Comprehensive 200 MCQ Challenge - Set 04

Subjects: Physics, Chemistry, Mathematics, Hindi, English, Reasoning, Current Affairs, HP GK, and Indian GK. **Level:** B.Sc. Level / Advanced Competitive (Hard).

Mixed MCQs (1-200)

1. The 'Dandhar' movement in the Bilaspur princely state was directed against which of the following? A) British land revenue policy B) Tyrannical rule of Raja Anand Chand C) Inclusion of Bilaspur in Himachal Pradesh D) Begar system in the hills
2. For a quantum mechanical operator to represent a physical observable, it must be: A) Unitary B) Hermitian C) Orthogonal D) Skew-symmetric
3. Choose the correct meaning of the foreign phrase 'Prima Facie': A) At first sight B) Under investigation C) Forever D) In a similar manner
4. The series $\sum_{n=1}^{\infty} \frac{1}{n^p}$ is convergent if and only if: A) $p \geq 1$ B) $p > 1$) $p < 1$ D) $p = 1$
5. Which of the following complexes follows the Effective Atomic Number (EAN) rule? A) $[Fe(CN)_6]^{3-}$ B) $[Cr(NH_3)_6]^{3+}$ C) $[Ni(CO)_4]$ D) $[Cu(NH_3)_4]^{2+}$
6. 'ऊधो का लेना न माधो का देना' मुहावरे का सही अर्थ है: A) सबसे अलग रहना B) झगड़ा मोल लेना C) अपने काम से काम रखना D) भक्ति में लीन होना
7. Find the next number in the pattern: 2, 10, 30, 68, 130, ? A) 210 B) 222 C) 196 D) 250
8. In which year was the 'Pajhota Movement' linked to the Quit India Movement in Sirmaur? A) 1939 B) 1942 C) 1945 D) 1947
9. The magnetic vector potential $\mathbf{A}$ is related to the magnetic field $\mathbf{B}$ as: A) $\mathbf{B} = \nabla \cdot \mathbf{A}$ B) $\mathbf{B} = \nabla \times \mathbf{A}$ C) $\mathbf{A} = \nabla \times \mathbf{B}$ D) $\mathbf{B} = -\nabla \mathbf{A}$
10. The Wittig reaction involves the treatment of a carbonyl compound with: A) Phosphorus ylide B) Grignard reagent C) Organolithium compound D) Diazomethane
11. If $u = \ln(x^2 + y^2)$, then $\frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2}$ is: A) $2/(x^2 + y^2)$ B) 0 C) 1 D) 2
12. Which Indian state recently became the first to implement the Uniform Civil Code (UCC) post-independence? A) Goa B) Uttarakhand C) Gujarat D) Himachal Pradesh
13. According to the Stefan-Boltzmann law, the total energy radiated per unit surface area of a black body is proportional to: A) T^2 B) T^3 C) T^4 D) $T^{1/4}$
14. 'पाश्चात्य' का विलोम शब्द क्या है? A) परवर्ती B) पौर्वात्य C) पूर्ववर्ती D) आधुनिक
15. If 'HUMAN' is coded as '62', what is 'BEING' coded as? A) 44 B) 42 C) 40 D) 46
16. The Clausius-Clapeyron equation describes the relationship between: A) Temperature and Entropy B) Pressure and Volume C) Vapor pressure and Temperature D) Enthalpy and Internal energy
17. The value of the integral $\int_{-\infty}^{\infty} e^{-x^2} dx$ is: A) π B) $\sqrt{\pi}$ C) 1 D) 0

