RRB Secunderabad

Junior Engineers Examination

Held on: 14.12.2014

14 **CC**

SECTION - I

ENGLISH

1. When we open an internet site, we see 'www' ? What is the full form of 'www' ?

(A) World Wide Web (B) World Wide Word

(C) Words Wise Web (D) None of these

2. The length of two trains are 140 m and 160 m respectively. If they run at the speed of 60 km/h and 40 km/h respectively in opposite directions on parallel tracks, then find the time in which they will cross each other.

(A) 10 sec (B) 10.8 sec (C) 9 sec (D) 9.6 sec

3. Transformer cores are laminated in order to :

(A) Minimise eddy current loss (B) Reduce cost

(C) Simplify its constructions (D) None of these

4. Strain Gauge is used to convert :

(A) Force into displacement

(B) Mechanical displacement into change in resistance

(C) Electric current into Mechanical displacement

(D) Sound Energy into Electric Energy

5. If an object lies in third quadrant, its position with respect to reference planes will be :

(A) Infront of V.P., Above H.P. (B) Behind V.P., Above H.P.

(C) Infront of V.P., Below H.P. (D) Behind V.P., Below H.P.

6. The speed of sound in air is approximately equal to :

(A) 3×10^8 m/sec (B) 330 m/sec (C) 5000 m/sec (D) 1500 m/sec

7. When Ram and Mohan work together, they complete a work in 4 days. If Ram alone can complete this work in 12 days then in how many days Mohan alone can complete this work ?

(A) 10 days (B) 8 days (C) 6 days (D) 16 days

8. Which of the following is a prime number ?

(A) 33 (B) 87 (C) 93 (D) 97

9. Find the missing term of the following series :

1, 4, 27, 16, __?__, 36, 343.

(A) 25 (B) 216 (C) 64 (D) 125

10. Which country won the FIFA world cup, 2014 in Football ?
(A) Germany (B) Argentina (C) Brazil (D) France

11. The slenderness ratio of a compression member is :
(A) $\frac{\text{Effective length}}{\text{Least radius of gyration}}$ (B) $\frac{\text{Actual length}}{\text{Moment of inertia}}$
(C) $\frac{\text{Moment of inertia}}{\text{Actual length}}$ (D) $\frac{\text{Actual length}}{\text{Radius of gyration}}$

12. Who is the speaker of present Lok Sabha ? (As on 01.11.2014)
(A) Smt. Sumitra Mahajan (B) Smt. Sushma Swaraj
(C) Smt. Meira Kumar (D) None of these

13. The value of binary 1111 is :
(A) 2^3 (B) $2^3 - 1$ (C) 2^4 (D) $2^4 - 1$

14. Who is the winner of Mens Singles Title in Tennis in US open, 2014 ?
(A) Roger Federer (B) Kei Nishikori
(C) Marin Cilic (D) Rafael Nadal

15. In which of the following movement did Gandhiji make the first use of Hunger Strike as a weapon ?
(A) Ahmedabad strike, 1918 (B) Rowlatt Satyagraha, 1919
(C) Swadeshi Movement, 1905 (D) Champaran Satyagraha, 1917

16. Who wrote the book "Not Just An Accountant" published recently ?
(A) P.C. Parakh (B) Sanjay Baru
(C) Vinod Rai (D) Natwar Singh

17. The length of a bar is L metres. It extends by 2 mm when a tensile force F is applied. Find the strain produced in the bar :
(A) $\frac{0.002}{L}$ (B) $\frac{2}{L}$ (C) $\frac{0.2}{L}$ (D) $\frac{L}{0.002}$

18. A four stroke petrol engine theoretically operates on :
(A) Joule cycle (B) Otto cycle
(C) Brayton cycle (D) Bell coleman cycle

19. Find the value of $(2744)^{\frac{1}{3}}$:

(A) 24 (B) 14 (C) 34 (D) 16

20. A man buys an article for ₹ 490 and sells it for ₹ 465.50. Find his loss percentage.

(A) 4% (B) 4.5% (C) 5% (D) 5.5%

21. If the cost of 'x' metres of wire is 'd' rupees, then what is the cost of 'y' metres of same wire ?

(A) $\frac{yd}{x}$ (B) $\frac{xd}{y}$ (C) $\frac{xy}{d}$ (D) $\frac{d}{xy}$

22. One side of a rectangular field is 15 metres. The length of diagonal of this rectangular field is 17 metres. Find the area of this rectangular field.

