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1. The Sardar Sarovar project is located in
   (A) Gujarat
   (B) Uttar Pradesh
   (C) Orissa
   (D) Madhya Pradesh

2. Which ministry conducts the decennial census in India?
   (A) Ministry of Rural Development
   (B) Ministry of Human Resource Development
   (C) Ministry of Home Affairs
   (D) Ministry of External Affairs

3. Who was the President of Indian National Congress when 'Poorna Swaraj' resolution was passed?
   (A) Motilal Nehru
   (B) Subash Chandra Bose
   (C) Gandhiji
   (D) Jawaharlal Nehru

4. Kolar mines in Karnataka is famous for :
   (A) Copper
   (B) Gold
   (C) Mica
   (D) Cement

5. Name the river that flows through silent valley :
   (A) Pamba
   (B) Kunthipuzha
   (C) Manjeswaram River
   (D) Chaliyar

6. Gandhiji broke the salt law on :
   (A) March 6, 1930
   (B) March 12, 1930
   (C) April 6, 1930
   (D) April 12, 1930

7. Who was the founder of 'Samathwa Samaj'?
   (A) Atmaram Pandurang
   (B) Keshub Chandra Sen
   (C) Brahmananda Sivayogi
   (D) Vaikunda Swami

8. Which is the longest river in South India?

    (A) Kaveri   (B) Krishna

    (C) Tapti   (D) Godavari

9. Telengana State was formed on :

    (A) June 2, 2014   (B) June 30, 2014

    (C) July 22, 2014   (D) August 15, 2014

10. SAARC summit of 2014 was held at :

    (A) Manila   (B) Dhaka

    (C) Kathmandu   (D) Jakarta

11. Anamudi peak is located in which district of Kerala :

    (A) Pathanamthitta   (B) Wayanad

    (C) Kottayam   (D) Idukki

12. Bachpan Bachao Andolan was started by :

    (A) Kailash Satyarthi   (B) Medha Patkar

    (C) J.L.Kaul   (D) Dr.Brahma Dutt

13. "No Caste, No Religion, No God for man" Who said these words?

    (A) Sahodaran Ayyappan   (B) Ayyankali

    (C) Sree Narayana Guru   (D) Chattambi Swamikal

14. Who among the following was known as 'Shanmughadasan'?

    (A) Brahmananda Sivayogi   (B) Vagbhadananda

    (C) Chattambi Swamikal   (D) Vaikunta Swamikal

15. 'Operation Lehar' was associated with

    (A) Phailin   (B) Katrina

    (C) Nilofer   (D) Hud Hud

16. Who wrote the book 'Mokshapradipam'?

    (A) Sree Narayana Guru   (B) Brahmananda Sivayogi

    (C) Poykayil Yohannan   (D) Chattambi Swamikal

17. What is the position of India in Human Development Index 2014?

    (A) 135   (B) 140

    (C) 118   (D) 67

18. Gandhiji met Sree Narayana Guru is :

    (A) 1920   (B) 1925

    (C) 1928   (D) 1936

19. Quit India movement was started after the failure of :

    (A) Simon Commission   (B) Hunter Commission

    (C) Cripps Mission   (D) Cabinet Mission

20. What is the motto of National Games?

    (A) Deeper integration for peace and prosperity

    (B) Get set play

    (C) Faster, Higher, Stronger

    (D) Diversity shines here

21. Specific heat is the amount of heat required to rise the temperature :

    (A) By unit degree of a substance

    (B) By unit degree of unit mass of substance

    (C) Unit mass by 10 degree

    (D) None of the above

22. Pulverized coal is :

    (A) Coal free from ash   (B) Non smoking coal

    (C) Coal broken into fine particles   (D) Coal which burn for long time

23. The I.P (indicated power) of an engine is always ———————— the brake power.

    (A) less than   (B) equal to

    (C) greater than   (D) none of the above

24. Volumetric efficiency is the ratio of :

    (A) Volume of charge admitted at NTP to swept volume

    (B) Total volume to clearance volume

    (C) Swept volume to clearance volume

    (D) None of the above

25. Water hammer is developed in a :
   - (A) Turbine
   - (B) Penstock
   - (C) Draft tube
   - (D) Surge tank

26. The time for half amount of radio active isotope to decay is known as :
   - (A) Half life
   - (B) Radio active decay
   - (C) Rate of decay
   - (D) Halving time

