2019 Tnpsc Science Questions In English Part 1

1. In uniform circular motion, the linear velocity perpendicular to

(A) Radius **(B) Radius vector** (C) Force (D) Momentum

2. Red light has a wavelength of 7000Å. In 'nm' it is,

(A) 7 nm (B) 0.07 nm (C) 70 nm **(D) 700 nm.**

3. Find out the correct equations

I. $H = V^2 It$ II. $V = IR$ III. $P = VI$ IV. $F = mV^2$

(A) I and II only (B) III and IV only

(C) II and III only (D) I and IV only

4. The ulcer is mostly due to infections by a bacterium called

(A) Helicobacter pylori (B) Strepto cocci

(C) Staphylo cocci (D) Nycobacterium tuberculae

5. Which one of the following Hybridization is present in PCl_5 molecule?

(A) $Sp^3 d^2$ **(B) $Sp^3 d$** (C) Sp^3 (D) Sp^2

6. The surface temperature of the sun is

(A) 2000° C **(B) 6000° C** (C) 15000° C (D) 15000000° C

7. A boy's larynx enlarges leading to deepening of voice and he shows hair growth over his face. This is due to the hormone

(A) Inhibition **(B) Testosterone** (C) Oestrogen (D) Progesterone

8. _____ is an antibiotic obtained from the blue green mold.

(A) Streptomycin **(B) Penicillin** (C) Aureomycin (D) Chloromycin

9. Pyrethrum Extracted from the inflorescence of

(A) Chrysanthemum (B) Citrus (C) Agro bacterium (D) Bacillus

10. A ray of light is incident normally on a glass surface of refractive index 1.5. The angle of refraction is

(A) 30° (B) $\sin^{-1}(0.666)$ **(C) Zero** (D) $\sin^{-1}(0.75)$

11. How many asymmetric carbon atoms are present in a glucose molecule?

(A) Two (B) Three **(C) Four** (D) Five

12. Which one of the following compound is used in the treatment of asthma and whooping cough?

(A) Benzyl alcohol (B) Benzyl acetate **(C) Benzyl benzoate** (D) Benzoic acid

13. Which one of the following process is used for the concentration of Argentite ore?

(A) Gravity separation method **(B) Froth Floatation method**

(C) Electro-magnetic separation method (D) Chemical method

14. Match the following:

(a) Radio active waste 1. Incineration

(b) Bio medical waste 2. Land fills

(c) Cyanide waste 3. Surface impoundment

(d) Small amount of chemical waste 4. Bioremediation

	a	b	c	d
(A)	**2**	**1**	**4**	**3**
(B)	3	2	1	4
(C)	4	3	2	1
(D)	1	4	3	2

15. First aid to be given to an electucated person with cardiac arrest

(A) External cardiac compression massage

(B) Mouth to mouth resuscitation

(C) Cardio-pulmonary resuscitation

(D) All of the above

16. Who had developed the central place theory?

(A) Thamos Robert Malthus (B) Vanthunan

(C) Walter Christaller (D) Webar

17. In Abelmosclus esculentus, the fruit is

(A) Drupe (B) Schizocarp (C) Regma **(D) Loculicidal capsule**

18. Who discovered X-rays?

(A) Bardeen **(B) Roentgan** (C) Weiss (D) Mari Curie

19. Visible light of solar radiation supplies the main energy for photosynthesis. Point out the wavelength of visible spectrum

(A) 300 nm. to 720 nm (B) 720 nm to 820 nm

(C) 280 nm to 300 nm (D) 1100 nm to 1900 nm

20. Name the raw material used in the production of glass

(A) Mica (B) Quartz (C) Plastic **(D) Silica**

21. Which of the following compounds of nitrogen is called 'Laughing gas'?

(A) NO Nitric oxide **(B) N_2O Nitrous Oxide**

(C) NO_2 Nitrogen dioxide (D) N_2O_5 Nitrogen pentoxide

22. Identify the diprotic acid from the following set of acids

(A) HNO_3 **(B) H_2SO_4** (C) H_3PO_4 (D) HCI

23. Trypanosomiasis is a disease transmitted by

(A) Sand fly **(B) Tse-tse fly** (C) Fire fly (D) May fly

24. The Drug most widely used against AIDS virus is

(A) Zidorudine (B) Miconozole (C) Nawoxylol (D) Virazole

25. Who was used the terminology 'supernova'?

(A) F.Hoyle (B) H.N.Russell (C) Sir James Jeans (D) Immanuel Kant

26. Name the device used to produce high output power

(A) Ruby laser (B) Semiconductor laser **(C) CO_2 laser** (D) Dye laser

27. What is the valency OF Nitrogen with atomic number 7 and mass number 14?

(A) 5 (B) 7 (C) 9 (D) 14

28. Einstein got the Noble prize for

(A) Radioactivity (B) Polarization (C) Relativity **(D) Photo-electric effect**

29. Which of the following is not an insecticide?

(A) Malathion (B) Parathion **(C) Isoprene** (D) Diaginon

30. All of the following are bacteria except

(A) Bacteriophage (B) E.Coli

(C) Lactobacillus subtilis (D) Corynebacterium diphtheria

31. Who constructed a model successfully for DNA first?

(A) Barbara Mcclintock 1965 (B) Melvin and Calvin 1963

(C) Watson and Crick 1953 (D) Hatch and Slack 1965

32. Ovulation generally occurs

(A) Just before menstruation (B) During menstruation

(C) Just after menstruation **(D) Midway through menstrual cycle**

33. Blood is formed in the human adult by the

(A) Heart (B) Spleen **(C) Red bone marrow** (D) Yellow bone marrow

34. Who discovered Gamma rays from the following?

(A) Paul Villand (B) Maria Curie (C) J.J.Thompson (D) Adam Osborne

35. When sound waves travel from one medium to another medium, the quantity that remain unchanged is

(A) Speed **(B) Frequency** (C) Intensity (D) Wavelength

36. In 2014, Nobel prize for physical was awarded for the invention of

(A) White light emitting diodes **(B) Blue light emitting diodes**

(C) Red light emitting diodes (D) Green light emitting diodes

37. A spring is hung vertically with a mass 'm' attached to its lower end, the spring experiences an elongation 'd'. Then the force constant of the spring is proportional to

(A) d / m (B) md **(C) m / d** (D) m^2d

38. Sensitivity, congenital, traumatic, metabolic and associated with drugs, smoke and heavy alcohol consumption are characters of

(A) Obesity **(B) Cataract** (C) Glanucoma (D) Diabetics

39. I. Obelia polyp is sessile and fixed

II. Obelia mature medusa in free-swimming.

(A) I alone true (B) II alone true **(C) I and II are true** (D) I and II are false

