

Dental Special Final Model Test-01

01. Which is not the correct characteristic of Echinodermata phylum?
 (a) Pentaradial symmetrical
 (b) Segmented
 (c) Body is thorny
 (d) No excretory system
Ans: (b) Segmented
02. Which disease is caused due to the deficiency of erythropoietin hormone?
 (a) Anemia (b) Polycythemia
 (c) Thalassemia (d) Hemophilia
Ans: (a) Anemia
03. Which one shows blue color in Leishman stain?
 (a) Monocyte (b) Lymphocyte
 (c) Eosinophil (d) Basophil
Ans: (d) Basophil
Solve: Note: Eosinophils become red in color.
04. Which is an example of atropous ovule?
 (a) Water pepper (b) Bean
 (c) Mustard (d) Opium
Ans: (a) Water pepper
05. Which is the respiratory region of the respiratory system?
 (a) Larynx (b) Trachea
 (c) Bronchus (d) Lobule
Ans: (d) Lobule
Solve: Note: The larynx, trachea and bronchi are part of the air transport zone.
06. Which valve is present at the beginning of systemic aorta?
 (a) Pulmonary semilunar valve
 (b) Aortic semilunar valve
 (c) Eustachian valve
 (d) Mitral valve
Ans: (b) Aortic semilunar valve
07. What is called the fluid present between the two layers of pleura?
 (a) Cerebrospinal fluid (b) Serous fluid
 (c) Peritoneal fluid (d) Pericardial fluid
Ans: (b) Serous fluid
Solve: Note: Between the two layers of the pericardium- the pericardial fluid is present. Present in the brain - cerebrospinal fluid.
08. During which process of carbon di oxide transport chloride shift reaction takes place?
 (a) As physical solution
 (b) As carbamino protein
 (c) As carbamino-hemoglobin
 (d) As bicarbonate compound
Ans: (d) As bicarbonate compound
09. Which is the part of renal corpuscle?
 (a) PCT (b) DCT
 (c) Loop of Henley (d) Glomerulus
Ans: (d) Glomerulus
10. Which is not a wrist bone?
 (a) Lunate (b) Triquetral
 (c) Capitate (d) Cuboid
Ans: (d) Cuboid
11. How many segments are there in the right lung?
 (a) 2 (b) 3
 (c) 8 (d) 10
Ans: (d) 10
Solve: Note: Left lung contains 8 segments.
12. Which part of the brain is responsible for fever in human body?
 (a) Cerebrum (b) Cerebellum
 (c) Thalamus (d) Hypothalamus
Ans: (d) Hypothalamus
Solve: Note: The hypothalamus controls anger, sleep, thirst, sweating, blood pressure, etc.
13. In which part of the female reproductive system the sperm fertilizes the ovum?
 (a) Ovary (b) Fallopian tube
 (c) Uterus (d) Cervix
Ans: (b) Fallopian tube
14. Who shows negative phototaxis?
 (a) Cockroach (b) *Euglena*
 (c) Pupa (d) Caterpillar
Ans: (a) Cockroach
15. Which is the permanent contraceptive method for male?
 (a) Vasectomy (b) Tubectomy
 (c) Ligation (d) Conjugation
Ans: (a) Vasectomy
Solve: Note: the permanent contraceptive method for female is ligation.

16. Which nerve's other name is pathetic nerve?
 (a) Olfactory (b) Optic
 (c) Oculomotor (d) Trochlear
Ans: (d) Trochlear
17. Which immunoglobulin can cross placenta during pregnancy?
 (a) IgG (b) IgM
 (c) IgD (d) IgE
Ans: (a) IgG
18. What is the phenotypic ratio for complementary dominance?
 (a) 9 : 7 (b) 13 : 3
 (c) 2 : 1 (d) 1 : 2 : 1
Ans: (a) 9 : 7
Solve: Note:
 Duplicate recessive epistasis ratio-9 : 7
 Pronounced epistasis ratio-13 : 3
 Lethal gene ratio-2 : 1
19. Which cell organelle is called the traffic police of the cell?
 (a) Ribosome
 (b) Endoplasmic reticulum
 (c) Golgi body
 (d) Lysosome
Ans: (c) Golgi body
Solve: Note: Ribosomes- protein factory, universal organelle.
 Lysosome- Suicidal sac.
20. Which code does not indicate any amino acid?
 (a) GUU (b) AUG
 (c) CGU (d) UAG
Ans: (d) UAG
Solve: Note: UAA, UGA and UAG doesn't indicate any amino acid.
21. Which is the stored food in plants?
 (a) Starch (b) Glycogen
 (c) Cellulose (d) Pectin
Ans: (a) Starch
Solve: Note: Stored food of animals is glycogen.
22. What is the normal systolic blood pressure of an adult?
 (a) 100 – 139 mmHg
 (b) 100 – 110 mmHg
 (c) 60 – 89 mmHg
 (d) 80 – 90 mmHg
Ans: (a) 100 – 139 mmHg
Solve: Note: The normal diastolic blood pressure of an adult is- 60 – 89 mmHg.
23. What is the BMI in the first level of obesity?
 (a) 30 – 34.9 kg/m²
 (b) 25 – 29.9 kg/m²
 (c) ≥ 40 kg/m²
 (d) 35 – 39.9 kg/m²
Ans: (a) 30 – 34.9 kg/m²
24. Which one is not the main excretory substance in human body?
 (a) Albumin (b) Urea
 (c) Uric acid (d) Urochrome
Ans: (a) Albumin
25. Bangladesh is situated in _____ zoo-geographical region.
 (a) Palearctic (b) Oriental
 (c) Neotropical (d) Ethiopian
Ans: (b) Oriental
26. Which is not the correct characteristic of fungi?
 (a) No chlorophyll
 (b) Non-flowering
 (c) Eukaryotic
 (d) Vascular tissue is present
Ans: (d) Vascular tissue is present
Solve: Note: Algae, fungi, *Riccia* - they do not have vascular tissue.
27. What % of sperm is nucleus?
 (a) 10% (b) 15%
 (c) 80% (d) 90%
Ans: (d) 90%
28. What type of placentation is present in water lily?
 (a) Parietal (b) Superficial
 (c) Basal (d) Apical
Ans: (b) Superficial
29. In which process are De-amino acids absorbed from the small intestine?
 (a) Active absorption (b) Diffusion
 (c) Osmosis (d) Exocytosis
Ans: (b) Diffusion

30. Which is a step of respiration?
 (a) Calvin cycle
 (b) Dicarboxylic acid cycle
 (c) Hatch and Slack cycle
 (d) Tricarboxylic acid cycle
Ans: (d) Tricarboxylic acid cycle
Solve: Note: Calvin cycle, dicarboxylic cycle, Hatch and Slack cycle photosynthesis steps.
31. Which is produced from benzene in Dow method?
 (a) Phenol (b) Aniline
 (c) Toluene (d) Ether
Ans: (a) Phenol
32. Itai-Itai disease is caused by which pollution?
 (a) Lead (b) Chromium
 (c) Cadmium (d) Arsenic
Ans: (c) Cadmium
Solve: Note: Lead - Decreases IQ
 Cadmium - cancer, osteoporosis
 Arsenic- Black foot disease, fatty liver
33. Which one is not alicyclic compound?
 (a) Cyclopropane (b) Cyclohexane
 (c) Cyclobutane (d) Naphthalene
Ans: (d) Naphthalene
Solve: Note: Naphthalene- aromatic compound.
34. What is the required temperature to produce water gas from coal?
 (a) 1000°C (b) 1300°C
 (c) 1800°C (d) 3000°C
Ans: (b) 1300°C
35. Which ester is present in ripe banana?
 (a) Pentyl acetate (b) Octyl acetate
 (c) Butyl acetate (d) Benzyl acetate
Ans: (a) Pentyl acetate
Solve: Note: Octyl acetate- orange
 Butyl acetate- butter
 Benzyl Acetate- Jasmine
36. Which one is phenol identification test?
 (a) Acrolein test (b) Liebermann test
 (c) Cumene test (d) PCl_5 test
Ans: (b) Liebermann test
Solve: Note: Acrolein test- Glycerin identification
 Tests with PCl_5 - Alcohol identification
37. To produce 100 mL 0.1 M HCl (dil) how much 11.10 m HCl (conc) is required?
 (a) 0.1 ml (b) 0.5 ml
 (c) 0.9 ml (d) 10.01 ml
Ans: (c) 0.9 ml
Solve: $V_1 \times M_1 = V_2 \times M_2 \Rightarrow V_1 = \frac{V_2 \times M_2}{M_1} = \frac{100 \times 0.1}{11.10} = 0.9 \text{ mL}$
38. What is the molar volume of any gas in STP?
 (a) 22.4 Lmol^{-1} (b) 24.04 Lmol^{-1}
 (c) 24.789 Lmol^{-1} (d) 26.04 Lmol^{-1}
Ans: (a) 22.4 Lmol^{-1}
Solve: Note: Molar volume of gas in SATP is 24.789 Lmol^{-1} .
39. Which is the unit of extinction modulus in CGS unit?
 (a) m^{-1} (b) cm^{-1}
 (c) mmolL^{-1} (d) ms^{-1}
Ans: (b) cm^{-1}
40. Which is not weak electrolyte?
 (a) CH_3COOH solution
 (b) HF solution
 (c) H_3PO_4 solution
 (d) NaOH solution
Ans: (d) NaOH solution
Solve: Note: weak electrolyte- CH_3COOH solution, HF solution, H_3PO_4 solution.
41. What is the melting heat of ice?
 (a) +4 kJ mol^{-1} (b) +5 kJ mol^{-1}
 (c) +6 kJ mol^{-1} (d) +8 kJ mol^{-1}
Ans: (c) +6 kJ mol^{-1}
42. Which one is used to make burette, pipette, beaker and hard glass materials?
 (a) Soft glass (b) Hard glass
 (c) Flint glass (d) Gena glass
Ans: (b) Hard glass
43. Which one is 100% recyclable metal?
 (a) Sodium (b) Glass
 (c) Copper (d) Iron
Ans: (c) Copper
Solve: Note: 100% recyclable material - aluminum, copper, glass.
44. What is the specific gravity of heavy oil?
 (a) 0.97 (b) 1.005
 (c) 1.03 (d) 1.09
Ans: (c) 1.03

45. Which one is composite particle?
 (a) Pion (b) Muon
 (c) Meson (d) Deuteron
Ans: (d) Deuteron
Solve: Note: Composite particles- Deuteron, Alpha.
46. Which orbital is not possible?
 (a) 2s (b) 1s
 (c) 2d (d) 4f
Ans: (c) 2d
47. What is the range of BOD for pure water?
 (a) 1 – 2 ppm (b) 1 – 3 ppm
 (c) 2 – 4 ppm (d) 0.1 – 0.3 ppm
Ans: (b) 1 – 3 ppm
48. Which is not the characteristic of transition elements?
 (a) Have variable valency
 (b) Form colorful compounds
 (c) Act as catalyst
 (d) Show ferromagnetic nature
Ans: (d) Show ferromagnetic nature
Solve: Note: Transition elements show paramagnetic nature.
49. Which is the correct order of strength of halogen hydricid?
 (a) $\text{HF} > \text{HBr} > \text{HI} > \text{HCl}$
 (b) $\text{HI} > \text{HBr} > \text{HCl} > \text{HF}$
 (c) $\text{HI} < \text{HCl} < \text{HBr} < \text{HF}$
 (d) $\text{HI} < \text{HBr} > \text{HCl} > \text{HF}$
Ans: (b) $\text{HI} > \text{HBr} > \text{HCl} > \text{HF}$
50. What is the value of first ionization energy of Na?
 (a) $+496 \text{ kJmol}^{-1}$ (b) $+419 \text{ kJmol}^{-1}$
 (c) $+738 \text{ kJmol}^{-1}$ (d) $+4562 \text{ kJmol}^{-1}$
Ans: (a) $+496 \text{ kJmol}^{-1}$
Solve: Note: Second ionization energy of Na- $+4562 \text{ kJmol}^{-1}$.
51. Which molecule has octahedral structure?
 (a) CH_4 (b) $\text{CH} \equiv \text{CH}$
 (c) SF_6 (d) $[\text{Cu}(\text{NH}_3)_4]^{2+}$
Ans: (c) SF_6
52. What is called 2-hydroxybenzoic acid?
 (a) Pyrrole (b) Salicylic acid
 (c) Picric acid (d) T.N.T
Ans: (b) Salicylic acid
53. Which one does not act as catalyst poison?
 (a) Dust (b) S powder
 (c) As_2O_3 (d) Mo Powder
Ans: (d) Mo Powder
Solve: Note: Mo Powder acts as catalyst helper.
54. What is the pH value of 1M NaOH?
 (a) 7 (b) 13
 (c) 14 (d) 10
Ans: (c) 14
Solve: $\text{pOH} = -\log[\text{OH}^-] = -\log 1 = 0$
 So, $\text{pH} = 14 - \text{pOH} = (14 - 0) = 14$
55. Which is the main component of talcum powder?
 (a) Talc
 (b) Zinc stearate
 (c) Menthol
 (d) Magnesium carbonate
Ans: (a) Talc
56. Which is not correct about the vector product of rectangular unit vector?
 (a) $\hat{i} \times \hat{i} = \vec{0}$ (b) $\hat{i} \times \hat{j} = -\hat{k}$
 (c) $\hat{k} \times \hat{i} = \hat{j}$ (d) $\hat{k} \times \hat{j} = -\hat{i}$
Ans: (b) $\hat{i} \times \hat{j} = -\hat{k}$
Solve: Note: $\hat{i} \times \hat{j} = \hat{k}$
57. What is the correct equation of time of flight of a projectile?
 (a) $T = \frac{V_0 \sin^2 \theta}{2g}$ (b) $T = \frac{2V_0 \sin 2\theta}{g}$
 (c) $T = \frac{V_0^2 \sin 2\theta}{g}$ (d) $T = \frac{2V_0 \sin \theta}{g}$
Ans: (d) $T = \frac{2V_0 \sin \theta}{g}$
58. What is correct information regarding impulsive force?
 (a) Short duration, small magnitude of force
 (b) Long duration, large magnitude of force
 (c) Short duration, large magnitude of force
 (d) Long duration, small magnitude of force
Ans: (c) Short duration, large magnitude of force
59. What is the correct dimension of Torque?
 (a) $[\text{ML}^2\text{T}^{-2}]$ (b) $[\text{MLT}^{-1}]$
 (c) $[\text{MLT}^{-2}]$ (d) $[\text{ML}^{-1}\text{T}^{-1}]$
Ans: (a) $[\text{ML}^2\text{T}^{-2}]$
Solve: Note:
 Momentum- $[\text{MLT}^{-1}]$
 Force- $[\text{MLT}^{-2}]$
 Pressure- $[\text{ML}^{-1}\text{T}^{-1}]$

60. When 2 N force acts on definite mass at definite direction with an angle of 60° and gets displaced 5m. What is the amount of work done?
 (a) 2 J (b) 4 J
 (c) 5 J (d) 10 J
Ans: (c) 5 J
Solve: $W = F \cos \theta = 2 \times 5 \times \cos 60^\circ = 5 \text{ J}$
61. How much distance light travels in space in one year?
 (a) $9.40 \times 10^{15} \text{ km}$
 (b) $9.40 \times 10^{12} \text{ km}$
 (c) $9.40 \times 10^{16} \text{ km}$
 (d) $9.4 \times 10^{13} \text{ km}$
Ans: (b) $9.40 \times 10^{12} \text{ km}$
62. Which is not Kepler's law about the motion of the planets?
 (a) Law of Ellipse
 (b) Law of Area
 (c) Law of Time
 (d) Law of time period
Ans: (d) Law of time period
63. What is the half-life of radon?
 (a) 4 days (b) 24 days
 (c) 60 days (d) 30 days
Ans: (a) 4 days
64. What is the ratio between magnetic field and magnetic permeability called?
 (a) Magnetization intensity
 (b) Magnetic induction
 (c) Magnetic intensity
 (d) Magnetic moment
Ans: (c) Magnetic intensity
65. What is the value of universal gas constant R in S.I.unit?
 (a) 8.314 JKmol^{-1}
 (b) $8.413 \text{ JK}^{-1} \text{ mol}^{-1}$
 (c) $8.314 \text{ JK}^{-1} \text{ mol}^{-1}$
 (d) 8.413 JKmol^{-1}
Ans: (c) $8.314 \text{ JK}^{-1} \text{ mol}^{-1}$
66. What is the value of γ for ideal gas?
 (a) 1.40 (b) 1.33
 (c) 1.67 (d) 1.75
Ans: (c) 1.67
67. The speed of a flying fly in a room is an example of-
 (a) One-dimensional motion
 (b) Two-dimensional motion
 (c) Three-dimensional motion
 (d) Half-dimensional motion
Ans: (c) Three-dimensional motion
68. Simplest counting method is-
 (a) Decimal method
 (b) Hexadecimal method
 (c) Octal number system
 (d) Binary method
Ans: (d) Binary method
69. Intensity of sound does not depend on.
 (a) Size of the source
 (b) Distance from the source
 (c) Density of the medium
 (d) Velocity of the medium
Ans: (a) Size of the source
70. What will be the image size of an object is placed in between optical center of lens and primary focus?
 (a) Real and inverse
 (b) Real and straight
 (c) Virtual and inverse
 (d) Virtual and straight
Ans: (d) Virtual and straight
71. Which electromagnetic wave is used for destroying cancer cells?
 (a) Ultraviolet ray (b) Infra-red ray
 (c) X-ray (d) Gama-ray
Ans: (d) Gama-ray
72. Opposite quantity of which elastic modulus is called compressibility?
 (a) Length modulus
 (b) Bulk modulus
 (c) Modulus of rigidity
 (d) Shearing modulus
Ans: (b) Bulk modulus
73. What is used for doping in p-type semiconductor?
 (a) Phosphorous (b) Bismuth
 (c) Gallium (d) Arsenic
Ans: (c) Gallium
Solve: Note: P, As, Bi are used to make n-type semiconductors.

74. What particle is exchanged in strong nuclear force?

- (a) Gluon (b) Photon
(c) Graviton (d) Boson

Ans: (a) Gluon

Solve: Note:

Photon- Electromagnetic force

Graviton- Gravitational force

Boson - Weak nuclear force

75. What is the escape velocity in the moon?

- (a) 11.2 km/s (b) 4.3 km/s
(c) 5.0 km/s (d) 2.4 km/s

Ans: (d) 2.4 km/s

76. You have no right to do it. Here 'Right' is a/an—

- (a) Adjective (b) Noun
(c) Adverb (d) Verb

Ans: (b) Noun

Solve: 'No' শব্দটা determiner যা adjective হিসেবে use হয় এবং no এর পরে noun বসে। সুতরাং 'right' noun.

77. The prices of rice are ____.

- (a) raising (b) riser
(c) rising (d) raised

Ans: (c) rising

Solve: 'raise' verb + transitive কিন্তু 'rise' verb + intransitive। যেহেতু verb এর পরে কোন object নাই তাই 'rising' হবে।

78. The correct spelling is—

- (a) Humouros (b) Humourious
(c) Humorous (d) Homorious

Ans: (c) Humorous

79. Write the appropriate translation of- 'পরীক্ষা খুবই নিকটবর্তী'।

- (a) The examination is coming soon.
(b) The examination will start soon.
(c) The examination is knocking at the door.
(d) The examination is beginning soon.

Ans: (c) The examination is knocking at the door.

80. Mr Humayun Ahmed $\frac{\text{achieved}}{a}$ fame both $\frac{\text{as a}}{b}$ writer $\frac{\text{or}}{c}$ as a $\frac{\text{film maker}}{d}$.

- (a) achieved (b) as a
(c) or (d) film maker

Ans: (c) or

81. 'Plebiscite' is a term related to—

- (a) Politics (b) Technology
(c) Law (d) Medicine

Ans: (a) Politics

82. Identify the correct passive form—"Open the window".

- (a) The window should be opened.
(b) Let the window be opened.
(c) Let the window be open.
(d) The window must be opened.

Ans: (b) Let the window be opened.

83. Government has been entrusted ____ elected politicians.

- (a) to (b) at
(c) for (d) with

Ans: (a) to

84. What is the synonym of 'Perplexed'?

- (a) Aroused (b) Annoyed
(c) Unhappy (d) Puzzled

Ans: (d) Puzzled

85. Why are you looking so much ____?

- (a) run across (b) run down
(c) run into (d) run off

Ans: (b) run down

86. 'To raise one's brow' means—

- (a) Annoyance (b) Disapproval
(c) Surprise (d) Indifference

Ans: (c) Surprise

87. Choose the correct sentence.

- (a) A new cabinet has been sworn of Dhaka.
(b) A new cabinet has been sworn by in Dhaka.
(c) New cabinet has sworn in Dhaka.
(d) A new cabinet has been sworn in Dhaka.

Ans: (d) A new cabinet has been sworn in Dhaka.

88. Of ____ two girls, she is the better.

- (a) a (b) an
(c) the (d) none of these

Ans: (c) the

Solve: Comparative এর সাথে the থাকলে of the two হয়।

89. The correct translation of “The cloud rolled away” is—

- (a) মেঘ উড়ে গেল। (b) মেঘ চলে গেল।
(c) মেঘ কেটে গেল। (d) মেঘ ঘুরে গেল।

Ans: (c) মেঘ কেটে গেল।

90. What is the synonym of the word ‘Dictionary’?

- (a) Lexicon (b) Big word book
(c) Index book (d) Legend book

Ans: (a) Lexicon

91. Where was the capital of Harshvardhan?

- (a) Gouda (b) Karnasuvarna
(c) Kannauj (d) Pataliputra

Ans: (c) Kannauj

92. When did the first war of the Panipat take place?

- (a) 1561 (b) 1526
(c) 1556 (d) 1761

Ans: (b) 1526

93. Who built the famous Boro Katra of Dhaka?

- (a) Shah Suja (b) Shaista Khan
(c) Mir Jumla (d) Islam Khan

Ans: (a) Shah Suja

Solve: Remember: Shaista Khan built the ‘Choto Katra’.

94. Who is the leader of the Tebhaga movement?

- (a) Kakon Bibi (b) Ila Mitra
(c) Leela Nag (d) Pari Sundari

Ans: (b) Ila Mitra

95. Where was the historic six point claim proposed?

- (a) Dhaka (b) Lahore
(c) Delhi (d) Mumbai

Ans: (b) Lahore

Solve: Remember: In Lahore on 5 & 6 February, 1966. Bongabandhu Sheikh Mujib raised his demand.

96. When was the provisional government of Mujibnagar formed?

- (a) 10 April, 1971 (b) 11 April, 1971
(c) 17 April, 1971 (d) 14 April, 1971

Ans: (a) 10 April, 1971

Solve: Remember: Oath taking of this government was held on 17 April, 1971.

97. Which organization was created as a result of the Language movement?

- (a) Tamuddin Majlish (b) Asiatic Society
(c) Bangla Academy (d) Bangla pedia

Ans: (c) Bangla Academy

Solve: Remember: Bangla Academy was established in 3 December, 1955.

98. Who is the only indigenous freedom fighter named in the War of Liberation?

- (a) Kakat Henincheta
(b) Usai Sing Chakma
(c) UK Ching Marma
(d) Bijay Marma

Ans: (c) UK Ching Marma

99. Where was the Concert for Bangladesh held?

- (a) Madison Square
(b) Harrison Square
(c) New York Square
(d) Rabishangkar Square

Ans: (a) Madison Square

100. Sufia Kamal is the author of which book based on the Liberation War?

- (a) Ekattorer Dinguli (b) Ekattorer Chithi
(c) Ekattorer Diary (d) Ekattorer Jishu

Ans: (c) Ekattorer Diary

Dental Special Final Model Test-02

01. What is called fat storing leucoplast?
 (a) Amyloplast (b) Elioplast
 (c) Aleuroplast (d) Chromoplast

Ans: (b) Elioplast

Solve: Note: Amyloplast- carbohydrate like food storing leucoplast.

02. What is called the process of mRNA transformation from DNA?
 (a) Translation (b) Transcription
 (c) Replication (d) Duplication

Ans: (b) Transcription

Solve:

Note: DNA $\xrightarrow{\text{Transcription}}$ mRNA $\xrightarrow{\text{Translation}}$ Protein

03. At what sub-stage of meiosis-1 crossing over between two non-sister chromatids take place?

- (a) Zygotene (b) Pachytene
 (c) Diplotene (d) Leptotene

Ans: (b) Pachytene

04. Which is a partial reducing sugar?
 (a) Cellulose (b) Glucose
 (c) Sucrose (d) Maltose

Ans: (d) Maltose

Solve: Note:

Cellulose- Non Reducing

Sucrose- Non Reducing

Glucose - Reducing

05. Which vitamin helps in blood coagulation?
 (a) Vit – A (b) Vit – B
 (c) Vit – C (d) Vit – K

Ans: (d) Vit – K

06. Which virus does not have RNA as nucleic acid?
 (a) Vaccinia (b) TMV
 (c) HIV (d) Polio

Ans: (a) Vaccinia

07. Which is not the principle element of nucleic acid?
 (a) Pentose sugar (b) Phosphoric acid
 (c) Amino acid (d) Nitrogenous base

Ans: (c) Amino acid

08. Which biochemical molecule is found in the cell wall of fungi?

- (a) Chitin (b) Starch
 (c) Lipoprotein (d) Peptidoglycan

Ans: (a) Chitin

Solve: Note: Chitin is a complex polysaccharide.

09. Which algae is used to determine the age of soil?

- (a) *Spirogyra* (b) *Diatom*
 (c) *Nostoc* (d) *Fucus*

Ans: (b) *Diatom*

10. What type of placentation is seen in China-rose?

- (a) Marginal (b) Axile
 (c) Parietal (d) Superficial

Ans: (b) Axile

11. Which is not a step of respiration?

- (a) Calvin cycle (b) Krebs cycle
 (c) TCA cycle (d) Citric Acid cycle

Ans: (a) Calvin cycle

Solve: Note: The Calvin cycle involves the process of photosynthesis.

12. Which cannot be found in the construction of embryo sac?

- (a) Monosporic (b) Bisporic
 (c) Trisporic (d) Tetrasporic

Ans: (c) Trisporic

13. How many amino acids are found in insulin?

- (a) 51 (b) 53
 (c) 41 (d) 43

Ans: (a) 51

14. Viviparous germination is seen in what type of plants?

- (a) Xerophytes (b) Halophytes
 (c) Lithophytes (d) Hydrophytes

Ans: (b) Halophytes

15. Placenta doesn't produce immunity against which disease in embryo?

- (a) Diphtheria (b) Measles
 (c) Pox (d) Syphilis

Ans: (d) Syphilis

16. Excretory organ of which animals are convoluted tubules called nephridia?
 (a) Mollusca (b) Annelida
 (c) Arthropoda (d) Echinodermata
Ans: (b) Annelida
17. Which one does not act as an extra excretory organ of grasshopper?
 (a) Urate cell (b) Chitin
 (c) Uricose gland (d) Nephrocyte
Ans: (b) Chitin
Solve: Note: The whole body of the grasshopper is covered with chitin-containing cuticles.
18. What is called the macrophage of liver?
 (a) Kuffer cell (b) Goblet cell
 (c) Microglia (d) Astrocyte
Ans: (a) Kuffer cell
19. Which one of the following is called biomembrane?
 (a) Cell membrane (b) Plasmasol
 (c) Protoplasm (d) Idiosome
Ans: (a) Cell membrane
20. At what age surfactant secretion starts in human fetus?
 (a) 21 weeks (b) 22 weeks
 (c) 23 weeks (d) 24 weeks
Ans: (c) 23 weeks
Solve: Note: Human embryos before 24 weeks are not considered to have independent existence.
21. Which membrane covers the lungs of human?
 (a) Pericardium (b) Peritoneum
 (c) Capsule (d) Pleura
Ans: (d) Pleura
Solve: Note: Capsules – covering of the Kidney
 Pericardium - covering of the heart
 Peritoneum - covering of the coelom.
22. How many species of *Pteris* grow in Bangladesh?
 (a) 41 (b) 195
 (c) 16 (d) 250
Ans: (c) 16
23. Which is pelvic vertebra?
 (a) Cervical vertebrae
 (b) Sacral vertebrae
 (c) Thoracic vertebrae
 (d) Coccygeal vertebrae
Ans: (b) Sacral vertebrae
24. In which layer of the eyeball melanin pigment is found?
 (a) Sclera (b) Choroid
 (c) Cornea (d) Conjunctiva
Ans: (b) Choroid
25. Which bactericide is found in milk?
 (a) Lysozyme (b) Spermin
 (c) Lacto peroxidase (d) Interferon
Ans: (c) Lacto peroxidase
26. How many times does the size of the uterus increase during pregnancy?
 (a) 10 times (b) 5 times
 (c) 20 times (d) 25 times
Ans: (c) 20 times
27. What type of antibody is present in mother's milk?
 (a) I_gA (b) I_gG
 (c) I_gM (d) I_gE
Ans: (a) I_gA
28. What is the phenotypic ratio of Dominant epistasis?
 (a) 9 : 7 (b) 13 : 3
 (c) 1 : 2 : 1 (d) 2 : 1
Ans: (b) 13 : 3
Solve: Note:
 Duplicate recessive epistasis ratio-9 : 7
 Pronounced epistasis ratio-13 : 3
 Lethal gene ratio-2 : 1
29. Which species of malaria causes quatern malaria?
 (a) *P.vivax* (b) *P.malariae*
 (c) *P.ovale* (d) *P.falciparum*
Ans: (b) *P.malariae*
30. Who observed first the method of netting of spider?
 (a) Empedocles (b) Hans Peters
 (c) Lamarck (d) Wiegman
Ans: (b) Hans Peters

31. Most of the natural gases are used in which sector at present?

- (a) Electricity production
(b) Urea production
(c) As Fuel
(d) Industrial sector

Ans: (a) Electricity production

32. What amount of 0.5M solution is required to prepare 100mL solution of 0.01M concentration?

- (a) 5 mL (b) 4 mL
(c) 2 mL (d) 20 mL

Ans: (c) 2 mL

Solve: $V_1S_1 = V_2S_2 \Rightarrow V_2 = \frac{0.01 \times 100}{0.5} = 2\text{mL}$

33. What is the oxidation potential of Zn electrode?

- (a) -0.76V (b) $+0.76\text{V}$
(c) $+0.34\text{V}$ (d) -0.34V

Ans: (b) $+0.76\text{V}$

34. Which is not the classification of half-cell?

- (a) Metal & metal ion half cell
(b) Gas half cell
(c) Metal amalgam & metal ion half cell
(d) Metal & soluble salt of metal half cell

Ans: (d) Metal & soluble salt of metal half cell

Solve: Note: Metal and insoluble salt of metal half-cell is a type of half-cell.

