreasing salt concentration
Q. Gel Filtration Chromatography	2. Ampholytes
R. Hydrophobic interaction Chromatography	3. Increasing salt concentration
S. Chromatofocusing	4. Molecular size

A. P-4, Q-1, R-2, S-3
B. P-4, Q-3, R-1, S-2
C. P-3, Q-4, R-1, S-2
D. P-3,Q-4, R-2, S-1

2. Which of the following statements is *false* regarding disulfide bonds?

A. They are formed by oxidation of thiol groups
B. They are formed between cysteine residues
C. They hold the heavy and light chains of immunoglobulins together
D. They stabilize the T-form of haemoglobin

3. Blocking the active site of an enzyme is a kind of

A. Competitive inhibition
B. Allosteric inhibition
C. Non-competitive inhibition
D. Feedback inhibition

4. Estrogen and testosterone are steroid hormones and are most likely to bind to

A. Membrane ion channel
B. Enzyme linked membrane receptor
C. G-protein linked membrane receptor
D. Cytoplasmic receptor

5. Which of the following is *incorrectly* stated regarding ABO blood group in human beings?

A. The ABO blood group locus has 3 alleles
B. I^A and I^B alleles are dominant over *i* alleles and are codominant with each other
C. The person with blood-type O produces both A antibodies and B antibodies
D. There are 4 genotypes possible at this locus

6. A DNA molecule of 300 bp long has 20 complete rotations. This DNA molecule is

A. negatively supercoiled
B. relaxed
C. positively supercoiled
D. renatured

7. ____ are plasmids that are capable of freely replicating and able to integrate into the bacterial chromosomes.

A. Plastidosomes
B. Episomes
C. Parasomes
D. Plasmosomes

8. Ashanthi DeSilva was the first to receive

A. Gene therapy
B. Stem cell therapy
C. Nanomedicine
D. Tissue transplant

9. Which of the following gene(s) is/are targeted to detect COVID-19 infection using qRT-PCR?

(i) *E* gene
(ii) *NSP3* gene
(iii) *RdDP* gene
(iv) *M* gene

A. (i) and (iii)
B. (iv) Only
C. (ii) Only
D. (ii) and (iv)

10. The core polysaccharide of the lipopolysaccharide layer of *Salmonella* consists of

A. Ketodeoxyoctonate, heptose, glucose, galactose and N-acetylglucosamine
B. Ketodeoxydeconate, heptose, pentose and N-acetylglucosamine
C. Ketodeoxyoctonate, heptose, glucose and N-deacetylglucosamine
D. Ketodeoxydeconate, heptose, pentose and N-deacetylglucosamine

11. In gene mapping experiments using generalized transduction, bacterial genes that are co-transduced are_____.

A. far apart on the bacterial chromosome
B. on different bacterial chromosomes
C. close together on the bacterial chromosome
D. on a plasmid

12. Identify the mismatch

A. *Staphylococcus aureus* – Widespread hospital pathogen
B. *Escherichia coli* – Cause of urinary tract infections
C. *Candida* – Opportunistic pathogen
D. *Bordetella pertussis* – Tularemia

13. A vector that is specifically designed to replicate in two different hosts is referred to as

A. Multi host vector
B. Shuttle vector
C. Dual vector
D. High fidelity vector

14. Which of the following is the only enzyme of the TCA cycle that is *not* located in the mitochondrial matrix?

A. Malate dehydrogenase
B. Succinate dehydrogenase
C. Isocitrate dehydrogenase
D. Lactate dehydrogenase

15. Which of the following statements regarding recombination frequency between the genes is *incorrect*?

A. A recombination frequency of 0.5 indicates independent assortment of the genes
B. A recombination frequency of 0.25 indicates linkage between the genes
C. A recombination frequency of 0.0 corresponds to complete linkage of the genes
D. A recombination frequency of 0.0 corresponds to independent assortment