(A) 120 m^2 (B) 60 m^2 (C) 255 m^2 (D) $144\frac{1}{2}$ m^2

23. 'When a body is wholly or partially, immersed in a fluid, it experiences an upthrust equal to the weight of the fluid displaced'. This is known as :

(A) Pascal's principle (B) Archimedes principle
(C) Stoke's law (D) Newton's Laws of Motion

24. Secretion of Insulin Hormone is by :

(A) Thyroid (B) Pituitary (C) Adrenal (D) Pancreas

25. Earthworm belongs to which of the following Animal Phyla ?

(A) Arthropoda (B) Mollusca (C) Annelida (D) Protozoa

26. If t_o, t_p and t_m are the optimistic, pessimistic and most likely time estimates of an activity respectively, then the expected time 't' of the activity will be :

(A) $\frac{t_o + t_p + t_m}{3}$ (B) $\frac{t_o + t_p + 3t_m}{5}$

(C) $\frac{t_o + t_p + 2t_m}{4}$ (D) $\frac{t_o + t_p + 4t_m}{6}$

27. Find the value of $\frac{(768)^3 + (232)^3}{(768)^2 - (768 \times 232) + (232)^2}$:

(A) 1000 (B) 536 (C) 500 (D) 268

28. For perfectly elastic bodies, the value of coefficient of restitution is :
(A) zero (B) 0.5 (C) 1.0 (D) 0.25

29. If 1st January, 2014 was Wednesday, then 29th December, 2014 will be :
(A) Thursday (B) Monday (C) Saturday (D) Friday

30. The thermal diffusivity of a substance is given by :
(A) $\frac{K\rho}{C}$ (B) $\frac{K}{\rho C}$ (C) $\frac{KC}{\rho}$ (D) $\frac{\rho C}{K}$
[Where K = Thermal conductivity; ρ = Mass density; C = Specific heat]

31. Which of the following is biodegradable pollutant ?
(A) DDT (B) BHC (C) Cotton cloth (D) Mercury

32. Sachin is younger than Rahul by 4 years. If their ages are in the ratio of 7 : 9, then how old is Sachin ?
(A) 14 years (B) 21 years (C) 18 years (D) 25 years

33. Find the value of (1+2+3+4+ _ _ _ _ _ _ _ +45) :
(A) 2140 (B) 2070 (C) 1035 (D) 1280

34. When an object is cut by a section plane, parallel to H.P. and perpendicular to V.P., then the sectional view of the object is obtained in :
(A) Top view (B) Front view (C) Left side view (D) Right side view

35. The pressure exerted on the walls of a container by a gas is due to the fact that Gas molecules :
(A) Stick to the walls of the container
(B) Lose their kinetic energy
(C) Get accelerated towards the wall
(D) Change their momentum due to collision with the wall.