35. Methyl orange gives which color in alkaline medium?

- (a) Pinkish red (b) Yellow
(c) Blue (d) Colorless

Ans: (b) Yellow

36. Oxidation number of the central atom of H_2SO_4 -

- (a) +5 (b) -5
(c) +6 (d) -6

Ans: (c) +6

Solve: Note:

$$(1 \times 2) + x + (-2) \times 4 = 0$$

$$2 + x - 8 = 0$$

$$x = 8 - 2 = 6$$

37. Which is the equation of probable velocity of gas?

- (a) $\alpha = \sqrt{\frac{3RT}{M}}$ (b) $\alpha = \sqrt{\frac{8RT}{\pi M}}$
(c) $\alpha = \sqrt{\frac{2RT}{M}}$ (d) $\alpha = \sqrt{\frac{2\pi RT}{M}}$

Ans: (c) $\alpha = \sqrt{\frac{2RT}{M}}$

38. What is the maximum tolerable value of 'As' in human body?

- (a) 0.01mgL^{-1} (b) 0.05mgL^{-1}
(c) 0.03mgL^{-1} (d) 0.07mgL^{-1}

Ans: (b) 0.05mgL^{-1}

39. Which organic compound was first produced in the laboratory?

- (a) CH_3OH (b) CH_3COOH
(c) $\text{CO}(\text{NH}_2)_2$ (d) CH_3NH_2

Ans: (c) $\text{CO}(\text{NH}_2)_2$

40. Which is the correct order of RX for $\text{S}_\text{N}1$?

- (a) $3^\circ > 2^\circ > 1^\circ > \text{CH}_3\text{X}$
(b) $3^\circ < 2^\circ < 1^\circ < \text{CH}_3\text{X}$
(c) $2^\circ > 3^\circ > 1^\circ > \text{CH}_3\text{X}$
(d) $1^\circ > 2^\circ > 3^\circ > \text{CH}_3\text{X}$

Ans: (a) $3^\circ > 2^\circ > 1^\circ > \text{CH}_3\text{X}$

41. What is the commercial name of propane-1,2,3-triol?

- (a) Sorbitol (b) Glycerin
(c) Glyoxal (d) Carboxylic acid

Ans: (b) Glycerin

42. Which polymer is used to make raincoat?

- (a) Polystyrene (b) Teflon
(c) Polyvinyl chloride (d) Polypropylene

Ans: (c) Polyvinyl chloride

43. What percentage of aqueous solution of methanal is called formalin?

- (a) 20% (b) 40%
(c) 17% (d) 6 – 10%

Ans: (b) 40%

44. Strength of acid does not depend on which one?

- (a) Dissociation constant of acid
(b) Size of positive ion of hydracid
(c) Oxidation state of central atom
(d) Nature of solvent

Ans: (b) Size of positive ion of hydracid

Solve: Note: The strength of the acid depends on - the size of negative ions of hydracid.

45. Which is the favorable temperature for NH_3 production?
 (a) $200^\circ - 300^\circ\text{C}$ (b) $300^\circ - 400^\circ\text{C}$
 (c) $400^\circ - 500^\circ\text{C}$ (d) $500^\circ - 600^\circ\text{C}$
Ans: (c) $400^\circ - 500^\circ\text{C}$
46. Which one is the example of sol?
 (a) Shampoo (b) Fog
 (c) Butter (d) Milk of magnesia
Ans: (d) Milk of magnesia
47. Which oxide is not present in normal glass used in windows?
 (a) Na_2O (b) CaO
 (c) SiO_2 (d) ZnO
Ans: (d) ZnO
48. If 5mg rider is used in chemical balance, what is the rider constant?
 (a) 0.1 mg (b) 0.0001mg
 (c) 0.0002mg (d) 0.00001g
Ans: (a) 0.1 mg
Solve: Note: $\frac{5\text{mg} \times 2}{100} = 0.1 \text{ mg}$
49. Which substance creates fire in contact with water?
 (a) NaCl (b) LiAlH_4
 (c) RMgX (d) CH_3Cl
Ans: (b) LiAlH_4
50. Which one is not a reducing agent?
 (a) CO (b) HBr
 (c) H_2S (d) MnO_2
Ans: (d) MnO_2
51. Which one is the Al^{3+} ion detection test in solution?
 (a) Test with Nessler solution
 (b) Test with NH_4OH solution
 (c) Test with potassium ferricyanide solution
 (d) Test with ammonium thiocyanate solution
Ans: (b) Test with NH_4OH solution
52. Which method is used in sugar production is industries?
 (a) Crystallization process
 (b) Sublimation process
 (c) Chromatography process
 (d) Fractional distillation process
Ans: (a) Crystallization process
53. Which group of elements are called marine salt producing elements?
 (a) Group- 15 (b) Group- 16
 (c) Group- 17 (d) Group- 18
Ans: (c) Group- 17
54. Which one is d-block element but not transition element?
 (a) Fe (b) Cr
 (c) Cu (d) Zn
Ans: (d) Zn
55. Which is the process of preparing curd from milk?
 (a) Hydrolysis (b) Fermentation
 (c) Coagulation (d) Oxidation
Ans: (c) Coagulation
56. A transistor is in common base connection. Its emitter flow is 0.85mA and base flow is 0.05mA. what is the current factor α amplification?
 (a) 0.49 (b) 0.94
 (c) 0.99 (d) 0.87
Ans: (b) 0.94
Solve: $\alpha = \frac{\Delta I_C}{\Delta I_E} = \frac{0.80}{0.85} = 0.94$
57. Which is not a vector quantity?
 (a) Mass (b) Acceleration
 (c) Force (d) Work
Ans: (d) Work
Solve: Note: Work is a scalar quantity.
58. The final velocity of an object having uniform acceleration from rest is _____ to the distance-
 (a) Proportional to the square
 (b) Inversely proportional to the square
 (c) Proportional to the square root
 (d) Inversely proportional to the square root
Ans: (c) Proportional to the square root
59. Which is the unit of moving/rotating force?
 (a) N-m (b) N
 (c) W (d) W-m
Ans: (a) N-m

60. The amount of work the highest at what angle between the force and the displacement?
 (a) 0° (b) 45°
 (c) 90° (d) 180°
Ans: (a) 0°
Solve: Note: If $\theta = 90^\circ$, the amount of work will be zero.
 If $\theta = 180^\circ$, the amount of work will be negative.
61. At what point of earth the value of g is the lowest?
 (a) Equator (b) North pole
 (c) South pole (d) Longitude
Ans: (a) Equator
62. What will be the change in gas viscosity when the absolute temperature is increased four times?
 (a) Increased by double
 (b) Increased by four times
 (c) Decreased by double
 (d) Decreased by four times
Ans: (a) Increased by double
63. What is the frequency of a second pendulum?
 (a) 2 Hz (b) 1 Hz
 (c) 0.5Hz (d) 1.5Hz
Ans: (c) 0.5Hz
Solve: Note: $f = \frac{1}{T} = \frac{1}{2} = 0.5\text{Hz}$
64. Which variable in Regnault's law of pressure of gas remains constant?
 (a) Temperature (b) Pressure
 (c) Volume (d) Internal energy
Ans: (c) Volume
65. What is called when symphony is produced between some sounds produced at a same time?
 (a) Harmony (b) Melody
 (c) Solo (d) Orchestra
Ans: (a) Harmony
66. In which thermodynamic process the value of entropy remains unchanged?
 (a) Isothermal process
 (b) Adiabatic process
 (c) Isovolumetric process
 (d) Isobaric process
Ans: (b) Adiabatic process
67. Which is an example of external combustion engine?
 (a) Petrol engine (b) Diesel engine
 (c) Steam engine (d) Thermal engine
Ans: (c) Steam engine
68. The meter bridge works based on-
 (a) Ampere's law
 (b) Wheatstone bridge principle
 (c) Fermat's principle
 (d) Kirchhoff's law
Ans: (b) Wheatstone bridge principle
69. Who is the founder of mechanics and lens formula?
 (a) Einstein (b) Huygens
 (c) Newton (d) Thomas Young
Ans: (c) Newton
Solve: Note:
 Einstein - The theory of relativity
 Higgins- The wave theory of light
 Thomas Young- Explanation of the interference of light
70. The power of a lens is -5D. What is the focal distance?
 (a) 20 cm (b) -20 cm
 (c) -30 cm (d) 50 cm
Ans: (b) -20 cm
Solve: $P = \frac{1}{f} \Rightarrow -5 = \frac{1}{f} \Rightarrow f = -\frac{1}{5} = -0.2 = -20 \text{ cm}$
71. Which ray is used in production of vitamin D in body?
 (a) Microwave (b) IR ray
 (c) UV ray (d) Gamma ray
Ans: (c) UV ray
72. What is the work function value of sodium?
 (a) 3.14eV (b) 2.30eV
 (c) 2.75eV (d) 4.74eV
Ans: (c) 2.75eV
73. Poisson's ratio is the characteristic of-
 (a) Liquid (b) Gas
 (c) Solid (d) Plasma
Ans: (c) Solid

74. Which is used as a dopant in a p-type semiconductor?

- (a) P (b) Bi
(c) As (d) Al

Ans: (d) Al

Solve: Note: Phosphorus, bismuth, arsenic are used as dopants in making n-type semiconductors.

75. What type of galaxies are the milky way and andromida?

- (a) Elliptical galaxy
(b) Spiral galaxy
(c) Non-uniform galaxy
(d) Radio galaxy

Ans: (b) Spiral galaxy

76. Which one is uncountable Noun?

- (a) Suitcase (b) Garment
(c) Information (d) Sight

Ans: (c) Information

Solve: Dictionary তে যেসব শব্দের plural form নাই যে সব শব্দ uncountable noun। যেমন: information.

77. The opposite of 'Accidental' is—

- (a) Intentional (b) Occupational
(c) Sensational (d) Chaotic

Ans: (a) Intentional

78. The passive form of-Who gave you this pen?

- (a) By whom was you given this pen?
(b) By whom have you been given this pen?
(c) By who were you given this pen?
(d) By whom were you given this pen?

Ans: (d) By whom were you given this pen?

Solve: প্রশ্নবোধক বাক্যে 'who' subject। তাই passive করার সময় who কে প্রথমেই by এর পরে whom (object) হিসেবে বসানো হয়। যেহেতু passive বাক্যটিও প্রশ্নবোধকই থাকে। তারপর Tense অনুযায়ী aux.v + object কে sub + v₃।

79. The idiom 'Bad blood' means—

- (a) Wrong blood (b) Enmity
(c) Friendship (d) Poisonous

Ans: (b) Enmity

Solve: "bad Blood" মানে মনোমালিন্য।

80. What time did he get home last night? Here 'home' is a/an-

- (a) Adjective (b) Noun
(c) Verb (d) Adverb

Ans: (d) Adverb

Solve: "Get home" থাকলে 'get' অর্থ হয় পৌছনো যা verb intransitive। Intransitive verb এর পরে adverb বসে/একানে 'home' adverb.

81. 'Diligent' is opposite of-

- (a) Active (b) Indolent
(c) Herald (d) Admire

Ans: (b) Indolent

82. ___ telephone has had ___ enormous impact on how we communicate.

- (a) The, an (b) The, a
(c) No article, an (d) a, an

Ans: (c) No article, an

Solve: Telephone কে যখন "system" হিসেবে দেখানো হয় তখন uncountable অর্থ একটি equipment হিসেবে দেখালে হয় তখন Countable। এখানে system হিসেবে দেখাতে হয়। তাই no article an হয়েছে।

83. "সে খুবই আবেগ প্রবণ"। What is the correct translation of the sentence?

- (a) He is very passionate.
(b) He is very emotional.
(c) He feels much emotion.
(d) Emotion touches him very much.

Ans: (a) He is very passionate.

84. He was absorbed ___ deep thought.

- (a) on (b) from
(c) to (d) in

Ans: (d) in

Solve: absorbed মানে নিমগ্ন। আর নিমগ্ন মানেই কোন কিছুতে অর্থাৎ in হয়।

85. The verb form of the noun 'Humanity' is-

- (a) Human (b) Humane
(c) Humanitarian (d) Humanize

Ans: (d) Humanize

Solve: ise/ize → suffix verb এর ক্ষেত্রে use হয়।

86. The correct spelling is-

- (a) Conscientious (b) Concientious
(c) Conscintous (d) Conscientous

Ans: (a) Conscientious

87. “তার পেশা কী?” The English translation of the sentence is —

- (a) What is he?
- (b) What is he doing?
- (c) What do he does?
- (d) What his occupation is?

Ans: (a) What is he?

Solve: সাধারণত ব্যক্তির ক্ষেত্রে who, whom বসে। কিন্তু what দ্বারা একটা ব্যক্তিকে refer করা মানে তার পেশা বোঝায়।

88. I still have ____ money.

- (a) a little
- (b) a few
- (c) little
- (d) the little

Ans: (a) a little

Solve: ‘money’ শব্দটা uncount তাই positive অর্থে a little আর negative অর্থে little বসে। এখানে positive অর্থে বাক্যটা use করা হয়েছে।

89. The engine _____ carbon di-oxide.

- (a) blows away
- (b) blows off
- (c) blows out
- (d) blows up

Ans: (b) blows off

90. Which is the best translation of the sentence?

“সকালে পাখিরা কিচিরমিচির করে”।

- (a) Birds twitter at dawn.
- (b) Birds shout at dawn.
- (c) Birds cry at dawn.
- (d) Birds how at dawn.

Ans: (a) Birds twitter at dawn.

91. Which Mughal Emperor named Bengal as ‘Jannatabad’?

- (a) Akbar
- (b) Humayun
- (c) Jahangir
- (d) Shahjahan

Ans: (b) Humayun

92. Who called Bangla as a hell rich in wealth?

- (a) Ibn Battuta
- (b) Hiuen Tsang
- (c) Fa-Hien
- (d) Megasthenes

Ans: (a) Ibn Battuta

93. When did the third war of Panipath take place?

- (a) 1526
- (b) 1556
- (c) 1756
- (d) 1761

Ans: (d) 1761

94. What were the Portuguese pirates called?

- (a) Harmad
- (b) Firingi
- (c) Borgi
- (d) Narmad

Ans: (a) Harmad

Solve: Remember: Marathas invading the Bengal were called Bargis.

95. Who was the first Chief Minister of undivided Bengal?

- (a) Mawlana Bhashani
- (b) Khaja Nazimuddin
- (c) Sher-e-Bangla A. K Fazlul Haq
- (d) Hossain Shahid Suhrawardy

Ans: (c) Sher-e-Bangla A.K Fazlul Haq

Solve: Remember: The last chief Minister of undivided Bengal was Hossain Shahid Suhrawardy.

96. Arm rescue operation after the liberation war is known as-

- (a) Operation Close Door
- (b) Operation Come Back
- (c) Operation Giving Back
- (d) Operation Jackpot

Ans: (a) Operation Close Door

97. Who used to read ‘Charampatra’ from the Shadhin Bangla Radio Center?

- (a) M.R.Akhter Mukul
- (b) Shahnaj Rahmatullah
- (c) Selina Parvin
- (d) M.A.Mannan

Ans: (a) M.R.Akhter Mukul

98. Where was Birsestha Ruhul Amin working during the liberation war?

- (a) Army
- (b) EPR
- (c) Navy
- (d) Airforce

Ans: (c) Navy

99. Liberation war based film-

- (a) Ora 11 jon
- (b) Jibon theke Newa
- (c) Dui Duari
- (d) E Desh Tomar Amar

Ans: (a) Ora 11 jon

Solve: Remember: Jibon theke neya- Language movement based film.

100. Who is the architect of the Liberation War based sculpture ‘Sangshaptak’?

- (a) Nitun Kundu
- (b) Shamim Shikdar
- (c) Mrinal Huque
- (d) Hamiduzzaman Khan

Ans: (d) Hamiduzzaman Khan

Dental Special Final Model Test-03

01. What % of CO₂ is transported as physical solution?
 (a) 5% (b) 12%
 (c) 65% (d) 27%
Ans: (a) 5%
Solve: Note: In the form of bicarbonate 65% and in the form of carbamino compounds 27% CO₂ is transported.
02. Which is not a facial bone?
 (a) Zygomatic (b) Vomer
 (c) Palatine (d) Temporal
Ans: (d) Temporal
Solve: Note: Temporal is a cranial bone.
03. In which layer of the small intestine are goblet cells present?
 (a) Mucosa (b) Serosa
 (c) Muscle layer (d) Submucosa
Ans: (a) Mucosa
04. What type of cartilage is found in Eustachian tube of the middle ear?
 (a) Hyaline cartilage
 (b) Elastic cartilage
 (c) White-fibrous cartilage
 (d) Calcified cartilage
Ans: (b) Elastic cartilage
05. The left and the right cerebellum is connected by-
 (a) Corpus callosum (b) Vermis
 (c) Aqueduct (d) Quadrigemina
Ans: (b) Vermis
Solve: Note: Corpus callosum- right cerebrum and left cerebrum.
06. Which part of the eyeball regulates the entry of light into the retina?
 (a) Cornea (b) Pupil
 (c) Eye lid (d) Conjunctiva
Ans: (b) Pupil
07. Which hormone plays a role in vitamin D activation?
 (a) Triiodothyronine (b) Thyroxin
 (c) Calcitonin (d) Parathormone
Ans: (d) Parathormone
08. What is called the process of formation of mobile sperms without spermatid division?
 (a) Spermatogenesis (b) Spermiogenesis
 (c) Oogenesis (d) Spermatolysis
Ans: (b) Spermiogenesis
09. Trachea is formed of _____ shaped cartilage-
 (a) C shape (b) S shape
 (c) V shape (d) U shape
Ans: (a) C shape
10. Which is the structural and functional unit of the bone?
 (a) Lamellae (b) Canaliculi
 (c) Osteon (d) Chondrion
Ans: (c) Osteon
Solve: Note: the structural and functional unit of the cartilage is Chondrion.
11. Which is an exception to the Mendel's law of independent assortment?
 (a) Incomplete dominance
 (b) Codominance
 (c) Lethal gene
 (d) Dominant epistasis
Ans: (d) Dominant epistasis
Solve: Note: The law of germ cell purity - incomplete dominance, codominance, lethal gene.
12. Sprain is mostly seen in-
 (a) Shoulder (b) Hip bone
 (c) Ankle (d) Elbow
Ans: (c) Ankle
13. Who is called the father of evolution?
 (a) Aristotle (b) Empedocles
 (c) Darwin (d) Lamarck
Ans: (b) Empedocles
14. Which one is a connecting layer of *hydra*?
 (a) Epidermis (b) Gastrodermis
 (c) Coelenteron (d) Mesoglea
Ans: (d) Mesoglea
15. Which one is the second largest phylum of the animal kingdom?
 (a) Arthropoda (b) Echinodermata
 (c) Mollusca (d) Nematoda
Ans: (c) Mollusca
Solve: Note: Largest phylum of the animal kingdom is Arthropoda.

16. How much time is required for blood circulation on one time in the body of a grasshopper?
 (a) 5–6 minute (b) 30–60 minutes
 (c) 100–110 minutes (d) 70–80 minutes
Ans: (b) 30–60 minutes
Solve: Note: The heartbeat of the grasshopper is 100–110 beats per minute.
17. How many types of teeth are present in adult human?
 (a) 4 (b) 3
 (c) 16 (d) 32
Ans: (a) 4
Solve: Note: Adult humans have incisor, canine, molar and premolar teeth.
18. Which is the smallest nematocyst of hydra?
 (a) Penetrant
 (b) Desmonim
 (c) Streptoline glutinant
 (d) Steroline glutinant
Ans: (d) Steroline glutinant
Solve: Note: The largest nematocyst of hydra is Penetrant.
19. What is the length of the heart of an adult?
 (a) 10 cm (b) 15 cm
 (c) 8 cm (d) 12 cm
Ans: (d) 12 cm
Solve: Note: The length of the heart is 12 cm and width is 8 cm.
20. Which phase of cell division is called the dynamic phase?
 (a) Metaphase (b) Anaphase
 (c) Prophase (d) Telophase
Ans: (b) Anaphase
Solve: Note:
 Middle phase- Metaphase
 Initial phase- Prophase
 Final phase- Telophase
21. Which bacteria is responsible for blight disease of paddy leaves?
 (a) *Agrobacterium tritici*
 (b) *Xanthomonas oryzae*
 (c) *Alternaria solani*
 (d) *Erwinia amylovora*
Ans: (b) *Xanthomonas oryzae*
Solve: Note: *Alternaria solani* – is responsible for the Late blight disease of potatoes.
22. What is called the non-protein part of the conjugated protein?
 (a) Apoenzyme (b) Prosthetic group
 (c) Co-factor (d) Co-enzyme
Ans: (b) Prosthetic group
Solve: Note: The nonprotein portion of the conjugated protein is called the apo enzyme.
23. What is the incubation period of *Plasmodium vivax*?
 (a) 12–20 days (b) 11–16 days
 (c) 8–15 days (d) 18–40 days
Ans: (a) 12–20 days
24. Which is found in the cytoplasm of photosynthetic bacteria?
 (a) Chromatophore (b) Chromoplast
 (c) Chloroplast (d) Pilli
Ans: (a) Chromatophore
25. Which hormone's other name is vasopressin?
 (a) FSH (b) TSH
 (c) PRL (d) ADH
Ans: (d) ADH
26. Which is not the correct characteristic of prothallus?
 (a) Multicellular (b) Autotrophic
 (c) Bisexual (d) Heterotrophic
Ans: (d) Heterotrophic
Solve: Note: Prothallus is autotrophic.
27. What type of aestivation is seen in the calyx of china-rose?
 (a) Open (b) Valvate
 (c) Vexillary (d) Imbricate
Ans: (b) Valvate
28. What type of vascular bundle is present in the stem of monocot plants?
 (a) Open collateral
 (b) Closed collateral
 (c) Bicollateral
 (d) Radial
Ans: (b) Closed collateral
Solve: Note: The vascular bundle in the root of monocot plants is radial.

29. Which is the first cell of female gametophyte?
 (a) Female spore
 (b) Ovule
 (c) Antipodal nucleus
 (d) Secondary nucleus
Ans: (a) Female spore
Solve: Note: the first cell of male gametophyte is the pollen.
30. Which is not the correct characteristic of plasmid?
 (a) Circular
 (b) Single stranded
 (c) DNA molecule
 (d) Contains less genes
Ans: (b) Single stranded
31. Which one is secondary standard substance?
 (a) $K_2Cr_2O_7$ (b) Na_2CO_3
 (c) $H_2C_2O_4 \cdot 2H_2O$ (d) $KMnO_4$
Ans: (d) $KMnO_4$
Solve: Note: secondary standard substances:
 $NaOH, HCl, H_2SO_4, KMnO_4, Na_2S_2O_3 \cdot 5H_2O$
32. Charge of 1 mol electron-
 (a) 96500 C (b) $1.603 \times 10^{-19} g$
 (c) $1.6605 \times 10^{-24} C$ (d) 94500 A
Ans: (a) 96500 C
33. Which one is discovered during alpha particle scattering test of Rutherford?
 (a) Nucleus (b) Proton
 (c) Electron (d) Dual nature of atom
Ans: (a) Nucleus
34. Number of total orbital in a sub-energy level?
 (a) $2l + 1$ (b) $2(2l + 1)$
 (c) $2l - 1$ (d) $2n^2$
Ans: (a) $2l + 1$
35. Which one is used to detect fake note and passport?
 (a) Infrared ray (b) Ultraviolet ray
 (c) Gamma ray (d) X-ray
Ans: (b) Ultraviolet ray
36. What is the number of p block elements at present?
 (a) 14 (b) 36
 (c) 41 (d) 27
Ans: (b) 36
37. Which is the most reactive stable metal?
 (a) Cs (b) K
 (c) Fr (d) Fe
Ans: (a) Cs
Solve: Note: most reactive metal is Fr.
38. Which series is created when the electron reaches the second energy level from higher energy level?
 (a) Lyman series (b) Paschen Series
 (c) Balmer Series (d) Brackett Series
Ans: (c) Balmer Series
39. Which is the unit of reaction rate?
 (a) $molL^{-1}s^{-1}$ (b) $Lmol^{-1}s^{-1}$
 (c) $mmolL^{-1}s^{-2}$ (d) $Latm^{-1}mol^{-1}s^{-1}$
Ans: (a) $molL^{-1}s^{-1}$
40. Which acid's central atom has the highest oxidation number?
 (a) H_2SO_3 (b) H_2SO_4
 (c) HNO_3 (d) $HClO_4$
Ans: (d) $HClO_4$
41. What is the pH of tear?
 (a) 6.6 – 7.6 (b) 6.6 – 6.9
 (c) 4.5 – 8.0 (d) 7.4 – 8.0
Ans: (a) 6.6 – 7.6
Solve: Note:
 Mother's milk: 6.6 – 6.9
 Urine: 4.5 – 8.0
 Blood: 7.4 – 8.0
42. Which is present as main component in Dabur Amla Hair oil?
 (a) Sunflower oil (b) Almond oil
 (c) Sesame oil (d) Coconut oil
Ans: (d) Coconut oil
Solve: Note: Herbal hair oil contains sunflower, almond and sesame oils.
43. Which one gives aldol condensation reaction?
 (a) CH_3CHO (b) $H - CHO$
 (c) C_6H_5CHO (d) $(CH_3)_3C - CHO$
Ans: (a) CH_3CHO

44. Which elastomer is used to make rubber bands?
 (a) Polybutadi-ene (b) Poly isoprene
 (c) Poly chloroprene (d) Neoprene
Ans: (a) Polybutadi-ene
45. What is the $C \equiv C$ bond distance of ethyne?
 (a) 0.105 nm (b) 0.120 nm
 (c) 0.109 nm (d) 0.106 nm
Ans: (b) 0.120 nm
46. Which one is not meta indicator group?
 (a) $-NO_2$ (b) $-CHO$
 (c) $-SO_3H$ (d) $-NH_2$
Ans: (d) $-NH_2$
Solve: Note: Ortho-para indicator group- NH_2, OH, Cl
47. Which is the main component of Dettol?
 (a) Chloroxylenol (b) Isopropyl alcohol
 (c) Terpineol (d) Soap water
Ans: (a) Chloroxylenol
48. Which is the suitable indicator in the titration of weak acid and strong base?
 (a) Litmus (b) Methyl orange
 (c) Methyl red (d) Phenolphthalein
Ans: (d) Phenolphthalein
49. Which one is used as a mobile phase in HPLC?
 (a) N_2 gas (b) Methanol + water
 (c) Alumina gel (d) Silicon gel
Ans: (b) Methanol + water
50. What is the electrochemical equivalent of hydrogen?
 (a) $0.001118 \text{ gcoul}^{-1}$
 (b) $0.000010447 \text{ gcoul}^{-1}$
 (c) $0.000329 \text{ gcoul}^{-1}$
 (d) $0.00001052 \text{ gcoul}^{-1}$
Ans: (b) $0.000010447 \text{ gcoul}^{-1}$
51. Which one is not correct?
 (a) $E^\circ_{\text{cell}} = E^\circ_{\text{anode(ox)}} + E^\circ_{\text{cathod(red)}}$
 (b) $E^\circ_{\text{cell}} = E^\circ_{\text{anode(ox)}} - E^\circ_{\text{cathod(ox)}}$
 (c) $E^\circ_{\text{cell}} = E^\circ_{\text{cathod(red)}} - E^\circ_{\text{anode(red)}}$
 (d) $E^\circ_{\text{cell}} = E^\circ_{\text{anode(ox)}} - E^\circ_{\text{cathod(red)}}$
Ans: (d) $E^\circ_{\text{cell}} = E^\circ_{\text{anode(ox)}} - E^\circ_{\text{cathod(red)}}$
52. Conductivity of an electrolyte and relative conductivity do not depend on which one?
 (a) Density of solution (b) Temperature
 (c) Nature of solvent (d) Size of ions
Ans: (a) Density of solution
53. Which one is used as a preservative?
 (a) $Ca(NO_3)_2$ (b) Formalin
 (c) Ether (d) $CaCO_3$
Ans: (b) Formalin
54. Which type of graph is obtained from Boyle's law?
 (a) Isotherm (b) Isobar
 (c) Isochore (d) Isotone
Ans: (a) Isotherm
Solve: Note: In the Charles' law- Isobar
55. Determine the pH of 0.025 M HCl solution.
 (a) 1.6 (b) 0.01
 (c) 0.6 (d) 2.6
Ans: (a) 1.6
Solve: $pH = -\log[H^+] = -\log(0.025) = 1.6$
56. What is commutative law vector algebra?
 (a) $\vec{A} + \vec{B} = \vec{B} + \vec{A}$
 (b) $(\vec{A} + \vec{B}) + \vec{C} = \vec{A} + \vec{B} + \vec{C}$
 (c) $m(\vec{A} + \vec{B}) = m\vec{A} + m\vec{B}$
 (d) $m(\vec{A} \times \vec{B}) = m\vec{A} \times m\vec{B}$
Ans: (a) $\vec{A} + \vec{B} = \vec{B} + \vec{A}$
57. What is the angle of dip if the value of horizontal and vertical components of geo magnetic field are same?
 (a) 45° (b) 30°
 (c) 90° (d) 60°
Ans: (a) 45°
Solve: $V = H \tan \theta \Rightarrow \tan \theta = \frac{V}{H} = 1 = \tan 45^\circ \therefore \theta = 45^\circ$
58. What amount of work is done per second by a motor having 60% efficiency and 100W power?
 (a) 20 J (b) 30 J
 (c) 50 J (d) 60 J
Ans: (d) 60 J
Solve: $P = 100 \times \frac{60}{100} = 60W = 60Js^{-1} = 60 J$