18. Which constitutional article empowers the Governor to promulgate ordinances? A) Article 123 B) Article 213 C) Article 161 D) Article 72
19. In a superconducting state, the magnetic flux lines are expelled from the interior of the material. This is known as: A) Hall Effect B) Meissner Effect C) Zeeman Effect D) Stark Effect
20. The symmetry element present in the BF_3 molecule is: A) C_2 only B) C_3 and σ_h C) i (Inversion center) D) S_4
21. 'शुद्ध वर्तनी' का चयन कीजिए: A) अधिशासी B) अधिसाशी C) अधिशाषी D) अधीशासी
22. Pointing to a woman, Abhijit said, "Her granddaughter is the only daughter of my brother." How is the woman related to Abhijit? A) Sister B) Grandmother C) Mother D) Mother-in-law
23. Who was the first recipient of the 'Pahari Gandhi Baba Kanshi Ram Award' for literature? A) Jai Dev Kiran B) Keshav C) Dr. Gautam Vyathit D) M.R. Thakur
24. The energy of a particle in a 1D box of length L is $E = \frac{n^2h^2}{8mL^2}$. What is the parity of the wavefunction for $n = 2$? A) Even B) Odd C) Zero D) Infinite
25. The Cayley-Hamilton Theorem states that: A) Every matrix has a unique inverse B) Every square matrix satisfies its own characteristic equation C) Eigenvalues are always real D) The determinant of a singular matrix is zero
26. Which of the following molecules has a permanent dipole moment? A) CO_2 B) BF_3 C) NF_3 D) SiF_4
27. Choose the word that is most nearly opposite in meaning to 'ABSTAIN': A) Refuse B) Indulge C) Repel D) Dismiss
28. The 'Ramsar Convention' is associated with the conservation of: A) Forests B) Wetlands C) Tigers D) Oceans
29. The Fugacity of a real gas is related to its pressure P by the relation $f = \gamma P$. For an ideal gas, γ is: A) 0 B) 1 C) ∞ D) -1
30. In which district of HP is the 'Dhamwari Sunda' hydel project located? A) Shimla B) Kinnaur C) Kullu D) Lahaul-Spiti
31. In the Lorentz transformation, as $v \to c$, the time interval Δt between two events measured in a moving frame: A) Decreases B) Increases (Dilation) C) Remains same D) Becomes zero
32. If $z = re^{i\theta}$, then $\ln z$ is: A) $\ln r + i\theta$ B) $r + \theta$ C) $\ln r - i\theta$ D) $i \ln r$
33. 'अनुगामी' शब्द का सही अर्थ है: A) पीछे चलने वाला B) आगे चलने वाला C) साथ चलने वाला D) विपरीत चलने वाला
34. Select the correct passive voice: 'The master is teaching the student.' A) The student is taught by the master. B) The student is being taught by the master. C) The student was being taught by the master. D) The student has been taught by the master.
35. The 'Cabinet Mission' came to India in which year? A) 1942 B) 1945 C) 1946 D) 1947

36. Which element exhibits the 'Inert Pair Effect' most prominently? A) Carbon B) Silicon C) Lead D) Tin

37. If 4 workers can build a wall in 9 days, how many extra days will it take if the number of workers is reduced to 3? A) 3 days B) 12 days C) 6 days D) 1 day

38. The Maxwell relation $\left(\frac{\partial S}{\partial V}\right)_T = \left(\frac{\partial P}{\partial T}\right)_V$ is derived from: A) Helmholtz Free Energy B) Gibbs Free Energy C) Internal Energy D) Enthalpy

39. The Maclaurin series for $\ln(1+x)$ is valid for: A) All x B) $|x| < 1$ C) $x > 0$ D) $|x| \leq 1$ (except $x = -1$)

40. Who was the leader of the 'Dhami Satyagraha' in 1939? A) Bhagmal Sautha B) Dr. Y.S. Parmar C) Pandit Padam Dev D) Shivanand Ramaul

41. For a d^4 octahedral complex in a weak field, the number of unpaired electrons is: A) 0 B) 2 C) 4 D) 5

42. 'षडानन' में कौन सी संधि है? A) स्वर B) व्यंजन C) विसर्ग D) गुण

43. Which Indian space mission recently succeeded in landing on the South Pole of the Moon? A) Chandrayaan-2 B) Chandrayaan-3 C) Mangalyaan D) Aditya-L1

44. The divergence of the position vector $\mathbf{r} = x\hat{i} + y\hat{j} + z\hat{k}$ is: A) 0 B) 1 C) 3 D) $\mathbf{r}$

45. The number of non-isomorphic groups of order 4 is: A) 1 B) 2 C) 3 D) 4

46. The 'Heisenberg Exchange Interaction' explains the origin of: A) Diamagnetism B) Paramagnetism C) Ferromagnetism D) Superconductivity