40. In human, which types of cells are affected by Malarial parasite?

(A) Liver cell and RBC (B) RBC and WBC

(C) RBC and T_{11} Cells (D) RBC and Epithelial cells

41. Which of following is used in making printer ink, shoe polish and paint?

(A) Lamp black **(B) Bone black** (C) Carbon black (D) Copper black

42. The number of coulomb required to liberate 127 g of iodine from potassium iodide solution is

(A) 53 coulombs (B) 7 coulombs **(C) 96500 coulombs** (D) 127 coulombs

43. Which of the following is the ore of titanium?

(A) Rutile (B) Hausmannite (C) Wolframite (D) Scheelite

44. Which is a Lewis base?

(A) B_2H_6 **(B) NH_3** (C) $LialH_4$ (C) AlH_3

45. Match the following:

(a) Newton 1. Radioactivity

(b) Albert Einstein 2. Laws of planetary motion

(c) Marie Curie 3. Laws of motion

(d) Kepler 4. Relativity theory

	a	b	c	d
(A)	1	3	4	2
(B)	**3**	**4**	**1**	**2**
(C)	2	1	3	4
(D)	4	2	1	3

46. Which one of the following is correctly arranged in their increasing order of reactivity?

(A) Mg > Al > Ca > Na **(B) Na > Ca > Mg > Al**

(C) Ca > Al > Mg > Na (D) Na > Ca > Al > Mg

47. Which of the following is correctly matched?

I. Apple - Oxalic acid II. Vinegar - Acetic acid

III. Grape - Malic acid IV. Tomato - Citric acid

(A) I **(B) II** (C) III (D) IV

48. _____ is essential for binding of Ribosomal sub units.

I. Mo II. Mg III. Cl IV. Ca

(A) I and II only **(B) II only** (C) III and IV only (D) IV only

49. Human ovum contains no yolk. How can we call it?

(A) Alecithel Egg (B) Isolecithel Egg (C) Mesolecithel Egg (D) Telolecithel Egg

50. Which gland enlarges, after the middle age of the male people leads to interrupt urination?

(A) Bulbo-urethral gland **(B) Prostate gland** (C) Ampulla (D) Gowper's gland

51. The average ocean salinity is

(A) 45% **(B) 35 %** (C) 33% (D) 38%

52. The distance between the molecules is

(A) 10 Å (B) 1 Å (C) 10^{-8} m (D) 10^{-15} m

53. When a car is moving on a circular track the centripetal force is given by the _____ between the road and the tyres.

(A) Attractive force **(B) Frictional force** (C) Electric force (D) Magnetic force

54. Electromagnets are made of soft iron because of soft iron has

(A) Low susceptibility and low retentivity

(B) High susceptibility and low retentivity

(C) High susceptibility and high retentivity

(D) Low susceptibility and high retentivity

55. What is the compound of calcium used in white-washing buildings?

(A) Calcium carbonate **(B) Calcium hydroxide** (C) Calcium oxide (D) Calcium sulphate

56. The element which is an essential constituent of all organic compounds belongs to _____ group.

(A) 15th group **(B) 14th group** (C) 13th group (D) 16th group

57. The female sex organ in Alga-chara is called as

I. Globule II. Strobili II. Oospore IV. Nucule

(A) I (B) II (C) III **(D) IV**

58. Which fungi impart "earthy odor" to the soil after rain?

I. Penicillium II. Rhizopus III. Mucor IV. Streptomyces

(A) I (B) II (C) III **(D) IV**

59. In Bio-Diversity, how many hotspots were identified from all over the world?

(A) 30 (B) 40 (C) 35 **(D) 25**

60. Which protozoan causing Kala azar?

(A) Trypanosoma gambiens **(B) Leishmania donovani**

(C) Leishmania tropica (D) Plasmodium vivax

61. The excess of pressure inside two soap bubbles of diameters in the ratio 2 : 1 is

(A) 1 : 2 (B) 1 : 4 (C) 2 : 1 (D) 4 : 1

62. The momentum of a body is given by the relation

(A) Force x Distance (B) Mass x Time **(C) Mass x Velocity** (D) Mass x Acceleration

63. What is the percentage of impurities present in Blister Copper?

(A) 5% (B) 0.5 % **(C) 2 %** (D) 3 %

64. Most common oxidation state of Lanthanides

(A) +2 **(B) +3** (C) +4 (D) +2 and +4

65. In sperm acrosome produces hyaluronidase enzyme. The acrosome is modification of

(A) Lysosome (B) Ribosome **(C) Golgi apparatus** (D) Mitochondria

66. Find the incorrect statement:

(i) Carbon sequestration: The simple technique is to preserve trees and plants more

(ii) Trees take up CO_2

(iii) They break down CO_2 in photosynthesis

(iv) They do not store carbon in new wood

(A) (i) only **(B) (iv) only** (C) (iii) only (D) (ii) only

67. The proportion of gases consist in the sun is

(A) 7.8% hydrogen, 92% helium and 0.2% other gases

(B) 92% hydrogen, 7.8% helium and 0.2% other gases

(C) 0.2% helium, 92% hydrogen and 7.8% other gases

(D) 92% helium, 7.8% hydrogen and 0.2% other gases

68. The major energy resource in India is

(A) Petroleum **(B) Coal** (C) Natural gas (D) Atomic energy

69. Stretched rubber chord is an example for

(A) Kinetic energy **(B) Potential energy** (C) Thermal energy (D) Electric energy

70. In Bentham and Hooker's classification of plants the number of series and families included in the class monocotyledonae

(A) 7 series and 34 families (B) 8 series and 36 families

(C) 5 series and 34 families (D) 7 series and 35 families

71. The hybridization in IF_7 molecule is

(A) SP^3 (B) $SP^3 d_2$ (C) $SP^3 d$ **(D) $SP^3 d^3$**

72. The geometry of the complex ion $[Fe(CN)_6]^{4-}$ is

(A) Tetrahedral (B) Square planar **(C) Octahedral** (D) Triangular

73. What is the expansion of BMR?

(A) Body Mass Rate **(B) Basal Metabolic Rate**

(C) Body Metabolic Ratio (D) Bone Mass Ratio

74. Match the percentage of human Leucocytes

(a) Neutrophils 1. 1 – 4%

(b) Eosinophils 2. 20 – 30%

(c) Lymphocytes 3. 0.5 – 3.0%

(d) Monocytes 4. 60 – 70%

	(a)	(b)	(c)	(d)
(A)	**4**	**3**	**2**	**1**
(B)	3	1	4	2
(C)	2	4	1	3
(D)	1	2	3	4

75. The minerals which help in cardiac functions

(A) Potassium and Calcium (B) Magnesium and Calcium

(C) Zinc and Iron (D) Calcium and Phosphorus

76. If you place your hand underneath but not touching a kettle of hot water mainly feel the presence of heat from

(A) Conduction (B) Convection **(C) Radiation** (D) Internal energy

77. In Glycolysis Fructose 1, 6 bid – phosphate is cleaved by an enzyme to two molecules of 3C compounds – dihydroxyacetone phosphate and glyceraldehyde 3 – phosphate. Name that enzyme