16. Among the listed amino acids, which one is *not* an intrinsic fluorophore of protein/ peptide?

A. Valine
B. Tyrosine
C. Tryptophan
D. Phenylalanine

17. In a negative repressible operon, the regulator protein is synthesized as

A. an active repressor
B. an inactive repressor
C. an active activator
D. an inactive activator

18. Which technique commonly used to study epigenetic alterations?

A. Electrophoretic mobility shift assay
B. Chromatin immunoprecipitation
C. Isoelectric focusing
D. ELISA

19. In proteins, N-linked oligosaccharides are attached to

A. Gln
B. Arg
C. Lys
D. Asn

20. Which of the following halogens are arranged in the order of electronegativity?

A. Cl>F>I>Br
B. Cl>Br>I>F
C. F>Cl>Br>I
D. B>F>Cl>I

21. Read the following statement and reason carefully with regard to the enzyme nitrogenase and identify the *correct* answer

Statement: The reduction of acetylene to ethylene is widely used for measuring the activity of nitrogen fixation.

Reason: The enzyme nitrogenase is not entirely specific for N_2 as the substrate. This enzyme can also reduce cyanide (CN^-), acetylene (C_2H_2) and several other triply bonded compounds.

A. Both statement and reason are correct and the reason explains the statement
B. Only the statement is correct and the reason is incorrect
C. Both statement and reason are incorrect
D. Statement is incorrect and reason is correct

22. The technique that uses hybridization to detect specific DNA restriction fragments in genomic DNA is

A. Restriction Fragment Length Polymorphisms
B. Random Amplified Polymorphic DNA
C. Amplified Fragment Length Polymorphisms
D. Inter Simple Sequence Repeats

23. During eukaryotic replication, ____ degrades the RNA primer by 5' – 3' exonuclease activity.

A. RNAse H1
B. FEN-1
C. Topoisomerase II B
D. DNA polymerase γ

24. Cardiolipin is a characteristic of the membrane of

A. Endoplasmic reticulum
B. Lysosomes
C. Myelin sheets
D. Mitochondria

25. A DNA stretch of 25.68 kb (kilobase pair) is equivalent to ___ mb (megabase pair).

A. 2.568
B. 0.2568
C. 0.02568
D. 0.002568

PART – B

26. The molecule that functions as a natural thiol reductant in a cell is

A. Glutathione
B. Methionine
C. Dithiothreitol
D. Cysteine

27. Guard cells differ from epidermal cells in having

A. Mitochondria
B. Chloroplast
C. Nucleus
D. Golgi body

28. In plants, which of the following is *not* an ATP-hydrolyzing pump that is found in membranes?

A. P-type
B. V-type
C. ABC transporters
D. Aquaporins

29. Why ATP is considered the high-energy molecule?

A. It is nucleoside triphosphate
B. ATP is more resonance stabilized than the products of its hydrolysis
C. The products of its hydrolysis are stabilized by resonance
D. ATP is present as Mg-ATP complex in the cell

30. Optical isomerism is shown by compounds having

A. a carboxylic group
B. a carboxylic and a hydroxyl group
C. an asymmetric carbon atom
D. a symmetric carbon atom

31. Grapes shrink when placed in a hypertonic sugar solution. This process is called

A. Deplasmolysis
B. Exosmosis
C. Osmosis
D. Imbibition

32. Reverse transcriptase is a ____.

A. DNA dependent DNA polymerase
B. RNA dependent RNA polymerase
C. RNA dependent DNA polymerase
D. DNA dependent RNA polymerase

33. Nystatin is an antibiotic against

A. Algae B. Bacteria C. Fungi D. Algae and Fungi

34. Blast disease of rice is caused by

A. Virus
B. Protozoa
C. Fungus
D. Bacterial

35. Which of the following is a derivative of mycolic acid?

A. S-protein
B. Cord factor
C. G-protein
D. F factor

36. The consensus sequence (TATAAT) found in most bacterial promoters approximately 10 bp upstream of the transcription start site is called ____.

A. Pribnow box
B. E box
C. Homeo box
D. OCT box

37. ΔG of a cellular reaction will be negative if

A. Products of the reaction have lesser entropy than the reactants
B. Products of the reaction have more entropy than the reactants
C. The reaction is non-spontaneous
D. There is requirement of input of energy for the reaction to occur

38. What does the 'Ct' value (cutoff threshold) in qRT-PCR experiments imply?

A. Lower the value, higher the transcript number
B. Higher the value, higher the transcript number
C. No transcript, if the value is lower than 30
D. No transcript, if the value is higher than 30

39. Acetyl CoA, the cytoplasmic substrate for the fatty acid synthesis, is formed in mitochondria. The IMM is impermeable to acetyl CoA. Which compound is the form in which the carbon of acetyl CoA is transported to the cytoplasm?

