NEET MODEL EXAM -01

DATE: 25 - 07 - 2021 **TIME: 10.15 AM – 1.15 PM**

DURATION: 3. 00 HOURS **MAX MARKS: 720**

Register Number: _____

Name of the candidate: _____

IMPORTANT INSTRUCTIONS

1. The exam is of 3 hours duration and the exam booklet contains 180 questions. Each question carries **FOUR** (04) marks. For each correct response, the candidate will be awarded **FOUR** (04) marks. For each incorrect response, **ONE** (01) mark will be deducted from the total scores. The **maximum marks are 720**. No marks will be deducted for unattempted questions.

2. Do not make any stray marks on the OMR Sheet.

3. Do not write your Register Number anywhere else except in the specified space in the Exam Booklet/ OMR Sheet.

4. Use of Electronic/Manual calculator, log tables or other electronic gadgets is strictly prohibited.

5. The candidate should write the correct Register Number in the OMR sheet, failing which the OMR will not be evaluated.

ALL THE BEST

TOPICS OF THE TEST	
BIOLOGY	THE LIVING WORLD AND BIOLOGICAL CLASSIFICATION
PHYSICS	PHYSICAL WORLD
CHEMISTRY	SOME BASIC CONCEPTS OF CHEMISTRY

PHYSICS

1. A scientific way of doing things involve
1. Identifying the problem
2. Collecting data
3. Hypothesizing a possible theory
4. All of the above

2 The scientific principle involved in production of ultra high magnetic field is
1. Super conductivity
2. Digital logic
3. Photoelectric effect
4. Laws of thermodynamics

3 Correct statement related to duly verified and dependable facts of a natural phenomenon is called
1. Law 2. Theory
3. Hypothesis 4. None of these

4 Concept of natural phenomenon widely accepted after due verification and experimentation is called
1. Hypothesis 2. Law
3. Theory 4. None of these

5 The man who has won Nobel prize twice in physics is
1. Einstein 2. Bardeen
3. Heisenberg 4. Faraday

6 Prof. Albert Einstein got Noble Prize in physics for his work on
1. Special theory of relativity
2. General theory of relativity
3. Photoelectric effect
4. Theory of specific heats

7 Which of the following is wrongly matched?
1. Barometer – Pressure
2. Lactometer – Milk
3. Coulomb's law – charges
4. Humidity – Calorimeter

8 C.V. Raman got Nobel Prize for his experiment on
1. Dispersion of light
2. Reflection of light
3. Deflection of light
4. Scattering of light

9 Louis de – Broglie is credited for his work on
1. Theory of relativity
2. Electromagnetic theory
3. Matter waves
4. Law of distribution of velocities

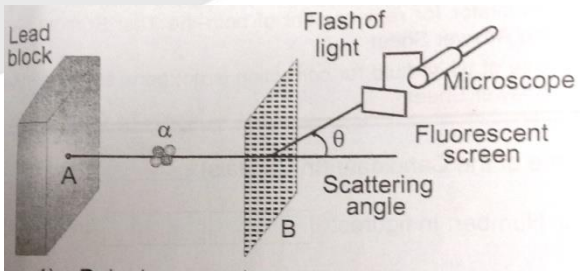
10 Madam Marie Curie won Nobel Prize twice which were in the field of
1. Physics and chemistry 2. Chemistry only
3. Physics only 4. Biology only

11 Which of the following is true regarding the physical science?
1. They deal with non – living things
2. The study of matter are conducted at atomic or ionic levels
3. Both 1 & 2
4. None of these

12 The man who is known as the Father of Experimental Physics is
1. Newton 2. Albert Einstein
3. Galileo 4. Rutherford

13 The person who has been awarded the title of the Father of Physics of 20th century is
1. Madame Curie 2. Sir C. V. Raman
3. Neils Bohr 4. Albert Einstein

14 In Rutherford alpha particle scattering experiment as shown in given figure, A and B refer to



1. Polonium sample and aluminium foil

2. Polonium sample and gold foil
3. Uranium sample and gold foil
4. Uranium sample and aluminium foil

15 The branch of science which deals with nature and natural phenomena is called
1. Sociology 2. Biology
3. Civics 4. Physics

16 Who gave general theory of relativity?
1. Einstein 2. Marconil
3. Ampere 4. Newton

17 Who discovered X – rays?
1. Chadwick 2. Roentgen
3. Thomson 4. Madam Curie

18 The field of work of S. Chandrasekhar is
1. Theory of black hole 2. Cosmic rays
3. Theory of relativity 4. X – rays

19 Two Indian born physicists who have been awarded Nobel Prize in Physics are
1. H.J. Bhabha and APJ Kalam
2. C.V. Raman and S. Chandrasekhar
3. J.C. Bose and M.N. Saha
4. S. N. Bose and H. J. Bhabha

20 Which of the following has infinite range ?
1. Gravitational force
2. Electromagnetic force
3. Strong nuclear force
4. Both 1 & 2

21 Which of the following is the correct decreasing order of the strengths of four fundamental forces of nature?
1. Electromagnetic force>weak nuclear force> gravitational force>strong nuclear force
2. Strong nuclear force>weak nuclear force>electromagnetic force>gravitational force
3. Gravitational force>electromagnetic force>strong nuclear force>weak nuclear force
4. Strong nuclear force>electromagnetic force>weak nuclear force>gravitational force