47. The catalyst used in the 'Ziegler-Natta' polymerization of ethene is: A) $TiCl_4 + Al(C_2H_5)_3$ B) V_2O_5 C) $PdCl_2$ D) $FeCl_3$

48. Choose the word that fits best: 'The judge _____ the prisoner on probation.' A) released B) let C) discharged D) gave

49. 'मृगेंद्र' किसका पर्यायवाची है? A) हिरण B) शेर C) हाथी D) घोड़ा

50. Which king of the 'Katoch' dynasty built the Kangra Fort? A) Susharma Chandra B) Sansar Chand C) Prithvi Chand D) Hamir Chand

51. The efficiency of a reversible heat engine is independent of: A) Temperature of the source B) Temperature of the sink C) Working substance D) Both A and B

52. The value of $\int_0^{\pi/2} \frac{\sqrt{\sin x}}{\sqrt{\sin x}+\sqrt{\cos x}} dx$ is: A) $\pi/2$ B) $\pi/4$ C) 0 D) 1

53. 'प्रत्युपकार' में कौन सा उपसर्ग है? A) प्र B) प्रति C) प्रत्यु D) उप

54. The 'Gaiety Theatre' in Shimla was opened in which year? A) 1887 B) 1890 C) 1901 D) 1910

55. Which of the following is a 'Hard Acid' according to the HSAB principle? A) Ag^+ B) Hg^{2+} C) Li^+ D) Cu^+

56. Look at the series: 1, 1, 2, 6, 24, ... What is the 7th term? A) 120 B) 720 C) 5040 D) 144

57. Change the narration: 'He said, "I have done my work."' A) He said that he has done his work. B) He said that he had done his work. C) He said that he did his work. D) He said that he has been doing his work.

58. The 'Indian Councils Act of 1909' is also known as: A) Montagu-Chelmsford Reforms B) Morley-Minto Reforms C) Pitt's India Act D) Regulating Act

59. The radius of a nucleus (R) varies with mass number (A) as: A) $A^{1/2}$ B) $A^{1/3}$ C) A D) $A^{-1/3}$

60. The sum of the series $\sum_{n=0}^{\infty} \frac{n^2}{n!}$ is: A) e B) $2e$ C) $3e$ D) e^2

61. Which isomerism is shown by $[Co(NH_3)_5SO_4]Br$ and $[Co(NH_3)_5Br]SO_4$? A) Linkage B) Ionization C) Coordination D) Hydrate

62. 'गायक' का संधि विच्छेद है: A) गै + अक B) गे + अक C) गा + यक D) गै + यक

63. Which part of the electromagnetic spectrum has the highest frequency? A) X-rays B) Gamma rays C) UV rays D) Microwaves

64. If A is an idempotent matrix, then A^2 is: A) I B) 0 C) A D) A^{-1}

65. Which HP town is known as 'Chhota Kashi'? A) Mandi B) Kullu C) Solan D) Chamba

66. The major component of 'Portland Cement' is: A) Silica B) Lime (CaO) C) Alumina D) Iron Oxide

67. Choose the correct spelling: A) Surveillance B) Surveilance C) Survaillence D) Survaillance

68. A circuit contains an inductor (L) and a capacitor (C) in series. The resonant frequency is: A) $1/\sqrt{LC}$ B) $1/(2\pi\sqrt{LC})$ C) $\sqrt{LC}$ D) L/C

69. The value of $\Gamma(n+1)$ for a positive integer n is: A) $n!$ B) $(n-1)!$ C) n^n D) e^n

70. 'अरण्य' का पर्यायवाची नहीं है: A) कानन B) विपिन C) वाटिका D) कांतार

71. Which session of the Indian National Congress saw the first split (Surat Split)? A) 1905 B) 1906 C) 1907 D) 1916

72. In the 'Cannizzaro reaction', the aldehyde must lack: A) α-Hydrogen B) β-Hydrogen C) Carbonyl group D) Oxygen

73. If $\sin^{-1} x + \sin^{-1} y = \pi/2$, then $x^2 + y^2$ is: A) 0 B) 1 C) π D) 2

74. The energy gap in a superconductor (2Δ) at $T = 0\,K$ is approximately: A) $k_B T_c$ B) $3.5\,k_B T_c$ C) $10\,k_B T_c$ D) 0