59. What is the angular velocity of hour hand of wrist watch?
 (a) $\frac{2\pi}{720} \text{ rad min}^{-1}$ (b) $\frac{\pi}{180} \text{ rads}^{-1}$
 (c) $\frac{\pi}{30} \text{ rads}^{-1}$ (d) $\frac{\pi}{21600} \text{ radmin}^{-1}$
Ans: (a) $\frac{2\pi}{720} \text{ rad min}^{-1}$
Solve: Note: $\omega = \frac{2\pi}{T} = \frac{2\pi}{12 \times 60} = \frac{2\pi}{720} \text{ rad min}^{-1}$
60. If momentum is increased up to 100%, what will be the change of kinetic energy?
 (a) 300% decrease (b) 300% increase
 (c) 400% decrease (d) 400% increase
Ans: (b) 300% increase
Solve: Note: $E' = \frac{1}{2}m(2v)^2 = 4 \times \frac{1}{2}mv^2 = 4E$
 $\therefore \Delta E = 4E - E = 3E$
 Percentage of increase = $\frac{3E}{E} \times 100\% = 300\%$
61. Saturated vapor pressure does not depend on-
 (a) Volume (b) Pressure
 (c) Temperature (d) Height
Ans: (a) Volume
62. What is the example of longitudinal wave?
 (a) Water wave
 (b) Wave in a stretched string
 (c) Sound wave
 (d) Light wave
Ans: (c) Sound wave
63. When several sounds one after other is pronounced and musical sound is created then it is called what?
 (a) Harmony (b) Melody
 (c) Solo (d) Orchestra
Ans: (b) Melody
64. What is the triple point temperature of water?
 (a) 273.61 K (b) 273.016 K
 (c) 273.16 K (d) 273.061 K
Ans: (c) 273.16 K
65. What will be the frequency of second pendulum in the space?
 (a) 0 Hz (b) 1 Hz
 (c) 2 Hz (d) Infinity
Ans: (a) 0 Hz
Solve: Note: Time period is infinite in the space. $\therefore \text{Frequency} = \frac{1}{\infty} = 0$
66. On which factor internal energy of a fixed amount of gas is dependent?
 (a) Heat (b) Temperature
 (c) Pressure (d) Volume
Ans: (b) Temperature
67. What is not the unit of electrical flux?
 (a) Wb (b) Tesla m^2
 (c) NA^{-1}m (d) NC^{-1}m^2
Ans: (d) NC^{-1}m^2
Solve: Note: Unit of electrical flux = $\text{Wb} = \text{Tm}^2 = \text{NA}^{-1}\text{m}^{-1} \times \text{m}^2 = \text{NA}^{-1}\text{m}$
68. Who discovered the Brownian movement theory?
 (a) Brownie (b) Huygens
 (c) Einstein (d) Heckle
Ans: (c) Einstein
69. What is called when force of a high magnitude of force acts for a very short duration?
 (a) Impulsive force (b) Impulse of force
 (c) Unit force (d) Force of unit
Ans: (a) Impulsive force
70. Where will be the angle of dip zero?
 (a) At the pole (b) At the equator
 (c) At longitude (d) At latitude
Ans: (b) At the equator
Solve: Note: The angle of dip at the pole = 90° .
71. What will be the position of image if object is placed more than $2f$ distance?
 (a) Focus plane
 (b) In between f and $2f$
 (c) More than $2f$ distance
 (d) Infinity
Ans: (b) In between f and $2f$
72. What wave spectrum is used for radio communication?
 (a) Radio wave (b) Microwave
 (c) Infra-red wave (d) UV ray
Ans: (b) Microwave
73. Angle between action and reaction force-
 (a) 0° (b) 45°
 (c) 90° (d) 180°
Ans: (d) 180°

74. The potential difference of two end of battery is 12 V. What will be the work done to carry an electron from one end to other?

- (a) 12 J (b) 30 J
(c) 5J (d) 24 J

Ans: (b) 30 J

Solve: $W = qV = 12 \times 2.5 = 30 \text{ J}$

75. Which element will not show any photo electric activity?

- (a) Sodium (b) Bromine
(c) Potassium (d) Gold

Ans: (b) Bromine

76. Which one is countable noun?

- (a) Song (b) Advice
(c) Corn (d) Journey

Ans: (a) Song

77. Choose the correct sentence.

- (a) The driver has been accusted for theft.
(b) The roads of Dhaka are better than Rajshahi.
(c) The roads of Dhaka is better than those of Rashahi
(d) The driver has been accused of theft.

Ans: (d) The driver has been accused of theft.

78. 'Once in a blue moon' means—

- (a) Full moon night (b) Very rarely
(c) On a moon lit night (d) Very often

Ans: (b) Very rarely

79. You had better ____ or you will miss the train.

- (a) hurried (b) hurry
(c) hurries (d) been hurried

Ans: (b) hurry

Solve: had better modal auxiliary তাই এর পরে verb এর base form হয়।

80. He talks as though ____.

- (a) he was a child
(b) he is a child
(c) he were a child
(d) he has been a child

Ans: (c) he were a child

Solve: 'as though' Conjunction দিয়ে যে বাক্য লেখা হয় তা unreal হয় তাই subject Singular থাকলেও তারপরে were বসে।

81. What is the synonym of 'Clandestine'?

- (a) Discreet (b) Rash
(c) Reckless (d) Adroit

Ans: (a) Discreet

82. "তার মনটা ভার ভার মনে হচ্ছে"। The english translation of the sentence is—

- (a) He looks rather gloomy.
(b) He looks festive.
(c) He looks gloomy.
(d) He looks idle.

Ans: (a) He looks rather gloomy.

83. 'Who broke the pencil'? The passive form of the sentence is —

- (a) By whom the pencil was broken?
(b) Who was broken the pencil?
(c) By whom is the pencil broken?
(d) By whom was the pencil broken?

Ans: (d) By whom was the pencil broken?

84. Choose the correct spelling.

- (a) Indegenus (b) Indiginous
(c) Indigenous (d) Indigeneous

Ans: (c) Indigenous

85. We must discourage people ____ throwing trash in public place.

- (a) for (b) into
(c) from (d) in

Ans: (c) from

86. Many a ____ tried to complete the works.

- (a) men has (b) men have
(c) man have (d) man has

Ans: (d) man has

87. 'He has done wrong.' Here wrong is a/an—

- (a) Noun (b) Verb
(c) Adjective (d) Adverb

Ans: (d) Adverb

88. What is the antonym of 'Tender'?

- (a) Tepid (b) Leonine
(c) Difficult (d) Hardened

Ans: (d) Hardened

89. Although he is poor, he is honest. (Make it simple)
 (a) Despite his poor, he is honest.
 (b) Despite his honesty, he is poor.
 (c) Despite his poverty, he is honest.
 (d) In spite of having poor, he is honest.
Ans: (c) Despite his poverty, he is honest.
Solve: 'Although' complex বাক্যে থাকলে preposition 'despite' use করে তারপর noun/noun phrase দিয়ে simple বাক্য করা হয়।
90. "I cannot but go". The correct translation of the sentence is –
 (a) আমি যাবই। (b) আমি না যেয়ে পারি না।
 (c) আমাকে যেতে হবে। (d) আমি যেতে পারি।
Ans: (b) আমি না যেয়ে পারি না।
91. Which drama is based on liberation war?
 (a) Kobor
 (b) Payer Awaj Paoa Jay
 (c) Ami Birangona Bolchi
 (d) Bangladesh Kotha Koy
Ans: (b) Payer Awaj Paoa Jay
92. Who was the finance minister of the Mujibnagar government?
 (a) A.H.M Kamruzzaman
 (b) Tajuddin Ahmed
 (c) Khondaker Moshtaq Ahmad
 (d) M.Mansur Ali
Ans: (d) M.Mansur Ali
Solve: Remember: Tajuddin Ahmed- Prime Minister
 Khandoker Moshtaq – Foreign Minister
 Kamruzzaman- Home Minister
93. In which sector did Lance Naik Nur Mohammad Sheikh fight in?
 (a) 2 (b) 5
 (c) 8 (d) 7
Ans: (c) 8
94. Historical 6 points are compared with what?
 (a) Magna Carta (b) Bill of Rights
 (c) Petition of Rights (d) Primary Law
Ans: (a) Magna Carta
95. When is the Martyred Intellectuals day?
 (a) 10th December (b) 21st November
 (c) 1st December (d) 14th December
Ans: (d) 14th December
96. What is the number of total accused in the Agartala conspiracy case?
 (a) 33 (b) 34
 (c) 35 (d) 36
Ans: (c) 35
Solve: Remember: Agartala conspiracy case was withdrawn on 22 February, 1969.
97. Who built the Basher Kella in Narikel Baria?
 (a) Titumir (b) Majnu Shah
 (c) Mahatma Gandhi (d) Surya Sen
Ans: (a) Titumir
Solve: Remember: This act was enabled on 26 July, 1856 by the endeavour of Ishwar Chandra vidyasagar.
98. Widow Marriage Law was passed in whose regime?
 (a) Lord Cornwallis (b) Lord Wellesley
 (c) Lord Bentinck (d) Lord Dalhousie
Ans: (d) Lord Dalhousie
99. Which Emperor is known as the 'Napoleon of India'?
 (a) Ashoka (b) Vijay Sen
 (c) Samudra Gupta (d) Akbar
Ans: (c) Samudra Gupta
100. Hiuen Tsang arrived in Bengal during whose reign?
 (a) Chandragupta Mourya
 (b) First Chandragupta
 (c) Second Chandragupta
 (d) Harshvardhan
Ans: (d) Harshvardhan

Dental Special Final Model Test-04

01. What type of chloroplast is found in *Spirogyra* cell?
 (a) Cup shaped (b) Spiral
 (c) Reticulated (d) Star shaped
Ans: (b) Spiral
Solve: Note:
Chlamydomonas- Cup shaped
Oedogonium - Reticulated
Zygnema- Star shaped
02. Which antibiotic provides resistance to the initiation of bacterial translation?
 (a) Chloromycin (b) Neomycin
 (c) Streptomycin (d) Erythromycin
Ans: (c) Streptomycin
03. In which sub phase of meiosis synapsis takes place between two homologous chromosomes?
 (a) Leptotene (b) Zygotene
 (c) Pachytene (d) Diplotene
Ans: (b) Zygotene
Solve: Note: Crossing over happens in the pachytene subphase.
04. What is called the protein part of the conjugated protein?
 (a) Apoenzyme (b) Prosthetic group
 (c) Co-factor (d) Co-enzyme
Ans: (a) Apoenzyme
Solve: Note: The nonprotein portion of the conjugated protein is called the prosthetic group.
05. How many lobes are there in the left lung?
 (a) 2 (b) 3
 (c) 8 (d) 10
Ans: (a) 2
06. Which is comma shaped bacteria?
 (a) *Spirillum minus*
 (b) *Rhizobium sp.*
 (c) *Candidatus savagella*
 (d) *Vibrio cholerae*
Ans: (d) *Vibrio cholerae*
Solve: Note:
 Spiral - *Spirillum minus*
 Polymorphic- *Rhizobium sp*
 Filamentous- *Candidatus savagella*
07. Which is not an emerging virus?
 (a) HIV (b) Ebola
 (c) SARS (d) Dengue
Ans: (d) Dengue
08. What is called the folded young leaf of fern?
 (a) Frond (b) Circinate
 (c) Crozier (d) Pinna
Ans: (c) Crozier
09. What type of placentation is found in *Oryza sativa*?
 (a) Marginal (b) Parietal
 (c) Superficial (d) Basal
Ans: (d) Basal
10. Which is an inactive vaccine?
 (a) Hepatitis-A (b) Mumps
 (c) Chicken pox (d) Tetanus
Ans: (a) Hepatitis-A
Solve: Note: Inactivated vaccines are influenza, cholera, polio, hepatitis A, rabies etc.
11. Which ion plays a role in opening of stomata in plant leaves?
 (a) Na^+ (b) K^+
 (c) Mg^{2+} (d) Ca^{2+}
Ans: (b) K^+
12. What is the respiratory quotient of malic acid?
 (a) 1 (b) 1.33
 (c) 0.71 (d) 4.33
Ans: (b) 1.33
Solve: Note: The respiratory rate of glucose is - 1
 The respiratory rate of oleic acid is- 0.71
13. Which plant does not reproduce by Sucker?
 (a) Banana (b) Pineapple
 (c) Shatamuli (d) Chandramollika
Ans: (c) Shatamuli
14. Who proposed the "Law of limiting factor"?
 (a) Blackman (b) Liebig
 (c) Morgan (d) Haberlandt
Ans: (a) Blackman

15. Which is not an excretory substance of plant cell?
 (a) Resin (b) Gum
 (c) Volatile oil (d) Nectar
Ans: (d) Nectar
16. Which animals have trochophore named larvae stage in the life style?
 (a) Mollusca (b) Annelida
 (c) Arthropoda (d) Cnidaria
Ans: (b) Annelida
17. Which artery provides blood to the tail region of Rohu fish?
 (a) Renal artery (b) Caudal artery
 (c) Iliac artery (d) Parietal artery
Ans: (b) Caudal artery
18. What is the normal bleeding time in human?
 (a) 4 – 5 min (b) 1 – 4 min
 (c) 5 – 6 min (d) 3 – 8 min
Ans: (b) 1 – 4 min
Solve: Note: Normally, the blood clotting time of a person is 3-8 minutes.
19. Which layer of the heart has a role in contraction and expansion?
 (a) Pericardium (b) Epicardium
 (c) Myocardium (d) Endocardium
Ans: (c) Myocardium
20. Which sinus is not found in human body?
 (a) Mandibular sinus (b) Frontal sinus
 (c) Ethmoid sinus (d) Sphenoid sinus
Ans: (a) Mandibular sinus
21. What is the normal value of creatinine in urine?
 (a) 2% (b) 0.05%
 (c) 0.07% (d) 0.02%
Ans: (c) 0.07%
22. How many cartilages are present in trachea?
 (a) 16-20 (b) 18-22
 (c) 19-29 (d) 14-15
Ans: (a) 16-20
23. Which is a paired cranial bone?
 (a) Frontal (b) Occipital
 (c) Sphenoid (d) Temporal
Ans: (d) Temporal
Solve: Note: paired cranial bones- Parietal, Temporal.
24. Which is known as the master gland?
 (a) Thyroid (b) Parathyroid
 (c) Pineal (d) Pituitary
Ans: (d) Pituitary
25. Which is a sensory nerve?
 (a) Vagus (b) Abducens
 (c) Vestibulocochlear (d) Trochlear
Ans: (c) Vestibulocochlear
Solve: Note: Sensory type nerves: olfactory, optic, vestibulocochlear.
26. Which one decreases the surface tension of the alveolar wall?
 (a) Collagen fiber
 (b) Surfactant
 (c) Trabeculae
 (d) Alveolar macrophage
Ans: (b) Surfactant
27. Which is not a bactericide?
 (a) Lysozyme (b) Spermin
 (c) Lacto peroxidase (d) Interferon
Ans: (d) Interferon
28. Which is used as nitrate explosive?
 (a) Glycogen (b) Cellobiose
 (c) Cellulose (d) Sucrose
Ans: (c) Cellulose
29. Which is not an ear bone?
 (a) Malleus (b) Incus
 (c) Stapes (d) Malleolus
Ans: (d) Malleolus
Solve: Note: Malleolus is a part of tibia.
30. Usual levels of creatinine in male blood is-
 (a) 0.6 – 1.2 mg/dl (b) 0.5 – 1.1 mg/dl
 (c) 6 – 12 mg/dl (d) 1.0 – 2.5 mg/dl
Ans: (a) 0.6 – 1.2 mg/dl
31. What is the concentration of centi molar solution?
 (a) 0.5M (b) 0.1M
 (c) 0.01M (d) 0.001M
Ans: (c) 0.01M
Solve: Note:
 Semi Molar- 0.5 M
 Deci Molar- 0.1 M
 Milli Molar- 0.001 M

32. Which one is used instead of H_2S gas in the qualitative analysis of inorganic salt in semimicro method?

- (a) Benzene (b) Thioacetamide
(c) Phenol (d) Acetone

Ans: (b) Thioacetamide

33. What is the maximum electron capacity of a principal energy shell?

- (a) n^2 (b) $2n^2$
(c) $2n + 1$ (d) $2n - 1$

Ans: (b) $2n^2$

34. Solubility of ionic compounds does not depend on which one?

- (a) Nature of solute (b) Nature of solvent
(c) Temperature (d) Concentration

Ans: (d) Concentration

35. Which ion shows violet color in the flame test?

- (a) Na^+ (b) K^+
(c) Ca^{2+} (d) Cu^{2+}

Ans: (b) K^+

Solve: Note: In the flame test-

Na^+ - Golden yellow

Ca^{2+} - Brick like red

Cu^{2+} - Bluish green

36. The element with 18 atomic number is located in which period of periodic table?

- (a) 3rd (b) 4th
(c) 5th (d) 6th

Ans: (a) 3rd

37. Which is the most inactive element after noble gas?

- (a) Nitrogen (b) Oxygen
(c) Fluorine (d) Hydrogen

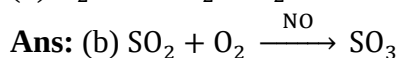
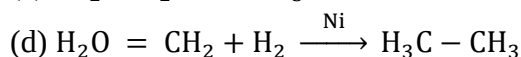
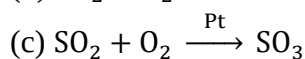
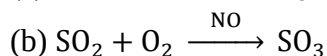
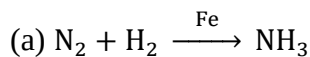
Ans: (a) Nitrogen

38. How many types of bonds are present in Na_2SO_4 compound?

- (a) 2 (b) 3
(c) 4 (d) 5

Ans: (b) 3

39. Which one is the example of homogenous catalysis?



40. Which one is included in neutral electrophile?

- (a) CH_3^+ (b) AlCl_3
(c) $\text{H}_2\ddot{\text{O}}$ (d) $\ddot{\text{N}}\text{H}_3$

Ans: (b) AlCl_3

41. Which one is chelating agent?

- (a) BHA (b) BHT
(c) TBHQ (d) EDTA

Ans: (d) EDTA

Solve: Note: The most commonly used chelating agent in industry is EDTA.

42. By which reaction 1°, 2°, 3° alcohols are produced?

- (a) Cannizzaro reaction
(b) Condensation reaction
(c) Isomerism reaction
(d) Grignard reagent reaction

Ans: (d) Grignard reagent reaction

43. Which one is not the main component of glass?

- (a) SiO_2 (b) CaO
(c) Na_2CO_3 (d) K_2CO_3

Ans: (d) K_2CO_3

44. What is the mole number of solute in 2.50M H_2SO_4 650 mL solution?

- (a) 1.625 mol (b) 0.25 mol
(c) 2.61 mol (d) 5.20 mol

Ans: (a) 1.625 mol

Solve: Mole number of solute in 1000mL 1M H_2SO_4 solution = 1 mol

∴ Mole number of solute in 650mL 2.50M

$$\text{H}_2\text{SO}_4 \text{ solution} = \frac{1 \times 650 \times 2.50}{1000 \times 1} = 1.625 \text{ mol}$$

45. In which condition most of the real gases will follow the laws of ideal gas?
 (a) High pressure & high temperature
 (b) High temperature & low pressure
 (c) Low temperature & high pressure
 (d) Low temperature & low pressure

Ans: (b) High temperature & low pressure

46. Which periodic property increases from left to right of the periodic table?

- (a) Ionization energy
 (b) Metallic property
 (c) Atomic radius
 (d) Basic nature of oxides

Ans: (a) Ionization energy

47. Which one is not a saturated fatty acid?

- (a) Propanoic acid (b) Stearic acid
 (c) Palmitic acid (d) Linoleic acid

Ans: (d) Linoleic acid

Solve: Note: Unsaturated fatty acids are: acrylic acid, oleic acid, linoleic acid.

48. Which is the identification reaction of ether?

- (a) Reaction with Lucas reagent
 (b) Reaction with PCl_5
 (c) Reaction with Grignard reagent
 (d) Acrolein test

Ans: (b) Reaction with PCl_5

49. Which one will be produced by the hydrolysis of calcium carbide?

- (a) Ethelene (b) Glycol
 (c) Carboxylic acid (d) Acetylene

Ans: (d) Acetylene

50. What is the formula of rust?

- (a) $\text{Fe}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$ (b) $\text{Fe}_3\text{O}_4 \cdot 3\text{H}_2\text{O}$
 (c) $\text{FeCl}_2 \cdot 3\text{H}_2\text{O}$ (d) $\text{FeO} \cdot 2\text{H}_2\text{O}$

Ans: (a) $\text{Fe}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$

51. What is the commercial name of 2,4,6-trinitro phenol?

- (a) Picric acid (b) Rubbing alcohol
 (c) Carboxylic acid (d) Dettol

Ans: (a) Picric acid

52. How many stereo isomers of glucose are possible?

- (a) 4 (b) 6
 (c) 10 (d) 16

Ans: (d) 16

Solve: Note: Asymmetric carbon number in glucose - 4

$\therefore$ Stereo isotopes possible = $2^4 = 16$

53. Which group is not chromophore?

- (a) Nitro group (b) Nitroso group
 (c) Azo group (d) Cyanide group

Ans: (d) Cyanide group

54. What is the internal resistance of lithium battery?

- (a) 60 ohms (b) 100 ohms
 (c) 90 ohms (d) 200 ohms

Ans: (b) 100 ohms

55. Which metal coating is given to protect iron from rust?

- (a) Zn (b) Pb
 (c) Hg (d) Ti

Ans: (a) Zn

56. What is called the distance between the projection and landing point?

- (a) Trajectory path
 (b) Range
 (c) Time of flight
 (d) Velocity of projection

Ans: (b) Range

57. Which vector has no specific direction?

- (a) Unit vector (b) Null vector
 (c) Reciprocal vector (d) Like vector

Ans: (b) Null vector

Solve: Remember: Null vector has no direction, it is denoted by $\vec{0}$

58. At what angle the horizontal range of a projectile is maximum?

- (a) 0° (b) 45°
 (c) 60° (d) 90°

Ans: (b) 45°

Solve: Note: $R_{\max} = \frac{v_0^2 \sin 90^\circ}{g} = \frac{v_0^2}{g}$

59. Which is the correct equation for angular momentum of circular motion?

- (a) $mr\omega$ (b) $mr^2\omega$
 (c) $mr\omega^2$ (d) $m^2r\omega$

Ans: (b) $mr^2\omega$

60. What is the active length of a second pendulum? [$g = 9.8\text{ms}^{-2}$]
 (a) 99m (b) 0.993cm
 (c) 0.9939mm (d) 0.9939m

Ans: (d) 0.9939m

Solve: $T = 2\pi\sqrt{\frac{L}{g}} \Rightarrow L = \frac{gT^2}{4\pi^2} = \frac{9.8 \times 2^2}{4 \times (3.14)^2} = 0.9939\text{m}$

61. What is the value of the escape velocity of Mars?
 (a) 2.4 km/s (b) 4.3 km/s
 (c) 5.0 km/s (d) 10.3 km/s

Ans: (c) 5.0 km/s

Solve: Note:

The escape velocity of Moon - 2.4 km/s

The escape velocity of Mercury - 4.3 km/s

The escape velocity of Venus- 10.3 km/s

62. Which is the unit of stress?
 (a) Nm^2 (b) Nm^{-2}
 (c) Nm (d) Nm^{-1}

Ans: (b) Nm^{-2}

Solve: Note: $P = \frac{F}{A} = \frac{N}{\text{m}^2} = \text{Nm}^{-2}$

63. Which is not the law for simple pendulum?
 (a) Law of time
 (b) Law of mass
 (c) Law of acceleration
 (d) Law of velocity

Ans: (d) Law of velocity

64. Who provided the superposition theory of waves?
 (a) Newton (b) Maxwell
 (c) Frenel (d) Huygens

Ans: (d) Huygens

65. Mass of a wheel is 5kg and the spherical radius relative to any axis is 0.2m. what is the moment of inertia?

- (a) 0.4 kgm^2 (b) 0.3 kgm^2
 (c) 0.2 kgm^2 (d) 0.01 kgm^2

Ans: (c) 0.2 kgm^2

Solve: $I = Mk^2 = 5 \times (0.2)^2 = 0.2\text{ kgm}^2$

66. Which thermodynamic variable remains constant in adiabatic process?
 (a) Heat (b) Temperature
 (c) Pressure (d) Volume

Ans: (a) Heat

67. What would be the change in force if the distance between two charges is made three times?

- (a) $\frac{1}{9}$ (b) 9
 (c) $\frac{1}{3}$ (d) 3

Ans: (a) $\frac{1}{9}$

Solve: Note: $F = C \frac{q_1 q_2}{(r)^2} = \frac{C q_1 q_2}{9}$

68. Shunt is a type of-
 (a) Resistance (b) Capacitor
 (c) Diode (d) Fuse

Ans: (a) Resistance

69. Which is not a paramagnetic substance?
 (a) Antimony (b) Sodium
 (c) Sodium chloride (d) Chromium

Ans: (c) Sodium chloride

Solve: Note: NaCl, Copper, silver, gold, etc. are examples of diamagnetic materials.

70. The value of minimum deviation does not depend on-
 (a) Material of the prism
 (b) Surrounding media
 (c) Angle of prism
 (d) Color of refracted light

Ans: (d) Color of refracted light

Solve: Note: The value of the minimum deviation depends on the color of the incident light.

71. Which electromagnetic wave is used in case of muscle pain and tension?
 (a) Microwave ray (b) IR ray
 (c) UV ray (d) Gamma ray

Ans: (b) IR ray

72. $1\text{ eV} = ?\text{ J}$
 (a) $6.7 \times 10^{-34}\text{ J}$ (b) $1.9 \times 10^{-31}\text{ J}$
 (c) $1.6 \times 10^{-31}\text{ J}$ (d) $1.6 \times 10^{-19}\text{ J}$

Ans: (d) $1.6 \times 10^{-19}\text{ J}$

73. Which is a charge neutral ray?
 (a) Alpha (b) Beta
 (c) Gamma (d) Cathode

Ans: (c) Gamma

Solve: Note: Alpha- with positive charge
 Beta- with negative charge

74. The centripetal acceleration of a vehicle is 1 ms^{-2} from the initial speed of 72 kmh^{-1} in a circular way, then what will be the radius of that circular way?

(a) 200 m (b) 300 m
(c) 400 m (d) 500 m

Ans: (c) 400 m

Solve: $a = \frac{v^2}{r} \therefore r = \frac{v^2}{a} = \frac{(20)^2}{1} = 400 \text{ m}$

75. At a definite volume, for a definite amount of mass of gas, pressure of gas is proportional to its absolute temperature. Who gave this law?

(a) Boyle's law (b) Charles's law
(c) Law of Regnault (d) Avogadro's law

Ans: (c) Law of Regnault

76. The appropriate proverb of- 'নানা মুনীর নানা মত'।

(a) Many men, many minds
(b) Many people, many views
(c) Many public, many opinion
(d) Many persons, many opinions

Ans: (a) Many men, many minds

77. The antonym of 'Clandestine' is-

(a) Revealed (b) Covert
(c) Secret (d) Concealed

Ans: (a) Revealed

Solve: Clandestine মানে 'চোরাগোষ্ঠ'। 'Revealed' ছাড়া বাকী সব word গুলো একই অর্থে use হয়েছে।

78. The indirect speech of-He said to me, "Whom do you want?"

(a) He asked me whom I had wanted.
(b) He asked me whom I have wanted.
(c) He asked me whom I wanted.
(d) He asked me if I wanted whom.

Ans: (c) He asked me whom I wanted.