22 The exchange particles for the electromagnetic force are
1. Gravitons 2. Gluons
3. Photons 4. Mesons

23 Which of the following is the weakest force?
1. Nuclear force 2. Gravitational force
3. Electromagnetic force 4. None of these

24 Classical physics mainly deals with
1. Microscopic phenomena
2. Macroscopic phenomena
3. Both of the above
4. None of the above

25 Microscopic domain includes
1. Atomic theory 2. Molecular theory
3. Nuclear theory 4. All of the above

26 Who discovered cosmic radiations?
1. Curie 2. Hubble
3. P.M.S. Brackett 4. Maxwell

27 Who gave Universal Law of Gravitation?
1. Einstein 2. Sir Issac Newton
3. J.D. Van der Waals 4. Galileo

28 What is the relative magnitude of electromagnetic force with respect to strong nuclear forces?
1. 10^{-38} 2. 10^{-13}
3. 10^{-32} 4. 10^{-2}

29 Who discovered scattering of light?
1. C.V. Raman 2. W. Wein
3. Hess 4. W. L. Bragg

30 Which scientific principle is steam engine based on?
1. Motion of charged particles in electric and magnetic field
2. Newton's Laws of motion
3. Thermodynamics
4. Propagation of electromagnetic waves

31 Who gave theory of relativity?
1. Einstein 2. C.D Anderson
3. Huygens 4. Newton

32 Who proposed the wave theory of light?
1. G.P. Thomson 2. Huygens
3. M. Planck 4. Maxwell

33 Which scientific principle is 'electric generator' based on?
1. Bernoullis's principle
2. Thermodynamics
3. Faraday's law of electromagnetic induction

4. Propagation of electromagnetic waves

34 Name one of the most important contributions of Albert Einstein
1. Theory of relativity
2. Molecular Spectra
3. Universal law of graviton
4. Scattering of light

35 Electron was discovered by
1. J. J. Thomson 2. Bohr
3. Ruther ford 4. Newton

36 Which scientist received Nobel Prize for his work on Molecular spectra?
1. Einstein 2. Newton
3. C.V. Raman 4. Ruther ford

37 Neutron was discovered by
1. Chadwick 2. Bohr
3. Rutherford 4. None of these

38 Name that branch of science which deals with the study of stars
1. Astronomy 2. Geology
3. Quantum theory 4. None of these

39 Name the branch of science which deals with the study of Earth
1. Astronomy 2. Geology
3. Quantum theory 4. None of these

40 Which is strongest force?
1. Gravitational force
2. Strong nuclear force
3. Weak nuclear force
4. Electromagnetic force

41 Name the scientist whose filed of work was 'elasticity'
1. S.N. Bose 2. J.C. Maxwell
3. Robert Hook 4. Paul Dirac

42 Transistor was discovered by
1. John Bardeen 2. C.H. Townes
3. M.N. Saha 4. C.V. Raman

43 Name the contribution made by the scientist S. N. Bose
1. Electromagnetic theory
2. Quantum theory
3. Relativistic theory of electron
4. Quantum statics

44 Name the contribution made by the scientist J.C. Maxwell
1. Electromagnetic theory
2. Quantum theory
3. Relativistic theory of electron
4. Quantum statics

45 Name the contribution made by the scientist Paul Dirac
1. Electromagnetic theory
2. Quantum theory
3. Relativistic theory of electron
4. Quantum statics

CHEMISTRY

46. 0.92g of Ag_2CO_3 is heated strongly beyond melting point. After heating the amount of residue is
1. 0.36g 2. 0.39g
3. 0.72g 4. 0.77g

47 The volume of neon gas in cm^3 at STP having the same number of atoms as that present in $800\,mg$ of Ca is (At. Mass; Ca = $40\,g\,mol^{-1}$, $Ne = 20\,g\,mol^{-1}$)
1. 56 2. 896
3. 224 4. 448

48 How many molecules of CO_2 are formed when one milligram of 100% pure $CaCO_3$ is treated with excess hydrochloric acid?
1. 6.023×10^{23} 2. 6.023×10^{21}
3. 6.023×10^{20} 4. 6.023×10^{18}

49 Arrange the following in the order of increasing mass (atomic mass: $O = 16, Cu = 63, N = 14$)
I. One atom of oxygen
II. One atom of nitrogen
III. 1×10^{-10} **mole of oxygen**
IV. 1×10^{-10} **mole of copper**
1. II<I<III<IV 2. I<II<III<IV
3. III<II<IV<I 4. IV<II<III<I

50 The mass of $CaCO_3$ required to react completely with $20mL$ of 1.0 M HCl as per the

reaction, $CaCO_3 + 2HCl \rightarrow CaCl_2 + CO_2 + H_2O$ **is (At. Wt. Ca = 40, C = 12, O = 16)**

1. 1 g
2. 2g
3. 10g
4. 20g

51 Which one of the following has maximum number of molecules?

1. 16 g of O_2
2. 16 g of NO_2
3. 4 g of N_2
4. 32 of N_2

52 The density of 2.0 M solution of a solute is $1.2\, g\, mL^{-1}$**. If the molecular mass of the solute is** $100\, g\, mL^{-1}$**, then the molality of the solution is**

1. 2.0 m
2. 1.2 m
3. 1.0 m
4. 0.6 m

53 The vapor density of a mixture containing NO_2 **and** N_2O_4 **is 27.6. Mole fraction of** NO_2 **in the mixture is**