75. Which reagent converts a Nitrile ($R-CN$) to a Primary Amine ($R-CH_2NH_2$)? A) $LiAlH_4$ B) $NaBH_4$ C) Sn/HCl D) H_2O/H^+

76. 'तबेले की बला बंदर के सिर' लोकोक्ति का अर्थ है: A) दूसरों पर दोष मढ़ना B) किसी का अपराध किसी और पर C) बंदर का तमाशा D) मुसीबत मोल लेना

77. Who is the author of the book 'The God of Small Things'? A) Arundhati Roy B) Kiran Desai C) Jhumpa Lahiri D) Anita Desai

78. The 'Malana' village in Kullu is famous for its: A) Oldest democracy in the world B) Apple production C) Hot springs D) Buddhist monasteries

79. The unit of 'Viscosity' in CGS system is: A) Poise B) Pascal C) Stoke D) Newton-second

80. A man completes $5/8$ of a job in 10 days. At this rate, how many more days will it take him to finish the job? A) 5 days B) 6 days C) 7 days D) 8 days

81. Identification of the correct grammatical sentence: A) I have seen him yesterday. B) I saw him yesterday. C) I am seeing him yesterday. D) I had seen him yesterday.

82. In which year was the 'Kunihar Struggle' against the Rana of Kunihar initiated? A) 1920 B) 1939 C) 1942 D) 1947

83. The enthalpy change (ΔH) and internal energy change (ΔU) are related by: A) $\Delta H = \Delta U + P\Delta V$ B) $\Delta H = \Delta U - P\Delta V$ C) $\Delta H = \Delta U + V\Delta P$ D) $\Delta H = \Delta U$

84. The limit of $(1 + x/n)^n$ as $n \to \infty$ is: A) e B) e^x C) x^e D) n

85. 'कूप-मंडूक होना' का अर्थ है: A) कुएं में गिरना B) अत्यंत सीमित ज्ञान होना C) मेंढक जैसा दिखना D) मूर्ख होना

86. Which mountain pass is located between Lahaul and Spiti? A) Kunzum Pass B) Rohtang Pass C) Baralacha Pass D) Shipki La

87. The group velocity of a matter wave is equal to: A) Phase velocity B) Velocity of the particle C) Velocity of light D) Zero

88. Which of the following is a 'Soft Base' according to the HSAB principle? A) F^- B) I^- C) OH^- D) NH_3

89. The value of $\sin(75^\circ)$ is: A) $(\sqrt{3}+1)/2\sqrt{2}$ B) $(\sqrt{3}-1)/2\sqrt{2}$ C) $\sqrt{3}/2$ D) $1/\sqrt{2}$

90. The 'Buri Singh Museum' is located in which district? A) Chamba B) Kangra C) Shimla D) Solan

91. Which country recently became the first to land a probe on the far side of the Moon? A) USA B) Russia C) China D) India

92. The resistance of an intrinsic semiconductor at $T = 0\,K$ is: A) Zero B) Finite C) Infinite D) Small

93. 'पवन' में कौन सी संधि है? A) यण B) अयादि C) गुण D) वृद्धि

94. A person who believes that pleasure is the most important thing in life: A) Hedonist B) Stoic C) Epicurean D) Optimist

95. In a row of students, Anil is 7th from the left and Sunil is 18th from the right. If they interchange their positions, Anil becomes 21st from the left. How many students are there in the row? A) 38 B) 39 C) 40 D) 41

96. Which is the highest village in the world (as per HP GK context often cited)? A) Kibber B) Kaza C) Hikkim D) Tabo

97. The reaction of Phenol with $CHCl_3/NaOH$ followed by acidification yields: A) Salicylic acid B) Salicylaldehyde C) Benzene D) Chlorobenzene

98. The derivative of $\ln(\sec x + \tan x)$ is: A) $\sec x$ B) $\tan x$ C) $\sec^2 x$ D) 1

99. 'जिसका कोई शत्रु न जन्मा हो' के लिए एक शब्द है: A) अजातशत्रु B) शत्रुघ्न C) अभय D) निर्भय