A. Malate
B. Acetate
C. Citrate
D. Pyruvate

40. Which of the following is a common disease in groundnut?

A. Tikka disease caused by the ascomycete *Colletotrichum falcatum*
B. Stem rust caused by the oomycete *Puccinia graminis*
C. Tikka disease caused by the ascomycete *Cercospora arachidicola*
D. Tikka disease caused by the oomycete *Cercospora arachidicola*

41. Which of the following photosynthetic pigment structure is closely mimicking to the bile pigment bilirubin structure?

A. Xanthophyll
B. Phycobilins
C. Carotene
D. Chlorophyll

42. To purify a particular recombinant protein, a scientist chooses to use affinity chromatography as he has nickel columns available in his laboratory. Which of the below molecule he should use to tag the protein for purification using those columns?

A. Glutathione-S-transferase
B. Histamine
C. Proline
D. Histidine

43. During daytime, if carbon dioxide concentration around the leaves increases

A. Stomata will open gradually
B. Stomata will open suddenly
C. No change in transpiration
D. Decrease in transpiration due to closure of stomata

44. The enzyme used to prevent unwanted self-ligation of DNA molecules during cloning experiments is

A. Terminal phosphatase
B. Reverse transcriptase
C. Terminal peroxidase
D. Alkaline phosphatase

45. What is Graafian follicle?

A. A mature follicle within which an ovum develops prior to ovulation
B. An ovulated follicle
C. A follicle undergoing apoptosis
D. A mature follicle in which a sperm develops

46. Protein phosphorylation is a mechanism of regulation that is extremely important in most cellular processes occurs through_____

A. Oxidation
B. Reversible posttranslational modification
C. Decarboxylation
D. Permanent posttranslational modification

47. In a PCR reaction, which of the following temperature is the most suitable for annealing reaction to take place

A. 55 °C
B. 74 °C
C. 94 °C
D. 40 °C

48. What would be the frequency of AabbCCDd individuals from a mating of two individuals of genotypes AabbCcDd X AabbCcDd?

A. 1/16 B. 1/32 C. 1/4 D. 1/8

49. The enzyme specific to glyoxylate cycle is

A. Isocitrate lyase
B. Succinate dehydrogenase
C. Isocitrate dehydrogenase
D. Aconitase

50. Which is the most important structure related to microbial attachment to cells?

A. Plasmid
B. Peptidoglycan
C. Flagellum
D. Glycocalyx

51. Which enzyme catalyzes the reaction, $2H_2O_2 \rightarrow 2H_2O + O_2$

A. Dehydrogenase B. Peroxidase C. Catalase D. Hydrolase

52. Which among the following is a high energy electromagnetic radiation known to arise from the radioactive decay of atomic nuclei?

A. Gamma rays B. Beat particle C. Alpha rays D. Far UV rays

53. Telomeres are present in eukaryotic genome at the chromosomal ends

A. as selfish DNA
B. to protect them from breakdown
C. to enclose essential genes involved in ageing
D. to silence genes at the ends of chromosomes

54. Which of the following is a linear and polar molecule?

A. N_2O B. CS_2 C. CO_2 D. CH_4

55. The cell organelle which shows extensive polymorphism is

A. Ribosome B. Dictyosome C. Lysosome D. Chloroplast

56. Mycotoxins are formed during the end of

A. Lag phase
B. Log phase
C. Death phase
D. Stationary phase

57. Arginine and lysine are found in what form and it behaves in what way?

A. Negative ion and alkaline
B. Positive ion and acidic
C. Negative ion and acidic
D. Positive ion and alkaline

58. In the context of bacterial colonization, the ____ is the zone of soil adjacent to and influenced by roots, whereas the surface of the root is known as the ____, and the ____ refers to the root cortex.