1. 0.8
2. 0.6
3. 0.4
4. 0.2

54 3g of an oxide of a metal is converted to chloride completely and it yielded 5 g of chloride. The equivalent weight of the metal is

1. 3.325
2. 33.25
3. 12
4. 20

55 1 ml of gaseous aliphatic compound $C_nH_{3n}O_m$ **is completely burnt in an excess of** O_2 **and closed to room temperature. The contraction in volume is**

1. $\left(1+\frac{3}{4}n-\frac{1}{2}m\right)$
2. $\left(1+\frac{1}{4}n-\frac{1}{4}m\right)$
3. $\left(1+\frac{3}{4}n-\frac{1}{4}m\right)$
4. $\left(1+\frac{1}{2}n-\frac{3}{4}m\right)$

56 A gas mixture contains O_2 **and** N_2 **in the ratio of 1:4 by weight. The ratio of their number of molecules is**

1. 1 : 8
2. 1 : 4
3. 3 : 16
4. 7 : 32

57 The number of moles of oxygen obtained by the electrolytic decomposition of 108g water is

1. 2.5
2. 3
3. 5
4. 7.5

58 If 1.5 moles of oxygen combines with Al to form Al_2O_3**, the mass of Al in g [Atomic mass of** $Al = 27$**] used in the reaction is**

1. 2.7
2. 54
3. 40.5
4. 81

59 One kilogram of a sea water sample contains 6 mg of dissolved O_2**. The concentration of** O_2 **in the sample in ppm is**

1. 0.6
2. 6.0
3. 60.0
4. 16.0

60 Which one of the following sets of compounds correctly illustrates the law of reciprocal proportions?

1. P_2O_3, PH_3, H_2O
2. P_2O_5, PH_3, H_2O
3. N_2O_5, NH_3, H_2O
4. N_2O, NH_3, H_2O

61 20.0 kg of $N_{2(g)}$ **and 3.0 kg of** $H_{2(g)}$ **are mixed to produce** $NH_{3(g)}$**. The amount of** $NH_{3(g)}$ **formed is**

1. 17 kg
2. 34 kg
3. 20 kg
4. 3 kg

62 Which one of the following is the highest?

1. 0.2 mole of hydrogen gas
2. 6.023×10^{22} molecules of nitrogen
3. 0.1 g of silver
4. 0.1 mole of oxygen gas

63 The molecular weight of O_2 **and** SO_2 **are 32 and 64 respectively. At** 15^0C **and** 150 $mm\ Hg$ **pressure, one litre** O_2 **contains 'N' molecules. The number of molecules in two litres of** SO_2 **under the same conditions of temperature and pressure will be**

1. N/2
2. 1N
3. 2N
4. N

64 The percentage weight of Zn in white vitriol $[ZnSO_4.7H_2O]$ **is approximately equal to** $(Zn = 65, Z = 32, O = 16 \,\&\, H = 1)$

1. 33.65%
2. 32.56%
3. 23.65%
4. 22.65%

65 The maximum number of molecules are present in

1. 15L of H_2 gas at STP

2. 5 L of N_2 gas at STP
3. 0.5 g of H_2 gas
4. 10 g of O_2 gas

66 Number of atoms in 558.5 gram Fe (At. Wt. of $Fe = 55.85\, g\, mol^{-1}$) is
1. Twice that in 60 g carbon
2. 6.023×10^{11}
3. Half that in 8 g He
4. $558.5\times6.023\times10^{23}$

67 Liquid benzene (C_6H_6) burns in oxygen according to the equation $2C_6H_6(l)+15O_2(g)\rightarrow12CO_2(g)+6H_2O(g)$ How many litres of O_2 at STP are needed to complete the combustion of 39g of liquid benzene? (Mol. wt. of $O_2=32, C_6H_6=78$)
1. 74L
2. 11.2 L
3. 22.4L
4. 84L

68 In a compound C, H and N atoms are present in 9:1:3.5 by weight Molecular weight of compound is 108. Molecular formula of compound is
1. $C_2H_6N_2$
2. C_3H_4N
3. $C_6H_8N_2$
4. $C_9H_{12}N_3$

69 For the reaction $Fe_2O_3+3CO\rightarrow2Fe+3CO_2$, the volume of carbon monoxide required to reduce one mole of ferric oxide is
1. $67.2\, dm^3$
2. $11.2\, dm^3$
3. $22.4\, dm^3$
4. $44.8\, dm^3$

70 10 moles SO_2 and 15 moles O_2 were allowed to react over a suitable catalyst. 8 moles of SO_3 were formed. The remaining moles of SO_2 and O_2 respectively are
1. 2 moles, 11 moles
2. 2 moles, 8 moles
3. 4 moles, 5 moles
4. 8 moles, 2 moles

71 100 ml O_2 and H_2 are kept at same temperature and pressure. What is true about their number of molecules?
1. $N_{O_2} > N_{H_2}$
2. $N_{O_2} < N_{H_2}$
3. $N_{O_2} = N_{H_2}$
4. $N_{O_2} + N_{H_2} = 1 mole$

72 The weight of one molecule of a compound $C_{60}H_{122}$ is
1. 1.2×10^{-20} gram
2. 1.4×10^{-21} gram
3. 5.025×10^{23} gram
4. 6.023×10^{23} gram