27. Acme thread has ————— degree angle.
   - (A) 45 degree
   - (B) 60 degree
   - (C) 29 degree
   - (D) 90 degree

28. As steam expands in turbine :
   - (A) its specific volume increases
   - (B) its pressure increases
   - (C) its boiling point increases
   - (D) its temperature increases

29. pv^n = constant, It is the relation for polytrophic process, if $n = 0$ then the process become :
   - (A) constant volume process
   - (B) throttling process
   - (C) constant temperature process
   - (D) constant pressure process

30. Which of the following enters to the super heater of a boiler?
   - (A) Hot water
   - (B) Super heated steam
   - (C) Wet steam
   - (D) Cold water

31. ————— is reduced in turning operation.
   - (A) Length
   - (B) Thickness
   - (C) Diameter and length
   - (D) Diameter

32. A hydro electric power station is commonly constructed at :
   - (A) Grass lands
   - (B) Desert areas
   - (C) Swamps
   - (D) Hilly areas

33. Morse test is conducted to find out the indicated power of :
   - (A) multi cylinder engines
   - (B) two stroke engines
   - (C) marine engines
   - (D) low speed engine

34. "Intensity of pressure at a point in a fluid at rest is same in all directions", this law is :
   - (A) Hydrostatic law
   - (B) Pascal's law
   - (C) Archimedes law
   - (D) Hagen-Poiseuille law

35. One liter of water occupies a volume of :

 (A)   100 cm³   (B)   100000 cm³

 (C)   1000 cm³   (D)   500 cm³

36. The ratio of strength of solid to hollow shaft, both having outside diameter D and hollow having inside diameter D/2 in torsion is :

 (A)   1/2   (B)   15/16

 (C)   3/8   (D)   1/4

37. The bending moment is maximum on a section where the shearing force :

 (A)   changes sign   (B)   is maximum

 (C)   is equal   (D)   is minimum

38. A structure used to dam up a stream or a river, over which the water flows is called :

 (A)   dam   (B)   notch

 (C)   orifice   (D)   weir

39. The most efficient air standard cycle is :

 (A)   Carnot cycle   (B)   Otto cycle

 (C)   Diesel cycle   (D)   Joule's cycle

40. The function of an inter cooler in multi stage compressor is:

 (A)   to increase the quantity of air delivered

 (B)   to make the compression polytropic

 (C)   to protect compressor components from over heating

 (D)   to cool the air and to minimize the work of compression

41. The brake power of an internal combustion engine can be found out with the help of :

 (A)   planimeter   (B)   brake dynamometer

 (C)   calorimeter   (D)   none of the above

42. The property of the fluid by which molecules of different kinds of fluids are attracted to each other is called :

 (A)   Adhesion   (B)   Viscosity

 (C)   Cohesion   (D)   Surface tension

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[P.T.O.]