Solve: Reported speech প্রশ্নবোধক হওয়ার indirect sentence এ reporting verb asked। আর wh- word থাকলে wh- word ই Conjunction হয় এবং conjunction এর পরে বাক্যটা assertive হয় ও tense change হয়।

79. The synonym of 'Genesis' is-

(a) Introduction (b) Beginning
(c) Preface (d) Forward

Ans: (b) Beginning

80. 'Throw cold water' means-

(a) Wash property (b) Punish
(c) Extinguish fire (d) Discourage

Ans: (d) Discourage

81. Bread and butter ___ my favourite breakfast.

(a) is (b) are
(c) were (d) has

Ans: (a) is

82. The Bengali translation of- "This is exactly what he wants".

(a) এটা তাই যা সে চাচ্ছে।
(b) এটাই সেটা যা সে চাচ্ছে।
(c) সে এটাই চাচ্ছে।
(d) সে যেটাই চাচ্ছে এটা সেটা।

Ans: (c) সে এটাই চাচ্ছে।

83. This is the man who is my brother. Here 'who' is-

(a) Distributive pronoun
(b) Personal pronoun
(c) Relative pronoun
(d) Reciprocal pronoun

Ans: (c) Relative pronoun

Solve: who এর পূর্বে noun বা pronoun থাকলে relative pronoun হয়।

84. He has assured me ___ safety.

(a) with (b) at
(c) of (d) for

Ans: (c) of

85. Choose the correct sentence.

(a) Rahim almost ate the whole fish.
(b) Almost Rahim ate whole fish.
(c) Rahim ate the whole fish almost.
(d) Rahim ate almost the whole fish.

Ans: (d) Rahim ate almost the whole fish.

Solve: যেই phrase/word কে modify করা হয় almost ঠিক তার পূর্বে বসে। এখানে 'the whole fish' কে modify করা হয়েছে তাই almost ঠিক পূর্বে বসেছে।

86. 'Light' is to 'Dark' as 'Cold' is to -

(a) Hot (b) Heat
(c) Cool (d) Winter

Ans: (a) Hot

87. Find out the correct sentence.
 (a) No one knows it.
 (b) No one know it.
 (c) Anyone does not know it.
 (d) Anyone do not knows it.
Ans: (a) No one knows it.
Solve: Anyone দিয়ে negative sentence হয় না। Affirmative ও interrogative sentence হয়। আর No one subject হিসেবে singular হয়।
88. Choose the correct passive form of-‘Who will do the work?’
 (a) Who will be done the work?
 (b) Who will done the work?
 (c) Whom will the work be done?
 (d) By whom will the work be done?
Ans: (d) By whom will the work be done?
89. Choose the correct spelling.
 (a) Acceomodate (b) Acomodate
 (c) Accommodate (d) Acmmmodate
Ans: (c) Accommodate
90. The plural form of ‘Genius’ is—
 (a) Genieses (b) Genii
 (c) Genis (d) Geniusus
Ans: (b) Genii
91. What is called the Arrest of Bangabandhu by Pakistani Army at midnight of 25th March?
 (a) Operation Bigbird
 (b) Operation Jackpot
 (c) Operation Chengiz Khan
 (d) Operation Searchlight
Ans: (a) Operation Bigbird
92. Who established the independent Gaur kingdom?
 (a) Samudragupta (b) Shashanka
 (c) Harshvardhan (d) Lakshman Sen
Ans: (b) Shashanka
93. When was Mughal Empire established?
 (a) 1161 (b) 1326
 (c) 1526 (d) 1556
Ans: (c) 1526
Solve: Remember: Emperor Babar established the Mughal empire.
94. Who cancelled the partition of Bengal?
 (a) Lord Canning (b) Lord Hardinge
 (c) Lord Curzon (d) Lord Minto
Ans: (b) Lord Hardinge
Solve: Remember: Partition of Bengal – Lord Curzon- 1905
 Cancellation of partition of Bengal – Lord Hardinge-1911
95. When was the first International Mother Language Day celebrated?
 (a) 1998 (b) 1999
 (c) 2000 (d) 2001
Ans: (c) 2000
96. Who presided the oath taking ceremony of the Mujibnagar government?
 (a) Professor Yusuf Ali
 (b) Humayun Rashid Chowdhury
 (c) Sayed Nazrul Islam
 (d) Abdul Mannan
Ans: (d) Abdul Mannan
97. Bangladesh was divided into how many sectors during the Liberation war?
 (a) 10 (b) 11
 (c) 15 (d) 64
Ans: (b) 11
98. Which is a magazine during the time of the liberation war?
 (a) Sainik (b) Bir Shena
 (c) Joy Bangla (d) New Nation
Ans: (c) Joy Bangla
99. Engineer Artificer Ruhul Amin fought in which sector?
 (a) 7 (b) 9
 (c) 10 (d) 11
Ans: (c) 10
100. Who is the architect of ‘Oporajeyo Bangla’?
 (a) Syed Abdullah Khaled
 (b) Hamiduzzaman Khan
 (c) Shamim Shikder
 (d) Mrinal Haque
Ans: (a) Syed Abdullah Khaled

Dental Special Final Model Test-05

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| <p>01. Who is called the father of Botany?
 (a) Aristotle (b) Theophrastus
 (c) Linnaeus (d) Hutchinson
 Ans: (b) Theophrastus
 Solve: Note: The father of Zoology is Aristotle.</p> <p>02. Erythropoietin hormone is made in-
 (a) Lung (b) Pancreas
 (c) Kidney (d) Brain
 Ans: (c) Kidney</p> <p>03. Where does the hepatic schizogony of malarial parasite occur?
 (a) Lumen of crop of the mosquito
 (b) Between the two layers of crop
 (c) Liver
 (d) Red blood cell
 Ans: (c) Liver</p> <p>04. Which lipid helps in blood coagulation?
 (a) Tarpenes (b) Sulfolipid
 (c) Steroid (d) Phospholipid
 Ans: (d) Phospholipid</p> <p>05. Which one is not a polysaccharide?
 (a) Starch (b) Cellulose
 (c) Raffinose (d) Chitin
 Ans: (c) Raffinose
 Solve: Note: Raffinose is oligosaccharide.</p> <p>06. How much energy is produced from anaerobic respiration?
 (a) 10 kcal (b) 20 kcal
 (c) 50 kcal (d) 100 kcal
 Ans: (b) 20 kcal</p> <p>07. Which is the example of amphitropous ovule?
 (a) Opium (b) Mustard
 (c) Bean (d) Kalkasunda
 Ans: (a) Opium
 Solve: Note: Campylotropous- Mustard, Kalkasunda.
 Anatropous- Bean, castor bean.</p> | <p>08. Which of the following scientists proposed cell cycle?
 (a) Howard and Pelc
 (b) Farmer and Moore
 (c) Strasburger
 (d) Walter Flemming
 Ans: (a) Howard and Pelc</p> <p>09. Which one is a water soluble vitamin?
 (a) Vitamin-K (b) Vitamin-D
 (c) Vitamin-B (d) Vitamin-A
 Ans: (c) Vitamin-B
 Solve: Note: water soluble vitamins are- B, C.</p> <p>10. Which bacteria causes nitrogen fixation in the nodules of root of bean like plants?
 (a) <i>Rhizobium</i> (b) <i>Azotobactor</i>
 (c) <i>Pseudomonus</i> (d) <i>Nitrosomonas</i>
 Ans: (a) <i>Rhizobium</i></p> <p>11. Which one is not an unpaired bone?
 (a) Frontal (b) Ethmoid
 (c) Parietal (d) Sphenoid
 Ans: (c) Parietal
 Solve: Note: Paired bones of cranium- Temporal, Parietal.</p> <p>12. Which is not a process of recombinant DNA identification?
 (a) PCR process
 (b) Restriction digestion process
 (c) Genetic probe process
 (d) Cloning process
 Ans: (d) Cloning process</p> <p>13. Which is not an example of a submerged aquatic plant?
 (a) Hydrilla (b) Water lily
 (c) Leafy moss (d) Najas
 Ans: (b) Water lily</p> <p>14. What is the % of sucrose in sugar-cane juice?
 (a) 10% (b) 15%
 (c) 20% (d) 28%
 Ans: (b) 15%</p> |
|--|--|

15. Which one is not a part of mid brain?
 (a) Cerebral peduncle
 (b) Cerebral aqueduct
 (c) Medulla oblongata
 (d) Corpora quadrigemina
Ans: (c) Medulla oblongata
Solve: Note: Medulla oblongata, pons, cerebellum are part of the hind brain.
16. Which is the fate of ectoderm?
 (a) Pituitary gland
 (b) Thyroid gland
 (c) Middle ear
 (d) Respiratory system
Ans: (a) Pituitary gland
17. Which one is bilateral symmetrical animal?
 (a) *Hydra* (b) Sea anemone
 (c) Snail (d) Butterfly
Ans: (d) Butterfly
Solve: Note: Radial symmetric- *Hydra*, Sea Anemon
 Asymmetric – snail.
18. Which one is not a component of first line defense of human?
 (a) Skin (b) Phagocyte
 (c) Cilia (d) Serumen
Ans: (b) Phagocyte
Solve: Note: Phagocytosis is a component of second line of defense.
19. What is called algae stuck in the underwater soil?
 (a) Benthick algae (b) Lithophyte
 (c) Endophyte (d) Phytoplankton
Ans: (a) Benthick algae
20. Which one is a part of respiratory region?
 (a) Larynx
 (b) Trachea
 (c) Respiratory bronchiole
 (d) Terminal bronchiole
Ans: (c) Respiratory bronchiole
21. Cranium is made of how many bones?
 (a) 29 bones (b) 24 bones
 (c) 8 bones (d) 14 bones
Ans: (a) 29 bones
Solve: Note: Facial bones = 14
 Cranial bones = 8
22. Head of humerus is attached to-
 (a) Acetabulum
 (b) Supraspinous fossa
 (c) Acromial process
 (d) Glenoid cavity
Ans: (d) Glenoid cavity
Solve: Note: Head of femur is attached to the Acetabulum.
23. Which hormone is not secreted from islets of Langerhans?
 (a) Glucagon (b) Insulin
 (c) Somatostatin (d) Pepsin
Ans: (d) Pepsin
24. Which is the smallest bone of human body?
 (a) Malleus (b) Incus
 (c) Eustachian tube (d) Stapes
Ans: (d) Stapes
Solve: Note: The largest bone of human body is- Femur.
25. *Hydra* uses which method to travel a long distance?
 (a) Looping (b) Somersaulting
 (c) Floating (d) Crawling
Ans: (a) Looping
Solve: Note: The way *Hydra* travels over short distances - Somersaulting.
26. Which one is not a chamber of eyeball?
 (a) Anterior chamber (b) Posterior chamber
 (c) Vitreous chamber (d) Aqueous chamber
Ans: (d) Aqueous chamber
27. Which scientist first notice the spider web formation?
 (a) Hans Peters (b) Lorenz
 (c) Darwin (d) Pavlov
Ans: (a) Hans Peters
28. How much gastric juice is produced per day by an adult human?
 (a) 1200 ml (b) 1500 ml
 (c) 1800 ml (d) 2000 ml
Ans: (a) 1200 ml
29. Intermediate stage in between two moulting process is called –
 (a) Ecdysis (b) Instar
 (c) Gena (d) Stadium
Ans: (b) Instar

30. Complication caused by low blood pressure is called –
 (a) Angina (b) Syncope
 (c) MI (d) Encephalopathy
Ans: (b) Syncope
31. Which one is the trade name of ammonium chloride?
 (a) Camphor
 (b) Nushadir salt (Nishadol)
 (c) Naphthalene
 (d) Niter
Ans: (b) Nushadir salt (Nishadol)
32. What is the reduction potential of copper electrode?
 (a) +0.76 V (b) +0.34 V
 (c) -1.1 V (d) -0.74 V
Ans: (b) +0.34 V
Solve: Note: The reduction potential of Zn = -0.76V
33. Which protein is found in the RBC of blood?
 (a) Albumin (b) Haemoglobin
 (c) Myoglobin (d) Casein
Ans: (b) Haemoglobin
34. Which one is used as a catalyst of formation of polythene from ethylene?
 (a) O₂ (b) H₂SO₄
 (c) SiO₂ (d) Fe
Ans: (a) O₂
35. Which of the following halide is very stable?
 (a) NCl₃ (b) NF₃
 (c) NBr₃ (d) NI₃
Ans: (b) NF₃
36. Which one is used for the production of shampoo and shaving cream?
 (a) Sodium soap (b) Calcium soap
 (c) Potassium soap (d) Magnesium soap
Ans: (c) Potassium soap
37. Which is not characteristic of S_N2 reaction?
 (a) Occurs more in 1° halide
 (b) Occurs in two stage
 (c) It is of second order
 (d) Carbonium ion is not created
Ans: (b) Occurs in two stage
38. Which is used to detect brain damage of newborn baby?
 (a) Near – IR (b) Middle – IR
 (c) Far – IR (d) X – Ray
Ans: (a) Near – IR
39. Which cation has the probability of being chargeless in cathode is more?
 (a) Zn²⁺ (b) Fe²⁺
 (c) Sn²⁺ (d) Pb²⁺
Ans: (a) Zn²⁺
Solve: Note: The probability of being chargeless: Pb²⁺ > Sn²⁺ > Fe²⁺ > Zn²⁺
40. Which one is produced due to hydration of acetylene in the presence of 2% HgSO₄ and 20% H₂SO₄?
 (a) Aldehyde (b) Phenol
 (c) Ether (d) Amine
Ans: (a) Aldehyde
41. Which one is correct?
 (a) ClO⁻ → Chromate ion
 (b) ClO₃⁻ → Chlorate ion
 (c) ClO₄⁻ → Chlorite ion
 (d) ClO₂⁻ → Perchlorate ion
Ans: (b) ClO₃⁻ → Chlorate ion
Solve: Note:
 ClO⁻ → Hypo Chlorite
 ClO₃⁻ → Chlorate
 ClO₄⁻ → Perchlorate
 ClO₂⁻ → Chlorite
42. Which one is used to remove peroxide from ether?
 (a) FeSO₄ (b) Na₂SO₄
 (c) NaOH (d) HCl
Ans: (a) FeSO₄
43. A layer of which one of the following is given in electrolysis method to different metals?
 (a) Mg (b) Al
 (c) Cr (d) Cu
Ans: (c) Cr
44. Which is not correct for Super critical CO₂?
 (a) Temperature is 31.25°C
 (b) Pressure is 72.9 atm
 (c) It is one type of gas
 (d) It works as oxidizing agent
Ans: (c) It is one type of gas

45. What is the melting point of benzoic acid?
 (a) 65°C (b) 121 °C
 (c) 801 °C (d) 700 °C
Ans: (b) 121 °C
46. At 27°C the volume of a definite amount of air is 500 cm³. If the pressure of air is static, at what temperature the volume of that air will be double?
 (a) 227°C (b) 127°C
 (c) 327°C (d) 427°C
Ans: (c) 327°C
Solve: $\frac{V_1}{T_1} = \frac{V_2}{T_2} \therefore T_2 = \frac{V_2 \times T_1}{V_1} = \frac{2 \times 500 \times 300}{500} = 600\text{K} = (600 - 273)^\circ\text{C} = 327^\circ\text{C}$
47. If $n=3$ according to $(4n+2)$, What it indicates?
 (a) Benzene (b) Anthracin
 (c) Napthalene (d) Furan
Ans: (b) Anthracin
48. What is the range of heterosphere?
 (a) 11 – 30 km (b) 15 – 85 km
 (c) 85 – 10,000 km (d) 100 – 12000 km
Ans: (c) 85 – 10,000 km
49. Which one is reduction reaction?
 (a) $\text{Fe}^{3+} + \text{e}^- \rightarrow \text{Fe}^{2+}$ (b) $\text{Na} \rightarrow \text{Na}^+ + \text{e}^-$
 (c) $\text{H}_2 \rightarrow 2\text{H}^+ + 2\text{e}^-$ (d) $\text{Fe}^{2+} \rightarrow \text{Fe}^{3+} + \text{e}^-$
Ans: (a) $\text{Fe}^{3+} + \text{e}^- \rightarrow \text{Fe}^{2+}$
50. Molecules having Vander Wales attraction force is which type?
 (a) Polar covalent
 (b) Non-polar covalent
 (c) Ionic
 (d) Dipole
Ans: (b) Non-polar covalent
51. What number of molecules are present in 11 g CO₂?
 (a) 1.5054×10^{22} (b) 15.054×10^{23}
 (c) 1.5055×10^{23} (d) 1.5054×10^{24}
Ans: (c) 1.5055×10^{23}
Solve: Number of molecules in 44g CO₂ = 6.022×10^{23}
 $\therefore$ Number of molecules in 11g CO₂ = $\frac{6.022 \times 10^{23} \times 11}{44} = 1.5055 \times 10^{23}$
52. How many lone pair electrons are present in NH₃?
 (a) 1 pair (b) 2 pairs
 (c) 3 pairs (d) 5 pairs
Ans: (a) 1 pair
53. Allcane is produced due to reaction of Grignard reaction with which one?
 (a) R – X (b) R – OH
 (c) H₂O (d) HCHO
Ans: (c) H₂O
54. Which one of the following gives golden yellow colour in flame test?
 (a) Na⁺ (b) K⁺
 (c) Pb²⁺ (d) Ca²⁺
Ans: (a) Na⁺
Solve: Note:
 K⁺ - Violet
 Pb²⁺ - Whiteish blue
 Ca²⁺ - Brick like red
55. Which one is the formula of vinyl group?
 (a) CH₂ = CH –
 (b) CH₂ = CH – CH₂ –
 (c) NH₂ – NH₂
 (d) CN –
Ans: (a) CH₂ = CH –
Solve: Note:
 NH₂ – NH₂ – Hydrazoic acid
 CN – Cyanide
56. What is the relation between angular momentum and angular velocity?
 (a) $L = \vec{p} \times \vec{r}$ (b) $\vec{v} = \vec{\omega} \times \vec{r}$
 (c) $L = I\omega$ (d) $\omega = IL$
Ans: (c) $L = I\omega$
57. What is the value of Planck's constant?
 (a) 6.63×10^{-34} Js (b) 6.36×10^{-30} Js
 (c) 6.6×10^{-32} Js (d) 6.36×10^{-34} Js
Ans: (a) 6.63×10^{-34} Js
58. What is the unit of strain?
 (a) kgm⁻³ (b) kgms⁻¹
 (c) ms⁻² (d) Has no unit
Ans: (d) Has no unit

59. What is the angle between two vectors to get the maximum resultant value?

- (a) 0° (b) 90°
(c) 180° (d) 120°

Ans: (a) 0°

Solve: $R_{\max} = \sqrt{P^2 + Q^2 + 2PQ\cos 0^\circ} = P + Q. \therefore \theta = 0^\circ$

60. What is the value of γ for He gas?

- (a) 1.67 (b) 1.33
(c) 1.17 (d) 1.40

Ans: (a) 1.67

Solve: For monoatomic gases $\gamma=1.67$, for diatomic gases, $\gamma = 1.40$, for triatomic gases, $\gamma = 1.33$. He is a monoatomic gas.

61. In case of concave lens if the object is in infinity then image will be-

- (a) Imaginary, invested, smaller
(b) Imaginary, straight, smaller
(c) Imaginary, invested, magnified
(d) Real, straight, smaller

Ans: (b) Imaginary, straight, smaller

62. What is the straight line that passes through the center of curvature and the pole of a curved mirror?

- (a) Polar point (b) Main axis
(c) Radius of curvature (d) Main focus

Ans: (b) Main axis

63. What is the special property of liquid elements?

- (a) Ductility (b) Elasticity
(c) Surface tension (d) Viscosity

Ans: (c) Surface tension

Solve: Note: The special property of solids is elasticity.

64. Which scientist discovered the idea to centralize rays by a spherical mirror to make fire?

- (a) Archimedes (b) Thales
(c) Newton (d) Einstein

Ans: (a) Archimedes

65. The focal length of a lens used in a microscope is 0.15m. The minimum distance for clear vision is 0.25m, what is the magnification?

- (a) 2.667 (b) 3.667
(c) 4.667 (d) 5.667

Ans: (a) 2.667

Solve: $m = 1 + \frac{D}{f} = 1 + \frac{0.25}{0.15} = 2.667$

66. Which capacitor is mostly used in radio?

- (a) Paper capacitor
(b) Electrolytic capacitor
(c) Constant capacitor
(d) Changeable capacitor

Ans: (b) Electrolytic capacitor

67. Which one is not an example of contact force?

- (a) Friction force
(b) Pulling force
(c) Molecular force
(d) Force due to friction

Ans: (c) Molecular force

68. A person throw a ball at straight forward in above in 48. 0 ms^{-1} . How much time it will stay in space?

- (a) 9.8 s (b) 7.2s
(c) 2.7 s (d) 8.9s

Ans: (a) 9.8 s

Solve: $T = \frac{2v_0}{g} = \frac{2 \times 48.0}{9.8} = 9.8\text{s}$

69. Which is not the property of entropy?

- (a) Natural quantity
(b) A physical property of object
(c) Remains constant in isothermal process
(d) SI unit is joule/ kelvin

Ans: (c) Remains constant in isothermal process

Solve: Note: Entropy remains constant in adiabatic process.

70. How many times is the speed of red light than violet light in glass?

- (a) 1.3 times more (b) 1.4 times more
(c) 1.9 times more (d) 1.8 times more

Ans: (d) 1.8 times more

71. Which one is an example of insulator?

- (a) Gold (b) Silver
(c) Glass (d) Copper

Ans: (c) Glass

72. What is the value of g at poles?

- (a) 9.832 ms^{-2} (b) 9.80 ms^{-2}
(c) 9.790 ms^{-2} (d) 9.735 ms^{-2}

Ans: (a) 9.832 ms^{-2}

73. What is the moment of inertia of the axis that passes through a narrow and uniform rods terminal and of its length perpendicularly?

- (a) $I = \frac{1}{3} Ml^2$ (b) $I = \frac{1}{2} Mr^2$
(c) $I = \frac{Ml^2}{12}$ (d) $I = \frac{1}{3} Ml$

Ans: (a) $I = \frac{1}{3} Ml^2$

Solve: Note: Through the center of gravity axis $= \frac{1}{12} ml^2$.

74. Which is not a feature of musical sound?

- (a) Has self timbre
(b) Has two characteristics
(c) Caused by regular vibration
(d) Melodious

Ans: (b) Has two characteristics

Solve: Note: Musical sound has three characteristics.

75. Methods of x-ray production are-

- (a) 5 (b) 6
(c) 3 (d) 7

Ans: (c) 3

76. The correct translation of- “বর্ষা শুরু হয়েছে”।

- (a) The rains has set in.
(b) The rains have set in.
(c) The rains have set on.
(d) The rains has set out.

Ans: (b) The rains have set in.

Solve: rain সাধারণত uncountable কিন্তু কিছু দেশে নির্দিষ্ট ঋতুতে বর্ষাকাল আরম্ভ হওয়া বোঝাতে ‘the rain’ plural ব্যবহার করা হয়।

77. What is the antonym of ‘Immense’?

- (a) Vast (b) Minute
(c) Massive (d) Banal

Ans: (b) Minute

78. Which one is a correct sentence?

- (a) The gold is a precious metal.
(b) A gold is a precious metal.
(c) Gold is a precious metal.
(d) Gold is precious metal.

Ans: (c) Gold is a precious metal.

Solve: উপাদান বাচক noun subject হলে তার সাথে article হয় না।

79. ‘To read between the line’ means—

- (a) To read carefully
(b) To read only some lines
(c) To read quickly to save time
(d) To read carefully to find out any hidden meaning

Ans: (d) To read carefully to find out any hidden meaning

80. ‘Relevant’ is similar to—

- (a) Extraneous (b) Harsh
(c) Germane (d) Stingy

Ans: (c) Germane

81. The antonym of ‘Genesis’ is—

- (a) Termination (b) Launching
(c) Genocide (d) Futile

Ans: (a) Termination

82. _____ you go to the cinema last night?

- (a) Do (b) Have
(c) Did (d) Was

Ans: (c) Did

Solve: ‘Last night’ উল্লেখ থাকলে past indefinite হয়।

83. The correct proverb of- “যারে দেখতে নারি তার চলন বাঁকা।”

- (a) Faults are thick where love is thin.
(b) To act on the spur of the movement.
(c) Blessing are not valued till they are gone.
(d) Pain is forgotten where gain follows.

Ans: (a) Faults are thick where love is thin.

84. Choose the correctly spelt word.

- (a) Lieutenant (b) Leisure
(c) Neumonia (d) Accomodation

Ans: (b) Leisure

85. He cut ____ slice of cake for me.

- (a) of (b) up
(c) off (d) down

Ans: (c) off

Solve: 'বিচ্ছিন্ন' বা 'বিযুক্ত' করা অর্থে 'off' ব্যবহার করা হয়।

86. He is endowed ____ talents.

- (a) against (b) in
(c) for (d) with

Ans: (d) with

Solve: Endowed মানে 'ভূষিত' অর্থাৎ কোন কিছু দিয়ে, সেই অর্থে with বসে।

87. My father never approved of ____ a foreigner.

- (a) her to marry (b) her marrying
(c) she marrying (d) she to marry

Ans: (b) her marrying

88. Choose the correct sentence.

- (a) A few of the boys got a prize.
(b) Every of the boy got a prize.
(c) All of the three boys got prize.
(d) Each of the three boys got a prize.

Ans: (d) Each of the three boys got a prize

89. They prefer ____ to listening.

- (a) to speak (b) to speaking
(c) speak (d) speaking

Ans: (d) speaking

90. The appropriate translation of-"তুমি কী আজ রাতে আসবে?"

- (a) Will you come tonight?
(b) Will you come today night?
(c) Will you come this night?
(d) Will you come present night?

Ans: (a) Will you come tonight?

91. Which is the birthday of Bangabandhu?

- (a) 17 March, 1921 (b) 8 August, 1920
(c) 21 March, 1917 (d) 17 March, 1920

Ans: (d) 17 March, 1920

92. When the battle of Palashi took place?

- (a) 23 June, 1756 (b) 23 June, 1757
(c) 23 July, 1757 (d) 23 June, 1857

Ans: (b) 23 June, 1757

93. Who authored the novel 'Hangor Nodi Grenade' based on Liberation War?

- (a) Chashi Nazrul Islam
(b) Selina Hossain
(c) Syed Shamsul Haque
(d) Anowar Pasha

Ans: (b) Selina Hossain

Solve: Remember: In 1997, Chashi Nazrul Islam made a film of same title based in this novel.

94. When Sergeant Zahurul Haque was killed during the mass uprising?

- (a) 20 January, 1969 (b) 24 January, 1969
(c) 15 February, 1969 (d) 18 February, 1969

Ans: (c) 15 February, 1969

95. Who first published the news of the brutality of Pakistani invading forces?

- (a) Simon Dring
(b) Pandit Rabishankar
(c) Anthony Mascarenhas
(d) Allen Ginsberg

Ans: (a) Simon Dring

96. The first mention of the name Banga is found in which book?

- (a) Oiterio aronnok (b) Indika
(c) Arthashastro (d) Kitabul Rehala

Ans: (a) Oiterio aronnok

97. Who is the founder of Muslim League?

- (a) Sheikh Mujibur Rahman
(b) Nawab Salimullah
(c) Aiub Khan
(d) Hossain Shahid Suhrawardy

Ans: (b) Nawab Salimullah

98. Who was the first martyr among the Birshresthas?

- (a) Sipahi Mustafa Kamal
(b) Captain Mohiuddin Jahangir
(c) Lance Naik Munsir Abdur Rouf
(d) Lance Naik Nur Muhammad Shekh

Ans: (c) Lance Naik Munsir Abdur Rouf

Solve: Remember: The last martyr - Birshrestha captain Mohiuddin Jahangir.

