195/2015

1. Granite is an example of _____ type of rocks.
   (A) Igneous rocks
   (B) Sedimentary rocks
   (C) Metamorphic rocks
   (D) None of these

2. The main reason for using stones in building works is its :
   (A) Good appearance
   (B) Resistance to fire
   (C) Low water absorption
   (D) Durability

3. In the manufacture of bricks, a pug mill is used for :
   (A) Proportioning of ingredients
   (B) Tempering
   (C) Blending
   (D) Digging

4. The initial setting time of ordinary cement should be less than :
   (A) 10 minutes
   (B) 1 hour
   (C) 10 hours
   (D) 30 minutes

5. The age of a tree can be determined approximately from the :
   (A) Medullary rays
   (B) Hard wood
   (C) Size of the trunk
   (D) Annual rings

6. It is a moulding provided under nosing to beautify the elevation of the step :
   (A) Scotia
   (B) Flier
   (C) Line of nosing
   (D) Winders

7. _____ is the surface of the abutment on which the arch rests.
   (A) Keystone
   (B) Voussoirs
   (C) Skewback
   (D) Springing stone

8. A window projecting outward from the walls of a room is termed as a _____.
   (A) Bay window
   (B) Corner window
   (C) Dormer window
   (D) Gable window

9. The lower edge of the inclined roof surface of a pitched roof is termed as _____.
   (A) valley
   (B) eaves
   (C) ridge
   (D) hip

A   3

27. A fixed point of reference of known elevation is called :

(A) change point (B) station point (C) bench mark (D) datum

28. An imaginary line tangential to the longitudinal curve of the bubble tube at its middle point is called :

(A) Axis of telescope (B) Axis of level tube

(C) Level line (D) Line of collimation

29. The collimation method for obtaining the reduced levels of points does not provide a check on :

(A) foresight (B) back sight

(C) change point (D) intermediate point

30. The method of surveying in which field work and plotting work are done simultaneously, is called :

(A) Compass surveying (B) Levelling

(C) Plane tabling (D) Chain surveying

31. It is the property of a material due to which it can undergo permanent deformation without failure :

(A) plasticity (B) stiffness (C) formability (D) toughness

32. Pick up the wrong statement :

(A) Two stroke engine can run in any direction.

(B) In four stroke engine, a power stroke is obtained in four strokes.

(C) Thermal efficiency of four stroke engine is more due to positive scavenging.

(D) Petrol engines occupy more space than diesel engines for same power output.

33. Diesel engine can work on very lean air fuel ratio of the order of 31 : 1. A petrol engine can also work on such a lean ratio provided :

(A) it is properly designed (B) best quality fuel is used

(C) cannot work as it is impossible (D) fly wheel size is proper

34. The presence of reflector in nuclear power plants results in :

(A) increased production of neutrons

(B) complete absorption of neutrons

(C) controlled production of neutrons

(D) decreased leakage of neutrons

35. In a differential with a gear ratio of 4 : 1 the drive pinion would revolve four times to cause the ring gear to rotate :

(A) one time   (B) two times   (C) four times   (D) six times

36. Electrical conductivity of insulators is the range _____.

(A) $10^{-10} \, (\Omega - mm)^{-1}$ (B) $10^{-10} \, (\Omega - cm)^{-1}$

(C) $10^{-10} \, (\Omega - m)^{-1}$ (D) $10^{-8} \, (\Omega - m)^{-1}$

37. The resistivity of semi-conductors at room temperature is :

(A) 1000 to 1500 ohm − cm   (B) 0.01 to 50 ohm − cm

(C) 10^9 to 10^{12} ohm − cm   (D) 1.6×10^6 to 100×10^6 ohm − cm

38. Instrument used for angular measurement :

(A) protractors   (B) vernier bevel protractors

(C) dial bevel protractors   (D) all of the above

39. Which saw is suitable for curve cutting ?

(A) cross cut saw   (B) tenon saw   (C) rip saw   (D) compass saw

40. Metal used to make the blade of a chisel is :

(A) carbon steel   (B) steel   (C) forged steel   (D) high carbon steel

41. Property of fluid by which its own molecules are attracted is called :

(A) Adhesion   (B) Cohesion   (C) Viscosity   (D) Surface tension

42. The unit of kinematic viscosity are :

   (A) m^2/sec (B) kg-sec/m   (C) Newton-sec/m (D) Nm/sec

43. Bernoulli's equation deals with the law of conservation of :

   (A) Mass   (B) Momentum   (C) Energy   (D) Force

44. In a reciprocating pump, air vessels are used to :

   (A) Reduce the flow   (B) Increase the delivery head

   (C) Smoothen the flow   (D) Reduce the acceleration head

45. The phenomenon of rise or fall of liquid surface relative to the adjacent general level of liquid is known as :

   (A) Surface tension (B) Cappillarity   (C) Compressibility (D) Elasticity

46. When the velocity of flow of fluid does not change, both in magnitude and direction, from point to point in the flowing fluid, for any given instant of time, the flow is said to be :