43. In water tube boilers :

    (A) forced circulation take place

    (B) flame and gas flows through the tube which surrounded by water

    (C) water passes through the tubes which are surrounded by the flame and gases

    (D) none of the above

44. The object of producing the draught in boiler :

    (A) to provide the adequate supply of air for the combustion

    (B) to exhaust the gases of combustion from the combustion chamber

    (C) to discharge gases of combustion to the atmosphere

    (D) all of the above

45. The efficiency of a boiler plant ——————— with mechanical draught :

    (A) increases   (B) remains same

    (C) decreases   (D) None of the above

46. Venturimeter is used to :

    (A) pressure difference of liquid flowing between two points in a pipeline

    (B) measure of the pressure of flowing liquid

    (C) measure the discharge of liquid flowing in a pipe

    (D) measure the velocity of the liquid

47. The property of a material which allows it to be drawn into smaller section is called :

    (A) plasticity   (B) ductility

    (C) elasticity   (D) durability

48. Kinematic viscosity is the :

    (A) ratio of absolute viscosity to the density of the liquid

    (B) product of absolute viscosity and mass of liquid

    (C) ratio of density of the liquid to absolute viscosity

    (D) product of absolute viscosity and density of the liquid

49. Which thermodynamic law provide the basis of temperature measurement?

    (A) I Law of thermodynamics   (B) II law of thermodynamics

    (C) Law of conservation of energy   (D) Zeroth law of thermodynamics

50. In one dimensional flow, the flow :

    (A) takes place in one direction   (B) is steady and uniform

    (C) takes place in straight line   (D) takes place in curve

51. A cylindrical section having no joint is called :

    (A) perfect section   (B) seamless section

    (C) homogeneous section   (D) jointless section

52. Cavitation in hydraulic machinery :

    (A) causes sudden drop in power output and efficiency

    (B) causes noise, vibrations of various parts

    (C) reduce discharge of the turbine

    (D) all of the above

53. The resilience of a material is considered when it is subjected to :

    (A) shock loading   (B) fatigue

    (C) creep   (D) none of the above

54. According to Darcy's formula loss of head due to friction in a pipe is :

    (A) $\dfrac{3flv^2}{2gd}$ (B) $\dfrac{flv^2}{2gd}$

    (C) $\dfrac{4flv^2}{2gd}$ (D) $\dfrac{flv^2}{gd}$

55. Which of the following has no unit?

    (A) Kinematic viscosity   (B) Surface tension

    (C) Bulk modulus   (D) Strain

56. Materials having same elastic properties in all directions is called :

    (A) Isentropic material   (B) Uniform material

    (C) Elastic material   (D) Practical material

57. The ratio of work done per cycle to the stroke volume of the compressor is known as :

    (A) Compressor capacity   (B) Mean effective pressure

    (C) Compressor efficiency   (D) Compression ratio

58. The maximum bending moment due to moving load on a simply supported beam, occurs :

    (A)   at mid span   (B)   anywhere on the beam

    (C)   at support   (D)   under the load

59. The characteristic equation of gas is :

    (A) $R_U = mR$ (B) $h = U + pv$

    (C) $pv = mRT$ (D) $\dfrac{p_1}{T_1} = \dfrac{p_2}{T_2}$

60. The mechanical efficiency of an impulse turbine is :

    (A)   ratio of actual work available at turbine to the energy imparted to the wheel

    (B)   ratio of actual power produced by the turbine to the energy actually supplied by the turbine

    (C)   ratio of work done on the wheel to the energy of the jet

    (D)   none of the above

61. C.R.D.I is related to :

    (A)   Ignition system   (B)   Fuel system

    (C)   Lighting system   (D)   Suspension system

62. E.G.R is employed to reduce :

    (A)   Noise   (B)   Harshness

    (C)   Emission   (D)   Vibration

63. VVT – i is employed to operate :

    (A)   Valve train   (B)   Clutch

    (C)   Steering   (D)   Variable ventury carburettor

64. Forward efficiency is related to :

    (A)   Braking   (B)   Steering

    (C)   Lighting   (D)   Engine performance

65. HUD is a term linked with ————— of the modern vehicle.

    (A)   Transmission   (B)   Aerodynamics

    (C)   Handling   (D)   Gauges

66. Anti dazzle devices are used in ——————— system.
    (A) Starting
    (B) Indicator
    (C) Charging
    (D) Head Lamp

67. FFV stands for :
    (A) Flexi fuel vehicle
    (B) Fuel free vehicle
    (C) Fully forward vehicle
    (D) Front final drive vehicle

68. Schrader valve appears on :
    (A) Master cylinder
    (B) Wheel cylinder
    (C) Wheel assembly
    (D) Fuel system

69. EBD is a ——————— device in modern vehicle.
    (A) Brake assistance
    (B) Stability programme
    (C) Electronic ignition
    (D) Emission control

70. Viscous coupling is employed instead of ——————— in modern vehicles.
    (A) Steering
    (B) Differential
    (C) Brake
    (D) Universal joint

71. Soot is a type of :
    (A) Body panel
    (B) Tyre
    (C) Ignition
    (D) Emission

72. Cowl is a part of :
    (A) Body panel
    (B) Indicator
    (C) Engine
    (D) Transmission

73. Blow by gases can be relieved by :
    (A) Pressure cap
    (B) Econostat
    (C) PCV valve
    (D) Thermostat valve

74. Expansion tank is employed in ——————— system.
    (A) Fuel
    (B) Lubrication
    (C) Cooling
    (D) Brake

75. A.C. Mechanical pump is employed in :

    (A) Fuel system
    (B) Automatic transmission system
    (C) Air conditioning
    (D) Power steering