(A) Hexokinase (B) Enolase (C) Pyruvickinase **(D) Aldolase**

78. Where should meta-center of a ship lie, to keep it in equilibrium?

(A) Below its center of buoyancy (B) Below its center of gravity

(C) Above the center of gravity (D) Above its center of buoyancy

79. What is the value of temperature co-efficient of a ceramic dielectric?

(A) Zero (B) Positive **(C) Infinity** (D) Negative

80. Which of the following is an disinfectant?

(A) ABT **(B) DDT** (C) NPK (D) CFC

81. Which of the following statements will be most suitable for $KMnO_4$?

(A) It is a strong acid **(B) It is a powerful oxidizing agent**

(C) It is a powerful reducing agent (D) It is a strong base

82. Which of the following characters is true about fungi? They are

(A) Heterotropic plants (B) Chlorophyllus plants

(C) Prokaryotic plants (D) Autotropic animals

83. The most likely period in which a woman may conceive is

(A) From 7th to 10 day of menstrual cycle

(B) 15 to 19 day of menstrual cycle

(C) On 14th day of menstrual cycle

(D) At any time in menstrual cycle

84. The deficiency of vitamin "A" causes

(A) Hair to fall (B) Dysentery **(C) Night blindness** (D) Weakness

85. What is the audible range of sound for human ear?

(A) 20 – 20,000 Hz (B) > 20,000 Hz (C) > 20 x 10^4 Hz (D) < 20 Hz

86. Which of the following compounds is called Baking Soda?

(A) Sodium Carbonate **(B) Sodium bicarbonate**

(C) Potassium Carbonate (D) Calcium Carbonate

87. What is the excess pressure inside a soap bubble?

(A) $\frac{2T}{r}$ (B) T / r **(C) $\frac{4T}{r}$** (D) $\frac{T}{2r}$

88. Which of the following is used as anaesthetic?

(A) CO_2 carbondioxide (B) C_2H_4 ethylene

(C) $CHCl_3$ chloroform (D) NH_3 Ammonia

89. Which of the following characters of Gnetum brings it close to Angiosperms?

(A) Woody habits (B) Anomalous secondary growth

(C) Presence of vessels in xylem (D) Naked seeds

90. From the list below choose the binomial of Lotus

(A) Nelumbium speciosum (B) Victoria regina

(C) Pistia stratiotes (D) Nymphae stellate

91. Haemophilia is a human disease caused by

(A) Bacterial infection (B) Fungal infection

(C) Mutant gene (D) Viral infection

92. According to Modern Atomic Theory which of the following statement is wrong?

(A) Atom is the smallest particle that takes part in a reaction

(B) Atoms are invisible

(C) Atoms of the same element may not be similar in all their properties

(D) Atoms of different elements may be similar in some of their properties

93. Which of the following are carbonate ores?

(A) Cryolite, Fluorspar (B) Bauxite, Cuprite

(C) Magnesite, Siderite (D) Galena, Cinnabar

94. In whose name Jammu Tavi botanical garden is named

(A) Janakiammal (B) Linnaeus (C) Engler (D) George Bentham

95. Who is the author of Book Anatomy speed plants?

(A) A.Schmidt **(B) Katherine Esau** (C) Ray.F (D) K.N.Rao

96. Consider the following statement.

Assertion (A): Neutrophils are belonging to granulocytic type.

Reason (R): Neutrophils contains no granules in cytoplasm.

(A) Both (A) and (R) are correct
(B) Both (A) and (R) are wrong
(C) (A) is correct but (R) is wrong
(D) (A) is wrong but (R) is correct

97. The hormone which maintains pregnancy and regulates menstrual cycle is

(A) Progesterone (B) Oestrogen (C) Relaxin (D) Testosterone

98. Recent studies have revealed the entry micro-plastics into the food chain through

(A) Mosquitoes (B) Frogs (C) Fish (D) Birds

99. A particle moves with constant velocity, what is the force acting on the partic;e?

(A) Always zero **(B) Need not be zero**

(C) Always not zero (D) None of these

100. Electromagnetic waves are

(A) Transverse wave (B) Longitudinal waves

(C) Transverse and Longitudinal waves (D) Neither transverse nor longitudinal

101. Fuse wire used in an electric circuits is based on the principle of

(A) Charles law (B) Newton's law of motion

(C) Joule's law of heating (D) Newton's law of cooling

102. Carbon forms large number of organic compounds due to

(A) Isomerism (B) Allotropy **(C) Catenation** (D) Tetra valency

103. Consider the following statements:

Assertion (A): Diamonds is not a good conductor of electricity.

Reason (R): It has no free electron.

(A) Both (A) and (R) are true and (R) is the reason for (A)
(B) Both (A) and (R) are true and (R) is not the correct reason for (A)
(C) (A) is true but (R) is false
(D) Both (A) and (R) are false

104. Alcoholic fermentation takes place in which organism

(A) Yeast (B) Fungi (C) Bacteria (D) Virus

105. In vacuum all objects fall with

(A) Same acceleration and heavy bodies reach ground first

(B) Same acceleration and reach the ground at the same time

(C) Different acceleration and reach the ground at different time

(D) Different acceleration and heavy bodies reach ground first

106. Which is insectivorous plant?

(A) Cuscuta (B) Monotropa (C) Vanda **(D) Drosera**

107. The time of reverberation of a hall can be decreased by

(A) Having a number of loud speakers **(B) Opening all windows and doors**

(C) Closing all windows and doors (D) Speaking loudly

108. Match the following:

(a) Beriberi	1. Vitamin C
(b) Pellagra	2. Vitamin B_1
(c) Scurvy	3. Vitamin D
(d) Rickets	4. Vitamin B_3