A. rhizoplane, rhizosphere, endorhizosphere
B. endorhizosphere, rhizosphere, rhizoplane
C. rhizosphere, rhizoplane, endorhizosphere
D. endorhizosphere, rhizoplane, rhizosphere

59. Histones and albumins are examples of

A. Simple proteins
B. Derived proteins
C. Nucleoproteins
D. Glycoproteins

60. The causal organism of kala-azar is

A. *Rickettsia prowazekii*
B. *Mycobacterium tuberculosis*
C. *Leishmania donovani*
D. *Sarcina ventriculi*

61. In a redox reaction, electrons move

A. From the compounds having more positive redox potential to compounds having lesser positive redox potential
B. From compounds having lesser positive redox potential to compounds with more positive redox potential
C. From compounds having lesser negative redox potential to compounds having more negative redox potential
D. From compounds having more positive redox potential to compounds with more negative redox potential

62. What is "Palsmogamy"?

A. It is the process of gametogenesis in Plasmodium
B. Cytoplasm of two parent cells fuses together before their nuclei fuse during sexual reproduction in fungi
C. A stage when plasmid DNA combines with chromosomal DNA
D. The bursting forth of protoplasm from a cell

63. Cholecystokinin is an example of peptide hormone of gastrointestinal system responsible for stimulation of digestion process. This hormone is synthesized and secreted by

A. Large intestine
B. Small intestine
C. Pancreas
D. Gall bladder

64. Hyperthyroidism is medically referred to as

A. Myxedema
B. Grave's disease
C. Addison's disease
D. Goiter

65. Sabin vaccine is given to offer

A. Innate immunity
B. Active immunity
C. Passive immunity
D. Auto immunity

66. Large sea weeds called 'kelps' belong to

A. Brown algae
B. Red algae
C. Yellow green algae
D. Green algae

67. Through Wobble, a single ____ can pair with more than one ____.

A. codon, anticodon
B. group of three nucleotides in DNA, codon in mRNA
C. tRNA, amino acid
D. anticodon, codon

68. Which of the following hormone is derived from the phenylalanine and tyrosine amino acids?

A. Progesterone
B. Endorphin
C. Prostaglandin
D. Epinephrine

69. Match the entries in Group I with the enzymes in Group II.

Group I	Group II
P. NAD+	1. Glutathione peroxidase
Q. Selenium	2. Nitrogenase
R. Pyridoxal phosphate	3. Lactate dehydrogenase
S. Molybdenum	4. Glycogen phosphorylase

A. P-3, Q-2, R-4, S-1
B. P-4, Q-1, R-3, S-2
C. P-3, Q-1, R-4, S-2
D. P-3, Q-4, R-2, S-1

70. When an aldehyde or ketone treated with α-bromo ester in the presence of zinc it leads to the formation of β-hydroxy ester after acid hydrolysis. This type of reaction is known as

A. Cannizaro reaction
B. Reformatsky reaction
C. Witting reaction
D. Gattermann reaction

71. Match the type of mutations in Column 1 with the major features in Column 2 and choose the *correct* answer

Column 1	**Column 2**
1. Silent mutation	i. Creates translational termination codon
2. Missense mutation	ii. No change in amino acid
3. Nonsense mutation	iii. Shifts triplet reading of codons out of correct phase
4. Frameshift mutation	iv. Change in amino acid encoded

A. 1-ii; 2-iii; 3-i; 4-iv
B. 1-ii; 2-iv; 3-i; 4-iii
C. 1-iii; 2-ii; 3-iv; 4-i
D. 1-iii; 2-iv; 3-ii; 4-i

72. Which of the following genetic disorder is *not* related to blood?

A. Haemophilia
B. Sickle cell anemia
C. Phenylketonuria
D. Thalassemia

73. A non-protein structure covalently attached to the protein part of an enzyme molecule is called

A. Coenzyme
B. Cofactor
C. Apoenzyme
D. Prosthetic group

74. Match the following for the micronutrients needed by microorganisms

Element	**Cellular function**
K. Chromium	i. Nitrate reductase
L. Molybdenum	ii. Carbonic anhydrase
M. Zinc	iii. Water-splitting enzyme
N. Manganese	iv. Formate dehydrogenase
	v. No know microbial requirement

