1. The radius of the Na^+ is 95 pm anc Cl^- ion is 181 pm. Predict the co-ordination number of Na^+.
   A) 4 ( ) C) 6 ( )
   B) 5 ( ) D) unpredictable ( )

2. Which of the following adopts normal spinal structure ?
   A) CsCl ( ) C) $MgAl_2O_4$ ( )
   B) FeO ( ) D) CaF_2 ( )

3. A binary solution of ethanol and n-heptane is an example of _____.
   A) Ideal solution ( ) C) Non-ideal solution with +ve deviation ( )
   B) Non-ideal solution with-ve deviation ( ) D) Unpredictable behavior ( )

4. Which of the following carbohydrate is an constituent of plant cell ?
   A) Starch ( ) C) Cellulose ( )
   B) Maltose ( ) D) Ucrose ( )

5. For an elementary process 2X + Y ---------->Z + W. The moleculerity is
   A) 2 ( ) C) 1 ( )
   B) 3 ( ) D) Unpredictable ( )

6. The electropositive sol. among the following is .....
   A) Prussian Blue ( ) C) Gold ( )
   B) Silicic Acid ( ) D) Tanic Acid ( )

7. Most abundant element in earth crust in terms of number of atoms per 100 atoms is .....
   A) Oxygen ( ) C) Silicon ( )
   B) Aluminium ( ) D) Hydrogen ( )

8. In the electrolytic method for the preparation of boron using carbon crucible as an anode and iron as cathode, the electrolytic bath is a mixture of fused boron trioxide, magnesium fluoride and
   A) KCl ( ) C) KF ( )
   B) Al_2O_3 ( ) D) MgO ( )

9. Which metal has the highest melting point ?
   A) Pt ( ) C) Pd ( )
   B) W ( ) D) Au ( )

10. How many ions are produced from $[Co(NH_3)_6]Cl_3$ in solution ?
   A) 6 ( ) C) 3 ( )
   B) 4 ( ) D) 2 ( )

11. Which of the following has highest chlorine content?
   A) Pyrene ( ) C) DDT ( )
   B) Chloral ( ) D) Gammaxane ( )

12. Which of the following compound contains intramolecular H-bonds ?
   A) O-Nitrophenol ( ) C) Phenol ( )
   B) Ethanoic Acid ( ) D) Resorcinol ( )

13. When molecule of acetaldehyde condenses with another dissimilar molecule in the presence of dilute alkali, the reaction is called
   A) Perkin's Condensation ( ) D) Cross aldol condensation ( )
   B) Aldol Condensation ( ) C) Benzoin Condensation ( )

14. In aqueous solutions, the basic strength of amines decreases in the order
   A) $CH_3NH_2 > (CH_3)_2NH > (CH_3)_3N$ ( ) C) $(CH_3)_3N > (CH_3)_2NH > ch_3NH_2$ ( )
   B) $(CH_3)_2NH > (CH_3)_3N > ch_3NH_2$ ( ) D) $(CH_3)_2NH > CH_3NH_2 > (CH_3)_3N$ ( )

15. Luminal, a barbiturate drug is used as a/an
   A) antihistamine ( ) C) Sedative ( )
   B) Antiseptic ( ) D) Antimalarial ( )

16. Let A = {x ∈R : x **≥** 1/2 } and B = {x ∈R : x **≥** 3/4 }. If f : A --------> B is defined as f (x) =x^2-x+1, then the solution set of the equation f (x) =f^{-1} (x) is

A) 1 ( ) C) 1/2 ( )
B) 2 ( ) D) none of these ( )

17. If x + y + z = xyz, then $\tan^{-1} x + \tan^{-1} y + \tan^{-1} z$ equals

A) 0 ( ) C) x^2 ( )
B) 1 ( ) D) none of these ( )

18. If AB = A and BA = B, where A and B are square matrices, then

A) B^2=B and A^2=A ( ) C) A^2# A, B^2=B ( )
B) B^2# B and A^2=A ( ) D) A^2# A, B^2#B ( )

19. First Woman UN General Assembly Chief was

A) Vijaya Lakshmi Pandit ( ) C) Nita Desai ( )
B) Sarojini Naydu ( ) D) Lakshmi Bai ( )

20. If f(x) = $x^3 \sin x$, then

A) f is derivable at x = 0 ( ) C) f is continuous but not derivable at x = 0 ( )
B) f'(x) exists for all x, but f''(x) does not exist( ) D) f'(x) exists for all x ( )

21. Which state first made Hindi as official language ?

A) Jharkhand ( ) C) Bihar ( )
B) Haryana ( ) D) UP ( )

22. The area of the figure bounded by the curves **y^2 = 2x + 1** and **x - y - 1 = 0** is

A) 2/3 ( ) C) 4/3 ( )
B) 8/3 ( ) D) 16/3 ( )

23. The differential equation which represents the family of plane curves y = exp(cx) is

A) y' = cy ( ) C) xy' - logy = 0 ( )
B) xlogy = yy' ( ) D) ylogy = xy' ( )

24. The differential equation of all the circles of radius a is of the order

A) 2 ( ) C) 3 ( )
B) 4 ( ) D) none of these ( )

25. The degree of the differential equation of all the curves having normal of the constant length c, is

A) 1 ( ) C) 4 ( )
B) 3 ( ) D) none of these ( )

26. The degree of the differential equation corresponding to the family of curves $y = a(x + a)^2$, where a is an arbitary constant is

A) 1 ( ) C) 2 ( )
B) 3 ( ) D) none of these ( )

27. A contemporary of Charles Darwin who came to the same conclusion in the matter of organic evolution was –

A) Jean Baptist Lamarck ( ) B) Thomas Fluxley ( )
B) Alfred Russel Wallace ( ) D) Franklin Benjamin ( )

28. What is the probability that for S's come consecutively in the word MISSISSIPPI' ?

A) 1/165 ( ) C) 2/165 ( )
B) 4/165 ( ) D) none of these ( )

29. If $x=3^{n,}$ where n is a positive integral value, then what is the probability that x will have 3 at unit's place ?

