Q.1) Knots in timber are

A. defects caused by crushing fibres

B. splits radiating from the centre

C. speckled strains

D. signs of branches cut off.

Q.2) If the depletion of oxygen is found to be 2.5 mg/litre after incubating 2.5 ml of sewage diluted to 250 ml for 5 days at 20

A. 100 mg/l

B. 150 mg/l

C. 200 mg/l

D. 250 mg/l.

Q.3) In a singly reinforced beam, if the permissible stress in concrete reaches earlier than that in steel, the beam section is called

A. under-reinforced section

B. over reinforced section

C. economic section

D. critical section.

Q.4) The three-hinged arch shown in the given figure will have value of H as

A. 20 kN

B. 30 kN

C. 40 kN

D. 50 kN

Q.5) Teak wood is suitable for

A. sports articles

B. furnitures

C. railway sleepers

D. all the above

Q.6) Plastic bitumen is generally used for

A. road pavements

B. expansion joints

C. crack fillings

D. none to these

Q.7) For medium silt whose average grain size is 0.16 mm, Lacey's silt factor is likely to be

A. 0.30

B. 0.45

C. 0.70

D. 1.32

Q.8) In preliminary survey of a road project, in hilly region cross sections are taken generally at _____.

A. 20 m

B. 30 m

C. 50 m

D. 100 m

Q.9) For a given material, if E, C, K and m are Young's modulus, shearing modulus, bulk modulus and poisson ratio, the following relation does not hold good

A. $E = \frac{9KC}{3K+C}$

B. $E = 2K\left(1 - \frac{2}{m}\right)$

C. $E = 2C\left(1 + \frac{1}{m}\right)$

D. $\frac{1}{m} = \frac{3K-2C}{6K+2C}$

Q.10) A flownet constructed to determine the seepage through an earth dam which is homogeneous but anisotropic, gave four flow channels and sixteen equipotential drops. The coefficients of permeability in the horizontal and vertical directions are 4 x 10- m/s and 1.0 x 10 m/s, respectively. If the storage head was 20 m, then the seepage per unit length of the dam (in m /s) would be

A. 5 x 10^{-7}

B. 10 x 10^{-7}

C. 20 x 10^{-7}

D. 40 x 10^{-7}

Q.11) Sodium Absorption ratio (SAR) is defined as

A. $\frac{Na^+}{\sqrt{Ca^{++}+Mg^{++}}}$

B. $\frac{Na^+}{2\sqrt{Ca^{++}+Mg^{++}}}$

C. $\frac{Na^+}{\sqrt{\frac{Ca^{++}+Mg^{++}}{2}}}$

D. $\frac{2Na^+}{\sqrt{Ca^{++}+Mg^{++}}}$

Q.12) The approximate ratio of strength of 15 cm x 30 cm concrete cylinder to that of 15 cm cube of the same concrete is

A. 1.25

B. 1.00

C. 0.85

D. 0.50

Q.13) The submerged density of soil in terms of unit weight of water, specific gravity G and voids ratio e is given by the expression

A. $\frac{\gamma_w(G+1)}{1+e}$

B. $\frac{\gamma_w(G-1)}{1-e}$

C. $\frac{\gamma_w(G+1)}{1-e}$

D. $\frac{\gamma_w(G-1)}{1+e}$

Q.14) In steady flow, which one of the following changes with time

A. velocity

B. pressure

C. density

D. none of these.

Q.15) For a given discharge, the effciency of sedimetation tank can be increased by

A. increasing the depth of tank

B. decreasing the depth of tank

C. increasing the surface area of tank

D. decreasing the surface area of tank

Q.16) The initial setting time for ordinary portland cement as per IS specifications should not be less than

A. 10 minutes

B. 30 minutes

C. 60 minutes

D. 600 minutes

Q.17) In reinforced concrete, pedestal is defined as compression member, whose effective length does not exceed its least dimension by

A. 12 times

B. 3 times

C. 16 times

D. 8 times

Q.18) The maximum amount of dust which may be permitted in aggregates is

A. 5% of the total aggregates for low workability with a coarse grading

B. 10% of the total aggregates for low workability with a fine grading

C. 20% of the total aggregates for a mix having high workability with fine grading

D. all the above.

Q.19) the recommended grade of tar for grouting purpose is

A. RT^{-1}

B. RT^{-2}

C. RT^{-3}

D. RT^{-5}

Q.20) Accroding is IS specifications,the maximum pitch of rivets in compression is

A. lesser of 200 mm and 12 t

B. lesser of 200 mm and 16 t

C. lesser of 300 mm and 32 t

D. lesser of 300 mm and 24 t

Q.01) Correct Ans: (D)

Q.02) Correct Ans: (D)

Q.03) Correct Ans: (B)

Q.04) Correct Ans: (C)

Q.05) Correct Ans: (B)

Q.06) Correct Ans: (C)

Q.07) Correct Ans: (C)

Q.08) Correct Ans: (B)

Q.09) Correct Ans: (B)

Q.10) Correct Ans: (B)

Q.11) Correct Ans: (C)

Q.12) Correct Ans: (C)

Q.13) Correct Ans: (D)

Q.14) Correct Ans: (D)

Q.15) Correct Ans: (C)

Q.16) Correct Ans: (B)

Q.17) Correct Ans: (B)

Q.18) Correct Ans: (D)

Q.19) Correct Ans: (D)

Q.20) Correct Ans: (A)