PGIMER B.SC NURSING SAMPLE PAPER 07

A) Time Allowed: 1 Hour 30 Minutes.
B) Maximum Marks: 100
C) Total Questions: 100

General Instructions:

- This question paper consists of five sections: Physics, Chemistry, Biology, English, and General Knowledge.
- Each section contains objective type questions with four multiple-choice options (A, B, C, D).
- +1 mark is awarded for each correct answer and 0.25 marks are deducted for each wrong answer.
- The question paper is available in English language only.

SECTION 1 - BIOLOGY

1. Which part of the human brain is primarily responsible for maintaining posture, balance, and equilibrium?

   (a) Cerebrum
   (b) Cerebellum
   (c) Medulla Oblongata
   (d) Hypothalamus

2. Which enzyme is secreted by the stomach and is responsible for protein digestion in an acidic environment?

   (a) Trypsin
   (b) Amylase
   (c) Pepsin
   (d) Lipase

3. In the process of DNA replication, which enzyme is responsible for "unzipping" the double helix?

   (a) DNA Polymerase
   (b) Helicase
   (c) Ligase
   (d) Primase

4. Which vitamin is synthesized by the human body upon exposure to sunlight?

   (a) Vitamin A
   (b) Vitamin C
   (c) Vitamin D
   (d) Vitamin K

5. The "Pacemaker" of the human heart is technically known as the:

   (a) AV Node
   (b) Bundle of His
   (c) Purkinje fibers
   (d) SA Node

6. Which of the following blood cells are responsible for the immune response and the production of antibodies?

   (a) Erythrocytes
   (b) Thrombocytes

(c) Lymphocytes
(d) Basophils

7. Which gas is the primary byproduct of the light-dependent reactions of photosynthesis?

(a) Carbon Dioxide
(b) Nitrogen
(c) Oxygen
(d) Methane

8. "Klinefelter Syndrome" is a genetic disorder resulting from:

(a) Monosomy of X chromosome (XO)
(b) Trisomy of chromosome 21
(c) Extra X chromosome in males (XXY)
(d) Deletion on chromosome 5

9. Which endocrine gland is often referred to as the "Master Gland" of the body?

(a) Thyroid
(b) Adrenal
(c) Pituitary
(d) Pineal

10. The basic structural and functional unit of muscle contraction is the:

(a) Sarcomere
(b) Myofibril
(c) Mitochondria
(d) Axon

11. Which of these is NOT a function of the liver?

(a) Bile production
(b) Detoxification of drugs
(c) Production of insulin
(d) Storage of glycogen

12. Which cranial nerve is the longest and provides parasympathetic innervation to most thoracic and abdominal viscera?

(a) Trigeminal
(b) Vagus
(c) Optic

(d) Olfactory

13. In the ABO blood group system, an individual with Type AB blood is considered:

(a) A universal donor
(b) A universal recipient
(c) A donor only to Type O
(d) Neither a donor nor a recipient

14. Which organelle is known as the "suicide bag" of the cell due to its high concentration of hydrolytic enzymes?

(a) Golgi apparatus
(b) Lysosome
(c) Ribosome
(d) Mitochondria

15. What is the primary role of the Eustachian tube?

(a) To produce earwax
(b) To equalize pressure between the middle ear and the atmosphere
(c) To amplify sound waves
(d) To transmit nerve impulses to the brain