A) 1/2 ( ) C) 1/3 ( )
B) 1/4 ( ) D) 1/5 ( )

30. Two non-negative integers x and y are chosen at random with replacement. The probability that $x^2 + y^2$ divisible by 10, is

A) 9/25 ( ) C) 9/50 ( )
B) 3/50 ( ) D) 6/25 ( )

31. What does an electric charge in accelerated motion produce ?
A) A magnetic Field only ( ) C) An Electric Field Only ( )
B) Electromagnetic radiation only ( ) D) All of the Above ( )

32. Maximum number of ministers in the government does not exceed the ____% of Lok Sabha Members
A) 15% ( ) C) 12% ( )
B) 10% ( ) D) 8% ( )

33. The relative density of the electrolyte of acid accumulator should not be allowed to fall below
A) 1.8 ( ) C) 1.5 ( )
B) 1.28 ( ) D) 1.18 ( )

34. If the current is doubled, the deflection is also doubled in
A) A Tangent Galvanometre ( ) C) both a & b ( )
B) a moving coil galvanometer ( ) D) none of these ( )

35. Unit of reduction factor is .....
A) ampere ( ) C) ohms ( )
B) tesla ( ) D) weber ( )

36. The equivalent quantity of mass in electricity is
A) current ( ) C) potential ( )
B) charge ( ) D) self inductance ( )

37. For long distance transmission, the ac is stepped up because transmission at high voltage is
A) faster ( ) C) economical ( )
B) not damped ( ) D) not dangerous ( )

38. Who is IMF chief?
A) Christine Lagarde ( ) B) Christine Lapaz ( )
C) Mary Lagarde ( ) D) Christine mary ( )

39. Which of the following are conserved when the light wave interfere?
A) amplitude ( ) C) phase ( )
B) intensity ( ) D) none of these ( )

40. Which one of the following is not an electromagnetic wave ?
A) Radio Wave ( ) C) X Ray ( )
B) Ultra violet radiation ( ) D) Ultra Sound Waves ( )

41. The frequency of the first line of the Lyman series in the hydrogen atom is v. What will be the frequency of the corresponding line for the singly ionised helium atom ?
A) v ( ) C) 4v ( )
B) 2v ( ) D) 8v ( )

42. Suppose the mass of electron decreases by 25%. How will it affect the Rydberg constant ?
A) Remains Unchanged ( ) C) Becomes one fourth ( )
B) Reduced to 75% of its original value ( ) D) It is doubled ( )

43. What is the number of neutrons in $_{17}C^{37}$?
A) 17 ( ) C) 37 ( )
B) 20 ( ) D) 54 ( )

44. A full wave rectifier is fed 60 Hz a.c. supply. The ripple frequency will be
A) 50 Hz ( ) C) 60Hz ( )
B) 100Hz ( ) D) 120Hz ( )

45. In which of the following cases the band width as well as modulation increases ?
A) DSB ( ) C) SSB ( )
B) FM ( ) D) AM ( )

46 Cell secretions are processed and packed up by

A) Mitochondria ( ) B) Golgi apparatus ( )
C) Ribosome ( ) D) Nucleus ( )

47 1 KHZ signal is used to test which stage?

A) Mixer stage ( ) B) 1 F stage ( )
C) Detector stage ( ) D) Audio stage ( )

48 _____ is the study of heart.

A) Neurology ( ) B) Cardiology ( )
C) Nephrology ( ) D) Archaeology ( )

49 Who will invited as chief guest on the republic day celebrations- **26 january 2017** .

A) Barack obama ( ) B) Sheikh md. Bin zayed al nahyan ( )
C) Sheikh Hasina ( ) D) Francois Hollande ( )

50 Transition ions absorb light in –

A) visible region ( ) B) infrared region ( )
C) ultraviolet region ( ) C) microwave region ( )

51 Who Is the founder of Flipkart

A) Vijay shekhar sharma ( ) B) Sachin bansal ( )
C) Binny bansal ( ) D) Rohit bansal ( )

52 In which year Albert Einstein born?

A) 1949 ( ) B) 1879 ( )
C) 1869 ( ) D) 1954 ( )

53 Author of "**Half Girlfriend**" book

A) Chetan bhagat ( ) B) Shiv khera ( )
C) Robin sharma ( ) D) Anoop sony ( )

54 When was world's first hard disk launched

A) 1956 ( ) B) 1953 ( )
C) 1957 ( ) D) 1958 ( )

55 Who becomes first indian to win 2 paralympics Golds?

A) Ravi Jarpula ( ) B) Devendra Jhajharia ( )
C) Jitendra Jarpula ( ) D) Mahendra Jhajharia ( )

56 The seventh largest country in the world (in view of area)

A) canada ( ) B) Brazil ( )
C) china ( ) D) none of these ( )

57 'The Narmada Bachao Andolan' was initiated by -

A) Medha Patekar ( ) B) Yogendra Yadav ( )
C) Sushmita Das ( ) D) Chintan Bhatt ( )

58 The main constituent of Gobar Gas

A) Methane ( ) B) Hellium ( )
C) Hydrogen ( ) D) Carbon ( )

59 The split rings in motion are called

(a) Armature ( ) (b) Commutator ( )
(c) Rotor ( ) (d) Core ( )

60 With the increase in atomic number in period

(a) Metallic character decreases ( ) (b) Metallic character increases ( )
(c) Chemical reactivity decreases ( ) (d) Chemical reactivity increases ( )