36. Which National Park is known for the 'Asiatic Lions' ?
(A) Corbett National Park (B) Kanha National Park
(C) Bandipur National Park (D) Gir National Park

37. Separation of water or sand or cement from a freshly mixed concrete is known as :
(A) Segregation (B) Creeping (C) Bleeding (D) Flooding

38. The relationship between Bulk density (γ), Dry density (γ_d) and water content (ω) for soil is :

(A) $\gamma = \gamma_d(1+\omega)$ (B) $\gamma_d = \gamma(1+\omega)$ (C) $\gamma = \frac{\gamma_d}{1+\omega}$ (D) $\gamma = \gamma_d(1-\omega)$

39. Which one of the following instruments will be used for measuring electric current ?
(A) Voltmeter (B) Ammeter (C) Ohmmeter (D) Wavemeter

40. In a certain code language, 'HAND' is written as 'SZMW', then what will be the code of 'MILK' ?
(A) ORNP (B) PNRO (C) NROP (D) RNOP

41. Find the simple interest on ₹ 4800 at the rate of $8\frac{1}{2}$ % per annum for a period of 2 years 3 months.
(A) ₹ 796 (B) ₹ 816 (C) ₹ 918 (D) ₹ 990

42. Choose the option which correctly shows the relationship between Modulus of Elasticity (E); Modulus of Rigidity (C) and Bulk Modulus (K) :

(A) $E = \frac{KC}{K+C}$ (B) $E = \frac{2KC}{2K+C}$ (C) $E = \frac{9KC}{3K+C}$ (D) $E = \frac{3KC}{K+2C}$

43. The term 'Operating System' means :
(A) A set of programmes which controls computer working
(B) The way a computer operator works
(C) Conversion of high level language into machine level language
(D) None of these

44. Which of the following is not a cold working process ?
(A) Extrusion (B) Slitting (C) Blanking (D) Lancing

45. The famous chinese pilgrim 'Hieun Tsang' visited India during the reign of :
(A) Harshavardhan (B) Chandragupta II
(C) Ashoka (D) Kanishka

46. The language which a computer can understand is :
(A) High Level Language (B) Machine Language
(C) Assembly Language (D) All of these

47. The property of a material by which it can be rolled into sheets is called :
(A) Elasticity (B) Plasticity (C) Ductility (D) Malleability

48. Schmitt trigger is also known as :
(A) Sweep circuit
(B) Blocking oscillator
(C) Squaring circuit
(D) Stable multi vibrator

49. A triac is a :
(A) Two terminal bi-directional switch
(B) Three terminal bi-directional switch
(C) Two terminal uni-directional switch
(D) Three terminal uni-directional switch

50. Cyclo converter converts :
(A) AC to DC
(B) DC to AC
(C) A fixed AC to a variable magnitude AC
(D) A fixed DC to a variable magnitude DC

51. Which one of the following is not a scalar quantity ?
(A) Volume (B) Mass (C) Force (D) Length

52. In a well conditioned triangle, no angle should be less than :
(A) 60° (B) 50° (C) 30° (D) 45°

53. The reduced bearing of a line is N 87° W. Its whole circle bearing is :
(A) 273° (B) 3° (C) 93° (D) 87°

54. The resultant of two forces P and Q acting at an angle θ, is given by :
(A) $\sqrt{P^2+Q^2+2PQ\tan\theta}$ (B) $\sqrt{P^2+Q^2+2PQ\sin\theta}$
(C) $\sqrt{P^2+Q^2+2PQ\cos\theta}$ (D) $P+Q+2PQ\tan\theta$

55. Primary storage in computer terminology refers to :
(A) Hard Disc Drive
(B) Random Access Memory (RAM)
(C) Read Only Memory (ROM)
(D) The storage device where the operating system is stored

56. In an examination, a student gets 4 marks for every correct answer and loses 1 mark for every wrong answer. If he attempts in all 60 questions and secures 130 marks, then find the number of questions he attempted correctly.
(A) 42 (B) 48 (C) 36 (D) 38

57. The Fundamental Duties of the Indian citizens are incorporated in the following Article of our constitution ?

(A) Article 21 A (B) Article 51 A (C) Article 370 A (D) Article 19 A

58. If $\frac{x}{y} = \frac{6}{5}$, then find the value of $\frac{x^2 + y^2}{x^2 - y^2}$:

(A) 11 (B) $\frac{61}{11}$ (C) $\frac{11}{5}$ (D) 6

59. Which device changes the alternating e.m.f. generated by the D.C. Generator in its armature coil to D.C. ?

(A) Slip ring (B) Rectifier (C) Commutator (D) None of these

60. A simply supported beam of length L is loaded with a uniformly distributed load of ω per unit length. The maximum bending moment will be :