	(a)	(b)	(c)	(d)
(A)	4	3	2	1
(B)	**2**	**4**	**1**	**3**
(C)	1	3	4	2
(D)	3	2	1	4

109. Which spectroscopy is used in chemical examination of interstellar space?

(A) Microwave Spectroscopy (B) Infrared (IR) Spectroscopy

(C) Raman Spectroscopy (D) NMR Spectroscopy

110. The Indian Salt Petre is

(A) Ammonium nitrate (NH_4NO_3) (B) Sodium nitrate ($NaNO_3$)

(C) Potassium nitrate (KNO_3) (D) Calcium nitrate Ca $(NO_3)_2$

111. The unit for equivalent conductivity is

(A) $ohm^{-1}cm^{-1}$ (B) $ohm^{-1}cm^{-2}eq^{-1}$ **(C) $ohm^{-1}cm^{2}eq^{-1}$** (D) S $cm^{-2}cm^{-1}$

112. The main constituent of steel in India are

(A) Ni and Cu **(B) Mn and Cr** (C) Fe and Cu (D) Ti and Cr

113. The end product of anaerobic respiration is

(A) Acetyl Co-A **(B) Ethanol alcohol** (C) Pyruvic acid (D) Succinic acid

114. Golden rice is a genetically modified crop. Where the incorporated gene is meant for biosynthesis of

(A) Vitamin A (B) Vitamin B (C) Vitamin C (D) Vitamin D

115. Most widely used bioweapon is

(A) Bacillus subtilis (B) Vibrio cholera

(C) Bacillus anthracis (D) Escherichia coli

116. Among the following plants, which one has oil repelling property?

(A) Tobacco (B) Maize (C) Hibiscus **(D) Aloe Vera**

117. What happens in human Thalassemias?

1. reduce α – globin synthesis

2. reduce β – globin synthesis

3. enhance α and β – globin synthesis

(A) 1 alone correct (B) 2 alone correct **(C) 1 and 2 correct** (D) 3 alone correct

118. Which of the following plant boosts the production of red blood cells?

(A) Turmeric (B) Tulsi **(C) Lemon grass** (D) Mustard

119. If the diameter of the earth becomes two times its present value and its mass remains unchanged then how would the weight of an object on the surface of the earth be affected

(A) Becomes half **(B) Becomes one-fourth**

(C) Becomes one-third (D) Remains unaffected

120. Nuclear forces are

(A) Strongly attractive force

(B) Strongly repulsive force

(C) Attractive or repulsive depend on nucleans

(D) Gravitational forces

121. According to Mosley's law the frequency of the spectral line in X-ray spectrum varies as

(A) Atomic number of the element

(B) Square of the atomic number of the element

(C) Square root of atomic – number of element

(D) Fourth power of the atomic number of the element

122. A Cathode Ray Oscilloscope (CRO) is used to measure _____ of a signal.

(A) Voltage (B) Frequency (C) Phase **(D) All the above**

123. Which one of the compounds is not a protonic acid?

(A) $SO(OH)_2$ (B) $SO_2(OH)_2$ **(C) $B(OH)_3$** (D) $Po(OH)_3$

124. SO_2 acts as

(A) A reducing agent (B) An oxidizing agent

(C) Both reducing and oxidizing agent (D) Neither reducing nor oxidizing agent

125. Nitrous Oxide is known as Laughing gas. It is also used in medical field as

(A) Instant horse power (B) Propellant

(C) Antiseptic **(D) Anesthetic**

126. Methane is the carbon compound. It's Molecular Formula is

(A) CH_4 (B) CH_3Cl (C) C_2H_6 (D) CCl_4

127. Which of the following is strong acid and strong base reaction?

(A) $HCOOH + NH_3$ (B) $HCOOH + NaOH$

(C) $HCl + NH_3$ **(D) $HCl + NaOH$**

128. Find the wrong pair/pairs:

1. Metabolism - Sum total of enzymatic reactions

2. Auxin - Photosynthesis

3. Photolysis of water - Growth

4. Oxidative phosphorylation - Respiration

(A) 1 and 2 (B) 2 only **(C) 2 and 3** (D) 3 and 4

129. Which one of the following is need on a non-conventional source of raw material for the paper production?

(A) Bamboo (B) Casuarina **(C) Sugarcane bagasse** (D) Eucalyptus

130. Consider the following Endocrine glands:

1. Islets of Langerhans - Produce Insulin

2. Thyroid gland - Produce diabetes

3. Adrenal gland - Produce Goiter

Which of the following is correctly matched?

(A) 1 only (B) 1 and 2 only (C) 2 and 3 only (D) 1, 2 and 3

131. Which one called from the development and the maturation of the erythrocyte from the haemocytoblast?

(A) Erythropoiesis (B) Erythrocynin (C) Erythrocyte (D) Haemotocyte

132. Combined drug in use to curve the Malaria is

(A) Quinine (B) Fansidar (C) Chloroquine (D) Primaquine

133. In mammals the mammalian glands are modied gland of following

1. Salivary gland 2. Sebaceous gland 3. Pituitary gland

(A) 1 only **(B) 2 only** (C) 1 and 2 only (D) 1 and 3 only

134. Which of the following ecological Pyramid is always upright?

(A) Pyramid of energy (B) Pyramid of number

(C) Pyramid of biomass (D) (B) and (C)

135. In an elementary particles there are _____ fundamental reactions.

(A) 4 (B) 5 (C) 3 (D) 2

136. Doppler broadening is proportional to _____, (T is the absolute temperature of the source).

(A) T (B) T^2 **(C) $\sqrt{T}$** (D) T^3

137. A metal-semiconductor junction diode is called _____

(A) Schottky diode (B) Photo diode

(C) Tunnel diode (D) P.N. Junction diode

138. The TV camera tube is a device which converts the optical image into

(A) Magnetic signal (B) Mechanical signal

(C) Acoustic signal **(D) Electrical signal**

139. A person donating blood should have a minimum heamoglobin level of

(A) 10 g (B) 11.5 g **(C) 12.5 g** (D) 14 g

140. Consider the statement:

Assertion (A) : The eukaryotic cells have four kinds of rRNA molecules namely 28 S rRNA, 18 S rRNA, 5.8 S rRNA, 5.8 rRNA and 5 S rRNA

Reason (R) : The 28 S rRNA, 5.8 rRNA and 5 S Rrna occur in 60 S ribosomal submit while 18 18 S rRNA occurs in 40 S ribosomal submit of 80 S ribosomes of eukaryotes.