100. Who is the current (2025) Secretary-General of the United Nations? A) Ban Ki-moon B) António Guterres C) Kofi Annan D) Boutros Boutros-Ghali

101. The displacement of a particle in SHM is $x = A\sin(\omega t)$. The phase difference between velocity and acceleration is: A) 0 B) $\pi/2$ C) π D) $3\pi/2$

102. Which molecule has a 'See-saw' shape? A) CH_4 B) SF_4 C) XeF_4 D) ClF_3

103. If the roots of $x^3 - 3x^2 + 4 = 0$ are α, β, γ, then $\alpha\beta\gamma$ is: A) 4 B) -4 C) 3 D) -3

104. 'टेढ़ी खीर' मुहावरे का अर्थ है: A) स्वादिष्ट भोजन B) कठिन कार्य C) असंभव कार्य D) खीर का गिरना

105. In which district is the 'Renuka Wildlife Sanctuary' located? A) Sirmaur B) Shimla C) Solan D) Bilaspur

106. Which is the largest freshwater lake in India? A) Wular Lake B) Chilika Lake C) Dal Lake D) Vembanad Lake

107. The 'Photoelectric Effect' can be explained by assuming light consists of: A) Waves B) Particles (Photons) C) Fields D) Rays

108. The 'Inert Gas' used in beacon lights for airplanes is: A) Helium B) Neon C) Argon D) Krypton

109. If $P(A) = 0.6, P(B) = 0.5$ and $P(A \cap B) = 0.2$, then $P(A|B)$ is: A) 0.4 B) 0.6 C) 0.2 D) 0.5

110. 'अभिज्ञ' का विलोम शब्द है: A) अज्ञ B) तज्ञ C) प्रज्ञ D) चतुर

111. Choose the correct idiom: 'He had to _____ for his mistake.' A) pay the piper B) face the music C) beat the bush D) call it a day

112. Who was the first Speaker of the Himachal Pradesh Vidhan Sabha? A) Jaiwant Ram B) Des Raj Mahajan C) Kultar Chand Rana D) Shravan Kumar

113. According to Lenz's Law, the induced EMF opposes: A) Change in flux B) Flux itself C) Current D) Resistance

114. The 'Huckel Rule' for aromaticity states that a planar cyclic system must have: A) $4n\pi$ electrons B) $(4n+2)\pi$ electrons C) $2n\pi$ electrons D) $6n\pi$ electrons

115. The angle of intersection of the curves $y = x^2$ and $x = y^2$ at $(1, 1)$ is: A) $\tan^{-1}(3/4)$ B) $\tan^{-1}(4/3)$ C) $\pi/4$ D) 0

116. 'विहग' किसका पर्यायवाची है? A) बादल B) पक्षी C) वायु D) चंद्रमा

117. Which city is known as the 'Coal Capital of India'? A) Dhanbad B) Bokaro C) Jharia D) Raniganj

118. Which state has the lowest sex ratio in India as per 2011 Census? A) Punjab B) Haryana C) Rajasthan D) Uttar Pradesh

119. The 'Skin Effect' in conductors is more pronounced at: A) High frequency B) Low frequency C) DC D) Zero frequency

120. Which element is used as a 'Dopant' to make p-type Silicon? A) Phosphorus B) Boron C) Arsenic D) Antimony

121. The value of $\int_0^1 \frac{dx}{1+x^2}$ is: A) $\pi/4$ B) $\pi/2$ C) 1 D) 0

122. 'नाक रगड़ना' मुहावरे का अर्थ है: A) नाक में खुजली होना B) दीनतापूर्वक प्रार्थना करना C) अपमानित करना D) जिद करना

123. If the day before yesterday was Thursday, what day will it be day after tomorrow? A) Monday B) Tuesday C) Wednesday D) Sunday

124. The 'Minjar' fair in Chamba is celebrated by offering what to the river Ravi? A) Maize flowers (Minjar) B) Wheat C) Coconut D) Coins

125. Raoult's Law for a non-volatile solute states that the relative lowering of vapor pressure is equal to: A) Mole fraction of solute B) Mole fraction of solvent C) Molarity of solution D) Molality of solution