99. Which sector comprised the Navy Command during liberation war?

- (a) 11th sector (b) 8th sector
(c) 9th sector (d) 10th sector

Ans: (d) 10th sector

100. Which was the regular force of the Liberation War?

- (a) Mujib Bahini (b) Kaderia Bahini
(c) Gonobahini (d) Brigade force

Ans: (d) Brigade force

Dental Special Final Model Test-06

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| <p>01. Which one is not a part of blood circulatory system of grasshopper?
 (a) Hemocoel (b) Ventral vessel
 (c) Dorsal vessel (d) Hemolymph
 Ans: (b) Ventral vessel</p> <p>02. Which one is not a simple protein?
 (a) Albumin (b) Globulin
 (c) Lipoprotein (d) Histone
 Ans: (c) Lipoprotein
 Solve: Note: Lipoprotein- is a compound protein.</p> <p>03. Who is called the father of tissue culture?
 (a) Morgan (b) Haberlandt
 (c) Karl Ereky (d) Lindermann
 Ans: (b) Haberlandt</p> <p>04. Animals of which phylum are known as thorny skin?
 (a) Arthropoda (b) Echinodermata
 (c) Mollusca (d) Annelida
 Ans: (b) Echinodermata</p> <p>05. Which is gram positive bacteria?
 (a) <i>Shigella</i> (b) <i>Salmonella</i>
 (c) <i>Rhizobium</i> (d) <i>Staphylococcus</i>
 Ans: (d) <i>Staphylococcus</i>
 Solve: Note: Gram-positive bacteria - Lactic acid bacteria, Clostridium, Streptococcus, Staphylococcus, Actinobacteria.</p> <p>06. Which one is not a part of small intestine?
 (a) Duodenum (b) Ileum
 (c) Appendix (d) Jejunum
 Ans: (c) Appendix
 Solve: Note: The appendix is attached to the cecum of the large intestine.</p> <p>07. Which one is a sesamoid bone?
 (a) Rib (b) Patella
 (c) Cuboid (d) Tibia
 Ans: (b) Patella</p> <p>08. Which one is not a mixed gland?
 (a) Pancreas (b) Testes
 (c) Ovary (d) Adrenal gland
 Ans: (d) Adrenal gland</p> | <p>09. Protein storing leucoplast is called—
 (a) Chromoplast (b) Chloroplast
 (c) Elaioplast (d) Aleuroplast
 Ans: (d) Aleuroplast
 Solve: Note: Fat storing leucoplast is- Elaioplast.</p> <p>10. Normal urine is straw color because of—
 (a) Urea (b) Urochrome
 (c) Ammonia (d) Urinodine
 Ans: (b) Urochrome</p> <p>11. What is the name of ninth pair of cranial nerve?
 (a) Hypoglossal
 (b) Spinal accessory
 (c) Abducens
 (d) Glossopharyngeal
 Ans: (d) Glossopharyngeal
 Solve: Note: Hypoglossal- XII
 Spinal accessory- XI
 Abducens- VI</p> <p>12. Which one is known as fire algae?
 (a) Euglenophyta (b) Pyrrophyta
 (c) Chrysophyta (d) Phaeophyta
 Ans: (b) Pyrrophyta</p> <p>13. Genetically controlled cell death is called—
 (a) Necrosis (b) Apoptosis
 (c) Mitosis (d) Meiosis
 Ans: (b) Apoptosis</p> <p>14. Erythropoiesis refers to the production of—
 (a) RBC (b) Platelet
 (c) Plasma (d) WBC
 Ans: (a) RBC
 Solve: Note: Thrombopoiesis- The process of making platelets
 Leukopoiesis - The process of making white blood cells.</p> <p>15. Function of cerebellum is-
 (a) Suddenly waking up the sleeping man
 (b) Regulating body temperature
 (c) Maintaining body balance
 (d) Regulating normal respiration rate
 Ans: (c) Maintaining body balance</p> |
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16. Which one is not an example of simple lipid?
 (a) Fat (b) Oil
 (c) Rubber (d) Wax
Ans: (c) Rubber
Solve: Note: Steroids, Turpines, rubber are derived or produced lipids.
17. Which virus is cuboidal in shape?
 (a) Vaccinia
 (b) Encephalitis tumor
 (c) TMV
 (d) Mumps
Ans: (a) Vaccinia
18. Where is loop of Henley located in the kidney?
 (a) Renal tubules (b) Renal corpuscle
 (c) Afferent arteriole (d) Efferent arteriole
Ans: (a) Renal tubules
19. What is the percentage of ammonium found in human urine?
 (a) 0.04 (b) 0.01
 (c) 0.35 (d) 0.15
Ans: (a) 0.04
Solve: Note: In Urine: Urea - 2 percent, creatine - 0.01 percent, creatinine - 0.075 percent.
20. The only light sensitive part of eye is—
 (a) Pupil (b) Iris
 (c) Retina (d) Blind point
Ans: (c) Retina
21. Which blood group is most prevalent in humans?
 (a) A (b) AB
 (c) B (d) O
Ans: (c) B
22. Which one is not paranasal sinus?
 (a) Frontal sinus (b) Maxillary sinus
 (c) Sphenoidal sinus (d) Occipital sinus
Ans: (d) Occipital sinus
Solve: Note: Paranasal sinuses are: Frontal, Maxillary, Sphenoidal, Ethmoidal.
23. Rare amino acid is—
 (a) Glycine (b) Hydroxypropene
 (c) Lysine (d) Hydroxylysine
Ans: (b) Hydroxypropene
24. Which one is not a step of urine production?
 (a) Ultrafiltration
 (b) Selective reabsorption
 (c) Active secretion
 (d) Inactive secretion
Ans: (d) Inactive secretion
25. Which is not present in blood serum?
 (a) Thromboplastin (b) Accelarin
 (c) Christmas factor (d) Fibrinogen
Ans: (d) Fibrinogen
26. Which one helps antibody in destroying bacteria?
 (a) Interferon
 (b) Vaccine
 (c) Complement system
 (d) Platelet
Ans: (c) Complement system
27. During which schizogony, the symptoms of malaria are expressed?
 (a) Pre-erythrocytic (b) Exo-erythrocytic
 (c) Hepatic (d) Erythrocytic
Ans: (d) Erythrocytic
Solve: Note: Erythrocytic schizogony is characterized by the fever caused by accumulation of a chemical called pyrogen in the blood.
28. Which one maintains balance of human body?
 (a) External ear (b) Internal ear
 (c) Middle ear (d) Nasopharynx
Ans: (b) Internal ear
29. Where is respiratory center located?
 (a) Pons (b) Mid brain
 (c) Cerebellum (d) Nerve cord
Ans: (a) Pons
30. Vaccine can be produced by—
 (a) Tissue culture
 (b) Mutation
 (c) Genetic engineering
 (d) Hybridization
Ans: (c) Genetic engineering

31. Which is used for the tanning of leather?

- (a) NaOH (b) Na₂S
(c) Cr₂(SO₄)₃ (d) CrCl₃

Ans: (c) Cr₂(SO₄)₃

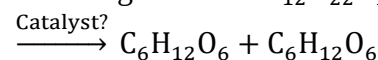
32. Which oxide below is acidic?

- (a) MgO (b) Al₂O₃
(c) Na₂O (d) CO₂

Ans: (d) CO₂

Solve: Note: Oxides of nonmetal are acidic.

33. Which one below acts as a catalyst for the following reaction? C₁₂H₂₂O₁₁ + H₂O



- (a) Ni (b) Cu
(c) Mineral acid (d) Fe

Ans: (c) Mineral acid

34. Which one below shows an exception to the ordinary rule of electronic configuration?

- (a) Zn (b) Cr
(c) Fe (d) Ca

Ans: (b) Cr

35. Which one is soda lime?

- (a) NaOH(CaO) (b) CaO
(c) NaOH (d) Na₂CO₃

Ans: (a) NaOH(CaO)

Solve: Note: Soda ash- Na₂CO₃

36. What is the size of nano particle?

- (a) 1 – 100 nm (b) 1 – 50 nm
(c) 1 – 10 nm (d) 0.1 – 0.5 nm

Ans: (a) 1 – 100 nm

37. What will be the molar concentration of 10% NaCl?

- (a) 1.709 mol/L (b) 170.9 mol/L
(c) 0.1709 mol/L (d) 17.09 mol/L

Ans: (a) 1.709 mol/L

Solve: $S = \frac{1000 W}{MV} = \frac{1000 \times 10}{58.5 \times 100} = 1.709 \text{ mol/L}$

38. What is the electronic configuration of Na?

- (a) 1s²2s²2p⁵3s² (b) 1s²2s²2p⁴3s³
(c) 1s²2s²2p⁶3s¹ (d) 1s²2s³2p³3s⁴

Ans: (c) 1s²2s²2p⁶3s¹

39. Which one below is used for the identification of Na⁺ ion in solution?

- (a) (NH₄)₂C₂O₄ (b) K₂H₂Sb₂O₇
(c) Na₂H₂Sb₂O₇ (d) AgNO₃

Ans: (b) K₂H₂Sb₂O₇

40. What is the number of d-block elements in the periodic table?

- (a) 24 (b) 43
(c) 41 (d) 15

Ans: (c) 41

Solve: Note:

s-block: 14; p-block- 36; d-block- 41;
f block- 27

41. Which of the following always has a negative value?

- (a) Ionisation Energy
(b) Electron Affinity
(c) Polaron
(d) Polarisation Energy

Ans: (a) Ionisation Energy

42. Which one below is suitable indicator for the titration of weak acid and a strong base?

- (a) Phenolphthalein
(b) Methyl orange
(c) Bromocresol green
(d) Methyl red

Ans: (a) Phenolphthalein

43. Which of the following was the basis of Mendeleev's periodic table?

- (a) Atomic number
(b) Atomic mass
(c) Electronic configuration
(d) Atomic size

Ans: (b) Atomic mass

Solve: Note: In the modern periodic table, the basis of arranging the elements is their individual atomic number and electronic configuration.

44. Which one is not a mineral source of chlorine?

- (a) Silvine (b) Brine
(c) Carnallite (d) Kyanite

Ans: (b) Brine

45. What gm of NaOH is present in 5% NaOH in 1000 ml solution?

- (a) 5 g (b) 0.5 g
(c) 40 g (d) 50 g

Ans: (d) 50 g

Solve: NaOH Present in 1000 ml = $\frac{5 \times 1000}{100} = 50 \text{ g}$

46. Which one is not included in the allotropes of arsenic?
 (a) Grey (b) Yellow
 (c) Black (d) White
Ans: (d) White
47. Which compound below has the least solubility?
 (a) MgSO_4 (b) BaSO_4
 (c) CaSO_4 (d) SrSO_4
Ans: (b) BaSO_4
48. Which one below is the formula of dimethyl amine?
 (a) CH_3NH_2 (b) $\text{C}_2\text{H}_5\text{NH}_2$
 (c) $\text{C}_2\text{H}_5\text{OH}$ (d) $(\text{CH}_3)_2\text{NH}$
Ans: (d) $(\text{CH}_3)_2\text{NH}$
49. Which one can be identified by Acrolein test?
 (a) Ethanol (b) Ethanoic acid
 (c) Glycerin (d) Glucose
Ans: (c) Glycerin
50. Which theory below is not used for the determination of the maximum number of electrons in the orbitals of any element?
 (a) Aufbau principle
 (b) Hund's principle
 (c) Pauli's Exclusion principle
 (d) Plank's Theory
Ans: (d) Plank's Theory
51. Which one below is a negative catalyst?
 (a) Cu (b) Alcohol
 (c) MnO_2 (d) Fe
Ans: (b) Alcohol
Solve: Note: Negative catalysts are H_2SO_4 , H_3PO_4 , CHCl_3 , alcohol, chloroform.
52. Which one below can absorb the UV rays of the sun?
 (a) O_2 (b) CO_2
 (c) O_3 (d) NO_2
Ans: (c) O_3
53. Which one is an aromatic ring activating group?
 (a) $-\text{SO}_3\text{H}$ (b) $-\text{COOH}$
 (c) $-\text{NO}_2$ (d) $-\text{NH}_2$
Ans: (d) $-\text{NH}_2$
Solve: Note: Ring activating groups: $-\text{CH}_3$, $-\text{NH}_2$, $-\text{OH}_2$, $-\text{OCH}_3$, $-\text{Cl}$
54. Which one below is used as a coating of cooking frypans?
 (a) Polythene (b) Plastic
 (c) Teflon (d) Polystyrene
Ans: (c) Teflon
55. What is the value of H^+ in pure water?
 (a) 10^6 mol/L (b) 10^{-4} mol/L
 (c) 10^{-7} mol/L (d) 10^7 mol/L
Ans: (c) 10^{-7} mol/L
56. Which one is the weakest fundamental force?
 (a) Electromagnetic force
 (b) Strong nuclear force
 (c) Gravitational force
 (d) Weak nuclear force
Ans: (c) Gravitational force
Solve: Note: The strongest fundamental force is the strong nuclear force.
57. What is the potential of junction barrier?
 (a) 0.1 – 0.3 V (b) 1 – 3 eV
 (c) 1.5 – 3.6 V (d) 2.7 – 3.9 V
Ans: (a) 0.1 – 0.3 V
58. What amount of energy is radiated by the sun every second?
 (a) $4 \times 10^{25} \text{ J}$ (b) $4 \times 10^{26} \text{ J}$
 (c) $4 \times 10^{29} \text{ J}$ (d) $4 \times 10^{30} \text{ J}$
Ans: (b) $4 \times 10^{26} \text{ J}$
59. Which lens is used to correct myopia?
 (a) Convexo concave (b) Planar
 (c) Convex (d) Concave
Ans: (d) Concave
60. What would be the required force to increase the velocity of a 60kg mass to 10 ms^{-1} in 1 minute?
 (a) 20 N (b) 40 N
 (c) 10 N (d) 50 N
Ans: (c) 10 N
Solve: $F = ma = \frac{m\Delta v}{t} = \frac{60 \times 10}{60} = 10 \text{ N}$
61. What is the intensity of normal respiration?
 (a) 10^{-8} Wm^{-2} (b) 10^{-9} Wm^{-2}
 (c) 10^{-10} Wm^{-2} (d) 10^{-11} Wm^{-2}
Ans: (d) 10^{-11} Wm^{-2}

62. In which process no exchange of heat in the system takes place?

- (a) Isothermal system
- (b) Adiabatic system
- (c) Isochoric system
- (d) Isobaric system

Ans: (b) Adiabatic system

63. The place where the rail way is curved, the external side of the rail line is a little higher. Which energy is supplied in the process?

- (a) Centripetal force
- (b) Friction force
- (c) Gravitational force
- (d) Electromagnetic force

Ans: (a) Centripetal force

64. On which characteristic does the power of a definite mass of ideal gas depend?

- (a) Temperature (b) Pressure
- (c) Volume (d) Density

Ans: (a) Temperature

65. Which material's temperature coefficient is negative?

- (a) Al (b) Cu
- (c) C (d) Fe

Ans: (c) C

Solve: Remember: Temperature coefficient of carbon and thermistor is negative.

66. What is the unit of self-inductance?

- (a) Tesla (b) Weber
- (c) Hertz (d) Henry

Ans: (d) Henry

67. If the length of the thread of the simple pendulum is increased 4 times, the time period will-

- (a) 4 times
- (b) Remain unchanged
- (c) Become double
- (d) Decrease 2 times

Ans: (c) Become double

Solve: Note: $T = 2\pi \sqrt{\frac{L}{g}}$

$$= 2\pi \sqrt{\frac{4}{g}} = 2\pi \times 2 \times \frac{1}{g} = 2 \left(2\pi \times \frac{1}{g} \right)$$

68. What are the characteristic of a fuse wire?

- (a) Low resistance and high melting point
- (b) High resistance and high melting point
- (c) High resistance and low melting point
- (d) Low resistance and low melting point

Ans: (d) Low resistance and low melting point

69. If a heat engine receives 3400 J heat and gives up 2400 J heat, what is the efficiency of the engine?

- (a) 41.67% (b) 10%
- (c) 29.41% (d) 40%

Ans: (c) 29.41%

$$\text{Solve: } \eta = \frac{3400 - 2400}{3400} \times 100\% = 29.41\%$$

70. If the distance between the moon and the earth is made twice, the gravitational force between them would become-

- (a) Twice (b) $1/4^{\text{th}}$
- (c) $\frac{1}{2}$ (d) 4 times

Ans: (b) $1/4^{\text{th}}$

71. Which one is the most elastic substance?

- (a) Copper (b) Iron
- (c) Quartz (d) Wood

Ans: (c) Quartz

72. Which scientist below discovered the magnetic effect of electric flow?

- (a) Oersted (b) Laplace
- (c) Ohm (d) Volt

Ans: (a) Oersted

73. Which one is the change of entropy in a irreversible process?

- (a) Increases (b) Decreases
- (c) Zero (d) Remains unchanged

Ans: (a) Increases

74. What distance will a body travel when thrown at 45° with the horizontal at 9.8 ms^{-1} ?

- (a) 19.6 m (b) 9.8 m
- (c) 10 m (d) 1 m

Ans: (b) 9.8 m

$$\text{Solve: } R_{\text{max}} = \frac{v_0^2}{g} = \frac{(9.8)^2}{9.8} = 9.8 \text{ m}$$

75. What is the relation between the kinetic energy and momentum of a definite mass?
 (a) Proportional to the square root
 (b) Proportional to the square
 (c) Inversely proportional to the square
 (d) Proportional

Ans: (b) Proportional to the square

76. The correct translation of-‘এত সুন্দর একট কলম হাতছাড়া কর না।’

- (a) Do not separate form this good pen.
 (b) Do not part by such a good pen.
 (c) Do not part with such a good pen.
 (d) Do not wall off with such a good pen.

Ans: (c) Do not part with such a good pen.

Solve: ‘part with’ phrase টির অর্থ কোন কিছু ফেলে যাওয়া।

77. The plural form of ‘Oasis’ is–

- (a) Oases (b) Oaseses
 (c) Oasis (d) Oasises

Ans: (a) Oases

Solve: শব্দের শেষে is থাকলে -es দিয়ে plural হয়।
 যেমন: Crisis – Crises.

78. There is no credit in earning money illegally. Here the underlined word is–

- (a) Infinitive (b) Gerund
 (c) Past Participle (d) Present Participle

Ans: (b) Gerund

79. This is ___ slip of ___ pen.

- (a) the, no article (b) a, the
 (c) the, the (d) no article, the

Ans: (b) a, the

80. A story with animals as the main characters, and a moral, is called a –

- (a) Parody (b) Parable
 (c) Fable (d) Legend

Ans: (c) Fable

81. Choose the correct indirect speech- She asked me, “Are you happy in your new job?”

- (a) She asked me if I was happy in my new job.
 (b) She asked me if I have been happy in my new job.
 (c) She asked me whether I am happy in my new job.
 (d) She asked me if I had been happy in my new job.

Ans: (a) She asked me if I was happy in my new job.

82. If they had waited another month, they could probably ___ a better price for their house.

- (a) would (b) would have got
 (c) could be (d) must be

Ans: (b) would have got

Solve: If এর সাথে past perfect থাকলে 3rd condition হয়, এবং পরবর্তী বাক্য world have/could have/ might have + v₃ হয়।

83. The best passive form of the sentence “What do you want?”

- (a) What was wanting by you?
 (b) What was wanted by you?
 (c) What is wanted by you?
 (d) What is wanting by you?

Ans: (c) What is wanted by you?

84. Choose the correct spelling.

- (a) Cigarette (b) Cigaret
 (c) Cigaret (d) Sigarate

Ans: (a) Cigarette

85. The officer is innocent _____ the charge.

- (a) to (b) from
 (c) with (d) of

Ans: (d) of

86. Choose the correct sentence.

- (a) Every body have gone there.
 (b) Everybody has gone there.
 (c) Everybody are gone there.
 (d) Every has went there.

Ans: (b) Everybody has gone there.

Solve: Everybody subject হলে singular ধরা হয়।

87. 'They rested at sunset'. Here 'at sunset' is an—

- (a) Adjective clause (b) Noun clause
(c) Adverb clause (d) Adverb phrase

Ans: (d) Adverb phrase

Solve: সময় বোঝালে adverb হয় আর একাধিক শব্দ দ্বারা সময় বোঝালে adverb phrase হয়।

88. Hard labour ____ health.

- (a) puts upon (b) tells upon
(c) breaks upon (d) turns upon

Ans: (b) tells upon

Solve: tell upon মানে ক্ষতি করা।

89. The correct synonym of 'Menace' is—

- (a) Encourage (b) Alarm
(c) Promise (d) Auspicious

Ans: (b) Alarm

90. Antonym of 'Melancholy' is—

- (a) Sage (b) Peevish
(c) Talkative (d) Happy

Ans: (d) Happy

91. Present Rajshahi was included in which ancient township?

- (a) Pundra (b) Banga
(c) Gauda (d) Rarh

Ans: (a) Pundra

92. Who was the Relief and Rehabilitation minister of the Mujibnagar Government?

- (a) M Mansur Ali
(b) A.H.M Kamaruzzaman
(c) Tajuddin Ahmed
(d) Khandaker Moshtaq

Ans: (b) A.H.M Kamaruzzaman

93. Who was called the Akbar of Bengal?

- (a) Shumsuddin Ilias Shah
(b) Giasuddin Azam Shah
(c) Fakhruddin Mobarak Shah
(d) Alauddin Hossain Shah

Ans: (d) Alauddin Hossain Shah

94. In which year was the Satidaha tradition abolished?

- (a) 1818 (b) 1819
(c) 1829 (d) 1830

Ans: (c) 1829

Solve: Remember: This tradition was abolished in 1829 under the reign of lord Bentink due to the effects of Raja Rammohan Roy.

95. When was the 'United Front' formed?

- (a) 4 December, 1952 (b) 4 December, 1953
(c) 4 December, 1954 (d) 4 December, 1955

Ans: (b) 4 December, 1953

96. Where was the first armed resistance against Pakistan developed?

- (a) Jaydevpur (b) Savar
(c) Mujibnagar (d) Tetulia

Ans: (a) Jaydevpur

Solve: Remember: The first armed resistance occurred in the present Gazipur or the then Joydebpur on 19 March, 1971

97. Which one is the Homecoming day of Bangabandhu?

- (a) 10th January, 1972
(b) 17th April, 1971
(c) 16th December, 1971
(d) 22nd February, 1972

Ans: (a) 10th January, 1972

Solve: Bangabandhu's Historical Speech – 7th March, 1971.

98. Who divided the country into 11 sectors during the Liberation War?

- (a) Sheikh Mujibur Rahman
(b) Tajuddin Ahmed
(c) M.A.G Osmani
(d) Syed Nazrul Islam

Ans: (c) M.A.G Osmani

99. What did Sheikh Mujibur Rahman's parents call him?

- (a) Mujib (b) Khoka
(c) Babu (d) Manik

Ans: (b) Khoka

100. Who is the director of the liberation war based documentary 'Muktir Kotha'?

- (a) Tarek Masud
(b) Tanvir Mokammel
(c) Morshedul Islam
(d) Alamgir Kabir

Ans: (a) Tarek Masud

Dental Special Final Model Test-07

01. Which one is the longest cell of human body?
 (a) Motor neuron (b) Sensory neuron
 (c) Pancreatic cell (d) Liver cell
Ans: (a) Motor neuron
02. Which organelle doesn't participate in photorespiration process?
 (a) Chloroplast
 (b) Peroxisome
 (c) Mitochondria
 (d) Endoplasmic reticulum
Ans: (d) Endoplasmic reticulum
03. Which of the following is not an essential amino acid?
 (a) Lycine (b) Alanine
 (c) Valine (d) Methionine
Ans: (b) Alanine
04. Spindle apparatus is created in which phase of mitosis?
 (a) Metaphase (b) Prophase
 (c) Pro-metaphase (d) Telophase
Ans: (c) Pro-metaphase
05. What is process of generation of embryo from unfertilized sperm called?
 (a) Parthenogenesis
 (b) Parthenocary
 (c) Androgenesis
 (d) Diploid parthenogenesis
Ans: (c) Androgenesis
06. Which one is not an external factor of respiration?
 (a) Light (b) Water
 (c) Oxygen (d) Enzyme
Ans: (d) Enzyme
Solve: Note: External factors- Temperature, Oxygen, Water, Light.
07. What is each member of perianth called?
 (a) Tepal (b) Sepal
 (c) Petal (d) Pushpal
Ans: (a) Tepal
Solve: Note: Sepal- The calyx is called Sepal.
 Petal- Each member of the corolla is called Petal.
08. In anaphase stage, metacentric chromosome looks like-
 (a) J (b) I
 (c) L (d) V
Ans: (d) V
Solve: Note:
 J- Telocentric; I- Acrocentric;
 L- Sub-metacentric
09. What is the scientific name of Sundari tree?
 (a) *Heritiera fomes* (b) *Nipa fruticans*
 (c) *Shorea robusta* (d) *Albizia procera*
Ans: (a) *Heritiera fomes*
10. What is not the characteristic of gymnosperms?
 (a) One-year living (b) Sporophyte
 (c) Heterosporous (d) Ever green
Ans: (a) One-year living
11. Which is called the molecular basis of life?
 (a) DNA (b) Nucleosome
 (c) Protein (d) Enzyme
Ans: (a) DNA
Solve: Note: Protein is called the language of life.
12. Inclinal time for bud formation of hydra is-
 (a) Summer (b) Rainy season
 (c) Autumn (d) Winter
Ans: (a) Summer
13. Antipodal cell is formed into which one after fertilization?
 (a) Tegmen (b) Nucellus
 (c) Endosperm (d) Is destroyed
Ans: (d) Is destroyed
14. Which plant's vascular bundle is leptocentric?
 (a) *Pteris* (b) *Selaginella*
 (c) *Lycopodium* (d) *Dracaena*
Ans: (d) *Dracaena*
Solve: Note: Hadrocentric- *Pteris*, *Lycopodium*, *Selaginella*
 Leptocentric- *Dracaena*, *Yucca*

15. How many salivary glands are present in human body?

- (a) 3 (b) 4
(c) 5 (d) 6

Ans: (d) 6

Solve: Note: The human body has 3 pairs of salivary glands. Namely- submandibular, sublingual, parotid.

16. Largest phylum of animal kingdom is-

- (a) Arthropoda (b) Mollusca
(c) Chordata (d) Echinodermata

Ans: (a) Arthropoda

Solve: Note: The second largest phylum of animal kingdom is Mollusca.

17. Which one is the major organ of osmoregulation?

- (a) Kidney (b) Lung
(c) Skin (d) Heart

Ans: (a) Kidney

Solve: Note: The main organ of blood circulation is the heart.

18. Which one is toxoid vaccine?

- (a) Polio vaccine
(b) Mumps vaccine
(c) Influenza vaccine
(d) Diphtheria vaccine

Ans: (d) Diphtheria vaccine

Solve: Note: Toxoid vaccine – Diphtheria, Tetanus.

19. Which complication is more seen in hypertensive patient?

- (a) Stroke
(b) Left ventricular failure
(c) Papilloedema
(d) Pleural effusion

Ans: (a) Stroke

20. Which type of cartilage is found in the area between two vertebra?

- (a) Transparent cartilage
(b) White fibrous cartilage
(c) Elastic cartilage
(d) Calcified cartilage

Ans: (b) White fibrous cartilage

Solve: Note:

Transparent cartilage - nose, trachea, larynx
Yellow-fibrous cartilage- pinna, eustachian tube, epiglottis

Calcified cartilage - on head of humerus and femur

21. Which one is not a hamstring muscle?

- (a) Biceps femoris
(b) Semimembranosus
(c) Semitendinosus
(d) Rectus femoris

Ans: (d) Rectus femoris

22. Which is not the neurotransmitter of central nervous system?

- (a) Dopamine (b) GABA
(c) Glycine (d) Histamine

Ans: (d) Histamine

Solve: Note: Neurotransmitters of peripheral nervous system- acetyl choline, adrenaline, nor-adrenaline.

23. What time is needed to complete spermatogenesis?

- (a) 20–30 day (b) 30–32 day
(c) 60–70 day (d) 40–100 day

Ans: (c) 60–70 day

24. Which part of the brain controls utterance?

- (a) Cerebellum (b) Cerebrum
(c) Thalamus (d) Pons

Ans: (b) Cerebrum

25. Which is not a layer of meninges?

- (a) Dura mater
(b) Pia mater
(c) Arachnoid mater
(d) Medullary membrane

Ans: (d) Medullary membrane

26. Who at first introduced the word 'Genetics'?

- (a) Mendel (b) Carl Corrence
(c) Cernot (d) William Batson

Ans: (d) William Batson

27. How many types of nematocyst had been identified from Cnidaria animal?

- (a) 4 (b) 13
(c) 19 (d) 23

Ans: (d) 23

28. Which bacteria is the leading cause of infectious diarrhea?
 (a) *Vibrio cholerae*
 (b) Rota virus
 (c) *Clostridium difficile*
 (d) *Escherichia coli*
Ans: (d) *Escherichia coli*
29. What is the number of thrombocyte in per cube ml blood?
 (a) 1.5–3 lakh (b) 6–8 lakh
 (c) 4–11 thousand (d) 1–1.5 lakh
Ans: (a) 1.5–3 lakh
30. How long it take for blood to pass through all of a grasshoppers body once?
 (a) 10–15 min (b) 30–60 min
 (c) 40–60 min (d) 1–2 hrs
Ans: (b) 30–60 min
31. Which is the chemical formula of TSP?
 (a) $(\text{NH}_2)_2\text{C}=\text{O}$ (b) $(\text{NH}_2)_2\text{HPO}_4$
 (c) KNO_3 (d) $\text{Ca}(\text{H}_2\text{PO}_4)_2$
Ans: d) $\text{Ca}(\text{H}_2\text{PO}_4)_2$
32. Which one is a polyprotic base?
 (a) CO_3^{2-} (b) H_2SO_4
 (c) PO_4^{3-} (d) H_3PO_3
Ans: (c) PO_4^{3-}
Solve: Note: Diprotic acid $\text{H}_3\text{PO}_3, \text{H}_2\text{SO}_4$
33. The standard oxidation potential of Zn/Zn^{2+} and Ag/Ag^+ electrodes are respectively +0.76 V and –0.799V. What is the electrochemical cell potential?
 (a) 1.559V (b) 0.449V
 (c) 1.449V (d) 0.559V
Ans: (a) 1.559V
Solve: $E_{\text{cell}} = E_{\text{anode(ox)}} - E_{\text{cathode(ox)}} = 0.76 - (-0.799) = 1.559 \text{ V}$
34. Which one is liquid oxidizing agent?
 (a) MnO_2 (b) NO_2
 (c) KClO_3 (d) H_2SO_4
Ans: (d) H_2SO_4
Solve: Gaseous oxidizing agent: $\text{F}_2, \text{Cl}_2, \text{O}_2, \text{O}_3, \text{SO}_2, \text{NO}_2$
 Liquid oxidizing agent: Liquid bromine, $\text{H}_2\text{O}_2, \text{HNO}_3$, concentrated H_2SO_4
 Solid oxidizing agent: $\text{KMnO}_4, \text{K}_2\text{Cr}_2\text{O}_7, \text{KClO}_3, \text{MnO}_2, \text{FeCl}_3$
35. What is the percentage of methane in CNG Cylinder?
 (a) 93–98% (b) 94–96%
 (c) 95–99% (d) 96–98%
Ans: (c) 95–99%
36. Which wave is used in remote control and physiotherapy?
 (a) IR ray (b) UV ray
 (c) X-ray (d) Gamma ray
Ans: (a) IR ray
Solve: Note:
 Ultraviolet rays - counterfeit money detection
 Gamma-ray- disinfection and cancer treatment
37. Identification test for alkyl halide is –
 (a) Carbil amine test (b) NH_3 gas test
 (c) HgO test (d) CS_2 test
Ans: (a) Carbil amine test
38. According to WHO, value of BOD should less than what for the betterment of fish and aqueous animal?
 (a) 2 – 6 mg/L (b) 3 mg/L
 (c) 10 mg/L (d) 6 mg/L
Ans: (d) 6 mg/L
39. Which gloves is environmental friendly and decomposable?
 (a) Zitex gloves
 (b) Nitril rubber gloves
 (c) Latex gloves
 (d) Neoprene gloves
Ans: (b) Nitril rubber gloves
Solve: Note:
 Zitex Gloves – Heat insulation Gloves
 Latex Gloves - Electric shock resistant gloves
40. Which one produces tertiary alcohol reacting with Grignard reagent?
 (a) Methanal (b) Ethanal
 (c) Aldehyde (d) Ketone
Ans: (d) Ketone
Solve: Note:
 Grignard reagent + methanol- 1° alcohol
 Grignard reagent + aldehyde- 2° alcohol
 Grignard reagent + ketone- 3° alcohol

41. Which is not a stage of ceramic production?
 (a) Filter cake production
 (b) Shafting and drying
 (c) Biscuit firing
 (d) Annealing

Ans: (d) Annealing

Solve: Note: Annealing- A step of glass production.