Choose the correct answer:

(A) Both (A) and (R) are individually correct and (R) is the correct explanation of (A)
(B) Both (A) and (R) are individually correct but (R) is not a correct explanation of (A)
(C) (A) is correct but (R) is false
(D) (A) is false but (R) is correct

141. Which of the following pair of elements different from the other?

(A) Li Mg (B) Na-K (C) Ca-Mg (D) B-Al

142. The reaction in which picric acid is formed from chlorobenzene is called as

(A) Acylation **(B) Nitration** (C) Sulphonation (D) Halogenation

143. The electromagnetic radiation are used in MRI instrument is

(A) X-rays (B) Microwaves **(C) Radio-waves** (D) Infra-red rays

144. The important heat-trapping gas in the atmosphere is

(A) Oxygen (B) Nitrogen (C) Ammonia **(D) Carbon dioxide**

145. What is taking place actually during an ammonification?

(A) Proteins are broken into ammonium ions

(B) Urea alone changed into ammonia

(C) Ammonium ions are return to atmosphere

(D) Ammonium ions are denatured

146. Pick out the mismatch of the followings

(A) SARS – Lungs (B) AIDS – Immunity

(C) ELISA – Treatment **(D) MALT – Oncogenes**

147. Which ratio is constant for DNA?

(A) A + G / T + G (B) A + T / G + C

(C) A + C / U + G (D) A + U / C + G

148. Find out the wrong statement

(A) The phloem in gymnosperms lacks companion cells

(B) Pollination is one mophilous in gymnosperms

(C) The ovules are protected by the carpels in gymnosperms

(D) Vessels are usually absent from the xylem of gymnosperms

149. Assertion (A) : Omega-3 fatty acids reduce the LDL cholesterol which may thus reduce risk if coronary heart disease.

Reason (R) : People with problems of blood circulation such as varicose veins benefit from consumption of omega-3 fatty acids since they stimulate blood circulation and help to breakdown fibrin (clot)

Choose the correct answer:

(A) Both (A) and (R) are individually true and (R) is not a correct explanation of (A)
(B) Both (A) and (R) are individually true but (R) is the correct explanation of (A)
(C) (A) is true but (R) is false
(D) (A) is false but (R) is true

150. Which are the endogenetic force?

1. Folding 2. Faults 3. Sil 4. Joints

(A) 1 only (B) 1, 2, 3 only **(C) 1, 2 and 4 only** (D) 2 and 3 only

151. Which of the following is called as 'Biological catalyst'?

(A) Vitamin **(B) Enzyme** (C) Fat (D) Carbohydrate

152. In order to deposit two metals simultaneously at a cathode, it is necessary that the two have

(A) The different deposition potentials **(B) The same deposition potentials**

(C) Zero potential (D) Lowest potential

153. For the radiation from the sun $\lambda_m = 4.8 \times 10^{-6}$ m and Wien displacement constant $b = 0.289 \times 10^{-2}$ m Kelvin. The temperature of the sun is

(A) 512 Kelvin **(B) 602 Kelvin** (C) 702 Kelvin (D) 812 Kelvin

154. The time period of equation $y = 6 \sin [4\pi t \frac{\pi}{3}]$ is

(A) 4 Seconds (B) 2 Seconds (C) 1 Seconds **(D) 0.5 Seconds**

155. Graafian follicle are characteristically found in the

(A) Ovary of frog **(B) Ovary of mammal**

(C) Thyroid of mammal (D) Testis of mammals

156. Consider the following statements.

Siamese twins means

i. Twins fail to separate completely from each other
ii. Twins have no variability

Choose the right answer

(A) (i) is correct and (ii) is wrong (B) (i) is wrong and (ii) is correct

(C) Both (i) and (ii) are correct (D) Both (i) and (ii) are wrong

157. Both extra and intracellular digestion take place in

(A) Dugesia (B) Star fish (C) Poly stoma (D) Turbellaria

158. In forensic science, _____ has become useful technique to identify and found relationship of a person

(A) DNA finger printing (B) Antisense RNA technique

(C) Animal cloning (D) Tissue culture

159. Which of the following chemicals can be used as Rodenticides?

i. Zinc phosphide ii. Sodium fluoro acetate

iii. Thallium sulphate iv. Dithio carbamate

(A) (i) and (ii) only (B) (iii) and (iv) only

(C) (i), (ii) and (iii) only (D) (i), (ii) and (iv) only

160. The acidity of CH, NH, HO and HF molecules should be in the order:

(A) HF < H_2O < NH_3 < CH_4 (B) HF > NH_3 < H_2O > CH_4

(C) H_2O < CH_4 < NH_3 < HF **(D) CH_4 < NH_3 < H_2O < HF**

161. Einstein got Nobel prize on which of the following works

(A) Mass-energy relation (B) Special theory of relativity

(C) Photo electric equation (D) Equation for stimulated emission

162. Match the following:

(a) Myopia 1. Bifocal lens

(b) Hyper Metropia 2. Cylindrical lens

(c) Presbyopia (above 45 years of age) 3. Concave lens

(d) Astigmatism 4. Convex lens

	a	b	c	d
(A)	4	3	1	2
(B)	**3**	**4**	**1**	**2**
(C)	2	4	1	3
(D)	1	2	3	4

163. Which of the following is not a function of transpiration?

(A) Uptake of water **(B) Excretion of minerals**

(C) Cooling of leaves (D) Uptake of minerals

164. On 1st February 2016, WHO declared _____ virus as dangerous vector disease:

(A) Dengu (B) Chikungunya **(C) Zika** (D) Melioidosis

165. In the presence of _____, protein is differentiated from carbohydrates and fats.

(A) N_2 (B) H_2 (C) O_2 (D) C

166. In a transistor, if the value of α is 0.9 then what is the value of β ?

(A) 9 (B) 90 (C) 0.9 (D) 900

167. Which one is an important vector for Plague disease?

(A) Mosquito (B) Housefly **(C) Flea** (D) Snail

168. The opening and closing of leaves of Mimosa pudica is due to

(A) Thermonastic movement (B) Photonastic movement

(C) Seisomonastic movement (D) Chemonastic movement

169. The wood and bark of conifers have special channels filled with

(A) Latex (B) Oil **(C) Resins** (D) Tannins

170. Producer gas is a mixture of

(A) $CO + N_2$ (B) $CO + H_2$ (C) $CH_4 + CO$ (D) $CO_2 + H_2$

171. Which of the following is called as Carborundum?

(A) Boron carbide (B) Tungsten carbide

(C) Silicon carbide (D) Aluminium carbide

172. The solar constant at earth's surface is

(A) 1.4 watt/m^2 (B) 14 watt/m^2 (C) 140 watt/m^2 **(D) 1400 watt/m^2**

173. Davisson and Germer experiment relates to

(A) Interference **(B) Electron diffraction**

(C) Polarization (D) Flourescence

174. The matrix of blood is known as

(A) Plasma (B) Blood protein

(C) RBC and WBC (D) WBC and Platelets

175. Sickle-cell anaemia is due to

(A) Viruses **(B) Genes** (C) Hormones (D) Bacteria

176. Endangered plant species are conserved through

(A) Herbarium **(B) Invitro/Invivo**

(C) Gene bank (D) Reducing pollution

177. The process of transfer of genetic information from DNA to RNA is

(A) Translocation (B) Transversion **(C) Transcription** (D) Translation

178. The relationship among the specific conductance, resistance and the area of cross-section of an electrical conductor is