73 How many moles of magnesium phosphate, $Mg_3(PO_4)_2$ will contain 0.25 mole of oxygen atoms?
1. 1.25×10^{-2}
2. 2.5×10^{-2}
3. 0.02
4. 3.125×10^{-2}

74 The number of moles of $KMnO_4$ reduced by one mole of *KI* in alkaline medium is
1. One
2. Two
3. Five
4. One fifth

75 If we consider that 1/6, in place of 1/12, mass of carbon atom is taken to be the relative atomic mass unit, the mass of one mole of a substance will
1. Decrease twice
2. Increase two fold
3. Remain unchanged
4. Be a function of the molecular mass of the substance

76 A gaseous hydrocarbon gives up combustion 0.72 g of water and 3.08 g of CO_2. The empirical formula of the hydrocarbon is
1. C_2H_4
2. C_3H_4
3. C_6H_5
4. C_7H_8

77 If 0.5 mol of $BaCl_2$ is mixed with 0.2 mole of Na_3PO_4, find the maximum amount of $Ba_3(PO_4)_2$ that can be formed
1. 1 mole
2. 0.5 mole
3. 0.1 mole
4. 0.01 mole

78 Boron has two stable isotopes, $^{10}B(19\%)$ and $^{11}B(81\%)$. Average atomic weight for boron in the periodic table is
1. 10.81
2. 10.2
3. 11.2
4. 10.0

79 The vapour density of gas is 11.2, then 11.2 g of this gas at N.T.P. will occupy a volume
1. 11.2 L 2. 22.4 L
3. 11.2mL 4. 22.4mL

80 The mass of 1 mole of electrons is
1. $9.1\times10^{-28}\,g$ 2. $1.008\,mg$
3. $0.55mg$ 4. $9.1\times10^{-27}\,g$

81 10g of hydrogen and 64 g of oxygen were filled in a steel vessel and exploded. Amount of water produced in this reaction will be
1. 3 mol 2. 4 mol
3. 1 mol 4. 2 mol

82 In the reaction $4NH_3(g)+5O_2(g)\rightarrow 4NO(g)+6H_2O(l)$ **when 1 mole of ammonia and 1 mole of** O_2 **are made to react to completion**
1. 1.0 mole of H_2O is produced
2. 1.0 mole of NO will be produced
3. All the oxygen will be consumed
4. All the ammonia will be consumed

83 Experimentally it was found that a metal oxide has formula $M_{0.98}O$**. Metal M, present as** M^{2+} **and** M^{3+} **in its oxide. Fraction of the metal which exists as** M^{3+} **would be**
1. 7.01% 2. 4.08%
3. 6.05% 4. 5.08%

84 Number of g of oxygen in 32.2g $Na_2SO_4\ .10H_2O$ **is**
1. 20.8 2. 2.24
3. 22.4 4. 2.08

85 How many atoms are contained in one mole of sucrose $(C_{12}H_{22}O_{11})$**?**
1. $20\times6.02\times10^{23}$ atoms/mol
2. $45\times6.02\times10^{23}$ atoms/mol
3. $5\times6.02\times10^{23}$ atoms/mol
4. None of these

86 If density of 3 M of $NaCl$ **is** $1.2\,g\,mL^{-1}$**, the molality of the same solution will be**
1. 3 m 2. 2.79m
3. 1.75m 4. 2.50m

87 The number of atoms in 0.1 mol of a triatomic gas is $(N_A=6.02\times10^{23}\,mol^{-1})$
1. 6.026×10^{22} 2. 1.806×10^{23}
3. 3.600×10^{23} 4. 1.800×10^{22}

88 What is the weight of oxygen required of for the complete combustion of 2.8 kg of ethylene?
1. 2.8 kg 2. 6.4kg
3. 9.6 kg 4. 96kg

89 6×10^{20} **molecules of** CO_2 **are removed from 220 milligram of** CO_2**. What are the remaining moles of** CO_2
1. 5×10^{-3} 2. 4×10^{-3}
3. 6×10^{-3} 4. 3×10^{-3}

90 Haemoglobin contains 0.334% of iron by weight. The molecular weight of haemoglobin is approximately 67200. The number of iron atoms (at. Wt. of Fe is 56) present in one molecule of haemoglobin are
1. 1 2. 6 3. 4 4. 2

BIOLOGY

91. Which of the following is less general in characters as compared to genus?
1. Species 2. Division
3. Class 4. Family

92 Mixotrophic mode of nutrition is a characteristic of which group?
1. Diatoms 2. Euglenoids
3. Desmids 4. Dinoflagellates

93 Find correct sequence of sexual cycle in Agaricus w.r.t following terms
A. Karyogamy B. Meiosis
C. Plasmogamy D. Dikaryophase
1. C,D,A,B 2. C,A,B,D
3. D,C,B,A 4. A,B,C,D

94 Group of organisms that closely resemble each other & freely interbreed in nature, constitute a
1. Species 2. Genus
3. Family 4. Taxon

95 A. Asexual reproduction is commonly through the formation of conidia in ascomycetes
B. Sexual spores are exogenous, stalked and diploid in ascomycetes

C. Fruiting body is called ascocarp in sac fungi

1. A & B are incorrect 2. B & C are in correct
3. A & C are correct 4. B & C are correct

96 Which of the following statements regarding growth is false?

1. Increase in mass and increase in number of individual s are twin characteristics of growth
2. In plants, growth by cell division is seen only up to certain stage
3. Growth exhibited by non – living objects is by accumulation of material on the surface
4. A multicellular organism grows by cell division