16. Which of the following is a water-soluble vitamin?

(a) Vitamin A
(b) Vitamin C
(c) Vitamin E
(d) Vitamin K

17. Which hormone is released by the posterior pituitary gland to promote water reabsorption in the kidneys?

(a) Oxytocin
(b) Vasopressin (ADH)
(c) Prolactin
(d) Growth Hormone

18. The presence of "Nissl granules" is a characteristic feature of:

(a) Muscle cells
(b) Nerve cells (Neurons)
(c) Liver cells

(d) Red blood cells

19. Which type of joint allows movement in only one plane, like a door hinge?

(a) Ball and socket
(b) Hinge
(c) Pivot
(d) Gliding

20. Which substance in the blood is responsible for carrying the majority of oxygen?

(a) Plasma
(b) Platelets
(c) Hemoglobin
(d) White blood cells

21. What is the term for the movement of water molecules across a semi-permeable membrane?

(a) Diffusion
(b) Osmosis
(c) Active transport
(d) Endocytosis

22. The "Langerhans cells" involved in immunity are found in which layer of the skin?

(a) Epidermis
(b) Dermis
(c) Hypodermis
(d) Subcutaneous tissue

23. Which hormone regulates blood calcium levels by mobilizing it from bones?

(a) Thyroxine
(b) Parathyroid hormone
(c) Insulin
(d) Melatonin

24. The "Krebs Cycle" takes place in which part of the cell?

(a) Cytoplasm
(b) Mitochondria
(c) Ribosome
(d) Nucleus

25. Which genetic condition is characterized by a “cat-like” cry in infants?

(a) Down Syndrome
(b) Cri-du-chat Syndrome
(c) Patau Syndrome
(d) Turner Syndrome

SECTION 2 - CHEMISTRY

Q26. What is the oxidation state of Chromium in $K_2Cr_2O_7$?

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

Q27. Which of the following elements has the highest electronegativity?

(a) Fluorine
(b) Chlorine
(c) Oxygen
(d) Nitrogen

Q28. In an exothermic reaction, how does an increase in temperature affect the equilibrium constant (K_{eq})?

(a) It increases
(b) It decreases
(c) It remains constant
(d) It becomes zero

Q29. Which law states that the total pressure exerted by a mixture of non-reacting gases is equal to the sum of the partial pressures of individual gases?

(a) Boyle's Law
(b) Charles's Law
(c) Dalton's Law
(d) Avogadro's Law

Q30. What is the IUPAC name of the compound $CH_3CH_2CH(OH)CH_3$?

(a) Butan-1-ol
(b) Butan-2-ol
(c) Propan-2-ol
(d) Pentan-2-ol

Q31. Which reagent is used to distinguish between aldehydes and ketones?

(a) Lucas reagent
(b) Tollens' reagent
(c) Benedict's solution

(d) Both B and C

Q32. What is the shape of a water (H_2O) molecule based on VSEPR theory?

(a) Linear
(b) Trigonal planar
(c) Bent (V-shaped)
(d) Tetrahedral

Q33. The number of unit cells in 4.0 g of a metal crystal with a face-centered cubic (FCC) structure (molar mass = 40 g/mol) is:

(a) 6.023×10^{22}
(b) 6.023×10^{23}
(c) 1.505×10^{22}
(d) 1.505×10^{23}

Q34. Which transition metal is liquid at room temperature?

(a) Gallium
(b) Mercury
(c) Cesium
(d) Bromine

Q35. The process of refining impure copper by electrolysis uses an electrolyte of:

(a) Pure Cu
(b) $CuSO_4$ solution and dilute H_2SO_4
(c) $NaCl$ solution
(d) $Cu(NO_3)_2$

Q36. Which of the following is a condensation polymer?

(a) Polythene
(b) Nylon 6,6
(c) PVC
(d) Teflon

Q37. What is the pH of a $10^{-3}M$ HCl solution?

(a) 3
(b) 11
(c) 1
(d) 7

Q38. Which gas is evolved when a metal reacts with a dilute acid?

(a) Oxygen
(b) Nitrogen
(c) Hydrogen
(d) Carbon Dioxide

Q39. The hybridization of Carbon in CH_4 is:

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

Q40. Which of the following is a buffer solution?

(a) $HCl + NaCl$
(b) $CH_3COOH + CH_3COONa$
(c) $NaOH + NaCl$
(d) $H_2SO_4 + Na_2SO_4$

Q41. What is the unit of the rate constant for a zero-order reaction?

(a) s^{-1}
(b) $mol\, L^{-1}\, s^{-1}$
(c) $L\, mol^{-1}\, s^{-1}$
(d) $L^2\, mol^{-2}\, s^{-1}$

Q42. The geometry of SF_6 is:

(a) Tetrahedral
(b) Octahedral
(c) Trigonal bipyramidal
(d) Square planar

Q43. Which isotope is commonly used for carbon dating?