A. K-v; L-i; M-ii; N-iii
B. K-ii; L-iv; M-iii; N-i
C. K-iv, L-iii; M-ii; N-i
D. K-v; L-ii; M-iii; N-iv

75. Which of the following antibody is predominantly found in saliva?

A. IgA
B. IgE
C. IgG
D. IgM

76. Decrease in sink-source ratio causes the rate of photosynthesis to

A. Decrease
B. Increase
C. Remain unaffected
D. First increase followed by decline

77. Match the following for an *Enterobacter* grown on different media

Agar Media	**Colony Characters**
K. Eosin-methylene blue (EMB)	i. Red to pink
L. MacConkey (MC)	ii. Greenish metallic sheen
M. Salmonella-Shigella (SS)	iii. Mucoid colonies with silver sheen
N. Bismuth sulfite (BS)	iv. White or beige
	v. Opaque

A. K-v; L-ii; M-i; N-iii
B. K-ii; L-iv; M-iii; N-i
C. K-ii, L-i; M-iv; N-iii
D. K-i; L-ii; M-v; N-iv

78. Star shaped chloroplast is seen in

A. Chlorella
B. Spirogyra
C. Cladophora
D. Zygnema

79. An example of symbiotic association of non-leguminous plants with rhizobium is

A. Gunnera
B. Anthoceros
C. Casuarina
D. Parasponia

80. Which of the following organic reaction is known as Ullmann Reaction?

A. Aryl halides couple with alkyl halides when heated with sodium in ether solution to form alkylbenzene
B. Aryl iodides and bromides when heated with copper form biazyl compounds in which two benzene rings are bond together
C. The treatment of aldehyde with conc. NaOH or KOH
D. When alkene is heated with carbon monoxide and steam under pressure with phosphoric acid at 400°C, carboxylic acid are formed

81. An example of point mutation is

A. Philadelphia chromosome
B. Sickle cell anemia
C. Edward's syndrome
D. Colour blindness

82. The causing agent of citrus greening disease is

A. *Candidatus Liberibacter asiaticus*
B. *Magnaporthe citri*
C. *Cercospora arachidicola*
D. *Puccinia graminis*

83. Presence of which pigment(s) is responsible for absorption of all wave lengths along the visible spectrum in red algae, giving it almost black appearance?

A. Chlorophyll a and d
B. Phycocyanin, allophycocyanin
C. Phycocyanin, phycoerythrin
D. Phycoerythrin, chlorophyll

84. Gastrointestinal tract is the site of food digestion, consists of the stomach, small intestine, and large intestine. The tract is rich in microbial diversity and a niche for the growth of many microorganisms. Which among the following part of the digestive system is considered as a chemostat for microbial growth?

A. Large intestine B. Small intestine C. Stomach D. None of the mentioned

85. Following are the statements on Mendel's success in formulating laws of inheritance in plants.

i. His choice of *Pisum sativum* for his experiments which showed well defined contrasting characters
ii. He studied the seven pairs of contrasting characters individually in parents and hybrids
iii. He focussed his attention to many contrasting characters at a time during hybridization experiments
iv. He made controlled crosses, accurately maintained the records and analysed the data statistically

Select the combination with <u>*all correct*</u> statements from the above:

A. i, ii and iv
B. i, ii and iii
C. ii, iii and iv
D. i, iii and iv

86. "Flatus" is the term use for

A. The small organic acids produced during fermentation within the intestines
B. The gas produced within the intestine due to the action of fermentation and consists mainly of CO_2, H_2 and sometimes CH_4
C. The gas produced within the intestine due to the action of non-enzymatic chemical reactions and consists mainly of CO_2, H_2 and sometimes CH_4
D. The organic acids produced within the intestine due to the action of non-enzymatic chemical reactions and consists mainly of lactic acid and acetic acid

87. In pedigree analysis, if affected fathers pass the trait on to all their daughters, then it can be inferred as

A. X-linked recessive trait
B. X-linked dominant trait
C. Autosomal recessive trait
D. Autosomal dominant trait

88. Identify the mismatch

i. *Mycoplasma genitalium* – Smallest known cellular genome
ii. *Rhodobacter sphaeroides* – Oxygenic phototrophic bacterium
iii. *Pyrococcus abyssi* – Is an Archaea which can grow at high temperatures
iv. *Borrelia burgdorferi* – Causes Lyme disease