97 A plant differs from an animal mainly in

1. Protoplasm 2. Vital activities
3. Nutrition 4. Reproduction

98 Binomial nomenclature means that every organism has

1. Two names one scientific and other popular
2. One scientific name consisting of a generic and specific epithet
3. One name given by two scientists
4. Two names, one latinized and other of the person

99 The sum total of chemical reactions occurring in our body is called

1. Metabolism 2. Homeostasis
3. Irritability 4. Catabolism

100 Match the items in column I with those in column II and choose the correct option

Column I		Column II	
A	Ascus	I	Spirulina
B	Basidium	II	Penicillium
C	Protista	III	Agaricus
D	Cyanobacteria	IV	Euglena
E	Animalia	V	Sponges

1. A – II, B – III, C – IV, D – V, E – I
2. A – I, B – II, C – III, D – V, E – IV
3. A – II, B – V, C – III, D – I, E – IV
4. A – II, B – III, C – IV, D – I, E – V

101 Which of the following is the defining feature of all the living organisms?

1. Growth 2. Metabolism
3. Reproduction 4. Self consciousness

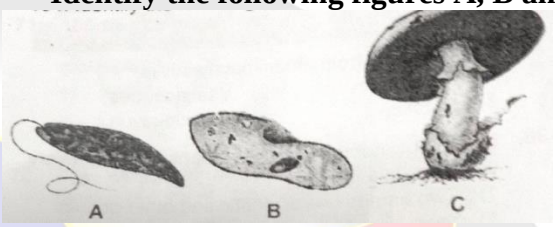
102 Which one of the following is a saprophytic protist?

1. Desmid 2. Slime mould
3. Euglena 4. Gonyaulax

103 Biological organization starts with

1. Cellular level
2. Organism level
3. Atomic level
4. Sub – microscopic molecular level

104 Identify the following figures A, B and C



1. A – Euglena, B – Paramecium, C – Agaricus
2. A – Euglena, B – Planaria, C – Agaricus
3. A – Planaria, B – Paramecium, C – Agaricus
4. A – Euglena, B – Paramecium, C – Aspergillus

105 Find out the correct statement

1. In lichens, the algal component is called phycobiont and fungal component is known as mycobiont, which are heterotrophic and autotrophic respectively
2. Viroid contains RNA of low molecular weight and protein coat.
3. A virus contains both RNA and DNA
4. Viruses are obligatory parasites

106 Identify the correct sequence of taxonomic categories

1. Species – order – kingdom – phylum
2. Species – family – genus – class
3. Genus – species – order – phylum
4. Species – genus – order – phylum

107 Who is known as 'Father of Taxonomy'?

1. Huxley 2. Linnaeus
3. Theophrastus 4. None of these

108 Naming of crop plant species is determined by

1. International union of biologists
2. International code of Botanical Nomenclature (ICBN)
3. International association of plant breeders
4. International code of nomenclature of cultivated plants

109 The term systematic is derived from Latin word 'Systema' which means

1. Classification of organisms
2. Nomenclature of organisms
3. Diversity of organisms along with ontogeny
4. Systematic arrangement of organisms

110 Which one of the taxonomic aids can give comprehensive account of complete complied information of any one genus or family at a particular time

1. Taxonomic key 2. Flora
3. Herbarium 4. Monograph

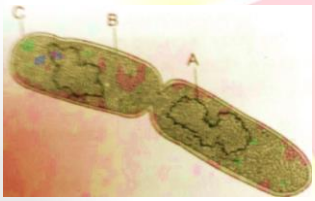
111 The correct series of procedure in classification of organism is

1. Classification, nomenclature, identification, characterization
2. Nomenclature, identification, classification, characterization
3. Characterization, identification, classification, nomenclature
4. Characterization, identification, nomenclature, classification

112 Which one of the following is correct as per binomial nomenclature?

1. Mangifera Indica L 2. Mangiferaindica Linn
3. Mangifera indica L 4. Mangifera indica Linn

113 Given below is the diagram of a dividing bacterium. In which of the following option (1 – 4) all parts labeled as A, B and C are identified correctly?



1. A – ss DNA; B – Cell wall; C - Glycocalyx
2. A – ds DNA; B – Cell wall; C – Cell membrane
3. A – DNA; B – Cell membrane; C – Cell wall
4. A – Circular DNA; B – Plasma membrane; C – Cellulosic cell wall

114 Which of the following pair of character unexceptionally present in all living organism and absent in no – living objects?

1. Consciousness, reproduction
2. Metabolism, cellular organization
3. Growth, reproduction
4. Reproduction, metabolism

115 Match the column I with column II

	Column I		Column II
A	**Indian Botanical Garden**	**I**	**Lucknow**
B	**Royal Botanical Garden**	**II**	**Italy**
C	**National Botanical Research Institute**	**III**	**Howrah**
D	**Villa Taranto**	**IV**	**Kew**

1. A – III, B – II, C – I, D – IV
2. A – I, B – IV, C – III, D – II
3. A – II, B – IV, C – III, D – I
4. A – III, B – IV, C – I, D – II

116 Organisms with heterotrophic nutrition, mulitcellular body organization with loose tissue are placed under which kingdom of Whittaker's system?

1. Monera 2. Protista
3. Fungi 4. None of these

117 Which one of the taxonomical aids is useful in providing information for identification of names of species found in an area?