(A) R = KA **(B) $K = \frac{1}{R} \times \frac{1}{A}$** (C) RA = K (D) R = K/A

179. Chemical name of aspirin is

(A) Ethyl salicylic acid (B) Benzoyl salicylic acid

(C) Methyl salicylate **(D) Acetyl salicylic acid**

180. Which rule is used for the order of filling of orbitals?

(A) Hunds rule **(B) (n + l) rule** (C) (n – l) rule (D) (2n + l) rule

181. The isomerism exist in 2-methyl-2-propanol and 2-butanol

(A) Position isomerism **(B) Chain isomerism**

(C) Functional isomerism (D) Metamerism

182. Which of the followings are identified as isobars?

i. $_{18}Ar^{40}$ ii. $_{17}Cl^{35}$ iii. $_{20}Ca^{40}$ iv. $_{17}Cl^{37}$

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

183. Who among the following persons discovered an alternate pathway for the utilization of glucose by the living cells

(A) Embden **(B) Dickens** (C) T.D.Lysenko (D) Bateson

184. Which one is the largest cells in white blood corpuscles.

(A) Lymphocytes (B) Basophils **(C) Monoscytes** (D) Neutrophils

185. HIV size is about _____

(A) 10-140 µm (B) 10-100 µm (C) 140-100 µm **(D) 100-140 µm**

186. Value of Astronomical unit

(A) 9.467×10^{11} m (B) 9.467×10^{11} km **(C) 1.496×10^{11} m** (D) 1.496×10^{11} km

187. Match the following:

(a) Lemon 1. Tartaric acid

(b) Apple 2. Citric acid

(c) Grape 3. Oxalic acid

(d) Tomato 4. Malic acid

	a	b	c	d
(A)	2	1	3	4
(B)	2	1	4	3
(C)	**2**	**4**	**1**	**3**
(D)	2	3	1	4

188. If 1 kg of a substance is fully converted into energy then the energy produced is

(A) 9 x 10^{16} J (B) 9 x 10^{24} J (C) 1 J (D) 3 x 10^{8} J

189. Among the four stages in oxidation of glucose, Which one is common in all organism?

(A) Glycolysis (B) Oxidative decarboxylation of pyruvic acid

(C) Krebs cycle (D) Electron transport chain

190. Who is known as Father of Taxonomy?

(A) Hippocrates **(B) Carolus Linnaeus**

(C) Gregor Johan Mendel (D) Aristotle

191. Major respiratory substrate is

(A) Protein (B) Vitamin **(C) Carbohydrate** (D) Fat

192. Four resistors of resistance R each are connected in parallel. The effective resistance is

(A) 4R (B) $\frac{4}{R}$ **(C) $\frac{R}{4}$** (D) 2R

193. Which one of the following is a powerful reducing agent?

(A) P_2O_3 (B) P_2O_5 **(C) H_3PO_3** (D) H_3PO_4

194. Which one of the following gives anisole on heating?

(A) $C_6H_5ONa + CH_3OH$ (B) $C_6H_5OH + CH_3Cl$

(C) $C_6H_5ONa + CH_3I$ (D) $C_6H_5I + CH_3ONa$

195. Pick the odd one out:

1. ATP - Adenosine Triphosphate

2. FAD - Flavin Adenine Dinucleotide

3. NAD - Nicotinamide Adenine dinucleotide

4. EMP - Embden Meyerhof parnas

(A) 4 (B) 2 (C) 1 (D) 3

196. Advanced family of monocotyledanae is

(A) Musaceae (B) Paceae (C) Solanaceae **(D) Orchidaceae**

197. Binomial of 'Vilvum' is

(A) Acalypha indica **(B) Aegle marmelos**

(C) Cissus quarangularis (D) Mimosa pudica

198. In 19th century population explosion occurred due to

(A) Discovery of vaccination (B) Discovery of antibiotics

(C) Uncontrolled reproduction **(D) Discovery of vaccination and antibiotics**

199. Name the proteins which are caused for the functions and operations of Methano trophic bacteria. Choose the correct answer

i. M bn B ii. M bn A iii. M bn C iv. M bn D

(A) (i) and (ii) are correct **(B) (i) and (iii) are correct**

(C) (i) and (iv) are correct (D) (iv) only correct

200. If a lift is going up with acceleration, the apparent weight of a body is

(A) More or less the true weight (B) Equal to the true weight

(C) Less than the true weight **(D) More than the true weight**

201. Sound waves do not show the phenomenon of

(A) Refraction (B) Interference (C) Diffraction **(D) Polarization**

202. The unit of magnetic flux

(A) Ohm (B) Volt (C) Tesla **(D) Weber**

203. Which one of the following compound undergoes Cannizzaro reaction?

(A) Benzaldehyde (B) Acetone (C) Acetaldehyde (D) Both (B) and (C)

204. The compound which is used to produce smoke screen is

(A) HPO_3 **(B) PH_3** (C) PCl_3 (D) P_2O_3

205. The vernacular name of this small herb with leaves sensitive to touch is

(A) Mimosa quadrivalvis (B) Mimosa microphylla

(C) Mimosa pudica (D) Mimosa pellita

206. Match the following

(a) Corpus luteum 1. Testosterone

(b) Graafian follicle 2. Inhibidin

(c) Sertoli cells 3. Theca interna

(d) Leydig's cells 4. Corpus albicans

	a	b	c	d
(A)	2	1	3	4
(B)	**4**	**3**	**2**	**1**
(C)	1	2	3	4
(D)	3	4	1	2

207. Which year new rabies vaccine was discovered?

(A) 1905 (B) 1912 (C) 1985 **(D) 1980**

208. The longest bone in the human body is

(A) Humerus (B) Spine **(C) Femur** (D) Tibia

209. Three beaker 2 ml, 5 ml, 10 ml capacities are having liquid at same temperature, Heat energy is

(A) Equal in all the beakers

(B) 2 ml beaker has lowest heat energy

(C) 5 ml beaker has lowest heat energy

(D) 10 ml beaker has lowest heat energy

210. Match the following instruments with their energy conversion

(a) Heat engine 1. Light energy into Electrical Energy

(b) Photo electric cell 2. Electrical energy into sound energy

(c) Microphone 3. Heat energy into kinetic energy

(d) Loud speaker 4. Sound energy into electrical energy

	a	b	c	d
(A)	1	3	4	2
(B)	**3**	**1**	**4**	**2**
(C)	4	2	3	1
(D)	2	4	1	3

211. Which element is toxic among Boron family?

(A) B – Boron (B) Ga – Gallium **(C) Tl – Tallium** (D) In – Indium

212. A molecular orbital can accommodate only two electrons and these two electrons must have opposite spins. This principle is known as