(a) C^{12}
(b) C^{13}
(c) C^{14}
(d) C^{15}

Q44. Which of the following is a non-reducing sugar?

(a) Glucose
(b) Fructose
(c) Sucrose
(d) Lactose

Q45. What is the product of the reaction between an alkene and H_2/Ni?

(a) Alkane
(b) Alkyne
(c) Alcohol
(d) Aldehyde

Q46. Which element is essential for the structure of chlorophyll?

(a) Iron
(b) Magnesium
(c) Calcium
(d) Potassium

Q47. What is the maximum number of electrons that can be accommodated in an 'f' subshell?

(a) 6
(b) 10
(c) 14
(d) 2

Q48. Which of the following is an example of an emulsion?

(a) Smoke
(b) Milk
(c) Fog
(d) Jelly

Q49. The reaction $2A + B \rightarrow C$ is of order 2 with respect to A and order 0 with respect to B. What is the total order?

(a) 0
(b) 1
(c) 2
(d) 3

Q50. What is the formula for Quicklime?

(a) $Ca(OH)_2$
(b) $CaCO_3$
(c) CaO
(d) $CaCl_2$

SECTION 3 - PHYSICS

Q51. A particle moves along a circular path of radius R. What is the magnitude of its displacement after 2.5 revolutions?

(a) 0
(b) πR
(c) $2R$
(d) $5\pi R$

Q52. A bus stops suddenly, and passengers fall forward. This is an application of:

(a) Newton's First Law (Inertia)
(b) Newton's Second Law
(c) Newton's Third Law
(d) Conservation of Energy

Q53. If the kinetic energy of an object increases by 300%, what is the percentage increase in its momentum?

(a) 100%
(b) 200%
(c) 300%
(d) 400%

Q54. What is the approximate escape velocity from the surface of the Earth?

(a) 9.8 km/s
(b) 11.2 km/s
(c) 11.2 m/s
(d) 3.0×10^8 m/s

Q55. According to Hooke's Law, within the elastic limit, stress is directly proportional to:

(a) Strain
(b) Force
(c) Area
(d) Pressure

Q56. The ability of small insects to walk on the surface of water is due to:

(a) Viscosity
(b) Surface tension
(c) Buoyancy

(d) Capillary action

Q57. The efficiency of a Carnot heat engine operating between temperatures T_1 (source) and T_2 (sink) is:

(a) $1 - T_2/T_1$
(b) T_1/T_2
(c) W/Q_2
(d) Q_1/W

Q58. As a sound source moves away from a stationary observer, the observed frequency:

(a) Increases
(b) Decreases
(c) Remains constant
(d) Drops to zero

Q59. If a dielectric material with a constant $K = 4$ is inserted between two point charges, the electrostatic force between them:

(a) Increases 4 times
(b) Decreases by a factor of 4
(c) Remains constant
(d) Decreases by a factor of 16

Q60. A metallic wire is stretched to double its original length. Its resistance becomes:

(a) The same
(b) Twice as much
(c) Four times as much
(d) Half as much

Q61. Which device is used to measure the EMF of a cell without drawing any current from it?

(a) Voltmeter
(b) Potentiometer
(c) Ammeter
(d) Galvanometer

Q62. When a charged particle enters a uniform magnetic field at an angle of 90 degrees, the path it follows is:

(a) A straight line
(b) A circle

(c) A parabola

(d) A helix

Q63. Transformer cores are laminated to minimize energy loss caused by:

(a) Copper loss

(b) Eddy currents

(c) Hysteresis

(d) Magnetic flux leakage

Q64. Which part of the electromagnetic spectrum has the highest frequency?

(a) Radio waves

(b) Infrared radiation

(c) Visible light

(d) Gamma rays

Q65. Where is an image formed if an object is placed at the focal point of a convex lens?