   (A) Steady flow   (B) Laminar flow   (C) Uniform flow   (D) Rotational flow

47. Continuity equation :

   (A) expresses the relation between energy and work

   (B) relates the momentum per unit volume for two points on a stream line

   (C) relates mass rate of flow along a stream tube

   (D) constant discharge through a long, straight tapering pipe

48. Francis turbine is :

   (A) an impulse turbine   (B) a reaction turbine

   (C) a tangential flow turbine   (D) an axial flow turbine

49. The instrument suitable for measurement of small pressure difference in liquid is :

   (A) U-tube differential manometer   (B) Two piezometer manometer

   (C) Diaphragm pressure gauge   (D) Inverted U-tube manometer

8

50. A centrifugal pump discharges 260 litres of water per second when running at 600 rpm. The impeller diameter at the outlet is 80 cm. It develops a head of 15.3. What is the approximate minimum starting speed ?

   (A) 425 rpm   (B) 450 rpm   (C) 475 rpm   (D) 500 rpm

51. Which of the following is not a marine pollutant ?

   (A) oil   (B) plastics
   (C) dissolved oxygen   (D) all of the above

52. Which of the following statements about the forest is **not** correct ?

   (A) forest reduces soil erosion   (B) provides recreational opportunities
   (C) provides economic development   (D) none of the above

53. Deforestation generally decreases :

   (A) rainfall   (B) soil erosion   (C) draught   (D) global warming

54. The major cause for land degradation in our country is :

   (A) soil erosion   (B) pollution of soil (C) water logging   (D) none of the above

55. The main disadvantage of line organisation is :

   (A) top level executives have to do excessive work
   (B) structure is rigid
   (C) communication delays occur
   (D) all of the above

56. In the twentyfirst century the four functions of management are :

   (A) monitoring, organising, suggesting and accommodating employees
   (B) planning, organising, controlling and leading employees
   (C) planning, organising, controlling and accommodating employees
   (D) monitoring, suggesting, journaling and accommodating employees

57. CPM has following time estimate :

   (A) one time estimate   (B) two time estimate
   (C) three time estimate   (D) four time estimate

58. According to Rowan plan, if H= hourly rate, A = actual time and S = standard time, then wages will be :

(A) HA

(B) HA + [(S−A)/S]HA

(C) HA + [(S−A)/2]H

(D) HA + [(S−A)/2S]HA

59. Which of the following is **not** wage incentive plan ?

(A) Differential piece rate system

(B) Rowan plan

(C) Taylor plan

(D) Halsey plan

60. Critical path on PERT/CPM chart is obtained by joining the events having :

(A) maximum slack

(B) minimum slack

(C) average slack

(D) judgement and experience

61. Superposition theorem is essentially based on the concept of _____.

(A) Duality   (B) Linearity   (C) Reciprocity   (D) Non-linearity

62. The number of turns and the length of a solenoid both are doubled. Its axial magnetizing field would be _____.

(A) doubled   (B) halved   (C) unaffected   (D) quadrupled

63. When a rectangular voltage is applied to a capacitor, the waveform of its charging current is :

(A) sinusoidal   (B) saw tooth   (C) rectangular   (D) none of the above

64. A hollow insulated conducting sphere has a positive charge of 10 μC. What will be the electric field at the centre of the sphere if its radius is 2 meters ?

(A) 5 μC/m²   (B) 40 μC/m²   (C) 20 μC/m²   (D) zero

65. The electric field on equipotential surface is _____.

(A) parallel to surface

(B) infinity

(C) perpendicular to surface

(D) zero

66. The self inductance of a coil of 500 turns is 0.25H. If 60% of the flux is linked with a second coil of 10000 turns, then mutual inductance is _____.

(A) 5H   (B) 3H   (C) 15 mH   (D) 12.5 mH

67. RMS value of current is $i = 10 + 5 \cos (628 t + 60°)$:

(A) 8A   (B) 15A   (C) 10.6A   (D) 10A

68. The form factor of dc supply voltage is always :

(A) zero   (B) 0.5   (C) unity   (D) infinite

69. An RL circuit has $Z = (6 + j8)$ ohm. Its susceptance is _____ Siemens.

(A) 0.06   (B) 0.08   (C) 0.1   (D) −0.08

70. The capacitance and dielectric loss of a capacitor is generally measured with the help of _____ bridge.

(A) De sauty   (B) Schering   (C) Wien   (D) Anderson

71. A diesel power plant is best suited as :

(A) base load plant   (B) stand by plant

(C) peak load plant   (D) general purpose plant

72. One kWh is equal to _____ kcal.

(A) 860   (B) 4.18   (C) 735.5   (D) 36×10^6

73. An ideal current source has zero :

(A) internal conductance   (B) internal resistance

(C) voltage on no load   (D) ripple

74. Interpoles are usually wound with :

(A) very fine gauge copper wire   (B) heavy gauge copper wire

(C) insulation material   (D) interpoles do not need winding

75. Which loss will increase rapidly as compared to others, when the number of magnetic reversals is increased ?

(A) friction loss   (B) copper loss   (C) hysteresis loss   (D) eddy current loss