(A) Aufbau principle (B) Hund's rule

(C) Heisenberg principle **(D) Pauli's exclusion principle**

213. Match the following:

Hormone	**Disease**
(a) Deficiency of growth hormone	1. Diabetes insipidus
(b) Deficiency of vasopreesin	2. Grave's disease
(c) Deficiency of thyroxine	3. Dwarfism
(d) Increase of thyroxine	4. Cretinism

	a	b	c	d
(A)	2	3	4	1
(B)	**3**	**1**	**4**	**2**
(C)	3	2	1	4
(D)	1	2	3	4

214. Primary waste water treatment removes how many percentage of suspended solids?

(A) 50-65 % (B) 45-55 % (C) 30-40 % (D) 90-95 %

215. Write the essential component mineral for the formation of chlorophyll

(A) 'a' chlorohyll (B) 'b' carotein

(C) Magnesium (D) Xanthophyll

216. A spherical ball is allowed to fall in a highly viscous liquid. Viscous force on the spherical ball does not depend on

(A) Coefficient of viscosity (B) Radius of the sphere

(C) Velocity of the sphere **(D) Mass of the sphere**

217. $\text{Glycerol + oxalic acid} \xrightarrow{533\,K} X,\ X - \text{is}$

(A) Formic acid (B) Acrolein **(C) Allyl alcohol** (D) Glycerol triacetate

218. It is the inability to recall memories from the past

(A) Stroke **(B) Amnesia** (C) Alzheimer's disease (D) Meningitis

219. Statement 1 : When blood comes out of the blood vessel haemostasis occurs

Statement 2 : Thrombin converts fibrinogen into fibrin

Statement 3 : Occurrence of blood clot with in the blood vessel is known as thrombosis

Statement 4 : Heparin present in Basophils inhibit blood clotting

(A) 1 wrong, 2 correct, 3 wrong, 4 correct

(B) 1 correct, 2 correct, 3 wrong, 4 wrong

(C) 1 wrong, 2 wrong, 3 correct, 4 correct

(D) 1 correct, 2 correct, 3 correct, 4 correct

220. Who proposed the "Natural Selection Theory"?

(A) Lamark (B) Linnaeus (C) Hooker **(D) Charles Darwin**

221. The family included under the series uni-sexuales is

(A) Solanaceae **(B) Euphorbiaceae** (C) Malvaceae (D) Musaceae

222. Consider the following statements, choose the correct answer from the codes given below:

Assertion (A) : Beadle and Tatum discovered the relationship between genes and enzymes in fugus Neurospora

Reason (R) : For their work they were awarded noble prize

(A) (A) and (R) are correct and (R) is the correct explanation of (A)
(B) (A) alone is correct (R) is incorrect
(C) (A) and (R) are incorrect
(D) (A) and (R) are correct but (R) is not the correct explanation of (A)

223. A newly discovered organ could change own understanding of Human Anatomy is

(A) Lunkivitus (B) Pansitium (C) Intestinium **(D) Interstinium**

224. Which one of the following cell is feasible?

(A) $Cu|Cu^{2+} || H^+, H_2$ (Pt) (B) (Pt) $H_2, H^+|| Zn^{2+}$ Zn

(C) $CuCu^{2+} || Zn^{2+}$ Zn **(D) $Zn|Zn^{2+} ||Cu^{2+} |Cu$**

225. Which compound is used as smoke screen?

(A) PCl_3 (B) PCl_5 **(C) PH_3** (D) H_3PO_3

226. The first human heart transplant was performed by professor Christian Bernard in the year

(A) 1959 (B) 1969 **(C) 1967** (D) 1957

227. Match the following:

(a) Ovi duct 1. Fallopian duct

(b) Vas deferens 2. Vagina

(c) Gamete Intra fallopian transfer 3. Vasectomy

(d) Cervical cap 4. Tubectomy

	a	b	c	d
(A)	2	1	4	3
(B)	3	4	2	1
(C)	1	2	3	4
(D)	**4**	**3**	**1**	**2**

228. S.I. Unit for magnetic induction is

(A) NmA (B) Nm-1 A^{-2} (C) Nm^{-2} A **(D) NA^{-1} M^{-1}**

229. Match the following and choose the correct option:

(a) Analgesic 1. Paracetamol

(b) Antipyretic 2. Penicillin

(c) Antiseptic 3. Novalgin

(d) Antibiotic 4. Iodoform

	a	b	c	d
(A)	3	1	2	4
(B)	2	1	3	4
(C)	**3**	**1**	**4**	**2**
(D)	1	3	4	2

230. Passing vapours of Ethyl alcohol over heated Alumina, gives

(A) Acetaldehyde **(B) Di ethyl ether** (C) Acetic acid (D) Acetone

231. Kala-azar is caused by

(A) Plasmodium vivx **(B) Leishmania donovani**

(C) Leishmania tropica (D) Trypnosoma gambiens

232. Which is the native places of Eucalyptus?

(A) Asia (B) Antarctica (C) Africa **(D) Australia**

233. The production of Phyto-Plankton is reduced due to

(A) The burning of Hydrocarbon (B) Deforestation

(C) Depletion of ozone layer (D) Climatic change

234. The ore of mercury is

(A) Garnierite (B) Chalcocite (C) Sperrylite **(D) Cinnabar**

235. The seeds which contain abundant glyoxysomes are

(A) Dry seeds (B) West seeds

(C) Germinating seeds (D) Shrunken seeds

236. Which plant is an excellent example for autonomic movement of variation?

(A) Desmodium gyrans (B) Crocus sativus

(C) Oxalis corniculate (D) Oxalis latifolia

237. Where does oxidative phosphorylation take place?

(A) Chloroplast **(B) Mitochondrion** (C) Ribosome (D) Lysosome

238. What is physical and mental dependence on drugs called

(A) Neurosis **(B) Addiction** (C) Sedation (D) Indication

239. The enzyme that joins DNA fragments is

(A) Restriction endonuclease (B) Lipase

(C) Ligase (D) Peroxidase

240. In a reactor the moderator is

(A) Uranium 234 (B) Uranium 238 (C) Cadmium **(D) Heavy Water**

241. Which of the following gas was the remon for the Bhopal tragedy?

(A) CFC (B) CO (C) CO_2 **(D) MIC**

242. Which of the following is an acidic salt?

(A) Na_2SO_4 **(B) $NaHSO_3$** (C) Na_2SO_3 (D) K_2SO_4

243. In pesticides the example for contact poison is

(A) Rotenone (B) HCN (C) Parathion (D) C_2H_4

244. The higher fatty acid in oil is

(A) Benzoic acid **(B) Palmitic acid** (C) Crotonic acid (D) Acetic acid

245. Match the following:

List I	**List II**
(a) Equisetum	1. Water fern
(b) Marsilea	2. Horse fail
(c) Cyathea	3. Clubmoss
(d) Lycopodium	4. Tree fern