(a) At infinity

(b) At 2F

(c) At the focus

(d) Between F and 2F

Q66. When Young's Double Slit Experiment is performed in water instead of air, the fringe width:

(a) Increases

(b) Decreases

(c) Remains unchanged

(d) Disappears

Q67. The threshold frequency in the photoelectric effect refers to:

(a) The frequency of incident light below which no emission occurs

(b) The maximum frequency of light

(c) The frequency of the emitted electron

(d) The frequency of the light source

Q68. In the Bohr model of the hydrogen atom, the radius of the n^{th} orbit (r_n) scales with n as:

(a) $r_n \propto n$

(b) $r_n \propto n^2$

(c) $r_n \propto 1/n$

(d) $r_n \propto \sqrt{n}$

Q69. If the half-life of a radioactive substance is 10 days, what fraction of the original sample will remain after 30 days?

(a) 1/2
(b) 1/4
(c) 1/8
(d) 1/16

Q70. In a forward-biased P-N junction diode, the depletion layer:

(a) Widens
(b) Narrows
(c) Remains constant
(d) Increases in resistance

Q71. Which logic gate produces a HIGH output only when all of its inputs are LOW?

(a) AND gate
(b) OR gate
(c) NOR gate
(d) NAND gate

Q72. What is the dimensional formula for the Universal Gravitational Constant (G)?

(a) $[MLT^{-2}]$
(b) $[M^{-1}L^3T^{-2}]$
(c) $[ML^2T^{-2}]$
(d) $[M^0L^2T^{-2}]$

Q73. In Simple Harmonic Motion (SHM), the kinetic energy is maximum at:

(a) The mean position
(b) Extreme positions
(c) Halfway between mean and extreme
(d) Everywhere

Q74. What is the angle between two equal vectors of magnitude A if their resultant also has a magnitude A?

(a) 60°
(b) 90°
(c) 120°

(d) 180°

Q75. Which of the following processes is characterized by the condition $Q = 0$?

(a) Isothermal

(b) Isobaric

(c) Isochoric

(d) Adiabatic

SECTION 4 - ENGLISH

Q76. Choose the word that is most nearly OPPOSITE in meaning to “Ephemeral”:

(a) Eternal
(b) Temporary
(c) Fleeting
(d) Brief

Q77. Identify the correct sentence:

(a) Each of the students have submitted their assignment.
(b) Each of the students has submitted his assignment.
(c) Each of the students have submitted his assignment.
(d) Each of the student has submitted their assignment.

Q78. What does the phrase “To keep the wolf from the door” mean?

(a) To hunt dangerous animals
(b) To avoid starvation
(c) To keep a secret
(d) To welcome a guest

Q79. Select the correctly spelled word:

(a) Accomodation
(b) Acommodation
(c) Accommodation
(d) Acomodation

Q80. “The committee _____ divided in its opinion.” (Fill in the blank with the correct verb)

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

Q81. Choose the synonym for “Incredible”:

(a) Believable
(b) Unbelievable
(c) Possible
(d) Common

Q82. "He is too weak _____ walk." (Fill in the blank)

(a) to
(b) and
(c) for
(d) than

Q83. Identify the part of speech of the word "bravely" in the sentence: "He fought bravely."

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

Q84. Which sentence uses the correct passive voice for: "Who wrote this book?"

(a) By whom was this book written?
(b) Who was this book written by?
(c) Both A and B
(d) None of the above

Q85. "One who hates mankind" is called:

(a) Philanthropist
(b) Misanthrope
(c) Optimist
(d) Pessimist

SECTION 5 - GENERAL KNOWLEDGE

Q86. Which Indian state is the largest producer of rubber?

(a) Kerala
(b) Tamil Nadu
(c) Karnataka
(d) Assam

Q87. The “Kyoto Protocol” is associated with:

(a) Nuclear disarmament
(b) Climate change
(c) Human rights
(d) Trade agreements

Q88. Who was the first Indian to win a Nobel Prize?

(a) C.V. Raman
(b) Rabindranath Tagore
(c) Mother Teresa
(d) Amartya Sen

Q89. The “Dandi March” led by Mahatma Gandhi was against:

(a) The Rowlatt Act
(b) The Salt Tax
(c) The Simon Commission
(d) Jallianwala Bagh Massacre

Q90. Which river is known as the “Dakshin Ganga”?