1. Flora 2. Manual
3. Monograph 4. Catalogue

118 The number of species that are known and described ranges between

1. 1 – 1.02 million species
2. 1.7 – 1.8 million species
3. 0.2 – 0.5 million species
4. 1 – 1.5 million species

119 Isolated metabolic reactions in – vitro are

1. Living things but not living reactions
2. Neither living things nor living reactions
3. Biological reactions as they involve biochemicals
4. Biological reactions as they do not involve enzymes

120 Which of the following group does not represent the aggregates of closely related families?

1. Carnivora 2. Polymoniales
3. Primata 4. Felidae

121 Lion, leopard and tiger represents

1. Same species
2. Different subspecies of same species
3. Different species of same genus
4. Different species of different genera

122 Taxonomical studies of all known organism have led to the development of hierarchy involving ----- obligate categories
1. 7 2. 5 3. 4 4. 3

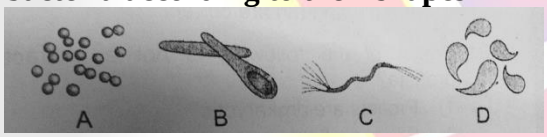
123 Which of the following organisms represent taxa at different levels?
1. Mammals, insects 2. Plants, Animals
3. Wheat, Plants 4. Dogs, Cats

124 Cyanobacteria are
1. Bacteria using cyanide for nutrition
2. Coloured fungi
3. Algae having blue – green cells
4. Viruses affecting bacterial growth

125 Which of the following cell organelle is absent in bacterial cell
1. Ribosme 2. Cell membrane
3. Golgi complex 4. Mesosome

126 The classification of Linnaeus was mainly based on
1. Sepals 2. Carpels
3. Petals 4. Stamens

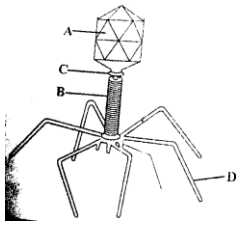
127 Choose the correct names of the different bacteria according to their shapes



1. A – Cocci, B – Bacilli, C – Spirilla, D - Vibrio
2. A – Bacilli, B – Cocci, C – Spirilla, D – Vibrio
3. A – Sirilla, B – Bacilli, C – Cocci, D – Vibrio
4. A – Spirilla, B – Vibrio, C – Cocci, D – Bacilli

128 Which pair of the following belongs to Basidiomycetes?
1. Puffballs and Claviceps
2. Peziza and Alternaria
3. Mucor and Mushrooms
4. Mushrooms and puffballs

129 The figure given below shows the structure of a bacteriophage. Identify its parts labeled as A, B, C and D



	A	B	C	D
1	Tail fibres	Head	Sheath	Collar
2	Sheath	Collar	Head	Tail fibres
3	Head	Sheath	Collar	Tail fibres
4	Collar	Tail fibres	Head	Sheath

130 Consider the following statements
I. Genus comprises a group of related species
II. Taxon represents a taxonomic group of individual organisms
III. Family comprises a group of related genera
IV. Taxonomic category class includes related orders.
Of the above statements
1. I, II & IV are correct
2. II & IV are correct
3. I , III & IV are correct
4. II, III & IV are correct

131 Which of the following is not a character of protista?
1. Protists are prokaryotic
2. Some protists have cell walls
3. Mode of nutrition is both autotrophic and heterotrophic
4. Membrane bound organelles are present in cells

132 Specialized cells called heterocysts are present in
1. Dinoflagellates 2. Chrysophytes
3. Euglenoids 4. Cyanobacteria

133 Which of the following is a flagellated protozoan?
1. Amoeba 2. Entamoeba
3. Plasmodium 4. Trypanosoma

134 The phylogenetic system of classification was put forth by
1. Carolus Linnaeus
2. George Bentham and Joseph Dalton Hooker
3. Theophrastus
4. Adolf Engler and Kari Pranti

135 Mycorrhiza is helpful to Pinus in
1. Synthesis of food
2. Getting nutrients and water from soil
3. Providing resistance against different regulators
4. Increasing the fertility of soil

136 Which of the following option is correct?
I. Mycoplasma has no cell wall

II. Mycoplasma is the smallest living organism
III. Mycoplasma cannot survive with O_2.
IV. Mycoplasma are pathogenic in animals and plants
V. True sexuality is not found in bacteria
VI. A sort of sexual reproduction occurs in bacterium by adopting a primitive DNA transfer from one bacterium to the other
1. All 2. Only III
3. I, II, IV, V & VI 4. I, III and VI

137 Taxonomic key is based on the contrasting characters generally in a pair and its each stamen is called
1. Monograph 2. Grade
3. Couplet 4. Lead

138 Which one of the following is a characteristic feature of Chrysophytes?
1. They are parastitic forms which cause diseases in animals
2. They have a protein rich layer called pellicle
3. They have indestructible wall layer deposited with silica
4. They are commonly called dinoflagellates

139 In Whittaker's system of classification, prokaryotes belong to the kingdom
1. Monera 2. Protista
3. Animalia 4. Fungi