126. A function $f(x)$ has a local maximum at $x = c$ if: A) $f'(c) = 0$ and $f''(c) > 0$ B) $f'(c) = 0$ and $f''(c) < 0$ C) $f'(c) = 0$ and $f''(c) = 0$ D) $f'(c) > 0$

127. Complete the proverb: 'A stitch in time saves _____.' A) ten B) nine C) effort D) money

128. Who founded the 'Ramakrishna Mission'? A) Ramakrishna Paramahansa B) Swami Vivekananda C) Sarada Devi D) Raja Ram Mohan Roy

129. The unit of 'Radioactive decay constant' (λ) is: A) s B) s^{-1} C) Ci D) Bq

130. The most stable conformation of 'Cyclohexane' is: A) Boat B) Chair C) Half-chair D) Twist-boat

131. The equation of the plane passing through $(1, 2, 3)$ and parallel to xy-plane is: A) $x = 1$ B) $y = 2$ C) $z = 3$ D) $x + y + z = 6$

132. 'मुँह की खाना' मुहावरे का अर्थ है: A) अपमानित होना B) बुरी तरह हारना C) भोजन करना D) कम बोलना

133. Which country is the largest producer of wheat in the world? A) India B) China C) USA D) Russia

134. Which valley of HP is called the 'Valley of Honey and Milk'? A) Chamba Valley B) Kullu Valley C) Kangra Valley D) Spiti Valley

135. The 'Work-Energy Theorem' states that work done is equal to: A) Change in Potential Energy B) Change in Kinetic Energy C) Total Energy D) Force $\times$ Distance

136. The 'Moderator' used in a nuclear reactor slowing down neutrons is usually: A) Heavy Water B) Cadmium C) Boron D) Lead

137. The derivative of $\tan^{-1}(\sinh x)$ is: A) $\operatorname{sech} x$ B) $\cosh x$ C) $\tanh x$ D) $\operatorname{csch} x$

138. Identify the incorrect sentence: A) One should do his duty. B) One should do one's duty. C) None of the students has come. D) Each of the girls is clever.

139. If 'COUNCIL' is coded as 'BITOCIK', how is 'GUIDE' coded? A) FTHCD B) FVJED C) FTHED D) HUIED

140. Which river in Himachal Pradesh flows through the 'Pattan Valley'? A) Chandra-Bhaga (Chenab) B) Ravi C) Beas D) Satluj

141. The focal length of a plano-convex lens ($n = 1.5$) with radius of curvature R is: A) R B) $2R$ C) $R/2$ D) $1.5R$

142. The product of the 'Diels-Alder' reaction is: A) Substituted cyclohexene B) Cyclohexane C) Benzene D) Naphthalene

143. The value of $\int_0^{\pi/2} \sin^2 x dx$ is: A) $\pi/2$ B) $\pi/4$ C) 1 D) 0

144. 'जंगम' का विलोम शब्द है: A) स्थावर B) स्थिर C) अचल D) चेतन

145. Who was the first Indian to win the 'Booker Prize'? A) Salman Rushdie B) Arundhati Roy C) V.S. Naipaul D) Arvind Adiga

146. For a process to be 'Adiabatic', the condition is: A) $dT = 0$ B) $dQ = 0$ C) $dP = 0$ D) $dV = 0$

147. Which polymer is used to make 'Non-stick' cookware? A) PVC B) PTFE (Teflon) C) Polystyrene D) Polypropene

148. The area between the curves $y^2 = x$ and $x^2 = y$ is: A) 1 B) 1/3 C) 2/3 D) 1/2

149. 'अत्युक्ति' में कौन सी संधि है? A) यण B) गुण C) वृद्धि D) दीर्घ

150. Where is the 'Central Potato Research Institute' (CPRI) located? A) Shimla (Bumloi) B) Mandi C) Solan D) Kangra

151. Which of the following is a 'Polar Molecule'? A) CCl_4 B) NH_3 C) BF_3 D) CH_4

152. In 'Electrophilic Aromatic Substitution', the Nitro group (NO_2) is: A) Ortho-para directing B) Meta directing C) Activating D) Nucleophilic

153. The integral $\int_0^\infty \frac{dx}{1+x^2}$ is: A) $\pi/2$ B) π C) ∞ D) 1

154. 'कलेजा फटना' मुहावरे का अर्थ है: A) दिल की बीमारी B) असहनीय दुख होना C) बहुत खुश होना D) मृत्यु होना