42. What is the unit of conductance in SI unit?
 (a) A (b) Sm^{-1}
 (c) V (d) Siemens

Ans: (d) Siemens

43. Which one is not a metal of group IIA?
 (a) Ca (b) Sr
 (c) Rb (d) Ba

Ans: (c) Rb

Solve: Note: Rb is the metal of group-I.

44. Which one is a gaseous alkyne?
 (a) C_5H_8 (b) $\text{C}_{12}\text{H}_{22}$
 (c) C_6H_{10} (d) C_3H_4

Ans: (d) C_3H_4

Solve: Note: The first three members of alkyne are gases; $\text{C}_5 - \text{C}_{11}$ are liquid, higher than C_{12} are solid.

45. Metamerism is not seen in which functional group?

(a) Ether (b) Ketone
 (c) Secondary amine (d) Primacy alcohol

Ans: (d) Primacy alcohol

Solve: Note: Tautomerism is seen in primary alcohol groups.

46. Which is a characteristic of d-block elements?

(a) Their d orbital is filled
 (b) Have low boiling point
 (c) All elements are light metal
 (d) Ionization energy is higher than s-block elements

Ans: (d) Ionization energy is higher than s-block elements

47. What is the strength of dipole-dipole attraction?

(a) 10–40 KJ/mol (b) 3–4 KJ/mol
 (c) $3-15 \frac{\text{KJ}}{\text{mol}}$ (d) $2-10 \frac{\text{KJ}}{\text{mol}}$

Ans: (b) 3–4 KJ/mol

Solve: Note: H bond- 10–40 KJ/mol

Ion induced -dipole attraction force- 3–15 KJ/mol

Dipole induced-dipole attraction force- 2–10 KJ/mol

48. If any reaction is not spontaneous then what will be the value of ΔG° ?

(a) Negative (b) Zero
 (c) Positive (d) Infinity

Ans: (c) Positive

Solve: Note: If $\Delta G < 0$, the reaction is-spontaneous

If $\Delta G = 0$, the reaction is- in equilibrium

49. Which one is aqua regia?

(a) 1 mol conc HNO_3 + 3 mol conc HCl
 (b) 1 mol conc H_2SO_4 + 3 mol. dilute H_2SO_4
 (c) 1 mol dilute HCl + 3 mol dilute H_2SO_4
 (d) 1 mol dilute HNO_3 + 3mol conc HCl

Ans: (a) 1 mol conc HNO_3 + 3 mol conc HCl

50. Which reagent is used to identify carbonil group?

(a) TNT (b) 5% NaHCO_3
 (c) PCl_5 (d) 2: 4 – DNP

Ans: (d) 2: 4 – DNP

51. Which ion is not dissolved in hard water?

(a) Ca^{2+} (b) Be^{2+}
 (c) Mg^{2+} (d) Fe^{2+}

Ans: (b) Be^{2+}

52. Which hybridization is present in $\text{CH}_2 = \text{CH}_2$?

(a) sp^2 (b) sp^3
 (c) sp (d) d^2sp^3

Ans: (a) sp^2

53. During titration, titrant is usually taken into-

(a) Conical flask (b) Volumetric flask
 (c) Measuring flask (d) Burette

Ans: (d) Burette

Solve: Remember: During titration, titrate is usually taken into conical flask.

54. Which one acts as a catalyst promoter in the following reaction- $\text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3$?

(a) Ni (b) Al_2O_3
 (c) Fe_2O_3 (d) Cr_2O_3

Ans: (b) Al_2O_3

Solve: Note: Al_2O_3 , MgO , SiO_2 act as catalyst promoter in this reaction.

55. Which is the right order of increasing strength of oxidant?

- (a) $\text{Zn}^{2+} < \text{Cr}^{3+} < \text{Pb}^{2+}$
 (b) $\text{Cr}^{3+} < \text{Ca}^{2+} < \text{K}^{+}$
 (c) $\text{Ni}^{2+} < \text{Cr}^{3+} < \text{Al}^{3+}$
 (d) $\text{Hg}_2^{2+} < \text{Ag}^{+} < \text{Ni}^{2+}$

Ans: (a) $\text{Zn}^{2+} < \text{Cr}^{3+} < \text{Pb}^{2+}$

56. Relation between linear and angular acceleration is-

- (a) $L = \vec{r} \times \vec{p}$ (b) $a = \alpha r$
 (c) $L = I\omega$ (d) $a = \alpha r^2$

Ans: (b) $a = \alpha r$

57. What difference in temperature can be measured with thermistor?

- (a) 0.5°C (b) 0.05°C
 (c) 0.005°C (d) 5.0°C

Ans: (c) 0.005°C

58. 1astronomical unit =?

- (a) $5.866 \times 10^8 \text{ m}$
 (b) $5.865 \times 10^{-8} \text{ m}$
 (c) $1.495 \times 10^8 \text{ m}$
 (d) $1.495 \times 10^{-8} \text{ m}$

Ans: (c) $1.495 \times 10^8 \text{ m}$

59. Who first invented reflecting telescope?

- (a) Gregory (b) Hygens
 (c) Newton (d) Faraday

Ans: (a) Gregory

Solve: Note: Newton invented the most common telescope.

60. Which one of the following is not the characteristic of mercury?

- (a) Bright
 (b) Heavy
 (c) Heat conductor
 (d) Heat nonconductor

Ans: (d) Heat nonconductor

61. Degree of freedom for rotating particle is-

- (a) 5 (b) 6
 (c) 7 (d) 9

Ans: (a) 5

62. Which bond is formed between metal and non-metal?

- (a) Ionic bond (b) Covalent bond
 (c) Metallic bond (d) Hydrogen bond

Ans: (a) Ionic bond

Solve: Note:

Covalent bonds: non-metal-non-metal

Metallic bonds: metal molecules

Hydrogen bonds: between N, O and F

63. What is called the midpoint of the reflection plane of a spherical mirror?

- (a) Centre of curvature
 (b) Radius of curvature
 (c) Main axis
 (d) Pole point

Ans: (d) Pole point

64. A bullet of a rifle can penetrate one wood plate. If the velocity of bullet is increased five times, how many wood plate it can penetrate?

- (a) 20 (b) 25
 (c) 10 (d) 30

Ans: (b) 25

Solve: $k_1 = \frac{1}{2}mv^2 \quad \therefore k_2 = \frac{1}{2}m(5v)^2 = \frac{1}{2}m25v^2 = 25 \times \frac{1}{2}mv^2 = 25 \times k_1 = 25$

65. Which scientist presented reliable concept about surface tension?

- (a) Laplace (b) Newton
 (c) Einstein (d) Archimedes

Ans: (a) Laplace

66. Which is not a polar vector?

- (a) Force
 (b) Displacement
 (c) Speed
 (d) Angular acceleration

Ans: (d) Angular acceleration

Solve: Remember: Polar vectors: Force, momentum, displacement, velocity, etc. Axial vectors: Angular velocity, Angular Acceleration, Angular momentum.

67. Curie temperature of iron is-

- (a) 1043°C (b) 1000°C
 (c) 1043 K (d) 770 K

Ans: (c) 1043 K

Solve: Note: Curie temperature of iron is -770°C or 1043 K

68. Which one is not a mechanical error?
 (a) Zero error (b) Backlash error
 (c) Level error (d) Repeating error
Ans: (d) Repeating error
Solve: Note: Repeating error is personal error.
69. At normal temperature and pressure, some dry air was compressed to make its volume half. What is the final pressure?
 (a) $3.026 \times 10^5 \text{ Nm}^{-2}$
 (b) $2.026 \times 10^5 \text{ Nm}^{-2}$
 (c) $4.026 \times 10^5 \text{ Nm}^{-2}$
 (d) $5.026 \times 10^5 \text{ Nm}^{-2}$
Ans: (b) $2.026 \times 10^5 \text{ Nm}^{-2}$
Solve: $P_2 = \frac{V_1 P_1}{V_2} = \frac{2V_2}{V_2} P_1 = 2P_1 = 2 \times 1.013 \times 10^5 = 2.026 \times 10^5 \text{ Nm}^{-2}$
70. If flow time is doubled, then heat generation would be-
 (a) Doubled (b) Quadrupled
 (c) Sextupled (d) Octupled
Ans: (a) Doubled
Solve: Note: $H \propto T$
71. Which can't be derived using Fermet's principle?
 (a) Linear velocity of light
 (b) Law of reflection of light
 (c) Law of refraction of light
 (d) Interference of light
Ans: (d) Interference of light
72. What is the value of g in earth's center?
 (a) Infinity (b) Less
 (c) Zero (d) High
Ans: (c) Zero
73. Which is not the property of gamma ray?
 (a) Has no mass
 (b) Velocity is $3 \times 10^8 \text{ ms}^{-1}$
 (c) Has ionization property
 (d) Is deflected by magnetic field
Ans: (d) Is deflected by magnetic field
74. How many laws were given by Kirchhoff to determine current and resistance?
 (a) 2 (b) 3
 (c) 4 (d) 5
Ans: (a) 2

75. What would be the work done if the displacement against gravitational force is three times?
 (a) Zero (b) Nine times
 (c) Six times (d) Three times
Ans: (d) Three times
Solve: Note: $W \propto h$
76. The correct passive form of the sentence :
 "Take care of your health" is —
 (a) Let your health takes care of.
 (b) Health is taken care by you.
 (c) Let your health taken care.
 (d) Let your health be taken care of.
Ans: (d) Let your health be taken care of.
Solve: 'Take care of' একটি phrase। তাই passive করার সময় 'taken care of' একসাথে রাখতে হবে। imperative sentence এর passive এর structure: Let + object + be + v_3 ।
77. "Maiden speech" means —
 (a) Late speech (b) First speech
 (c) Final speech (d) Early speech
Ans: (b) First speech
Solve: Reporting verb এ, exclaimed that থাকা মানেই, direct speech এর reported speech টা exclamatory Very clever থাকলে direct speech এ how clever subject এর পূর্বে হবে।
78. A basket of apples ____ been sold.
 (a) has (b) have
 (c) is (d) being
Ans: (a) has
Solve: A basket of apples এর ক্ষেত্রে 'a basket' হল subject যা singular। তাই perfect tense has ব্যবহৃত হবে।
79. The antonym of 'Sporadic' is —
 (a) Occasional (b) Intermittent
 (c) Frequent (d) Isolated
Ans: (c) Frequent
Solve: এখানে 'what' verb এর object। তাই passive বাক্যেও what বাক্যের শুরুতে আর present indefinite থেকে change হয়ে past indefinite হয়েছে।

80. He has paid the penalty ____ his crimes with five years in prison.

- (a) with (b) for
(c) about (d) at

Ans: (b) for

81. “আমাকে তার সাথে দেখা করতে হবে” The English translation is ——

- (a) I need to see him.
(b) I am to ready for his meeting.
(c) I am to meet him.
(d) I have an appointment with him.

Ans: (c) I am to meet him.

82. ‘Impediment’ is similar to—

- (a) Block (b) Aid
(c) Pacify (d) Support

Ans: (a) Block

83. Choose the correct sentence.

- (a) Open page 10.
(b) Open at page 10.
(c) Open page at 10.
(d) At open page 10.

Ans: (b) Open at page 10.

Solve: বইয়ের page খোলা যায় না, নির্দিষ্ট page এ বই খোলা যায়। তাই open at page 10 হবে।

84. What is the appropriate translation of-‘আমি তোমাকে খাওয়াই’?

- (a) I eat you (b) I have eat you
(c) I feed you (d) I fed you

Ans: (c) I feed you

Solve: অবাস্তব condition এবং ক্ষেত্রে পরবর্তী বাবদ model + base দিয়ে করতে হয়।

85. ____ your shoes before entering the mosque.

- (a) Put out (b) Put off
(c) Put away (d) Put on

Ans: (b) Put off

Solve: If দিয়ে ইচ্ছা প্রকাশ করা হয় না, বাক্যে subject এর সামনে heal দিয়ে ইচ্ছা প্রকাশ করা হয় এবং সেই had ই if এর meaning প্রকাশ করে।

86. Nilufa takes interest ____ music.

- (a) to (b) on
(c) in (d) with

Ans: (c) in

Solve: কোন বিষয়ে আগ্রহ বোঝাতে ‘interest’ এর পরে in হয়।

87. Choose the correct spelling.

- (a) Hetrogeneous (b) Heteroganeous
(c) Heterogeneous (d) Heterogeneous

Ans: (d) Heterogeneous

88. Correct English translation of-“লাইনটা কেটে দাও” is –

- (a) Cut off the line.
(b) Pen through the line.
(c) Cut the line.
(d) Erase the line.

Ans: (b) Pen through the line.

89. Antonym of ‘Frugal’ is –

- (a) Stingy (b) Thrifty
(c) Extravagant (d) Appathy

Ans: (c) Extravagant

90. Choose the correct sentence:

- (a) He was hanged for murder.
(b) He has been hunged for murder.
(c) He had been hunged for murder.
(d) He was hunged for murder.

Ans: (a) He was hanged for murder.

Solve: Murder এর ক্ষেত্রে hang এর সাথে ed যোগ করে Past বা Past participle করা হয় কিন্তু অন্যান্য ক্ষেত্রে Past ও Past participle হয় hung।

91. Who was the first independent Sultan of Bengal?

- (a) Shamsuddin Ilias Shah
(b) Fakhruddin Mubarak Shah
(c) Alauddin Hossain Shah
(d) Dawood Khan Kurrani

Ans: (b) Fakhruddin Mubarak Shah

92. 21 February, 1952 was -

- (a) Saturday (b) Thursday
(c) Monday (d) Friday

Ans: (b) Thursday

93. Who built the famous Tara Masjid of Dhaka?

- (a) Shaista Khan (b) Shahjada Azam
(c) Shahjada Suja (d) Mirza Golam Pir

Ans: (d) Mirza Golam Pir

94. When was the Lahore resolution proposed?

- (a) 1926 (b) 1935
(c) 1938 (d) 1940

Ans: (d) 1940

95. Who is the proponent of the two-nation theory?
 (a) Muhammad Ali Jinnah
 (b) A.K Fazlul Huq
 (c) Hossain Shahid Suhrawardy
 (d) Mahatma Gandhi
Ans: (a) Muhammad Ali Jinnah
96. Who was the home minister of the Mujibnagar Government?
 (a) Syed Nazrul Islam
 (b) M.Mansur Ali
 (c) A.H.M Kamaruzzaman
 (d) Khandoker Moshtaq Ahmad
Ans: (c) A.H.M Kamaruzzaman
97. Boundary commission of 1947 was known as—
 (a) Radcliff commission
 (b) Simon commission
 (c) Lawrence commission
 (d) Macdonald commission
Ans: (a) Radcliff commission

- Solve:** Remember: Radcliff line is the boundary determining line between India and Pakistan.
98. Which Birshreshtha was working in the air force?
 (a) Hamidur Rahman (b) Mustafa Kamal
 (c) Matiur Rahman (d) Ruhul Amin
Ans: (c) Matiur Rahman
99. Sitara Begum fought in which sector?
 (a) 2 (b) 3
 (c) 4 (d) 5
Ans: (a) 2
100. Which dynasty was known as the golden age of the ancient Indian subcontinent?
 (a) Maurya dynasty (b) Pala dynasty
 (c) Gupta dynasty (d) Sen dynasty
Ans: (c) Gupta dynasty

Dental Special Final Model Test-08

01. Which is the smallest structural unit of cell wall?
 (a) Micelles (b) Microfibril
 (c) Macro fibril (d) Glycoprotein
Ans: (a) Micelles
02. What percent of time is wasted in S phase of cell cycle?
 (a) 30-50% (b) 10-20%
 (c) 40-60% (d) 60-90%
Ans: (a) 30-50%
Solve: Note:
 G₁ phase- 30-40%
 G₂ phase- 10-20%
 M phase- 5-10%
03. Which is an example of prokaryotic cell?
 (a) Algae (b) Fungi
 (c) Bryophytes (d) Cyanobacteria
Ans: (d) Cyanobacteria
04. How many malarial parasites have been found in the human body?
 (a) 2 (b) 3
 (c) 4 (d) 7
Ans: (c) 4

- Solve:** Note: malarial parasites have been found in the human body are:
Plasmodium vivax
Plasmodium falciparum
Plasmodium ovale
Plasmodium malarial
05. Which fungus produces ergot?
 (a) *Claviceps purpurea*
 (b) *Aspergillus flavus*
 (c) *Trichophyton rubrum*
 (d) *Gibberella fujikuroi*
Ans: (a) *Claviceps purpurea*
06. Which one is absent in DNA?
 (a) Ribose (b) Adenine
 (c) Phosphate (d) Nucleotide
Ans: (a) Ribose
Solve: Remember: Deoxyribose is present in DNA.
07. In which sub-stage of Meiosis, Chromomere is seen first?
 (a) Leptotene (b) Pachytene
 (c) Zygotene (d) Diplotene
Ans: (a) Leptotene

08. Which one can dissolve clotted blood?

- (a) TPA (b) Plasminogen
(c) Thrombin (d) Betaferon

Ans: (a) TPA

Solve: TPA, Plasmin and Streptokinase can dissolve clotted blood.

09. Which type of vascular bundle is seen in flowering plants?

- (a) Bicollateral (b) Collateral
(c) Radial (d) Concentric

Ans: (b) Collateral

10. What is the name of the disabled pollen having same characteristics of maternal cell?

- (a) Autospore (b) Zoospore
(c) Exospore (d) Aplanospore

Ans: (a) Autospore

11. Which one is not an asexual process?

- (a) Budding (b) By Gonidia
(c) By Conidia (d) Conjugation

Ans: (d) Conjugation

12. What is the amount of electrical light required for callus formation and multiplication?

- (a) 1,000–1,500 lux
(b) 3,000–5,000 lux
(c) 5,000–10,000 lux
(d) 10,000–20,000 lux

Ans: (b) 3,000–5,000 lux

13. Which is the most northern terrestrial biome?

- (a) Desert biome (b) Terrestrial biome
(c) Tundra biome (d) Savana biome

Ans: (c) Tundra biome

14. Which is not an element of phloem tissue?

- (a) Sieve tubes (b) Companion cells
(c) Phloem fibre (d) Vessel

Ans: (d) Vessel

Solve: Note: Tracheid, Vessel are elements of xylem tissue.

15. Which disease forms from herpes simplex?

- (a) Liver cancer (b) Anogenital cancer
(c) Kaposi's sarcoma (d) Breast cancer

Ans: (c) Kaposi's sarcoma

16. *Hydra* completes respiration and excretion by which process?

- (a) Osmosis (b) Active absorption
(c) Imbibition (d) Guttation

Ans: (a) Osmosis

17. Which is the main vibratory organ of grasshopper?

- (a) Hemocoel (b) Hemolymph
(c) Dorsal artery (d) Ventral artery

Ans: (c) Dorsal artery

18. How much percentages of gastric juice secretion occurs in gastric period?

- (a) 20 percent (b) 30 percent
(c) 50 percent (d) 70 percent

Ans: (d) 70 percent

19. Which is the thickest chamber of heart?

- (a) Left atrium (b) Left ventricle
(c) Right atrium (d) Right ventricle

Ans: (b) Left ventricle

20. If sperm cell is not fertilized, it dies in how many hours?

- (a) 24 hr (b) 36 hr
(c) 48 hr (d) 40 hr

Ans: (a) 24 hr

21. Heart valves are covered by—

- (a) Pericardium (b) Epicardium
(c) Myocardium (d) Endocardium

Ans: (d) Endocardium

Solve: Note: Myocardium plays a role in the contraction and expansion of the heart.

22. Which germ layer gives rise to muscular tissue?

- (a) Ectoderm (b) Neuroectoderm
(c) Mesoderm (d) Endoderm

Ans: (c) Mesoderm

23. Which hormone is not secreted from ovary?

- (a) Estrogen (b) Progesterone
(c) Androgen (d) Testosterone

Ans: (d) Testosterone

24. Which is not a part of forebrain?

- (a) Cerebrum (b) Cerebellum
(c) Thalamus (d) Hypothalamus

Ans: (b) Cerebellum

Solve: Note: Cerebellum is the part of hindbrain.

25. Which problem is caused by secretion of too much growth hormone in adult human body?
 (a) Turner syndrome
 (b) Goiter
 (c) Prader-willy syndrome
 (d) Maritz disease
Ans: (d) Maritz disease
26. Which is not affected in upper respiratory tract infection?
 (a) Nose (b) Ear
 (c) Sinus (d) Trachea
Ans: (d) Trachea
Solve: Note: Trachea is the part of lower respiratory tract.
27. What is the length of excretory duct in Human body?
 (a) 20 cm (b) 25 cm
 (c) 30 cm (d) 12 cm
Ans: (b) 25 cm
28. Which one is applicable for Human heart?
 (a) Single circulation
 (b) Double circulation
 (c) Triple circulation
 (d) Mono circulation
Ans: (b) Double circulation
29. Which antibody is present in Blood group-A?
 (a) a antibody
 (b) b antibody
 (c) a and b both antibody
 (d) There is no antibody
Ans: (b) b antibody
30. A macrophage can consume almost how many bacteria?
 (a) 100 (b) 20
 (c) 30 (d) 60
Ans: (a) 100
31. Which of the following is used to clean liquid material?
 (a) $K_2Cr_2O_7$ & HCl
 (b) $K_2Cr_2O_7$ & conc. HCl
 (c) $K_2Cr_2O_7$ & conc. H_2SO_4
 (d) $K_2Cr_2O_7$ & mild H_2SO_4
Ans: (c) $K_2Cr_2O_7$ & conc. H_2SO_4
Solve: Note: $K_2Cr_2O_7$ & conc. H_2SO_4 is the best cleaner.
32. Which one is used in laboratory to produce any gas?
 (a) CO_2 (b) SO_3
 (c) H_2S (d) NH_3
Ans: (c) H_2S
33. What is the wavelength of Ultraviolet ray?
 (a) 10 – 380nm (b) 10 – 380Å
 (c) 10 – 380cm (d) 10 – 380mm
Ans: (a) 10 – 380nm
34. The mass of α particle is ____ times greater than the mass of electron?
 (a) 5000 (b) 6000
 (c) 7000 (d) 8000
Ans: (c) 7000
35. What is the pH of Vinegar?
 (a) 4.74 (b) 3.74
 (c) 4.34 (d) 4.89
Ans: (a) 4.74
36. Which inert gas forms very stable compound?
 (a) F_2 (b) Cl_2
 (c) Br_2 (d) I_2
Ans: (a) F_2
37. What is the cell potential of Lead-acid car battery?
 (a) 2.00 V (b) 1.50 V
 (c) 3.70 V (d) 1.60 V
Ans: (a) 2.00 V
38. What is the correct relation between K_P and K_C ?
 (a) $K_P = K_C(RT)^{\Delta n^{-1}}$ (b) $K_P = K_C(RT)^{\Delta n}$
 (c) $K_C = K_P(RT)^{\Delta n}$ (d) $K_C = K_P(RT)^{\Delta n^{-1}}$
Ans: (b) $K_P = K_C(RT)^{\Delta n}$
39. Which one of the following has the highest Ionization Energy?
 (a) N (b) O
 (c) Be (d) B
Ans: (a) N
40. What could be the alternative to poisonous substance CCl_4 ?
 (a) C_6H_{14} (b) $C_6H_5 - CH_3$
 (c) K_2CO_3 (d) C_6H_6
Ans: (a) C_6H_{14}
Solve: Note: Alternative of C_6H_6 is $C_6H_5 - CH_3$
 Alternative of K is Ca
 Alternative of $PbCrO_4$ is K_2CO_3

41. What is the shape of S orbital?
 (a) Spherical (b) Dumbbell shaped
 (c) Cubic (d) Triangular
Ans: (a) Spherical
42. Which of the following is halous acid?
 (a) HClO_3 (b) HBrO_3
 (c) HIO_3 (d) HBrO_2
Ans: (d) HBrO_2
Solve: Note: HClO_2 , HBrO_2 , HIO_2 are halous acid
43. What is the temperature range of mesosphere?
 (a) -56° to 25°C (b) -56° to -2°C
 (c) -2° to -92°C (d) -92° to 1200°C
Ans: (c) -2° to -92°C
44. What is the WHO approved pH range of drinking water?
 (a) 3.5 – 6.5 (b) 5.5 – 7.5
 (c) 6.5 – 8.5 (d) 7.5 – 9.5
Ans: (c) 6.5 – 8.5
45. Which colored precipitation is formed by 2,4-dinitrophenyl hydrogen?
 (a) Orange (b) Green
 (c) Red (d) Blue
Ans: (a) Orange
46. How many probable isomers are possible by the molecular symbol of $\text{C}_2\text{H}_6\text{O}$?
 (a) 2 (b) 3
 (c) 4 (d) 6
Ans: (a) 2
Solve: Note: The two isomers of $\text{C}_2\text{H}_6\text{O}$ are:
 $\text{CH}_3 - \text{CH}_2 - \text{OH}$, $\text{CH}_3 - \text{O} - \text{CH}_3$
47. Which one is dicarboxylic acid?
 (a) Benzoic acid (b) Citric acid
 (c) Tartaric acid (d) Formic acid
Ans: (c) Tartaric acid
48. What is the ideal example of an organic compound having 2 similar chiral centers?
 (a) Lactic acid (b) Tartaric acid
 (c) Propanoic acid (d) Acetic acid
Ans: (b) Tartaric acid
49. What percentage of benzol is found from distilled part of diluted oil at $110^\circ - 140^\circ\text{C}$ temperature?
 (a) 90% (b) 50%
 (c) 84% (d) 70%
Ans: (b) 50%
50. Which one is not a primary standard substance?
 (a) Na_2CO_3 (b) $\text{K}_2\text{Cr}_2\text{O}_7$
 (c) NaOH (d) Oxalic acid
Ans: (c) NaOH
Solve: Note: NaOH , H_2SO_4 , KMnO_4 etc. are secondary standard substances.
51. Which one is produced in the anode during electrolysis of brine?
 (a) H_2 (b) Cl_2
 (c) NaOH (d) H_2O
Ans: (b) Cl_2
Solve: Note: H_2 gas is produced in the cathode during electrolysis of NaCl .
52. What is the standard reduction potential of Mg^{2+} electrode?
 (a) -2.93 (b) -2.71
 (c) $+0.79$ (d) -2.37
Ans: (d) -2.37
Solve: Note:
 $\text{K}^+/\text{K} \rightarrow -2.93$
 $\text{Na}^+/\text{N} \rightarrow -2.71$
 $\text{Hg}^{2+}/\text{Hg} \rightarrow 0.79$
53. What is the example of gas half-cell?
 (a) $\text{Au}, \text{Sn}^{2+}(\text{aq})/\text{Sn}^{4+}(\text{aq})$
 (b) $\text{Na}, \text{Hg}(\text{s})/\text{Na}^+(\text{aq})$
 (c) $\text{Pt}, \text{Cl}_2(\text{g})/\text{Cl}^-(\text{aq})(1\text{M})$
 (d) $\text{Ag}(\text{s}), \text{AgCl}(\text{s})/\text{Cl}^-(\text{aq})$
Ans: (c) $\text{Pt}, \text{Cl}_2(\text{g})/\text{Cl}^-(\text{aq})(1\text{M})$
54. What percentage of lime is present in Portland cement?
 (a) 52% (b) 62%
 (c) 22% (d) 7.5%
Ans: (b) 62%
Solve: Note: In Portland cement- magnesia (1-4%), silica (20-24%), alumina (3-8%) are present.
55. Which is not a derivative of Carboxylic acid?
 (a) RCOX (b) RCONH_2
 (c) RCOOR (d) $\text{R} - \text{CO} - \text{R}$
Ans: (d) $\text{R} - \text{CO} - \text{R}$
56. Who gave the 'sun-centralized' theory?
 (a) Kepler (b) Ptolemy
 (c) Copernicus (d) Newton
Ans: (c) Copernicus

57. Which one is the distributive law?

- (a) $\vec{P} + \vec{Q} = \vec{Q} + \vec{P}$
 (b) $(\vec{P} + \vec{Q}) + \vec{R} = \vec{P} + (\vec{Q} + \vec{R})$
 (c) $m(\vec{P} + \vec{Q}) = m\vec{P} + m\vec{Q}$
 (d) $\vec{P} + \vec{Q} = -\vec{Q} + \vec{P}$

Ans: (c) $m(\vec{P} + \vec{Q}) = m\vec{P} + m\vec{Q}$

58. Which one is the example of two dimensional object?

- (a) Hanging thread (b) Table
 (c) Thin paper (d) Long thread

Ans: (c) Thin paper

Solve: Note: Long slender rod, long slender yarn, hanging yarn- one-dimensional objects. table- three-dimensional object.