140 Select the correct taxonomic aid given in column I with the feature given in column II

Column I		Column II	
A	Herbarium	I	Includes those specimens which can be easily classified on their observable character
B	Botanical garden	II	Preserved specimens on sheets become a store house for future use
C	Museum	III	Generally set up in educational institutes
D	Zoological Park	IV	Includes those animals which are identified based on their aggregate of characters
E	Key	V	All animals provided similar conditions to their natural habitat
		VI	Includes animals of related orders
		VII	Includes collection of living plants for reference
		VIII	It identifies animals and plants on the basis of their similarities and dissimilarities

1. A – I, B – II, C – VIII, D – V, E – III
2. A – III, B – I. C – IV, D – II, E – V
3. A – II, B – VII, C – III, D – V, E – VIII
4. A – II, B – III, C – VII, D – I, E – IV

141 In prokaryotes, chromatophores are
1. Specialised granules responsible for colouration of cells
2. Structures responsible for organizing the shape of the organism
3. Inclusion bodies lying free inside the cells for carrying out various metabolic activities
4. Internal membrane systems that may become extensive and complex in photosynthetic bacteria

142 Most common mode of reproduction in bacteria is by
1. Binary fission 2. Sporulation
3. Budding 4. Genetic recombination

143 Consider the following statements with respect to characteristic features of the kingdom
A. In animalia the mode of nutrition is autotrophic
B. In monera the nuclear membrane is present
C. In protista the cell type is prokaryotic
D. In plantae the cell wall is present of the above statements
1. A alone is correct 2. B alone is correct
3. C alone is correct 4. D alone is correct

144 I. Unicellular, colonial, filamentous, marine or terrestrial forms
II. The colonies are surrounded by a gelatinous sheath
III. Some can fix atmospheric nitrogen in specialized cells called heterocysts
IV. They often form blooms in water bodies

These above characters are seen in

1. Archaebacteria 2. Cyanobacteria
3. Chrysophytes 4. Dinoflagellates

145 Identify the given figure and match its correct characteristics

1. Zoological Park – A place where plants were kept under human care
2. Museum – Includes collection of preserved plants and animal specimens
3. Herbarium – Store house where plant specimen are collected, dried, pressed and preserved on sheets
4. Botanical garden – Plants specimens are collected, preserved along with labeling indicating its scientific name

146 Mesosomes are found in

1. Yeast 2. Acetabularia
3. Bacteria 4. Chara

147 Match column I with Column II and choose the correct option

Column I		Column II	
A	**Erst Mayr**	**I**	**Discovered viroids**
B	**Whittaker**	**II**	**Gave the name virus**
C	**Pasteur**	**III.**	**Proposed Five Kingdom classification**
D	**Diener**	**IV**	**Darwin of the 20th centrury**

1. A – IV, B – III, - II, D – I
2. A – III, B – IV, C – II, D – I
3. A – II, B – III, C – IV, D – I
4. A – I, B – II, C – III, D – IV

148 Nuclear material without nuclear membrane, is observed in

1. Bacteria and cyanobacteria
2. Cyanobacteria and red algae
3. Bacteria and green algae
4. Mycoplasma and green algae

149 Chemosynthetic bacteria

1. Oxidise various organic substances
2. Are most abundant in nature
3. Oxidise substances like nitrites, ammonia, iron etc
4. Reduce various inorganic substances

150 Pick out the wrong statement

1. Lichens are symbiotic associations
2. Lichens are very good pollutions indicators
3. Lichens do not grow in unpolluted areas
4. The algal component of lichen is known as phycobiont

151 An example for artificial system of classification is that of

1. Bentham and Hooker 2. Bessey
3. Linnaeus system 4. Hutchinson

152 Which of the following are the characters of dinoflagellates?

A. Planktonic golden yellow algae with soap box like structure
B. Marine red biflagellated protistans
C. Appear yellow, green, brown, blue and red in colour
D. Billagellated organisms with pellicle.
E. Saprophytic (or) parasitic unicellular forms

1. A, B & C only 2. B, D & E only
3. B & C only 4. B & E only

153 Reproduction is commonly asexual which occurs through cell division and resulting in red tide formation by

1. Gonyaulax 2. Ceratium
3. Euglenoids 4. Slime moulds

154 Site of respiration in Bacteria is

1. Mesosome 2. Vacuole
3. Nucleoid 4. Mitochondria

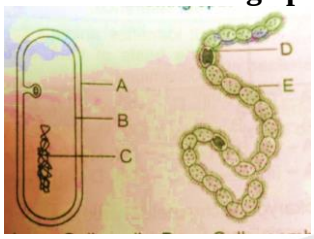
155 Diatoms are used in brewing industry because

1. Its mode of nutrition is holophytic
2. Its cell wall has two haves
3. Its cell wall has rough and gritty nature
4. Of presence of leucosin as reserve food

156 Instead of cell wall, euglenoids have a protein rich layer called ____, which makes their body ___

1. Glycocalyx, flexible 2. Pellicle, flexible
3. Theca, rigid 4. Frustule, rigid

157 Which one of the following option is correct?



1. A – Cell wall, B – cell membrane, C – Heterocyst, D – DNA, E – Mucilagenous sheath
2. A – Cell wall, B – Cell membrane, C – DNA, D – Heterocyst, E – Mucilagenous sheath
3. A – Mucilagenous sheath, B – Cell membrane, C – DNA, D – Heterocyst, E - Cell wall
4. A – Cell membrane, B – Cell wall, C – DNA, D – Heterocyst, E – Mucilagenous sheath