(A) $\frac{\omega L^2}{4}$ (B) $\frac{\omega L^2}{8}$ (C) $\frac{\omega L^2}{2}$ (D) ωL^2

61. Jama Masjid at Delhi was built by :

(A) Akbar (B) Jahangir (C) Shah Jahan (D) Aurangzeb

62. Arrange the fractions $\frac{3}{5}, \frac{4}{7}, \frac{8}{9}$ and $\frac{9}{11}$ in their descending order :

(A) $\frac{8}{9} > \frac{9}{11} > \frac{3}{5} > \frac{4}{7}$ (B) $\frac{9}{11} > \frac{8}{9} > \frac{4}{7} > \frac{3}{5}$

(C) $\frac{3}{5} > \frac{4}{7} > \frac{8}{9} > \frac{9}{11}$ (D) $\frac{4}{7} > \frac{8}{9} > \frac{3}{5} > \frac{9}{11}$

63. Find the average of all prime numbers between 30 and 50 :

(A) 48 (B) 39 (C) 39.8 (D) 38

64. A cyclotron is a :

(A) Bunch of Gamma Rays (B) High Frequency Oscillator
(C) Particle Accelerator (D) None of these

65. Who is the winner of Nobel Prize, 2014 in the field of Economics ?

(A) Patrick Modiano (B) Malala Yousafzai
(C) Jean Tirole (D) Kailash Satyarthi

66. The Indian Standard Time (I.S.T.) is ahead of Greenwich Mean Time (G.M.T.) by :

(A) 6 hours (B) 5 hours

(C) 6 hours 30 minutes (D) 5 hours 30 minutes

67. Which of the following processes is generally used for mass production of connecting rod of Automobile Engines ?

(A) Sand Casting (B) Cold Heading (C) Forging (D) Spinning

68. The load which does not change its magnitude and position with time is called :

(A) Live load (B) Dynamic load (C) Creep load (D) Dead load

69. A byte is group of :

(A) 2 bits (B) 4 bits (C) 8 bits (D) 16 bits

70. If $\log_8 x = \frac{2}{3}$, then the value of 'x' is :

(A) $\frac{16}{3}$ (B) $\frac{4}{3}$ (C) 12 (D) 4

71. _____ will translate the complete programme at once from a high level language to the machine language.

(A) Compiler (B) Assembler (C) Joystick (D) Bus

72. Pipe 'P' can fill a tank in 36 hours and pipe 'Q' can fill this tank in 45 hours. If both the pipes are opened simultaneously, then how much time will be taken to fill this tank ?

(A) 20 hours (B) $40\frac{1}{2}$ hours (C) 9 hours (D) 42 hours

73. Find out the term which is different from other terms in the following :

22, 33, 66, 99, 121, 279, 594

(A) 99 (B) 121 (C) 279 (D) 594

74. A CRO can display :

(A) D.C. signals only (B) A.C. signals only

(C) Both D.C. and A.C. signals (D) Time - invariant signals

75. The 'Quit India Movement' was launched in the year :

(A) 1920 A.D. (B) 1930 A.D. (C) 1942 A.D. (D) 1946 A.D.

76. If a thin rectangular plate of 60 mm × 30 mm is inclined at an angle of 60° to the Horizontal Plane, its top view may be :

(A) Square of 30 mm size

(B) Square of 60 mm size

(C) Rectangle of 60 mm × 45 mm size

(D) Rectangle of 45 mm × 30 mm size

77. A file which contains transient data to be processed in combination with a master file is called :

(A) Sequential file (B) Master file

(C) Random organization file (D) Transmission file

78. Find the missing term of the following series :

BZA, DYC, FXE, __?__, JVI.