155. Which state is the largest producer of 'Cotton' in India? A) Gujarat B) Maharashtra C) Punjab D) Haryana

156. The time period of a simple pendulum of infinite length is: A) Infinite B) 84.6 minutes C) $2\pi\sqrt{R/g}$ D) 2 seconds

157. Which element has the highest thermal conductivity? A) Silver B) Copper C) Gold D) Aluminum

158. If $y = \tan^{-1} x$, then y'' at $x = 1$ is: A) -1/2 B) 1/2 C) -1/4 D) 0

159. 'गागर में सागर भरना' का अर्थ है: A) थोड़े में बहुत कहना B) सागर से गागर भरना C) असंभव कार्य करना D) बहुत बोलना

160. Which district of HP has the lowest literacy rate (2011 Census)? A) Chamba B) Lahaul-Spiti C) Sirmaur D) Kinnaur

161. The unit of 'Inductance' is: A) Henry B) Farad C) Weber D) Tesla

162. Which vitamin is also known as 'Calciferol'? A) Vitamin A B) Vitamin B C) Vitamin C D) Vitamin D

163. The derivative of $\sec x$ is: A) $\sec x \tan x$ B) $\sec^2 x$ C) $\tan^2 x$ D) $\sec x$

164. 'पाश्चात्य' का विलोम है: A) आधुनिक B) पौर्वात्य C) प्राचीन D) नवीन

165. The headquarters of 'World Health Organization' (WHO) is in: A) Geneva B) New York C) Paris D) Rome

166. An 'Ideal Transformer' has an efficiency of: A) 50% B) 100% C) 90% D) 0%

167. Which gas is used in the 'manufacture of glass'? A) SO_2 B) CO_2 C) N_2 D) O_2

168. The value of $\int_0^1 x^3 dx$ is: A) 1/4 B) 1/3 C) 1/2 D) 1

169. 'नाक का बाल होना' मुहावरे का अर्थ है: A) बहुत प्यारा होना B) नाक में बाल होना C) कष्ट देना D) जिद करना

170. 'Larji' hydel project is on which river? A) Beas B) Satluj C) Ravi D) Chenab

171. The speed of light in water ($n = 1.33$) is approximately: A) $2.25 \times 10^8\, m/s$ B) $3 \times 10^8\, m/s$ C) $1.5 \times 10^8\, m/s$ D) $2 \times 10^8\, m/s$

172. The oxidation state of P in H_3PO_4 is: A) +3 B) +5 C) +1 D) -3

173. The distance between points $(1, 1, 1)$ and $(2, 2, 2)$ is: A) $\sqrt{3}$ B) 3 C) 1 D) $\sqrt{2}$

174. 'सरस्वती' का पर्यायवाची नहीं है: A) शारदा B) भारती C) कमला D) वीणापाणि

175. Which planet is called the 'Twin of Earth'? A) Venus B) Mars C) Mercury D) Jupiter

176. The resistance of an ideal ammeter is: A) Zero B) Infinite C) $1\,\Omega$ D) Very high

177. Which element is used as a 'Moderator' in nuclear reactors? A) Graphite B) Cadmium C) Boron D) Lead

178. The value of $\cos(180^\circ)$ is: A) 0 B) 1 C) -1 D) $1/2$

179. 'क्षणिक' का विलोम शब्द है: A) शाश्वत B) अल्प C) दीर्घ D) स्थिर

180. The 'Trilokpur' temple in Sirmaur is dedicated to which deity? A) Mahamaya Balasundari B) Hadimba C) Shakti Devi D) Renuka

181. A body projected vertically upwards reaches its maximum height. Its velocity there is: A) g B) Zero C) Maximum D) $9.8\, m/s$

182. Which isotope is used for 'Carbon Dating'? A) $C-12$ B) $C-13$ C) $C-14$ D) $C-11$

183. If $P(A) = 1/2, P(B) = 0$, then $P(A|B)$ is: A) 0 B) 1/2 C) Undefined D) 1

184. 'मुँह फुलाना' मुहावरे का अर्थ है: A) गुस्सा होना B) मुँह की बीमारी C) बहुत खाना D) व्यायाम