59. Mass of a wheel is 5kg and radius of gyration 25cm. What is the moment of inertia?

- (a) 0.03125 kgm^2 (b) 0.3125 kgm^2
 (c) 3.0125 kgm^2 (d) 0.003125 kgm^2

Ans: (b) 0.3125 kgm^2

Solve: $I = MK^2 = 5 \times (0.25)^2 = 0.3125 \text{ kgm}^2$

60. Which one is the correct equation of work energy theorem?

- (a) $W = \frac{1}{2}mv_0^2 - \frac{1}{2}mv^2$
 (b) $W = \frac{1}{2}mv^2 - \frac{1}{2}mv_0^2$
 (c) $W = \frac{1}{2}mv^2 - \frac{1}{2}m^2v_0$
 (d) $W = mgh$

Ans: (b) $W = \frac{1}{2}mv^2 - \frac{1}{2}mv_0^2$

61. The value of 'g' is considered ideal in which latitude?

- (a) 90° (b) 45°
 (c) 0° (d) 180°

Ans: (b) 45°

62. What is the value of youngs coefficient of copper?

- (a) $12.6 \times 10^9 \text{ Nm}^{-2}$
 (b) $12.6 \times 10^{11} \text{ Nm}^{-2}$
 (c) $12.6 \times 10^{10} \text{ Nm}^{-2}$
 (d) $12.5 \times 10^{12} \text{ Nm}^{-2}$

Ans: (c) $12.6 \times 10^{10} \text{ Nm}^{-2}$

63. The path difference of two points in a wave is $\frac{\lambda}{4}$. What is the phase difference between the two points?

- (a) $\frac{\pi}{4}$ (b) $\frac{\pi}{2}$
 (c) $\frac{\lambda}{2}$ (d) π

Ans: (b) $\frac{\pi}{2}$

Solve: phase difference $= \frac{2\pi}{\lambda} \times \text{path difference} = \frac{2\pi}{\lambda} \times \frac{\lambda}{4} = \frac{\pi}{2}$

64. If $\vec{P}$ & $\vec{Q}$ vectors are working at same direction, what will be their vector product?

- (a) PQ (b) $-PQ$
 (c) 0 (d) Infinite

Ans: (c) 0

Solve: $\vec{P} \times \vec{Q} = PQ \sin 0^\circ = PQ \cdot 0 = 0$

65. Which thermodynamic law will become invalid if efficiency becomes 100%?

- (a) 0th law (b) 1st law
 (c) 2nd law (d) 3rd law

Ans: (c) 2nd law

Solve: According to the 2nd law of thermodynamics, the efficiency of a machine cannot be 1 or 100%

66. Relation between pressure and volume for adiabatic change is-

- (a) $PV = \text{Constant}$ (b) $TV^{\gamma-1} = \text{Constant}$
 (c) $PV^\gamma = \text{Constant}$ (d) $TV^\gamma = \text{Constant}$

Ans: (c) $PV^\gamma = \text{Constant}$

67. If insulator is positioned between conductors, capacitance of a capacitor-

- (a) Decreases
 (b) Increases
 (c) Remains unchanged
 (d) Becomes negative

Ans: (b) Increases

68. Electromotive force of a cell is 1.5V. Its potential difference becomes 1.4V when 4A current is flowed. What is the internal resistance?

- (a) 0.025Ω (b) 1.025Ω
 (c) 2.025Ω (d) 3.025Ω

Ans: (a) 0.025Ω

Solve: $E = V + Ir \Rightarrow r = \frac{E-V}{I} = \frac{1.5-1.4}{4} = 0.025 \Omega$

69. How many components are there in geomagnetism?

- (a) 2 (b) 3
(c) 4 (d) 5

Ans: (b) 3

Solve: There are 3 elements of geomagnetism. Namely: deviation, dip, horizontal component of geomagnetic field.

70. What is the value of form coefficient?

- (a) 2.11 (b) $\sqrt{2}$
(c) 1.11 (d) $\sqrt{\frac{1}{2}}$

Ans: (c) 1.11

71. Which lens is used in magnifying glass?

- (a) Concave (b) Convex
(c) Biconcave (d) Convexo-concave

Ans: (b) Convex

72. Who introduced the electromagnetic theory?

- (a) Huygens (b) Max Plank
(c) Einstein (d) Max Well

Ans: (d) Max Well

Solve: Note: Huygens- The wave theory of light

Einstein - The theory of relativity

73. Graph of volume and pressure of a specific mass of gas at constant temperature -

- (a) Rectangular hyperbola
(b) Straight line from origin
(c) Ellipse
(d) Circle

Ans: (a) Rectangular hyperbola

Solve: This graph is called isothermal graph which follows Boyle's law.

74. With increase of free electron number per unit volume, drift velocity-

- (a) Increases
(b) Decreases
(c) Become zero
(d) Remains unchanged

Ans: (b) Decreases

Solve: Drift velocity and number of free electrons per unit volume are inversely proportional to one another.

75. Which one is not an advantage of transistor?

- (a) Small in size
(b) Active in small voltage
(c) Instant action
(d) Temporary

Ans: (d) Temporary

76. Choose the correct sentence.

- (a) He is M.A.in English
(b) He is a M.A in English
(c) He is an M.A.in English
(d) He is a M.A. English

Ans: (c) He is an M.A.in English

Solve: 'M' অক্ষরের উচ্চারণে প্রথমে vowel আসে তাই an হবে। আর যোগ্যতা বোঝাতে প্রথম letter এর পরে Full stop হয়, দ্বিতীয় letter এর পরেও Full stop না। Avevi Full stop ছাড়াও লেখা যায়।

77. The Antonym of 'Hazardous' is -

- (a) Certain (b) Safe
(c) Risky (d) Dear

Ans: (b) Safe

78. গাঁয়ে মানে না আপনি মোড়ল- The correct English proverb is-

- (a) Every man is for himself
(b) He is a self-styled leader
(c) Opportunity makes the thieves
(d) Good wine needs no bush

Ans: (b) He is a self-styled leader

79. He has an optimistic view of life.

- (a) happy (b) hopeful
(c) joyous (d) sarcastic

Ans: (b) hopeful

80. Which one is the correct sentence given below?

- (a) You, he and I went there.
(b) He, you and I went there.
(c) I, you and he went there.
(d) You, I and he went there.

Ans: (a) You, he and I went there.

Solve: দুই এর মধ্যে অধিক pronoun subject হিসেবে হলে pronoun এর ordering হবে second + third + first person।

81. I reached the destination_____ Monday.

- (a) in (b) on
(c) at (d) by

Ans: (b) on

Solve: বারের পূর্বে 'on' বসে।

82. Which is correct English translation for the sentence? “সকাল থেকে ঝড়িঝড়ি বৃষ্টি হচ্ছে।”

- (a) It has been drizzling since morning.
- (b) It is raining from morning.
- (c) It has been raining from morning.
- (d) It is drizzling since morning.

Ans: (a) It has been drizzling since morning.

83. Which one is a complex sentence?

- (a) There is no mother but loves her child.
- (b) He is poor but honest.
- (c) Do or die.
- (d) He tried hard to help me.

Ans: (a) There is no mother but loves her child.

84. The station master knows when the train will depart. The underlined clause is-

- (a) noun clause
- (b) an adjective clause
- (c) an adverb clause
- (d) a prepositional clause

Ans: (a) noun clause

85. Choose the correct sentence.

- (a) I have many works to do
- (b) I have many work to do
- (c) I have a lot of work to do
- (d) I have great deal works to do

Ans: (c) I have a lot of work to do

86. If we had a boat, we _____ the river.

- (a) will cross
- (b) would cross
- (c) will be crossing
- (d) would make crossed

Ans: (b) would cross

87. Identify the underlined clause– The time when the train will leave is not fixed.

- (a) Adjective clause
- (b) Noun clause
- (c) Adverbial clause
- (d) Co-ordinate clause

Ans: (a) Adjective clause

88. The pill tastes bitter. বাক্যটির passive voice হবে-

- (a) The pill is bitter when it is tasted
- (b) The pill is bitter when it tastes
- (c) The pill was bitter when it tasted
- (d) The pill was bitter it was tasted

Ans: (a) The pill is bitter when it is tasted

Solve: A few, every এগুলো Pronoun হয় না, তাই এদের মাঝখানে preposition থাকতে পারবে না। All pronoun হয় তবে ‘all of’ এর পরে personal, demonstrative অথবা relative pronoun থাকে। কিন্তু each pronoun হিসেবে ব্যবহৃত হয় যার পরে noun/pronoun উভয় থাকতে পারে।

89. She said, “Let me come in”. Which of the following is correct indirect form of speech?

- (a) She said that she may come in
- (b) She requested that she may come in
- (c) She requested that she may be allowed to come in
- (d) She requested that she might come in

Ans: (d) She requested that she might come in

Solve: Prefer এর পরে preposition to বসে এবং ঐ ‘to’ উভয় পাশে ing যুক্ত verb হয়।

90. “In black and white” এর অর্থ-

- (a) orally
- (b) in details
- (c) in writing
- (d) in short

Ans: (c) in writing

91. Who was the first Nawab of Bengal?

- (a) Murshid Quli Khan
- (b) Alibardee Khan
- (c) Shirajuddoula
- (d) Mir Kashem

Ans: (a) Murshid Quli Khan

92. Which part of the ancient Bengal was situated in the eastern part of Bangladesh?

- (a) Samatata
- (b) Harikel
- (c) Raarh
- (d) Chandradip

Ans: (b) Harikel

93. What was the name of Shashanka’s capital?

- (a) Pataliputra
- (b) Karnasubarna
- (c) Rajmahal
- (d) Gauda

Ans: (b) Karnasubarna

94. The famine of 76 occurred in which Bengali year?

- (a) 1376 (b) 1146
(c) 1076 (d) 1176

Ans: (d) 1176

Solve: Remember: English year was 1770 AD.

95. Who was the first Lieutenant Governor of the newly formed province back in 1905?

- (a) Robert Muller (b) Lord Diar
(c) Bamfylde Fuller (d) Louis Philip

Ans: (c) Bamfylde Fuller

96. Which organization declared the 21st of February as the 'International Mother Language Day'?

- (a) UNICEF (b) UNDP
(c) UNESCO (d) ECOSOC

Ans: (c) UNESCO

Solve: Remember: It was recognized by UNESCO in 17 November, 1999.

97. How many were given the title of 'Bir Pratik' for their contribution to liberation war?

- (a) 7 (b) 69
(c) 175 (d) 426

Ans: (d) 426

Solve: Remember: Bir Shrestha - 7; Bir Uttam - 69; Bir Bikram - 175; Bir Pratik - 426.

98. When was the Mujibnagar Government Established?

- (a) 10 April, 1971 (b) 17 April, 1971
(c) 4 April, 1971 (d) 26 March, 1971

Ans: (a) 10 April, 1971

Solve: Remember: Oath taking of this government was held on 17 April, 1971.

99. Where did the 'Concert for Bangladesh' take place?

- (a) California (b) New York
(c) Michigan (d) Los Angeles

Ans: (b) New York

100. Who was the supreme leader of the liberation war of Bangladesh?

- (a) Sheikh Mujibur Rahman
(b) M.A.G Osmani
(c) A.K Khandoker
(d) Tajuddin Ahmed

Ans: (a) Sheikh Mujibur Rahman

Dental Special Final Model Test-09

01. Which cell organelle can cause cancer?

- (a) Lysosome (b) Ribosome
(c) Golgi body (d) Mitochondria

Ans: (a) Lysosome

Solve: Lysosomes are frequently called suicidal bags or suicidal squad.

02. In which stage of mitotic cell division do the middle lamella of cell walls form?

- (a) Prophase (b) Metaphase
(c) Anaphase (d) Telophase

Ans: (d) Telophase

03. Which of the following is not produced from procambium?

- (a) Cortex (b) Phloem
(c) Xylem (d) Cambium

Ans: (a) Cortex

Solve: Note: Cortex is formed from ground meristem.

04. Which one helps in the formation of Nucleolus?

- (a) SAT (b) Chromomere
(c) Kinetochore (d) Pelicle

Ans: (a) SAT

05. In which one globulin protein is not found?

- (a) Egg yolk (b) Plasma
(c) Eye lens (d) Wheat seed

Ans: (d) Wheat seed

06. Which one creates water bloom?

- (a) *Oedogonium* (b) *Nostoc*
(c) *Chara* (d) *Zygnema*

Ans: (b) *Nostoc*

07. Asexual reproduction of *Pteris* plants is completed by—

- (a) Spore formation (b) Conidia
(c) Gonidia (d) Bud formation

Ans: (a) Spore formation

08. Which enzyme is used in Cataract surgery?
 (a) Trypsin (b) Pectin
 (c) Catalase (d) Urobialase
Ans: (a) Trypsin
09. Casparian strip is found in-
 (a) Outer skin (b) Epidermis
 (c) Inner skin (d) Pericycle
Ans: (c) Inner skin
10. In which part of the cell do the reactions of glycolysis take place?
 (a) Cytoplasm (b) Mitochondria
 (c) Nucleus (d) Plastid
Ans: (a) Cytoplasm
Solve: Note: The Krebs cycle occurs in the mitochondrial matrix.
11. Which of the following is obligate anaerobes?
 (a) *Clostridium* (b) *Azotobacter*
 (c) *Micrococcus* (d) *Escherichia*
Ans: (a) *Clostridium*
Solve: Remember: *Azotobacter* is obligate aerobes.
12. Number of plasmid in each cell of bacteria can be—
 (a) 1 – 500 (b) 1 – 1000
 (c) 1 – 10000 (d) 1 – 5000
Ans: (b) 1 – 1000
13. Which is an animal of Palearctic region?
 (a) Alligator (b) Lemur
 (c) Wallaby (d) Humming bird
Ans: (a) Alligator
14. Which part of the bacteria is called slime layer?
 (a) Cell wall (b) Flagella
 (c) Capsule (d) Pili
Ans: (c) Capsule
15. Which is not used in photosynthesis process?
 (a) CO₂ (b) Water
 (c) Chlorophyll (d) O₂
Ans: (d) O₂
Solve: Note: O₂ is used in the respiration process.
16. Compound eye and ocellus on head works as which receptor?
 (a) Photoreceptor
 (b) Thigmoreceptor
 (c) Thermoreceptor
 (d) Chordotonal receptor
Ans: (a) Photoreceptor
17. Ruhi fish cannot survive under which temperature?
 (a) 17° C (b) 14° C
 (c) 27° C (d) 25° C
Ans: (b) 14° C
18. Which is not secreted from the wall of digestive canal?
 (a) Gastrin (b) Secretin
 (c) Enterocrinin (d) Oxytocin
Ans: (d) Oxytocin
Solve: Note: Oxytocin is secreted from the posterior part of the pituitary gland.
19. Urea is produced in liver through which cycle?
 (a) Ornithine cycle (b) PCR cycle
 (c) Kelvin cycle (d) Krebs cycle
Ans: (a) Ornithine cycle
20. Which is the defensive substance of plasma?
 (a) Albumin (b) Lecithin
 (c) Bilirubin (d) Agglutinin
Ans: (d) Agglutinin
21. Which of is the last chamber of the heart of Ruhi fish?
 (a) Ventricle (b) Sinus venosus
 (c) Bulbus arteriosus (d) Atrium
Ans: (a) Ventricle
22. Which are floating ribs?
 (a) 10th, 11th (b) 11th, 12th
 (c) 10th, 9th (d) 7th, 8th
Ans: (b) 11th, 12th
23. Which is an example of first class lever?
 (a) Pulling car (b) Nail cutter
 (c) Scissor (d) Elbow junction
Ans: (c) Scissor
Solve: Note: Second class lever-wheelbarrow
 Third class lever - nail clipper, elbow joint

24. The terminal nerves are formed by which part of neuron?
 (a) Body (b) Dendrite
 (c) Axon (d) Synaptic cleft
Ans: (c) Axon
25. Which doesn't participate in accumulation of eyes of human?
 (a) Irish (b) Ciliary muscle
 (c) Lens (d) Sclera
Ans: (d) Sclera
26. The Antibody which is used to excite an Antigen for phagocytosis is called -
 (a) Opsonin (b) Cytokinin
 (c) Histamin (d) Heparin
Ans: (a) Opsonin
27. Which one is a vestigial organ?
 (a) Nictitating membrane
 (b) Tympanic membrane
 (c) Eyelid
 (d) Eye gland
Ans: (a) Nictitating membrane
28. Which is the permanent contraceptive method for women?
 (a) Vasectomy (b) Diaphragm
 (c) Sponge (d) Tubectomy
Ans: (d) Tubectomy
29. Which is mostly affected by hemophilia?
 (a) Digestive canal (b) Skin
 (c) Teeth (d) Bonejoint
Ans: (d) Bonejoint
30. Which antibody is directly related with allergic reaction?
 (a) IgG (b) IgA
 (c) IgE (d) IgM
Ans: (c) IgE
31. What is the percentage of NH_3 in liquor ammonia?
 (a) 10 – 20% (b) 20 – 30%
 (c) 30 – 40% (d) 60 – 70%
Ans: (c) 30 – 40%
32. What is the minimum volume of liquid that can be measured by measuring cylinder?
 (a) 0.01 mL (b) 0.1 mL
 (c) 1 mL (d) 10 mL
Ans: (c) 1 mL
33. Which one was not used in Rutherford's experiment?
 (a) α particle emitted from Radioactive element
 (b) Thin silver foil
 (c) Thin gold foil
 (d) Screen covered with ZnS
Ans: (b) Thin silver foil
34. Which one is not included as an antioxidant?
 (a) Vitamin -A (b) Vitamin -C
 (c) Vitamin -E (d) Vitamin -K
Ans: (d) Vitamin -K
35. Above which temperature Diamond is converted to Graphite?
 (a) 3730°C (b) 3600°C
 (c) 1000°C (d) 500°C
Ans: (c) 1000°C
36. What is the color of aqueous solution of $\text{Cr}_2(\text{SO}_4)_3$?
 (a) Blue (b) Violet
 (c) Green (d) Yellow
Ans: (c) Green
37. What is the unit of rate of reaction for fast reactions?
 (a) mol s^{-1} (b) $\text{mol dm}^{-3} \text{min}^{-1}$
 (c) $\text{mol dm}^{-3} \text{s}^{-1}$ (d) mol m^{-1}
Ans: (c) $\text{mol dm}^{-3} \text{s}^{-1}$
38. Which one is not an antimicrobial food preservative?
 (a) Potassium sorbate
 (b) TBHQ
 (c) Acetic acid
 (d) Citric acid
Ans: (b) TBHQ
Solve: Note: TBHQ is antioxidant food preservative.

39. What is the process called in which food is successively brined and soaked in vinegar for preservation?
 (a) Pickling (b) Curing
 (c) Jellying (d) Jugging
Ans: (a) Pickling
40. The structure of atom becomes pentagonal dipyramid if there is – hybrid orbital.
 (a) 3 (b) 5
 (c) 6 (d) 7
Ans: (d) 7
41. Which is the chemical method of enumerating reaction rate?
 (a) Titration
 (b) Enumeration of change in volume
 (c) Change of color
 (d) Measurement of electrical conductivity
Ans: (a) Titration
42. Which of the following is known as White vinegar?
 (a) Cider vinegar (b) Grape vinegar
 (c) Spirit vinegar (d) Malt vinegar
Ans: (c) Spirit vinegar
43. What is the amount of CH₄ in CNG of metal gas cylinder?
 (a) 80 – 85% (b) 90 – 95%
 (c) 95 – 99% (d) 100%
Ans: (c) 95 – 99%
44. What is the normal limit of DO of surface water?
 (a) 5 mg/L (b) 6 mg/L
 (c) 7 mg/L (d) 8 mg/L
Ans: (a) 5 mg/L
45. Volume of a gas at definite pressure and 27°C temperature is $1.85 \times 10^{-2} \text{ m}^3$. What will be the volume of that gas at 25°C temperature?
 (a) 64.67 m^3
 (b) $1.84 \times 10^{-2} \text{ m}^3$
 (c) 0.36 m^3
 (d) $5.31 \times 10^{-12} \text{ m}^3$
Ans: (b) $1.84 \times 10^{-2} \text{ m}^3$
Solve: $\frac{V_1}{T_1} = \frac{V_2}{T_2} \Rightarrow V_2 = \frac{V_1 \times T_2}{T_1} = \frac{1.85 \times 10^{-2} \times 298}{300} = 1.84 \times 10^{-2} \text{ m}^3$
46. What is the reaction series of halogens reacting with alkanes?
 (a) $\text{F}_2 > \text{Cl}_2 > \text{Br}_2 > \text{I}_2$
 (b) $\text{Cl}_2 > \text{F}_2 > \text{Br}_2 > \text{I}_2$
 (c) $\text{F}_2 > \text{Br}_2 > \text{Cl}_2 > \text{I}_2$
 (d) $\text{Br}_2 > \text{I}_2 > \text{Cl}_2 > \text{F}_2$
Ans: (a) $\text{F}_2 > \text{Cl}_2 > \text{Br}_2 > \text{I}_2$
47. Which of the following is not a component of middle oil?
 (a) Quinoline (b) Phenol
 (c) Cresol (d) Naphthalin
Ans: (a) Quinoline
48. Which one is Tollen's reagent?
 (a) $\text{Cu}(\text{OH})_2 + \text{NaOH}$ (b) $[\text{Ag}(\text{NH}_3)_2]\text{OH}$
 (c) $\text{R} - \text{Mg} - \text{X}$ (d) $\text{HCl} + \text{HNO}_3$
Ans: (b) $[\text{Ag}(\text{NH}_3)_2]\text{OH}$
49. Which ingredient of Dettol works as a germicide?
 (a) Chloroxylenol (b) Pine oil
 (c) Isopropyl alcohol (d) Fragrant
Ans: (a) Chloroxylenol
50. Which of the following is closed chain aliphatic compound?
 (a) Benzene (b) Cyclohexane
 (c) Thiofin (d) Pyridine
Ans: (b) Cyclohexane
Solve: Note: Cyclopropane, benzene, ethylene oxide, thiophene - closed chain organic compounds.
51. Which one is the correct RX reactivity series of S_N1 reaction?
 (a) $3^\circ \text{RX} > 2^\circ \text{RX} > 1^\circ \text{RX}$
 (b) $1^\circ \text{RX} > 2^\circ \text{RX} > 3^\circ \text{RX}$
 (c) $1^\circ \text{RX} > 3^\circ \text{RX} > 2^\circ \text{RX}$
 (d) $3^\circ \text{RX} > 1^\circ \text{RX} > 2^\circ \text{RX}$
Ans: (a) $3^\circ \text{RX} > 2^\circ \text{RX} > 1^\circ \text{RX}$
52. If 0.5A electricity is run within the aqueous solution of blue vitriol for 10 min then how much of Cu will be stored?
 (a) 0.987 g (b) 0.0987 g
 (c) 0.0789 g (d) 0.789 g
Ans: (b) 0.0987 g
Solve: $W = ZIt = 0.000329 \times 0.5 \times 600 = 0.0987 \text{ g}$. $[Z = \frac{63.5}{2 \times 96500} = 0.000329]$

53. Which one is used as an electric stimulator in Dry Cell?
 (a) MnO_2 (b) ZnCl_2
 (c) NH_4Cl (d) NH_4OH
Ans: (c) NH_4Cl
Solve: Note: MnO_2 is used as the depolarizer in Dry Cell.
54. Which agent is added to decolorize glass?
 (a) NaNO_3 (b) Al_2O_3
 (c) MnO_2 (d) FeO
Ans: (c) MnO_2
55. Which one is used for the production of plastic film and recording tape?
 (a) Nylon-6:6 (b) Polystyrene
 (c) Dacron (d) Teflon
Ans: (c) Dacron
56. Device to determine the relative humidity of the air-
 (a) Hygrometer
 (b) Thermometer
 (c) Hydrometer
 (d) Sphygmomanometer
Ans: (a) Hygrometer
57. Who first used differential calculus in theoretical physics?
 (a) Galileo (b) Newton
 (c) Huygens (d) Young
Ans: (b) Newton
58. The battery will be recharged when the emf is below of-
 (a) 1.9 V (b) 2 V
 (c) 3 V (d) 1.17 V
Ans: (d) 1.17 V
59. Which one is used as fuel for rocket?
 (a) Liquid Oxygen (b) Liquid Hydrogen
 (c) Methane (d) Liquid Nitrogen
Ans: (b) Liquid Hydrogen
Solve: Note: Liquid Oxygen is used as fuel for rocket.
60. The work done by an object rotating in a circular field is-
 (a) Positive (b) Negative
 (c) Zero (d) Infinite
Ans: (c) Zero
61. Diameter of mars is 6000 km and acceleration due to gravity on its surface is 3.8 ms^{-2} . What is the escape velocity of a body from the surface of mars?
 (a) 4.77 kms^{-1} (b) 3.77 kms^{-1}
 (c) 2.77 kms^{-1} (d) 1.77 kms^{-1}
Ans: (a) 4.77 kms^{-1}
Solve: $V_e = \sqrt{2gR} = \sqrt{2 \times 3.8 \times 3 \times 10^6} = 4.77 \times 10^3 \text{ ms}^{-1} = 4.77 \text{ kms}^{-1}$
62. Whose intermolecular distance is the least?
 (a) Solid (b) Gaseous
 (c) Plasma (d) Liquid
Ans: (a) Solid
Solve: Note: Intermolecular distance is the maximum in the gaseous condition.
63. If water vapor increases in the air, the density of air-
 (a) Decreases (b) Remains constant
 (c) Increases (d) None
Ans: (a) Decreases
64. What is the threshold intensity level of painful sound in the ear?
 (a) 120 dB (b) 100 dB
 (c) 90 dB (d) 95 dB
Ans: (a) 120 dB
65. How is the weather when the difference in between the dry and wet bulb thermometer is enormous?
 (a) Humid
 (b) Dry
 (c) Possibility of rain
 (d) Possibility of storm
Ans: (b) Dry
Solve: Note: The weather is humid when the difference is small.
 The weather is dry if the difference is too much.
 The difference gradually decreases - probability of rain.
 If the difference suddenly decreases - there may be a storm.

66. 1st law of thermodynamics establishes relation between-
 (a) Heat and energy (b) Heat and work
 (c) Work and power (d) Heat and force
Ans: (b) Heat and work
67. S.I unit of electric field is-
 (a) m/V (b) NC⁻¹
 (c) JC⁻¹ (d) Vm⁻¹
Ans: (b) NC⁻¹
68. Thermal co-efficient of resistance of aluminum is-
 (a) $3.5 \times 10^3 (^\circ\text{C})^{-1}$
 (b) $2.5 \times 10^{-2} (^\circ\text{C})^{-1}$
 (c) $4.9 \times 10^{-3} (^\circ\text{C})^{-1}$
 (d) $3.9 \times 10^{-3} (^\circ\text{C})^{-1}$
Ans: (d) $3.9 \times 10^{-3} (^\circ\text{C})^{-1}$
69. At first who proposed the idea of nuclear current?
 (a) Faradey (b) Ampere
 (c) Weis (d) Newton
Ans: (b) Ampere
70. Which is called Sinusoidal equation?
 (a) $E = E_0 \cos \omega t$ (b) $E = E_0 \sin \omega t$
 (c) $L = \frac{E}{\frac{dI}{dt}}$ (d) $E = N \frac{d\phi}{dt}$
Ans: (b) $E = E_0 \sin \omega t$
71. A force of 16N acts on a body of 4 kg for 4 s. Find out the impulse of force.
 (a) 64 N (b) 64 Ns
 (c) 64 kgms⁻² (d) 16 Ns
Ans: (b) 64 Ns
Solve: $J = F \times t = (16 \text{ N} \times 4 \text{ s}) = 64 \text{ Ns}$
72. Wavelength of visible light is-
 (a) $10^{-3} \text{m} - 4 \times 10^{-7} \text{m}$
 (b) $5 \times 10^{-7} \text{m} - 5 \times 10^{-9} \text{m}$
 (c) $7 \times 10^{-7} \text{m} - 4 \times 10^{-7} \text{m}$
 (d) $5 \times 10^{-11} \text{m} - 5 \times 10^{-15} \text{m}$
Ans: (c) $7 \times 10^{-7} \text{m} - 4 \times 10^{-7} \text{m}$
73. Distance of Alpha centauri from our galaxy is-
 (a) 2.3 light years (b) 3.3 light years
 (c) 4.3 light years (d) 5.3 light years
Ans: (c) 4.3 light years
74. What transformation of energy takes place if an insulated cast iron is wrapped by copper wire and current is allowed to flow?
 (a) Electric energy to light energy
 (b) Electric energy to heat energy
 (c) Electric energy to magnetic energy
 (d) Electric energy to mechanical energy
Ans: (c) Electric energy to magnetic energy
75. Value of Chandrashekhar limit is-
 (a) $3M_\odot$ (b) $1.4M_\odot$
 (c) $2M_\odot$ (d) $2.4M_\odot$
Ans: (b) $1.4M_\odot$
76. Which is correct?
 (a) She took pictures, and I did so
 (b) She took pictures and so I did
 (c) She took pictures and so did I
 (d) She took pictures, and I did the same
Ans: (c) She took pictures and so did I
Solve: Positive agreement এর ক্ষেত্রে and so এর পরে পূর্বের বাক্যের tense অনুযায়ী সাহায্যকারী verb এবং তারপরে subject বসে।
77. What is the synonym of mild?
 (a) violent (b) gentle
 (c) hard (d) lovely
Ans: (b) gentle
78. 'Fallacious' is closely opposite in meaning to-
 (a) Safe (b) Energetic
 (c) Diverted (d) Valid
Ans: (d) Valid
Solve: Fallacious- প্রতারণাপূর্ণ; Safe- নিরাপদ; Energetic- অনলস; Diverted- বিমুখ করা; Valid- বৈধ; So, 'Fallacious' is closely opposite to 'Valid'.