(a) Krishna
(b) Kaveri
(c) Godavari
(d) Mahanadi

Q91. The “International Court of Justice” is located in:

(a) Geneva
(b) The Hague
(c) New York
(d) London

Q92. Which article of the Indian Constitution empowers the President to declare a Financial Emergency?

(a) Article 352
(b) Article 356
(c) Article 360
(d) Article 370

Q93. What is the currency of Japan?

(a) Yuan
(b) Won
(c) Yen
(d) Baht

Q94. The "Konark Sun Temple" is located in which state?

(a) Odisha
(b) Bihar
(c) Rajasthan
(d) Gujarat

Q95. "Bihu" is a famous folk dance of:

(a) West Bengal
(b) Assam
(c) Manipur
(d) Nagaland

Q96. Which of the following gases is used in fire extinguishers?

(a) Carbon dioxide
(b) Nitrogen
(c) Hydrogen
(d) Oxygen

Q97. The first human to land on the moon was:

(a) Yuri Gagarin
(b) Neil Armstrong
(c) Buzz Aldrin
(d) Michael Collins

Q98. Which organization publishes the "Human Development Index" (HDI)?

(a) World Bank
(b) IMF
(c) UNDP
(d) WHO

Q99. The “Battle of Plassey” was fought in which year?

(a) 1757
(b) 1764
(c) 1857
(d) 1905

Q100. The study of fungi is known as:

(a) Mycology
(b) Botany
(c) Zoology
(d) Bacteriology

SOLUTIONS

Q1. Correct Answer: (B)

The: Cerebellum controls posture, balance, coordination, and equilibrium.

Q2. Correct Answer: (C)

Pepsin is the enzyme responsible for protein digestion in the stomach.

Q3. Correct Answer: (B) Helicase unwinds the DNA double helix during replication.

Q4. Correct Answer: (C) Vitamin D is synthesized in the skin under sunlight exposure.

Q5. Correct Answer: (D)

The natural pacemaker of the heart is: SA Node

Q6. Correct Answer: (C)

Lymphocytes help in immune response and antibody production.

Q7. Correct Answer: (C)

The primary byproduct of light reactions of photosynthesis is: Oxygen

Q8. Correct Answer: (C)

Klinefelter syndrome is caused by: XXY chromosome pattern

Q9. Correct Answer: (C)

The: Pituitary gland is called the master gland of the body.

Q10. Correct Answer: (A)

The functional unit of muscle contraction is: Sarcomere

Q11. Correct Answer: (C)

The liver does not produce: Insulin because insulin is secreted by the pancreas.

Q12. Correct Answer: (B)

The: Vagus nerve is the longest cranial nerve.

Q13. Correct Answer: (B)

Individuals with: AB blood group are universal recipients.

Q14. Correct Answer: (B)

Lysosomes contain hydrolytic enzymes and are called suicide bags of the cell.

Q15. Correct Answer: (B)

The Eustachian tube helps: equalize pressure between the middle ear and atmosphere.

Q16. Correct Answer: (B)
Vitamin C is a water-soluble vitamin.

Q17. Correct Answer: (B)

$$ADH(Vasopressin)$$

promotes water reabsorption in kidneys.

Q18. Correct Answer: (B)

$$Nisslgranules$$

are characteristic features of neurons.

Q19. Correct Answer: (B)
A:

$$Hingejoint$$

allows movement in one plane only.

Q20. Correct Answer: (C)

$$Hemoglobin$$

carries the majority of oxygen in blood.

Q21. Correct Answer: (B)
The movement of water through a semipermeable membrane is:

$$Osmosis$$

Q22. Correct Answer: (A)

$$Langerhanscells$$

are found in the epidermis.

Q23. Correct Answer: (B)

$$Parathyroidhormone$$

increases blood calcium levels.

Q24. Correct Answer: (B)
The Krebs cycle occurs in:

$$Mitochondria$$

Q25. Correct Answer: (B)

$$Cri-du-chatsyndrome$$

causes a characteristic cat-like cry in infants.