185. The largest part of the human brain is: A) Cerebellum B) Cerebrum C) Medulla D) Thalamus

186. The unit of 'Surface Tension' is: A) N/m B) N/m^2 C) J/m D) N

187. Which component of blood carries antibodies? A) RBC B) WBC C) Plasma D) Platelets

188. If $\theta = 30^\circ$, then $2\sin\theta\cos\theta$ is: A) $1/2$ B) $\sqrt{3}/2$ C) 1 D) 0

189. 'दशानन' में कौन सा समास है? A) बहुव्रीहि B) द्विगु C) द्वंद्व D) तत्पुरुष

190. Which glacier is located in the 'Chandra Valley' of Lahaul? A) Bara Shigri B) Chota Shigri C) Dudhon D) Beas Kund

191. Ultrasonic waves have frequency: A) Below $20\, Hz$ B) Between $20 - 20,000\, Hz$ C) Above $20,000\, Hz$ D) Zero

192. Which gas is known as 'Phosgene'? A) $COCl_2$ B) PH_3 C) CS_2 D) CO_2

193. The integral $\int \frac{dx}{x}$ is: A) $\ln|x| + C$ B) $x^2/2 + C$ C) $1 + C$ D) $e^x + C$

194. 'आँखें दिखाना' का अर्थ है: A) डराना B) प्यार करना C) आँख का इलाज D) इशारा

195. Who is the author of 'Abhigyan Shakuntalam'? A) Kalidasa B) Valmiki C) Tulsidas D) Ved Vyas

196. A 'Concave Lens' always forms which type of image? A) Real and inverted B) Virtual and erect C) Real and erect D) Virtual and inverted

197. Which property is unique to 'Covalent Solids'? A) High melting point B) Electrical conductivity C) Directional bonds D) Malleability

198. The surface area of a sphere of radius r is: A) πr^2 B) $2\pi r^2$ C) $4\pi r^2$ D) $4/3\pi r^3$

199. 'निरीश्वरवादी' का विलोम शब्द है: A) आस्तिक B) नास्तिक C) भक्त D) ईश्वर

200. In which district is the 'Dhauladhar' range most prominent? A) Kangra B) Chamba C) Mandi D) Shimla

Answer Key

1-B, 2-B, 3-A, 4-B, 5-C, 6-C, 7-B, 8-B, 9-B, 10-A, 11-B, 12-B, 13-C, 14-B, 15-B, 16-C, 17-B, 18-B, 19-B, 20-B, 21-A, 22-C, 23-C, 24-B, 25-B, 26-C, 27-B, 28-B, 29-B, 30-A, 31-B, 32-A, 33-A, 34-B, 35-C, 36-C, 37-A, 38-A, 39-D, 40-A, 41-C, 42-B, 43-B, 44-C, 45-B, 46-C, 47-A, 48-A, 49-B, 50-A, 51-C, 52-B, 53-B, 54-A, 55-C, 56-B, 57-B, 58-B, 59-B, 60-B, 61-B, 62-A, 63-B, 64-C, 65-A, 66-B, 67-A, 68-B, 69-A, 70-C, 71-C, 72-A, 73-B, 74-B, 75-A, 76-B, 77-A, 78-A, 79-A, 80-B, 81-B, 82-B, 83-A, 84-B, 85-B, 86-A, 87-B, 88-B, 89-A, 90-A, 91-C, 92-C, 93-B, 94-A, 95-A, 96-C, 97-B, 98-A, 99-A, 100-B, 101-B, 102-B, 103-B, 104-B, 105-A, 106-A, 107-B, 108-B, 109-A, 110-A, 111-B, 112-A, 113-A, 114-B, 115-B, 116-B, 117-A, 118-B, 119-A, 120-B, 121-A, 122-B, 123-B, 124-A, 125-A, 126-B, 127-B, 128-B, 129-B, 130-B, 131-C, 132-B, 133-B, 134-A, 135-B, 136-A, 137-A, 138-A, 139-A, 140-A, 141-B, 142-A, 143-B, 144-A, 145-B, 146-B, 147-B, 148-B, 149-A, 150-A, 151-B, 152-B, 153-A,