79. Shahed did not join the army. Here the word army is-

- (a) an abstract noun (b) a common noun
(c) a collective noun (d) a material noun

Ans: (c) a collective noun

80. Which of the following sentence is a compound sentence?

- (a) Govern your passions or they will govern you
(b) The town in which I live is very large
(c) Rain is accompanied by a strong wind
(d) There was one philosopher who close to live in a tub

Ans: (a) Govern your passions or they will govern you

Solve: 'or' শব্দটি compound বাক্যের conjunction যার দুটি principal clause/independent clause থাকে।

81. He is deaf ——— my request. Fill in the blank.

- (a) of (b) on
(c) to (d) from

Ans: (c) to

Solve: 'deaf to' অর্থ উদাসীন।

82. Which is the correct sentence?

- (a) I wrote him yesterday
(b) I wrote him a letter yesterday
(c) I had written him yesterday
(d) I had written him a letter yesterday

Ans: (b) I wrote him a letter yesterday

Solve: 'write' verb এর দুটি object থাকে। what ? এর উত্তর যা direct object. whom ? এর উত্তর যা indirect object

83. LAZY : INDOLENT

- (a) introvert: sociable
(b) work : toil
(c) novice : veteran
(d) stubborn : obstinate

Ans: (d) stubborn : obstinate

84. The synonym of the word 'Victor' is-

- (a) Vanquisher (b) Defeated
(c) Nonentity (d) Indication

Ans: (a) Vanquisher

85. Birds of the same _____ flock together.

- (a) feather (b) class
(c) group (d) color

Ans: (a) feather

86. Give the antonym of the word 'Ascend'.

- (a) Go up (b) Stop
(c) Move away (d) Go down

Ans: (d) Go down

87. Which of the following is a correct proverb?

- (a) Fools rush is the where angels fear to tread
(b) Fools rush in all where angels fear to tread
(c) Fools rush in where angels fear to tread
(d) Fools rush in an where angel fears to tread

Ans: (c) Fools rush in where angels fear to tread

88. The opposite of the word 'minimize' is-

- (a) list (b) expand
(c) destroy (d) itemize

Ans: (b) expand

89. "তিনি ইংরেজীর একজন বিগদ্ধ অধ্যাপক"। Translate into English.

- (a) He is an erudite professor of English.
(b) He is a professor with outstanding knowledge in English.
(c) He is at home in English.
(d) He is a professor of English with vast understanding.

Ans: (a) He is an erudite professor of English.

90. Indirect speech of - He said, "Friends, Goodbye."

- (a) He bade his friends goodbye.
- (b) He told his friends goodbye.
- (c) He bade his friends with good wishes.
- (d) He said goodbye to his friends.

Ans: (a) He bade his friends goodbye.

Solve: Direct speech এর reported speech এ পূর্ণ বাক্য না থাকলে reported speech এর উদ্দেশ্য অনুযায়ী reporting verb দিতে হয়। যেমন: Goodbye শব্দটা দেখে 'bade' ব্যবহার করা হয়েছে।

91. What is the name of the highest state award of the Bangladesh?

- (a) Shadhinota Award
- (b) Ekushe Padak
- (c) Bangla Academy Award
- (d) Bangbandhu Award

Ans: (a) Shadhinota Award

Solve: Remember: The Independence Award was introduced in 1977.

92. Which period of Bengal is expressed by the word 'Matsyanya'?

- (a) 6th-7th century
- (b) 7th-8th century
- (c) 8th-9th century
- (d) 5th-6th century

Ans: (b) 7th-8th century

93. Among the European merchants, which came to Bengal first?

- (a) Portuguese
- (b) Dane
- (c) English
- (d) Dutch

Ans: (a) Portuguese

94. Which Mughal Emperor at first conquered Bengal?

- (a) Humayun
- (b) Babur
- (c) Shahjahan
- (d) Akbar

Ans: (d) Akbar

95. 'All India Muslim League' was established in which city?

- (a) Lahore
- (b) Karachi
- (c) Kolkata
- (d) Dhaka

Ans: (d) Dhaka

Solve: Remember: All India Muslim league was founded in 1906 at Dhaka.

96. Who declared the 'six point demand'?

- (a) Wali Khan
- (b) Khan Abdul Gaffar Khan
- (c) Sheikh Mujibur Rahman
- (d) Maolana Bhashani

Ans: (c) Sheikh Mujibur Rahman

Solve: Remember: In Lahore on 5 & 6 February, 1966. Bongabandhu Sheikh Mujib raised this demand.

97. Who recited the 'Charampatra' from the Shadhin Bangla radio station?

- (a) Belal Ahmed
- (b) M.R Akhtar Mukul
- (c) Anisuzzaman
- (d) Syed Ali Ahsan

Ans: (b) M.R Akhtar Mukul

98. Who was the commander in chief of the 'K-force' in the liberation war?

- (a) K.M Shafiullah
- (b) Mir Showkot Ali
- (c) Kazi Nuruzzaman
- (d) Khaled Mosharraf

Ans: (d) Khaled Mosharraf

99. Taramon Bibi fought in which sector?

- (a) 11
- (b) 6
- (c) 5
- (d) 7

Ans: (a) 11

100. 'Bangladesh-The Unfinished Revolution' was written by which writer?

- (a) Leon Russel
- (b) Archer K Blood
- (c) Lawrence Lifschultz
- (d) Anthony Mascarenhas

Ans: (c) Lawrence Lifschultz

Dental Special Final Model Test-10

01. Where was Golgi bodies first found?
 (a) Nerve cell of cat
 (b) Nerve cell of guinea pig
 (c) Nerve cell of cockroach
 (d) Nerve cell of ant
Ans: (a) Nerve cell of cat
02. Which is not an element of phloem tissue?
 (a) Sieve tubes (b) Companion cells
 (c) Phloem fibre (d) Vessel
Ans: (d) Vessel
03. Which is not an example of pentose sugar?
 (a) Xylose (b) Ribose
 (c) Ribulose (d) Erythrose
Ans: (d) Erythrose
04. Which stage of malarial parasite is extremely fragile?
 (a) Trophozoite
 (b) Amoeboid trophozoite
 (c) Schizont
 (d) Rosette
Ans: (a) Trophozoite
05. Which bacteria does nitrogen fixation in the nodules of root of bean like plants?
 (a) *Rhizobium* (b) *Azotobacter*
 (c) *Pseudomonas* (d) *E.coli*
Ans: (a) *Rhizobium*
Solve: Note: Receives nitrogen directly from the air- *Azotobacter*, *Pseudomonas*, *Clostridium*
06. Reverse Transcription is done in which process?
 (a) PCR (b) Cryogenic
 (c) GEO (d) Biolistics
Ans: (a) PCR
07. Which reproduction is completed in prothallus?
 (a) Sexual (b) Asexual
 (c) Fragmentation (d) Budding
Ans: (a) Sexual
08. Which is not a characteristic of Malvaceae family?
 (a) Flower is single
 (b) Has calyx
 (c) Axial placentation
 (d) Filamentous anther
Ans: (d) Filamentous anther
09. DNA of which virus is double-stranded?
 (a) T₂ (b) X₁₇₄
 (c) M₁₃ (d) Reovirus
Ans: (a) T₂
Solve: Virus like X₁₇₄, M₁₃ -Single stranded DNA, Reovirus and Bamon disease of paddy is - Double stranded RNA
10. The rate of photosynthesis is highest at-
 (a) 18 – 30°C (b) 30 – 35°C
 (c) 40 – 45°C (d) 45 – 50°C
Ans: (b) 30 – 35°C
11. Which one has fragmentation reproduction by stem?
 (a) Potato (b) Sweet potato
 (c) Dahlia (d) Asparagus
Ans: (a) Potato
Solve: Note: Vegetative reproduction can be done by sweet potato, dahlia, asparagus root.
12. In which class of plants, the stomata remain open at night?
 (a) Craculaceae (b) Poeace
 (c) Malvaceae (d) Solanaceae
Ans: (a) Craculaceae
Solve: Patharkuchi (Craculaceae) plant has open stomata at night and closed stomata during daytime.
13. Which plasmid contains collicin producing gene?
 (a) F plasmid
 (b) R plasmid
 (c) Col plasmid
 (d) Degradative plasmid
Ans: (c) Col plasmid

14. Which of the following's color is bluish green?
 (a) Ch – a (b) Ch – b
 (c) Xanthophyll (d) Carotene
Ans: (b) Ch – b
Solve: Note: Ch – a is of yellowish green color
 Xanthophyll- Yellow in color
 Carotene- Orange in color
15. Chromosomal dance is seen in which sub-stage of prophase-1?
 (a) Diplotene (b) Pachytene
 (c) Zygotene (d) Leptotene
Ans: (a) Diplotene
16. Which one is Brewer Yeast?
 (a) *Saccharomyces* (b) *Echcherichia*
 (c) *Acetobacter* (d) *Lactobacillus*
Ans: (a) *Saccharomyces*
17. Which type of scales covers the tail of Rohu fish?
 (a) Cycloid (b) Ptenoid
 (c) Ganoid (d) Placoid
Ans: (a) Cycloid
18. What is the name of the branch of medicine that discuss the reason of obesity?
 (a) Bariatrics (b) Psychiatry
 (c) Geriatrics (d) Pediatrics
Ans: (a) Bariatrics
Solve: Note: Branch related to adult health- Geriatrics
 Branch related to child health- Pediatrics
 Branch related to mental health- Psychiatry
19. In which place of digestive system maximum absorption occurs?
 (a) Heart (b) Stomach
 (c) Mouth cavity (d) Small intestine
Ans: (d) Small intestine
20. Which one's presence inhibits blood clotting in the blood vessels?
 (a) Heparin (b) Hemoglobin
 (c) Histamine (d) Thrombocyte
Ans: (a) Heparin
Solve: Note: Thrombocyte takes part in blood clotting.
21. Pacemaker is consisted of how many chambers?
 (a) One (b) Two
 (c) Three (d) Four
Ans: (c) Three
22. Which is not a bone of pelvic gridle?
 (a) Ilium (b) Pubis
 (c) Ischium (d) Ileum
Ans: (d) Ileum
Solve: Note: Ileum is the last part of the small intestine.
23. Which bone looks like 'U'?
 (a) Nasal (b) Mandible
 (c) Vomer (d) Zygomatic
Ans: (b) Mandible
24. Movement of head and neck is the function of which nerve?
 (a) Glossopharyngeal (b) Vegas
 (c) Spinal accessory (d) Hypoglossal
Ans: (c) Spinal accessory
25. Less secretion of which hormone causes Myxedema?
 (a) Thymocin (b) Melatonin
 (c) Thyroxin (d) Tri iodothyrenin
Ans: (c) Thyroxin
26. Which is Glorified Reptile?
 (a) Birds (b) Frog
 (c) Snake (d) Crocodile
Ans: (a) Birds
Solve: "Birds are glorified reptiles"- Huxley
27. What is the amount of blood flow in ml in kidney every minute?
 (a) 1200 ml (b) 125 ml
 (c) 150 ml (d) 100 ml
Ans: (a) 1200 ml
Solve: Remember: In human body, every minute 1200 ml blood is flown through kidney.

28. Which one is the first cell of male gametophyte?
 (a) Pollen grain (b) Pollen tube
 (c) Pollenal (d) Male gametes
Ans: (a) Pollen grain
29. Which part of eyes contains melanin pigment?
 (a) Choroid (b) Lens
 (c) Retina (d) Iris
Ans: (a) Choroid
30. Which phylum's organisms are known as Rain forest of sea?
 (a) Porifera (b) Cnidaria
 (c) Echinodermata (d) Mollusca
Ans: (b) Cnidaria
Solve: Note:
 Porifera- Porous animals
 Echinodermata- Thorny animals
 Mollusca- Mollusc animals
31. Which of the following is not a irritant substance?
 (a) Soap powder (b) Dil. Acid solution
 (c) Petroleum (d) Cement dust
Ans: (c) Petroleum
Solve: Note: Petroleum is a flammable substance.
32. Which quantum number explains the creation of fine lines in spectrum of atoms?
 (a) Primary quantum number
 (b) Secondary quantum number
 (c) Magnetic quantum number
 (d) Spin quantum number
Ans: (b) Secondary quantum number
Solve: Note: The spin quantum number of an electron is required to explain the magnetic nature.
33. What is the radius of the 1st orbit of H atom called?
 (a) Bohr radius (b) Thomson radius
 (c) Rutherford radius (d) Planck radius
Ans: (a) Bohr radius
34. What is called the Group-2 molecules?
 (a) Alkali metal (b) Earth alkali metal
 (c) Halogen (d) Currency metal
Ans: (b) Earth alkali metal
Solve: Note: Alkali metal- Group-1
 Halogen- Group-17
 Currency metal- Group-11
35. What is the shape of compound formed by d^2sp^3 hybridization?
 (a) Octagonal
 (b) Planer triangular
 (c) Linear
 (d) Triangular dipyramid
Ans: (a) Octagonal
36. What is the pH of saliva?
 (a) 4.8 – 7.5 (b) 6.2 – 7.4
 (c) 6.6 – 6.9 (d) 7.4 – 8.0
Ans: (b) 6.2 – 7.4
37. Which of the following acts as catalyst promoter in the NH_3 production by Haber method?
 (a) MgO (b) Fe
 (c) Ni (d) V_2O_5
Ans: (a) MgO
Solve: Note: In Haber method, catalyst promoters in NH_3 production are- MgO, SiO_2, Al_2O_3
38. Which one is not a form of antimony?
 (a) Metal antimony
 (b) β antimony
 (c) α antimony
 (d) Explosive antimony
Ans: (b) β antimony
39. What is the example of positive colloid?
 (a) V_2O_5 (b) Platinum colloid
 (c) Hemoglobin (d) CuS
Ans: (c) Hemoglobin
40. What type of substance is indicated by [Xi]?
 (a) Flammable (b) Toxic
 (c) Harmful (d) Provocative
Ans: (d) Provocative
Solve: Note:
 Flammable- F
 Toxic- T
 Harmful- Xr

41. By which method is oil extracted from eucalyptus leaves?
 (a) Distillation
 (b) Sublimation
 (c) Vapor distillation
 (d) Fractional distillation
Ans: (c) Vapor distillation
42. What is the correct sequence of the increase in covalent character?
 (a) $\text{CaI}_2 > \text{CaBr}_2 > \text{CaCl}_2$
 (b) $\text{CaBr}_2 > \text{CaI}_2 > \text{CaCl}_2$
 (c) $\text{CaCl}_2 > \text{CaBr}_2 > \text{CaI}_2$
 (d) $\text{CaI}_2 > \text{CaCl}_2 > \text{CaBr}_2$
Ans: (a) $\text{CaI}_2 > \text{CaBr}_2 > \text{CaCl}_2$
43. At constant temperature and pressure, the diffusion rate of any gas is _____ to its density.
 (a) Proportional
 (b) Proportional of square root
 (c) Proportional of square
 (d) Inversely proportional of square root
Ans: (d) Inversely proportional of square root
44. Which is not a primary element in heterosphere?
 (a) N_2 (b) O_2
 (c) He (d) H^+
Ans: (d) H^+
Solve: Note: $\text{H}^+, \text{O}_2^+, \text{He}^{2+}, \text{NO}^+$ are secondary elements in heterosphere.
45. Anemia is seen due to the pollution of-
 (a) As^{3+} (b) Cr^{3+}
 (c) Fe^{2+} (d) Fe^{3+}
Ans: (b) Cr^{3+}
46. Which acid is found in Locus reagent?
 (a) Conc.HCl (b) Dil.HCl
 (c) Conc. HNO_3 (d) Conc. H_2SO_4
Ans: (a) Conc.HCl
47. Which of the following is known as Delrin?
 (a) Paraformaldehyde
 (b) Trimethanal
 (c) Urea formaldehyde resin
 (d) Tetraethanal
Ans: (a) Paraformaldehyde
48. Which of the following samples will have the largest mass?
 (a) 1.0 mol N_2H_4 (b) 2.0 mol N_2
 (c) 3.0 mol NH_3 (d) 2.5 mol H_2
Ans: (b) 2.0 mol N_2
Solve: 1.0 mol $\text{N}_2\text{H}_4 \rightarrow 32 \text{ g}$
 2.0 mol $\text{N}_2 \rightarrow 56 \text{ g}$
 3.0 mol $\text{NH}_3 \rightarrow 51 \text{ g}$
 2.5 mol $\text{H}_2 \rightarrow 5 \text{ g}$
49. Which of the following is not included to natural polymer?
 (a) Natural rubber (b) Starch
 (c) Cellulose (d) Cellulose acetate
Ans: (d) Cellulose acetate
50. Which one of the following is a reactivity decreasing radical?
 (a) $-\text{CH}_3$ (b) $-\text{NH}_2$
 (c) $-\text{OH}$ (d) $-\text{CN}$
Ans: (d) $-\text{CN}$
51. What is the characteristics of reducing agents?
 (a) Causes oxidations
 (b) Loses electron
 (c) Goes through reduction itself
 (d) Accepts electrons
Ans: (b) Loses electron
52. What is the number of atoms in 55.85g iron?
 (a) 3.023×10^{23} (b) 6.023×10^{23}
 (c) 1.023×10^{23} (d) 1.67×10^{-24}
Ans: (b) 6.023×10^{23}
Solve: Note: 55.85g iron = 1 mol Fe
 $\therefore$ Number of atoms = 6.023×10^{23}

53. What is the standard reduction potential of Al^{3+}/Al electrode at 25°C temperature?

- (a) -1.36 (b) -1.66
(c) -0.44 (d) -0.76

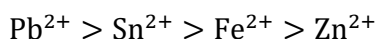
Ans: (b) -1.66

54. Whose tendency of being charge less is more in cathode?

- (a) Zn^{2+} (b) Fe^{2+}
(c) Sn^{2+} (d) Pb^{2+}

Ans: (a) Zn^{2+}

Solve: Note: The order of tendency of being charge free:



55. Which of the following has the highest electronegativity?

- (a) F (b) Cl
(c) Br (d) I

Ans: (a) F

Solve: F electronegativity is 4.0

Cl electronegativity is 3.0

Br electronegativity is 2.8

56. From fixed position, obtained velocity in a specific time of freely falling object is ____ of that time.

- (a) Inversely proportional
(b) Proportional
(c) Double
(d) Proportional to cubic root

Ans: (b) Proportional

57. By “dew point” we understand-

- (a) Heat (b) Temperature
(c) Humidity (d) Relative humidity

Ans: (b) Temperature

58. Which one is the most viscous?

- (a) Milk (b) Oil
(c) Tar (d) Water

Ans: (c) Tar

Solve: Note: $\text{Tar} > \text{Oil} > \text{Milk} > \text{Water}$.

59. On the contingent of mass centric and parallel axis of width what is the moment of inertia of oblongated wire

- (a) $\frac{Ml^2}{12}$ (b) $\frac{Ml^2}{3}$
(c) $\frac{1}{2}Mr^2$ (d) $\frac{1}{2}Ml^2$

Ans: (a) $\frac{Ml^2}{12}$

60. Which is the relation between kinetic energy and momentum of inertia?

- (a) $E = \frac{1}{2}I\omega^2$ (b) $E = \frac{1}{3}I\omega^2$
(c) $E = I\omega$ (d) $E = \omega\alpha$

Ans: (a) $E = \frac{1}{2}I\omega^2$

61. What is the average density of Earth?

- (a) $5.5 \times 10^2 \text{ kgm}^{-3}$
(b) $5.5 \times 10^3 \text{ kgm}^{-3}$
(c) $5.5 \times 10^5 \text{ kgm}^{-3}$
(d) $5.5 \times 10^6 \text{ kgm}^{-3}$

Ans: (b) $5.5 \times 10^3 \text{ kgm}^{-3}$

62. Relation between length of second pendulum and gravitational acceleration is-

- (a) Proportional
(b) Inverse
(c) Inverse to square
(d) Proportional to square

Ans: (a) Proportional

63. What will be the period of time of a second pendulum if its length is increased by 225%?

- (a) 4.5 s (b) 6.31 s
(c) 3.61 s (d) 4.24 s

Ans: (c) 3.61 s

Solve: $\frac{T_1}{T_2} = \sqrt{\frac{L_1}{L_2}} \Rightarrow T_2 = T_1 \sqrt{\frac{L_2}{L_1}} = 2 \sqrt{\frac{325}{100} L_1} = 3.61 \text{ s}$

64. What is the value of root mean square velocity of H molecules at normal temperature and pressure?

- (a) 1.6 kms^{-1} (b) 3.08 kms^{-1}
(c) 2.72 kms^{-1} (d) 1.2 kms^{-1}

Ans: (a) 1.6 kms^{-1}

65. Which one is called shearing strain?

- (a) Volume strain
- (b) Longitudinal strain
- (c) Torsion strain
- (d) Transverse strain

Ans: (c) Torsion strain

66. All natural process is-

- (a) Reversible
- (b) Irreversible
- (c) Cyclic
- (d) Thermal

Ans: (b) Irreversible

67. Which one is not an example of dielectric substance?

- (a) Methane
- (b) Water
- (c) Mica
- (d) Silicon

Ans: (d) Silicon

Solve: Note: Silicon is an example of metalloid.

68. Practical use of shunt is seen in-

- (a) Ammeter
- (b) Galvanometer
- (c) Barometer
- (d) Thermometer

Ans: (a) Ammeter

69. What is the value of geo magnet on the geo surface?

- (a) $5 \times 10^{-5}T$
- (b) $6 \times 10^{-5}T$
- (c) $7 \times 10^{-5}T$
- (d) $8 \times 10^{-5}T$

Ans: (a) $5 \times 10^{-5}T$

70. The frequency of any direction changeable flow is 50 Hz. How much time is required for the flow to reach the highest value from zero?

- (a) $5 \times 10^{-3}s$
- (b) $5 \times 10^{-2}s$
- (c) 5×10^3s
- (d) 5×10^2s

Ans: (a) $5 \times 10^{-3}s$

Solve: $T = \frac{1}{f} = \frac{1}{50} = 0.02s$; Again, time for reaching the highest value, $t = \frac{T}{4} = \frac{0.02}{4} = 5 \times 10^{-3}s$

71. Which one can not be explained by the Corpuscular theory of light?

- (a) Travelling in straight line
- (b) Reflection
- (c) Refraction
- (d) Interference

Ans: (d) Interference

Solve: Note: With the help of particle theory of light, interference, polarization, diffraction, dispersion cannot be explained.

72. If wavelength increases, capacity of diffraction of light -

- (a) Decreases
- (b) Becomes half
- (c) Increases
- (d) Becomes zero

Ans: (c) Increases

73. Polarization of light is the proof of _____ wave-

- (a) Vertical wave
- (b) Horizontal wave
- (c) Linear wave
- (d) All types of waves

Ans: (b) Horizontal wave

74. What is the energy difference between the valence band and conductive band of silicon?

- (a) 1 eV
- (b) 0.72 eV
- (c) 1.1 eV
- (d) 0.2 eV

Ans: (c) 1.1 eV

75. Who theoretically proved that black hole can be a source of particle emission?

- (a) Stephen Hawking
- (b) George Lemiter
- (c) Edwin Hubble
- (d) Einstein

Ans: (a) Stephen Hawking

76. Choose the correct sentence:

- (a) We have a lot of work to do in summer.
- (b) We have much works to do in summer.
- (c) We have many works to do in summer.
- (d) We have a lot of works to do in summer.

Ans: (a) We have a lot of work to do in summer.

Solve: 'Work' শব্দটি উৎপত্তিগত বহুবচন। তাই 'Work' এর সাথে 's' যোগ করা যাবে না।

77. The English translation of the sentence 'চোরটি হাতে নাতে ধরা পড়ল' is-

- (a) The thief was caught by red-handed.
- (b) The thief was caught red-handed.
- (c) The thief was caught with red-handed.
- (d) The thief was caught in red-handed.

Ans: (b) The thief was caught red-handed.

78. The synonym of 'Franchise' is-
 (a) Privilege (b) Utility
 (c) Frence (d) Frankness
Ans: (a) Privilege
79. Select the appropriate option for the blank space : When we arrived at the shop, we noticed that someone _____ into the place.
 (a) had broken (b) broke
 (c) had been breaking (d) would break
Ans: (a) had broken
80. 'Humorous' is opposite to-
 (a) Linger (b) Serious
 (c) Amusing (d) Cumulous
Ans: (b) Serious
81. The boss prefers that he _____ with his clients personally.
 (a) speaks (b) speak
 (c) is to speak (d) speaking
Ans: (b) speak
82. Emily has to clean her messy room before she goes out. The underlined word is a/an:
 (a) Adjective (b) Verb
 (c) Noun (d) Adverb
Ans: (a) Adjective
83. Mother said to me, "Do not tell a lie."
 Change into indirect narration.
 (a) Mother advised me not to tell a lie.
 (b) Mother frightened me not to tell a lie.
 (c) Mother suggested me not to tell a lie.
 (d) Mother warned me not to tell a lie.
Ans: (a) Mother advised me not to tell a lie.
Solve: Direct speech এর reported speech imperative হলে reported speech দ্বারা উপদেশ, অনুরোধ, আদেশ, প্রস্তাব, নিষেধ বোঝায় তা দেখে reporting verb দিতে হয়। যেমন: এই বাক্যে উপদেশ বুঝে advise দেওয়া হয়েছে।

84. Antonym of 'Refractory' is-
 (a) Cussed (b) Intractable
 (c) Stubborn (d) Obedient
Ans: (d) Obedient
85. The idiom "Without issue" means —
 (a) No mother (b) Illiterate
 (c) Childless (d) No wealth
Ans: (c) Childless
Solve: 'issue' শব্দের অর্থ 'সন্তান-সন্ততি'
86. Which of the following is the correct compound form of this sentence? 'As he felt a great love for them, he blessed them from heart.'
 (a) He felt a great love and blessed them from heart.
 (b) He felt great love for them and blessed them from heart.
 (c) He felt a great love for them and blessed them from heart.
 (d) He felt a great love for them and blessed from heart.
Ans: (c) He felt a great love for them and blessed them from heart.
87. Choose the correct spelling.
 (a) Leutenant (b) Leftenant
 (c) Lieutenant (d) Leiutenant
Ans: (c) Lieutenant
88. Writing one's own life story is known as-
 (a) Biography (b) Autobiography
 (c) Autograph (d) Life history
Ans: (b) Autobiography
Solve: নিজের জীবন কাহিনী নিজে নিজে লিখলে auto biography আর নিজের জীবন দ্বারা লিখিত হলে biography.
89. Had I been rich, I ____ (help) her.
 (a) would have help
 (b) would have helped
 (c) had helped
 (d) would help
Ans: (b) would have helped

90. Choose the correct sentence.
 (a) Airport is busy place
 (b) The Airport is busy place
 (c) The Airport is the busy place
 (d) Airport is a busy place
Ans: (d) Airport is a busy place
91. Today's Dhaka was a part of which township of the ancient Bengal?
 (a) Samatata (b) Banga
 (c) Harikel (d) Gouda
Ans: (b) Banga
92. When Dhaka was first made the capital of Bengal?
 (a) 1610 (b) 1338
 (c) 1893 (d) 1905
Ans: (a) 1610
Solve: Remember: Governor Islam Khan under the reign of Mughal emperor Jahangir first founded the capital of Bengal in Dhaka on 1610.
93. Which emperor of Delhi made the Portuguese go away from Bengal?
 (a) Akbar (b) Aurangzeb
 (c) Sher Shah (d) Jahangir
Ans: (c) Sher Shah
94. When was Awami League established?
 (a) In 1955 (b) In 1949
 (c) In 1954 (d) In 1957
Ans: (b) In 1949
Solve: Remember: Awami League was established in 23 June, 1949.
95. Who was the first Viceroy of the Indian subcontinent?
 (a) Lord Ripon (b) Lord Bentinck
 (c) Lord Canning (d) Lord Mayo
Ans: (c) Lord Canning
96. Who was the first President of Bangladesh?
 (a) Sheikh Mujibur Rahman
 (b) Syed Nazrul Islam
 (c) Abu Syed Chowdhury
 (d) A.S M Sayem
Ans: (a) Sheikh Mujibur Rahman
97. In 1971, the concert for Bangladesh took place in-
 (a) Brooklyn Street (b) Green Square
 (c) Pearl Square (d) Maddison Square
Ans: (d) Maddison Square
98. What was the name of the mission which was executed to seize the illegal weapons after the liberation war?
 (a) Operation close door
 (b) Operation clean heart
 (c) Operation search light
 (d) Operation thunder storm
Ans: (a) Operation close door
99. During the liberation war, who was the all-alliance advisor to the Mujibnagar government?
 (a) Tajuddin Ahmed
 (b) Syed Nazrul Islam
 (c) Maolana Abdul Hamid Khan Bhashani
 (d) Professor Mojafor Hossain
Ans: (c) Maolana Abdul Hamid Khan Bhashani
Solve: Remember: Total members of all alliance advisory council was 6.
100. The writer of 'Oshomapto attojiboni'-
 (a) Sheikh Hasina
 (b) Sheikh Mujibur Rahman
 (c) Baby Moudud
 (d) Shamsuzzaman Khan
Ans: (b) Sheikh Mujibur Rahman