A. ii & iv B. iii only C. i & iv D. ii only

89. Heterocyst of cyanobacteria is

A. specialized for oxygenic photosynthesis
B. responsible spore formation
C. specialized for gamete formation
D. specialized for N_2 fixation

90. Activation of Rubisco by light is due to

A. Decrease in pH of lumen
B. Increase in pH of stroma
C. Due to release of Rubisco from thylakoids into the stroma
D. Due to Mg^{+2} moving out of thylakoid lumen to stroma

91. Earth is thought to be _____ billion years old; the first evidence of microbial life emerges in rocks about _____ billion years old.

A. 2.7; 1.8 B. 3.8; 2.4 C. 4.6; 3.86 D. 5.2; 4.8

92. Hexokinase activity in glycolysis is inhibited by

A. Fructose 6-phosphate
B. Glucose 6-phosphate
C. Fructose 1,6 bisphosphate
D. Phosphofructokinase

93. Protein separation based on ligand specific method called

A. Affinity chromatography
B. Gel exclusion chromatography
C. Ion exchange chromatography
D. Gas liquid chromatography

94. A binary vector is a

A. Cloning vector B. Sequence vector C. Expression vector D. Storage vector

95. The chloride that turns black on addition of NH_4OH is

A. AgCl B. $PbCl_2$ C. Hg_2Cl_2 D. Both A and B

96. When phenol reacts with acid chlorides (or acid anhydrides) in aqueous alkali solution, it produces ..... (in this reaction the alkali first forms the phenoxide ion which then reacts with the acid chloride)

A. Phenyl ethers
B. Salicylaldehyde
C. Phenyl esters
D. Chlorobenzene

97. Ca^{2+} ions have the same number of electrons as

A. K
B. Ar
C. Cl
D. Mg^{2+}

98. Resorcinol is very important organic compound which is used in skin related problems. How it is obtained in the laboratory?

A. It is obtained from m-benzenedisulphonic acid
B. It is obtained from heating gallic acid
C. It is obtained from 2,4-6-trinitrotoluene
D. It is obtained from o-dichlorobenzene

99. Choose the *correct* answer

Statement 1: In plants, photosystem II removes electrons from water and passed them to plastoquinone.

Statement 2: The complex associated with the cleavage of water is called as oxygen splitting complex which is closely associated with PSII.

A. Statement 1 is correct and statement 2 is false
B. Statement 2 is correct and statement 2 is false
C. Both statements are correct
D. Both statements are false

100. Identify the statement that is *incorrect* regarding genetic code.

A. The genetic code is based on triplets of bases
B. The genetic code is nonoverlapping
C. 64 codons encode amino acids
D. The genetic code is unambiguous

*****

University of Hyderabad
Entrance Examinations - 2021

School/Department/Centre : Department of Plant Sciences, School of Life Sciences
Course/Subject : M.Sc. Molecular Microbiology – 2021 (Code No. Z-12)

Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer
1	C	26	A	51	C	76	A
2	D	27	B	52	A	77	C
3	A	28	D	53	B	78	D
4	D	29	C	54	A	79	D
5	D	30	C	55	C	80	B
6	A	31	B	56	A	81	B
7	B	32	C	57	D	82	A
8	A	33	C	58	C	83	D
9	A	34	C	59	A	84	A
10	A	35	B	60	C	85	A
11	C	36	A	61	B	86	B
12	D	37	B	62	B	87	B
13	B	38	A	63	B	88	D
14	B	39	C	64	B	89	D
15	D	40	C	65	B	90	C
16	A	41	B	66	A	91	C
17	B	42	D	67	D	92	B
18	B	43	D	68	D	93	A
19	D	44	D	69	C	94	C
20	C	45	A	70	B	95	C
21	A	46	B	71	B	96	C
22	A	47	A	72	C	97	B
23	B	48	A	73	D	98	A
24	D	49	A	74	A	99	A
25	C	50	D	75	A	100	C

Note/Remarks: Final Answer Key is same as Provisional Answer Key. No Corrections have been made.

11/09/2021

Signature of the Head
Department of Plant Sciences