(A) HWG (B) HUG (C) WHG (D) GUH

79. Who is the President of China ? (As on 01.11.2014)

(A) Li Keqiang (B) Xi Jinping (C) Shinzo Abe (D) Hu Jintao

80. Zeroth Law of thermodynamics forms the basis of _____ measurement.

(A) Pressure (B) Temperature (C) Work (D) Momentum

81. Who wrote 'Indica' ?

(A) Kautilya (B) Kalidasa (C) Shudraka (D) Megasthenes

82. Red rot is a plant disease which affects :

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

83. Which one of the following is also known as Red Planet ?

(A) Mercury (B) Venus (C) Earth (D) Mars

84. Find the angle between the hour hand and the minute hand of a clock when the time is 10.25 hours i.e. 25 minutes past 10 ?

(A) 180° (B) 165° (C) $162\frac{1}{2}^{\circ}$ (D) $152\frac{1}{2}^{\circ}$

85. Which of the following Amplifiers produces the least distortion ?

(A) Class A (B) Class B (C) Class AB (D) Class C

86. What is 15% of 34 kg ?
(A) 3.4 kg (B) 3.75 kg (C) 4.50 kg (D) 5.10 kg

87. Who is the Chief Minister of Tamil Nadu ? (As on 01.11.2014)
(A) Mr. O. Panneerselvam (B) Ms. J. Jayalalitha
(C) Mr. Karunanidhi (D) Mr. Dayanidhi Maran

88. Which of the following is a universal gate ?
(A) AND (B) NAND (C) OR (D) NOR

89. Who is the Chairperson of National Commission for Women in India ? (As on 01.11.2014)
(A) Jayanti Patnaik (B) Girija Vyas
(C) Mamta Sharma (D) Lalitha Kumaramangalam

90. BOD (Bio Chemical Oxygen Demand) of safe drinking water must be :
(A) 0 (B) 50 ppm (C) 100 ppm (D) 200 ppm

91. In an examination, 35% of the students passed and 455 failed. How many students appeared for the examination ?
(A) 700 (B) 1300 (C) 845 (D) 1250

92. Pointing to a man in a photograph, Asha said, "His mother's only daughter is my mother". How is that man related to Asha ?
(A) Brother (B) Maternal Uncle (C) Grand father (D) Father

93. Galena is an ore of :
(A) Lead (B) Copper (C) Aluminium (D) Iron

94. Which of the following is a presentation graphics software ?
(A) MS Windows (B) MS Word (C) MS Excel (D) MS PowerPoint

95. Boyle's law states that :
(A) The pressure of a gas varies directly with temperature at constant volume i.e. $P \alpha T$.
(B) The product of pressure and volume of a given mass of a gas is constant at constant temperature i.e. $PV = \text{constant}$.
(C) The volume of a gas varies directly with temperature at constant pressure i.e. $V \alpha T$.
(D) The pressure of a gas varies directly with volume at constant temperature i.e. $P \alpha V$.

96. Weld spatter is a/an :
(A) Flux (B) Electrode (C) Welding defect (D) None of these

97. The nucleus of an atom generally, contains :
(A) Protons and Neutrons (B) Protons and Electrons
(C) Electrons and Neutrons (D) Only Neutrons

98. The dimensions of a brick are 10 cm × 4 cm × 3 cm. What is the total surface area of this brick ?
(A) 82 cm^2 (B) 164 cm^2 (C) 120 cm^2 (D) 180 cm^2

99. A bullet is fired vertically upwards with a velocity of 196 m/sec. What is the maximum height reached by the bullet ? (Assuming $g = 9.8\ m/sec^2$)
(A) 1960 m (B) 196 m (C) 980 m (D) 490 m

100. With which of the following, the intrinsic semi conductor Silicon be doped in order to obtain p-type semi-conductor ?
(A) Boron (B) Phosphorus (C) Gallium (D) None of these