Q26. Correct Answer: (B)

In:

$$K_2Cr_2O_7$$

the oxidation state of chromium is:

$$+6$$

Q27. Correct Answer: (A)

$$Fluorine$$

is the most electronegative element.

Q28. Correct Answer: (B)

For an exothermic reaction, increasing temperature shifts equilibrium backward, so:

$$K_{eq}$$

decreases.

Q29. Correct Answer: (C)

$$Dalton'sLaw$$

states that total pressure equals the sum of partial pressures.

Q30. Correct Answer: (B)

The IUPAC name of:

$$CH_3CH_2CH(OH)CH_3$$

is: Butan-2-ol

Q31. Correct Answer: (D)

Both: Tollens' reagent and Benedict's solution distinguish aldehydes from ketones.

Q32. Correct Answer: (C)

Water molecule has:

$$Bent(V-shaped)$$

geometry due to lone pairs.

Q33. Correct Answer: (A)

Using FCC crystal calculations gives:

$$6.023 \times 10^{22}$$

unit cells.

Q34. Correct Answer: (B)

$$Mercury$$

is liquid at room temperature.

Q35. Correct Answer: (B)

Electrolytic refining of copper uses:

$$CuSO_4 + dilute\ H_2SO_4$$

Q36. Correct Answer: (B)

$$Nylon6,6$$

is a condensation polymer.

Q37. Correct Answer: (A)

$$pH = -\log[10^{-3}]$$

$$pH = 3$$

Q38. Correct Answer: (C)

Metals react with dilute acids producing:

$$Hydrogengas$$

Q39. Correct Answer: (C)

Carbon in:

$$CH_4$$

shows:

$$sp^3$$

hybridization.

Q40. Correct Answer: (B)

A buffer solution contains:

$$weakacid + itssalt$$

Example:

$$CH_3COOH + CH_3COONa$$

Q41. Correct Answer: (B)

Zero-order rate constant has units:

$$mol\ L^{-1}\ s^{-1}$$

Q42. Correct Answer: (B)

$$SF_6$$

has:

$$Octahedral geometry$$

Q43. Correct Answer: (C)

$$C^{14}$$

is used for carbon dating.

Q44. Correct Answer: (C)

$$Sucrose$$

is a non-reducing sugar.

Q45. Correct Answer: (A)

Hydrogenation of alkene with:

$$H_2/Ni$$

produces:

$$Alkane$$

Q46. Correct Answer: (B)

$$Magnesium$$

is present at the center of chlorophyll molecule.

Q47. Correct Answer: (C)

An:

$$f$$

subshell can hold:

$$14 electrons$$

Q48. Correct Answer: (B)

$$Milk$$

is an example of an emulsion.

Q49. Correct Answer: (C)

Total order of reaction:

$$2 + 0 = 2$$

Q50. Correct Answer: (C)

Quicklime is:

$$CaO$$

Q51. Correct Answer: (C)

After 2.5 revolutions on a circular path, the particle reaches the diametrically opposite point. Hence displacement is:

$$2R$$

Q52. Correct Answer: (A)

Passengers fall forward due to:

$$Inertia$$

explained by Newton's First Law.

Q53. Correct Answer: (A)

Since:

$$K = \frac{p^2}{2m}$$

if kinetic energy becomes four times, momentum becomes twice. Hence increase:

$$100\%$$

Q54. Correct Answer: (B)

Escape velocity from Earth is:

$$11.2\ km/s$$

Q55. Correct Answer: (A)

Hooke's law states:

$$Stress \propto Strain$$

Q56. Correct Answer: (B)

Surface tension allows insects to walk on water.

Q57. Correct Answer: (A)

Carnot engine efficiency:

$$\eta = 1 - \frac{T_2}{T_1}$$

Q58. Correct Answer: (B)

Observed frequency decreases when source moves away due to Doppler effect.

Q59. Correct Answer: (B)

Electrostatic force becomes:

$$F' = \frac{F}{K}$$

For:

$$K = 4$$

force decreases four times.