76. Leakage fluxes in a transformer may be minimized by :

(A) sectionalizing and interleaving the primary and secondary windings

(B) constantly cooling the core

(C) under rating the transformer

(D) reducing the reluctance of the iron core to the minimum

77. A transformer working under maximum efficiency has total losses of 1600 W, while operating at half load, the copper loss will be :

(A) 800 W   (B) 400 W   (C) 200 W   (D) 100 W

78. Salient poles are generally used on :

(A) high speed prime movers only   (B) medium speed prime movers only

(C) low speed prime movers only   (D) low and medium speed prime movers only

79. If the slip of the rotor of an induction motor is halved, the value of rotor reactance :

(A) doubled   (B) unchanged

(C) halved   (D) reduced to one fourth

80. A 4-pole, 50 Hz, 3 phase induction motor has a rotor resistance of 0.21 ohm per phase and standstill reactance of 0.7 ohm per phase. The speed at which maximum torque is developed :

(A) 1500 rpm   (B) 3000 rpm   (C) 1455 rpm   (D) 1460 rpm

81. Indian Constitution consists of :

(A) 365 articles   (B) 375 articles   (C) 385 articles   (D) 395 articles

82. The first annual conference of S.N.D.P. Yogam was held at :

(A) Kollam   (B) Varkala

(C) Chempazhanthy   (D) Aruvipuram

83. Malayala Manorama newspaper was established in :

(A) 1868 (B) 1878 (C) 1888 (D) 1898

84. Which of the following novel of Lalitambika Antarjanam won the 'Kerala Sahitya Award' in 1977 ?

(A) Lalithanjali (B) Agnisakshi

(C) Kilivathililude (D) Nisabtha Sangeetham

85. Sadhu Jana Paripalana Yogam was founded in :

(A) 1907 (B) 1917 (C) 1927 (D) 1937

86. Trivandrum Public Library was started by :

(A) Col. Olcott (B) Col. Edward Cadogan

(C) Col. Munro (D) Col. Macaulay

87. K. Ramakrishna Pillai, the editor of the 'Swadeshabhimani' was exiled from Travancore in :

(A) 1907 (B) 1909 (C) 1911 (D) 1913

88. Devadasi system was abolished in Travancore by :

(A) Gowri Parvathi Bai (B) Swathi Thirunal

(C) Sri Chithira Thirunal (D) Setu Lakshmi Bai

89. Muslim Education Society was established in :

(A) 1960 (B) 1962 (C) 1964 (D) 1966

90. The first Governor – General of Independent India was :

(A) C. Rajagopalachari (B) Lord Mountbatten

(C) Lord Canning (D) Dr. Rajendra Prasad

91. Reserve Bank of India was established in :

(A) 1935 (B) 1947 (C) 1950 (D) 1952

92. The British rule in India was established with the battle of :

(A) Panipat (B) Plassey (C) Colachal (D) Buxar

93. English education was started in Travancore for the first time during the reign of :

   (A) Swathi Thirunal   (B) Gowri Parvathi Bai

   (C) Uthgradam Thirunal   (D) Sri Chithira Thirunal

94. Sir C. Sankaran Nair presided over the annual session of the Indian National Congress held at :

   (A) Lahore   (B) Gaya   (C) Nagpur   (D) Amaravati

95. Minimum age required to a citizen to become the President of India is :

   (A) 25 years   (B) 30 years   (C) 35 years   (D) 40 years

96. In Malabar, the Salt Satyagraha was led by :

   (A) P. Krishna Pillai   (B) K. Kelappan

   (C) C. Kesavan   (D) G.P Pillai

97. The first woman judge of the High Court of Kerala was :

   (A) Anna Chandi   (B) Fatima Beevi

   (C) Leela Joseph   (D) Sujatha Manohar

98. Which one of the following is **not** the permanent member of the Security Council of the United Nations Organization ?

   (A) China   (B) France   (C) Japan   (D) England

99. 'Kerala Sahitya Charitiram' was written by :

   (A) Ulloor S. Parameswara Iyer   (B) Kumaran Asan

   (C) Vallathol Narayana Menon   (D) S.K. Pottakkad

100. 'Mathilukal' was written by :

   (A) Ponkunnam Varkey   (B) Kesav Dev

   (C) G. Sankara Kurup   (D) Vaikom Muhammad Basheer

-o0o-