101. Water has its maximum density at :
(A) 0°C (B) 100°C (C) 50°C (D) 4°C

102. Compiler and interpreters are examples of :
(A) System software (B) Application software
(C) Both (A) and (B) (D) None of these

103. 'Giddha' is a folk dance of :
(A) Punjab (B) Uttar Pradesh (C) Assam (D) Maharashtra

104. The entropy of universe tends to be :
(A) Minimum (B) Zero (C) Average (D) Maximum

105. The angle of elevation of a ladder leaning against a wall is 60° i.e. ladder makes an angle of 60° with the ground. The foot of the ladder is 4.6 metres away from the wall. What is the length of this ladder ?
(A) 9.2 m (B) 2.3 m (C) 6.9 m (D) 7.8 m

106. The total number of bones in the average adult human skeleton is :
(A) 350 (B) 206 (C) 115 (D) 540

107. A 4 - pole, 1500 r.p.m. alternator will generate e.m.f. at :
(A) 20 Hz (B) 60 Hz (C) 40 Hz (D) 50 Hz

108. Disinfection of drinking water is done to remove :
(A) Odour (B) Bacterias (C) Turbidity (D) Colour

109. A conductor of axial length 30 cms carries a current of 100 A and lies at right angle to a magnetic field of strength 0.4 tesla. What is the force exerted on it ?

(A) 10 N (B) 12 N (C) 1.2 N (D) 0

110. The Headquarters of West Central Railway is located at :

(A) Jabalpur (B) Jaipur (C) Allahabad (D) Ahmedabad

111. Ampere second is the unit of :

(A) Charge (B) Power (C) Voltage (D) Energy

112. Find the missing term of the following series :

4, 7, 12, ___?___, 28, 39.

(A) 17 (B) 18 (C) 21 (D) 19

113. Identify the city which faced large scale destructions due to 'Hudhud' cyclone recently ?

(A) Chennai (B) Vishakhapatnam (C) Kolkata (D) Hyderabad

114. A gate in which all inputs must be high to get a low output is :

(A) An inverter (B) AND gate (C) NOR gate (D) NAND gate

115. The area of an equilateral triangle is $24\sqrt{3}$ cm^2. What is the perimeter of this equilateral triangle ?

(A) 96 cm (B) $4\sqrt{6}$ cm (C) $12\sqrt{6}$ cm (D) $6\sqrt{6}$ cm

116. Global warming is caused by :

(A) N_2 (B) CO_2 (C) Ozone (D) None of these

117. In sand Moulding, the top flask is known as :

(A) Cope (B) Drag (C) Check (D) Fillet

118. The United Nations Day (U.N.Day) is celebrated every year on :

(A) Dec 26 (B) Nov 14 (C) Sept 5 (D) Oct 24

119. For which of the following applications, a D.C. motor is preferred over an A.C. motor ?

(A) Variable speed operation (B) High speed operation

(C) Low speed operation (D) Fixed speed operation

120. Projection of an object shown by three views is known as :

(A) Perspective (B) Oblique (C) Orthographic (D) None of these

121. Fins are provided on heat transferring surface in order to increase :

(A) Heat transfer area (B) Heat transfer coefficient

(C) Temperature gradient (D) Mechanical strength of the equipment

122. A transformer has 1000 primary turns. It is connected to 250 volts A.C. supply. Find the number of secondary turns to get secondary voltage of 400 volts.