76. Pulsation of clutch pedal is due to :

    (A) Loose Rivets
    (B) Misalignment of engine and transmission
    (C) Worn out clutch facing
    (D) Incorrect linkage adjustment

77. Car can stop in gear by using :

    (A) Vacuum clutch
    (B) Cone clutch
    (C) Multi plate clutch
    (D) Fluid flywheel

78. Torque transfer at an angle is provided on propeller shaft by using :

    (A) Centre support bearing
    (B) Slip joint
    (C) Universal joint
    (D) Differential

79. Scrub radius is :

    (A) Distance between king pin axis on the ground and wheel contact point on the ground
    (B) Inner wheel radius
    (C) Outer wheel radius
    (D) Turning radius

80. The ratio of side force to the slip angle is called :

    (A) Thrust power
    (B) Cornering power
    (C) Cornering angle
    (D) Steering angle

81. Torsion bar is used for :

    (A) Keeping wheel track
    (B) Protecting the vehicle from crash
    (C) Vibration damping
    (D) Suspension system

82. The unbalanced wheel gives rise the problem of :

    (A) Wheel wobble
    (B) Side pulling
    (C) Side wear
    (D) Skidding

83. Skidding of wheels avoided by :
    (A) brake compensation
    (B) using cross tyre tread
    (C) using ABS
    (D) dynamic braking system

84. Brake caliper is :
    (A) used in disc brakes
    (B) used for measuring brake pad thickness
    (C) used for brake setting
    (D) used for calibrating stopping distance

85. The distance between the centre lines of the front and the rear axles is called :
    (A) Axle distance
    (B) Effective chasis length
    (C) Wheel base
    (D) Wheel track

86. Ackermann steering mechanism is used for :
    (A) reducing steering hardness
    (B) keeping equal angle of turn of front wheels
    (C) reducing steering shake
    (D) getting correct steering angle

87. Top of the wheel slants vertically outward is called :
    (A) Negative camber
    (B) Positive castor
    (C) Toe - out
    (D) Positive camber

88. Over drive is used to :
    (A) Increase driving comfort
    (B) Step up the gear ratio
    (C) Double the wheel r.p.m.
    (D) Maintain wheel r.p.m. without engine support

89. Volumetric efficiency of an engine is increased by :
    (A) Using large inlet value
    (B) Using more number of piston rings
    (C) Increasing gap between head and piston
    (D) Increasing the size of piston

90. Cold rating is associated with :
    (A) Engine cooling system
    (B) Cooling capacity of oil
    (C) Battery
    (D) Blower speed of A/c

91. Spark developed in spark plug when :
   - (A) C.B. Point closes
   - (B) C.B. Point opens
   - (C) Ignition switch on
   - (D) Spark plug is fouled

92. Turn ratio is associated with :
   - (A) Spark plug
   - (B) Condenser
   - (C) Carburettor
   - (D) Ignition coil

93. R.P.M. of an engine can be measured with :
   - (A) Odometer
   - (B) Dwellmeter
   - (C) Tacometer
   - (D) Trip meter

94. Folo – Thru drive employed in :
   - (A) Starting system
   - (B) Suspension system
   - (C) Transmission system
   - (D) E.F.I. System

95. Sealed beam unit is a part of :
   - (A) Head lamp circuit
   - (B) Chasis frame
   - (C) Independent suspension system
   - (D) Over drive system

96. M.A.C.T. is related to :
   - (A) Fitness test
   - (B) Accident claim
   - (C) Learners test
   - (D) Driving test

97. Speed limit is included in :
   - (A) Informatory sign
   - (B) Cautionary sign
   - (C) Road marking
   - (D) Mandatory sign

98. Super elevation is ——————— of a horizontal curved portion of a road.
   - (A) Convexity
   - (B) Inward transverse inclination
   - (C) Positive grade
   - (D) Camber

99. A fare that is proportionate to the distance travelled is known as :
   - (A) Zonord fare
   - (B) Flat fare
   - (C) Reduced fare
   - (D) Graduated fare

100. The Motor vehicle to which semi-trailer is attached is called :
   - (A) Tractor
   - (B) Grader
   - (C) Articulated vehicle
   - (D) Mobile crane