158 Fungi imperfect shows

1. Septate mycelium
2. Proonged diakaryophase
3. Zoospore formation
4. Advance sex organs

159 Archaebaceria differ from other bacteria in having

1. Double stranded DNA
2. A different cell wall structure
3. Autotrophic mode of nutrition
4. Nuclear membrane

160 Mycoplasma are organisms that completely lack

1. Nuclear membrane as well as plasma membrane
2. Cell wall and cell membrane
3. Plasma membrane and flagella
4. Cell wall and can survive without oxygen

161 Reproduction also cannot be an all inclusive property of living organisms because

1. Yeast and Hydra multiply by fragmentation
2. Protonema of moss multiplies by binary fission
3. It is synonymous to growth in unicellular organisms
4. Some organisms like worker bees and mules are interfertile

162 The basic unit of classification

1. Species 2. Genus
3. Family 4. Phylum

163 Which of the following criteria for five kingdom classification was not used by Whittaker?

1. Mode of nutrition 2. Reproduction
3. Pigmentation 4. Thallus organization

164 The characteristic photosynthetic pigments present in blue green algae are

1. Chlorophyll-a, phycocyanin and phycoerythrin
2. Chlorophyll -a and chlorophyll –b
3. Chlorophyll-b and phycobillins
4. Chlorophyll -b, phycoerythrin and carotenes

165 Viroids

A. Discovered by T.O. Diener
B. Are low molecular weight RNA molecules
C. Are causal entities of tobacco mosaic disease
D. Are free RNA particles lacking protein coat

1. A, B & D are correct
2. A, C & D are correct
3. A, B & C are correct
4. All are correct

166 In classification system given by whittaker kingdom protista includes

1. All photosynthetic unicelled organisms
2. All saprozoic unicelled organisms
3. All holozoic unicelled organisms
4. Nutritionally diverse unicelled organisms

167 Phosphate absorption is the major function of

1. Actinomycetes 2. Lichens
3. Mycorrhiza 4. Spirochaetes

168 In members of deuteromycetes, asexual reproduction often occurs by

1. Basidia 2. Sporangiospores
3. Conidia 4. Zoospores

169 In class basidiomycetes, the site of karyogamy and meiosis is

1. Basidiospore 2. Zygospore
3. Oospore 4. Basidium

170 Statement – 1: Taxon and category are different things
Statement – 2: Category shows hierarchical classification

1. Statement – 1 and statement – 2 are true and statement – 2 is a correct explanation for statement – 1
2. Statement – 1 and statement – 2 are true and statement – 2 is not a correct explanation for statement – 1

3. Statement – 1 is true and statement – 2 is false
4. Both the statements are false

171 Which one of the following taxonomic category of hierarchy will have more specific and general characters respectively

A. Class B. Family C. Genus
D. Order E. Species

1. E & D 2. C & A
3. E & B 4. E & A

172 Find incorrect statements w.r.t slime moulds

A. Spore dispersal by wind
B. Somatic body and spores, both are wall – less
C. Mostly parasitic
D. Unicellular eukaryotes

1. A, D 2. A, C
3. B, C 4. C, D

173 Match the following and choose the correct combination from the options given

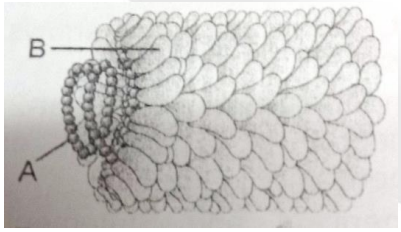
Column I (common name)		Column II (Taxonomic category order)	
A	**Wheat**	**I**	**Primata**
B	**Mango**	**II**	**Diptera**
C	**Housefly**	**III**	**Sapindales**
D	**Man**	**IV**	**Poales**

1. A – I, B – II, C – IV, D – III
2. A – IV, B – III, C – II, D – I
3. A – II, B – IV, C – I, D – III
4. A – III, B – IV. C – II, D – I

174 Chief producers in the oceans are

1. Dinoflagellates 2. Diatoms
3. Euglenoids 4. Pyrrophytes

175 Identify the labels A and B in the figure given below



1. A – ss DNA; B – Head
2. A – ds RNA; B – Capsid
3. A – ss RNA; B – Capsid
4. A – ss DNA; B – Capsid

176 Potato spindle tuber disease is caused by

1. Virus 2. Virusoid
3. Virion 4. Viroid

177 Select the correct statement among the following

1. All organisms have self – consciousness
2. Human beings are the only organism who are self – conscious
3. Metabolic reactions cannot be demonstrated outside the body in cell – free systems
4. Prokaryotes cannot sense and respond to environmental cues

178 Which among the following are incapable of reproduction?

1. Mules 2. Worker bees
3. Slime moulds 4. Mules & worker bees

179 Which one of the following fungi is extensively used in biochemical and genetic research?

1. Yeast 2. Penicillium
3. Neurospora 4. Mucor

180 The following are twelve members of fungi Mucor, Rhizopus, Albugo, Alternaria, Colletotrichum, Agaricus, Asoergillus, Ustilago, Neurospora, puccinia, Claviceps and trichoderma. Select the option in which the twelve members are distributed correctly to the four groups of fungi

	Phycomycetes	Ascomycetes	Basidiomycetes	Deuteromycetes
1	4	3	3	2
2	3	4	2	3
3	3	3	3	3
4	2	4	3	3

SPACE FOR ROUGH WORK

SPACE FOR ROUGH WORK