(A) 1600 (B) 625 (C) 100 (D) 1250

123. Find the L.C.M. of 148 and 185.

(A) 680 (B) 740 (C) 2960 (D) 3700

124. What is the General formula of Alkanes ?

(A) C_nH_{2n+2} (B) C_nH_{2n} (C) C_nH_{2n-2} (D) C_nH_{2n+4}

125. The sum of two numbers is 40 and the difference of these two numbers is 4. Find the ratio of these two numbers.

(A) 11 : 9 (B) 11 : 18 (C) 22 : 9 (D) 17 : 13

126. 'The Servants of India Society' was founded by :

(A) Jyotiba Phule (B) G.K. Gokhale (C) B.G. Tilak (D) B.R. Ambedkar

127. Power Loss in a resistor is given by :

(A) $P = V^2R$ (B) $P = \frac{V}{I}$ (C) $P = \frac{I^2}{R}$ (D) $P = \frac{V^2}{R}$

128. The pollutant responsible for ozone holes is :

(A) CO_2 (B) CO (C) SO_2 (D) CFC

129. With the formation of Telangana, how many States are there in our country now ?

(A) 30 (B) 29 (C) 28 (D) 31

130. If $2^{2n-1} = \frac{1}{8^{n-3}}$, then the value of 'n' is :

(A) 3 (B) 2 (C) 0 (D) -2

131. Goutam Buddha delivered his first sermons at :

(A) Kusinagar (B) Sarnath (C) Pataliputra (D) Vaishali

132. Ravi runs 200 metres in 24 seconds. Find his average speed :

(A) 20 km/h (B) 24 km/h (C) 28.5 km/h (D) 30 km/h

133. How many terms are there in the following series ?

201, 208, 215, ..., 369.

(A) 26 (B) 25 (C) 24 (D) 23

134. If a point moves in a plane in such a way that the sum of its distances from two fixed points is constant, the curve so traced is called :

(A) Parabola (B) Ellipse (C) Hyperbola (D) All of these

135. Ammonia is prepared commercially by the :

(A) Oswald process (B) Hall process (C) Contact process (D) Haber process

136. Lokpriya Gopinath Bardoloi International Airport is located at :

(A) Jaipur (B) Bangalore (C) Guwahati (D) Hyderabad

137. The elements which have same mass number but different atomic numbers are known as :

(A) Isotones (B) Isobars (C) Isotopes (D) Halogens

138. Which one of the following is not a Noble Gas ?

(A) Helium (B) Bromine (C) Argon (D) Neon

139. The BIS code which deals with steel structures is :

(A) BIS : 456 (B) BIS : 800 (C) BIS : 875 (D) BIS : 1893

140. To be eligible for elected as President, a candidate must be :

(A) Over 25 years of age (B) Over 30 years of age

(C) Over 35 years of age (D) Over 60 years of age

141. At what temperature, both Celsius and Fahrenheit scales will show the identical readings ?

(A) 100° (B) 0° (C) $-40°$ (D) 40°

142. Time constant of a series R-L circuit is :

(A) LR seconds (B) $\frac{L}{R}$ seconds (C) L^2R seconds (D) LR^2 seconds

143. A capacitor stores 1 coulomb at 10 volts. Its capacitance is (f = farad) :

(A) 1 f (B) 10 f (C) 0.1 f (D) 0.01 f

144. M.C. (Moving Coil) and M.I. (Moving Iron) type of instruments can be distinguished by their :

(A) Range (B) Size of terminals (C) Pointer (D) Scale

145. Which of the following flip-flops is used as Latch ?

(A) JK flip-flop (B) RS flip-flop (C) D flip-flop (D) T flip-flop

146. Identify the disease which is caused due to deficiency of Protein ?

(A) Scurvy (B) Beri-Beri (C) Night-Blindness (D) Kwashiorkor

147. Hopkinson's test for D.C. motors is conducted of :

(A) Low Load (B) Half Load (C) Full Load (D) No Load

148. If fineness Modulus of sand is 2.5, it is graded as :

(A) Medium sand (B) Fine sand (C) Coarse sand (D) Very coarse sand

149. Large scale deforestation decreases :

(A) Soil Erosion (B) Rain fall (C) Drought (D) Global warming

150. Hot Wire Instruments read :

(A) Peak value (B) Average value (C) r. m. s. value (D) None of these

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