Q60. Correct Answer: (C)

Resistance:

$$R = \rho \frac{L}{A}$$

Doubling length halves area, making resistance:

$$4R$$

Q61. Correct Answer: (B)

A potentiometer measures EMF without drawing current.

Q62. Correct Answer: (B)

A charged particle entering perpendicular magnetic field follows circular motion.

Q63. Correct Answer: (B)

Transformer cores are laminated to reduce:

$$Eddycurrentlosses$$

Q64. Correct Answer: (D)

Gamma rays have the highest frequency.

Q65. Correct Answer: (A)

An object at focal point forms image at infinity.

Q66. Correct Answer: (B)

Fringe width decreases in water because wavelength decreases.

Q67. Correct Answer: (A)

Threshold frequency is the minimum frequency required for photoelectric emission.

Q68. Correct Answer: (B)

According to Bohr model:

$$r_n \propto n^2$$

Q69. Correct Answer: (C)

After 3 half-lives:

$$\left(\frac{1}{2}\right)^3 = \frac{1}{8}$$

Q70. Correct Answer: (B)

Forward bias narrows the depletion layer.

Q71. Correct Answer: (C)

NOR gate gives HIGH output only when all inputs are LOW.

Q72. Correct Answer: (B)

Dimensional formula of:

$$G$$

is:

$$[M^{-1}L^3T^{-2}]$$

Q73. Correct Answer: (A)

In SHM kinetic energy is maximum at mean position.

Q74. Correct Answer: (C)

Using vector formula:

$$R^2 = A^2 + A^2 + 2A^2\cos\theta$$

Given:

$$R = A$$

$$\cos\theta = -\frac{1}{2}$$

Hence:

$$\theta = 120^\circ$$

Q75. Correct Answer: (D)

In an adiabatic process:

$$Q = 0$$

Q76. Correct Answer: (A)

$$Ephemeral$$

means short-lived, so opposite is:

$$Eternal$$

Q77. Correct Answer: (B)

$$Each$$

takes singular verb:

$$has$$

Q78. Correct Answer: (B)

The idiom means:

$$toavoidstarvationorpoverty$$

Q79. Correct Answer: (C)

Correct spelling:

$$Accommodation$$

Q80. Correct Answer: (A)

Collective noun:

$$committee$$

takes singular verb here:

$$was$$

Q81. Correct Answer: (B)

Synonym of:

$$Incredible$$

is:

$$Unbelievable$$

Q82. Correct Answer: (A)

Correct expression:

$$tooweaktowalk$$

Q83. Correct Answer: (C)

$$Bravely$$

describes the verb fought, hence it is an adverb.

Q84. Correct Answer: (C)

Both passive forms are grammatically correct.

Q85. Correct Answer: (B)

One who hates mankind is called:

$$Misanthrope$$

Q86. Correct Answer: (A)

$$Kerala$$

is the leading producer of rubber in India.

Q87. Correct Answer: (B)

Kyoto Protocol is related to:

$$Climatechange$$

Q88. Correct Answer: (B)

$$RabindranathTagore$$

was the first Indian Nobel Prize winner.

Q89. Correct Answer: (B)

Dandi March protested against:

$$SaltTax$$

Q90. Correct Answer: (C)

$$Godavari$$

is called Dakshin Ganga.

Q91. Correct Answer: (B)

International Court of Justice is located at: The Hague

Q92. Correct Answer: (C)

Financial Emergency is under: Article 360

Q93. Correct Answer: (C)

Currency of Japan is: Yen

Q94. Correct Answer: (A)

Konark Sun Temple is located in: Odisha

Q95. Correct Answer: (B)

Bihu is a folk dance of Assam.

Q96. Correct Answer: (A)

Carbon dioxide is commonly used in fire extinguishers.

Q97. Correct Answer: (B)

First human on the Moon: Neil Armstrong

Q98. Correct Answer: (C)

Human Development Index is published by: UNDP

Q99. Correct Answer: (A)

Battle of Plassey was fought in: 1757

Q100. Correct Answer: (A)

Study of fungi is called: Mycology