	a	b	c	d
(A)	**2**	**1**	**4**	**3**
(B)	4	2	1	3
(C)	3	4	1	2
(D)	4	3	1	2

246. The extra cellular fluid of blood is

(A) RBC (Red Blood Corpuscles) (B) WBC (White Blood Corpuscles)

(C) Plasma (D) Lymph

247. Plasma is a cloud of

(A) α – particle (B) Neutrino

(C) Completely ionized matter (D) Uncharged particles

248. The science of time measurement or clock making is

(A) Astrology (B) Chronology **(C) Horology** (D) Hymnology

249. R-C coupling is used for

(A) Voltage amplification (B) Power amplification

(C) Current amplification (D) Direct amplification

250. Two sound waves are y = α sin (wt – kx), y = α cos (wt – kt) the phase difference between the two waves is

(A) $\frac{\pi}{2}$ (B) $\frac{\pi}{4}$ (C) π (D) Zero

251. In SI system of units, the unit of solid angle

(A) Radian **(B) Steradian** (C) Degree (D) Celcius

252. Which of the following is most abundant in earth's crust?

(A) C. Carbon **(B) Si. Silicon** (C) Ge. Germonium (D) Sn. Tin

253. Select the correct statement with respect to d-block elements

(A) They are all metals

(B) They show variable valency

(C) They form coloured ions and complex salts

(D) All above statement are correct

254. Thermistor is a

(A) Material with positive Thomson effect

(B) Material with a negative temperature co-efficient

(C) Material with a positive temperature co-efficient

(D) Material with negative Thomson effect

255. The phenomenon of transfer of heat without any material medium is known as

(A) Radiation (B) Convection (C) Conduction (D) None of these

256. Oxidation number of sulphur in sulphuric acid is

(A) +6 (B) -6 (C) +5 (D) -5

257. In which of the following minerals, aluminium is not present?

(A) Cryolite (B) Mica (C) Feldspar **(D) Fluorspar**

258. Statement: For a person fitted with artificial pacemaker after 7 years battery for the pacemaker was replaced by surgery

Reason: The pacemaker lithium battery lasts for 7 to 8 years

(A) Statement correct and reason is wrong
(B) Statement and reason are correct but the reason is not explaning the statement
(C) Statement and reason are correct and the reason explains the statement
(D) Statement and reason are wrong

259. An example for C_4 plant is

(A) Sugarcane (B) Potato (C) Wheat (D) Rice

260. _____ is composed of one or more cenospecies that are not able to intercross.

(A) Family **(B) Comparium** (C) Herbarium (D) Ecospecies

261. An example of C_3 plant is

(A) Maize (B) Sugarcane (C) Tribulus **(D) Wheat**

262. Holography can be used in the formation of

(A) Three dimensional images (B) Two dimensional images

(C) One dimensional images (D) Half dimensional images

263. Calculate the inter planer spacing for a (3 2 1) plane in a simple cubic whose lattice constant is 4.2 x 10^{-10} m

(A) 1.1 Å (B) 2.1 Å (C) 3.1 Å (D) 4.1 Å

264. Eutrophication leads to the death of fish due to

(A) Increase O_2 content (B) Increased algae number

(C) Decreased algae number **(D) Decreased O_2 Content**

265. The formula of triple super phosphate is

(A) Ca $(H_2PO_4)_2.H_2O$ (B) CA_2 $(PO_4)_2$

(C) CaH_4 $(PO_4)_2$ (D) $K_2SO_4.2.MgSO_4$

266. Which of the following is a base according to Usanovich concept?

(A) SO_3 (B) Cl_2 **(C) Na_2O** (D) $Fe(CN)_2$

267. The first medicine developed by US for nerve injury using biodegradable wireless device is

(A) Bio-mechanical medicine (B) Bio-technical medicine

(C) Bio-electronic medicine (D) None of the above

268. A new frontier of drug design employing small stretches of complementary DNA and RNA is

(A) Pencillin **(B) Oligonucleotides**

(C) Ampicillin (D) Ciprofloxacin

269. The first solar boat designed in India was

(A) Sonnet **(B) Surya** (C) Gagan (D) Aries

270. The maximum efficiency of a half wave rectifier is

(A) 81.2 % (B) 41.6 % **(C) 40.6 %** (D) 42.6 %

271. 1 amu is equivalent to

(A) 1 eV (B) 931 eV (C) 931 KeV **(D) 931 MeV**

272. Difference between RNA and DNA is that of

(A) Phosphate and sugar (B) Phosphate and Nitrogenous base

(C) Nucleoside and nucleotide **(D) Sugar and nitrogenous base**

273. How the Dracunculiasis disease transmission takes place?

(A) Consumption of water containing Cyclops

(B) Inhalation of polluted sir

(C) Consumption of snail

(D) Consumption of contaminated food

274. What will happen when hydrazine solution is added to copper II sulphate solution?

(A) A copper mirror is produced

(B) A copper mirror is produced and the blue colour fades

(C) A copper mirror is produced and green colour appears

(D) Colour changes from blue to green

275. Which alloy of aluminum is used in boat machinery?

(A) Magnalium **(B) Duralumin** (C) Nickeloy (D) Alnico

276. S varies directly as R varies and T varies inversely as R varies, At a time R = 20, S = 40 and T = 10. If R is changed to 10, then the value of T will be

(A) 20 (B) $\frac{1}{10}$ (C) 40 (D) 80

277. The growth of pollen tubes down the style is due to

(A) Hydrotropism (B) Traumatotropism

(C) Thymotropism **(D) Chemotropism**

278. Flavonoids mostly accumulate in

(A) Chloroplast (B) Chromoplast **(C) Vacuole** (D) Cytosol