CLASS-10-PS EM IMPORTANT BITS for PUBLIC EXAMS-2017
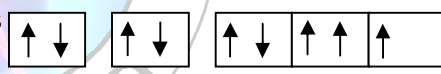
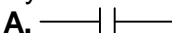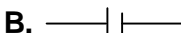**1)** What would be the final temperature of a mixture of 60 g of water at 40^oC temperature and 60 g of water at 80^oC temperature? [   ]
   A. 70^oC **B.** 50^oC **C.** 60^oC **D.** 65^oC

2) If there is a thermal equilibrium between two bodies, then [   ]
   A. Two bodies have different temperatures.   **B.** Two bodies have same temperatures
   C. The masses of two bodies are equal   **D.** The volume of two bodies are equal

3) How much energy is transferred when 1gm of boiling water at 100^oC condenses to water a 100^oC? [   ]
   A. 540 Cal   **B.** 80 Cal   **C.** 60 Cal   **D.** 720 Cal

4) Which process is different [   ]
   A. formation of mist   **B.** formation of fog   **C.** formation of rain   **D.** formation of clouds

5) Latent heat of fusion of ice is ……………….. Cal/gm [   ]
   A. 100   **B.** 540   **C.** 80   **D.** 720

6) Absolute zero temperature(Infinite cold) is [   ]
   A. -273^oC **B.** 0^oC **C.** 273 K   **D.** 273^oC

7) The gas filled in potato chips flush bags [   ]
   A. Hydrogen   **B.** Oxygen   **C.** Nitrogen   **D.** Chlorine

8) Galvanising means, coating of …. On the iron substances to prevent corrosion [   ]
   A. Zn   **B.** Cr   **C.** Cu   **D.** C

9) $2Fe_2O_3 + 3C \rightarrow 4Fe + 3CO_2$ Then which is true of the following [   ]
   A. Carbon is oxidised   **B.** Carbon is reduced
   C. Iron is oxidised   **D.** Iron oxide is oxidised

10) It converts slaked lime into milk white substance [   ]
   A. Oxygen   **B.** Carbon dioxide   **C.** Hydrogen   **D.** Sulphur dioxide

11) A substance is in light yellow colour. If we put it in sun light, it changes into gray colour. What is the substance? [   ]
   A. Lead Iodide   **B.** Potassium Iodide   **C.** Silver Bromide   **D.** Hydrogen Chloride

12) The following image relates to the reaction between [   ]
   A. $CuSO_4 + Fe$ **B.** $FeSO_4 + Cu$
   C. $CuSO_4 + Zn$ **D.** $ZnSO_4 + Cu$

13) The image appears always erect even you stand at any place in front of a mirror. Which mirror it is? [   ]
   A. convex   **B.** concave   **C.** plane   **D.** plane or convex

14) This is not the use of a Concave mirror [   ]
   A. Used in Head lights   **B.** Used by ENT specialist doctors
   C. Used in solar furnaces   **D.** Used beside drivers

15) If the object is placed at infinite distance before a concave mirror, the image is formed at ……… [   ]
   A. F   **B.** C   **C.** P   **D.** O

16) Magnification produced by a plane mirror is [   ]
   A. +1   **B.** -1   **C.** 0   **D.** $-\frac{1}{2}$

17) If an incident ray from the object passes through the Focus of the concave mirror, then the reflected ray [   ]
   A. passes through F   **B.** passes through C
   C. parallel to the axis   **D.** coincides with the incident ray

18) The distance between 'P' and 'C' in the figure is called [   ]
   A. Focal length
   B. Radius of curvature
   C. Distance of object
   D. Distance of image
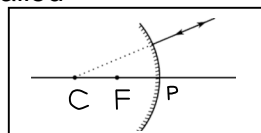
19) The cation present in HCl solution is   [   ]
    A. H^+ **B.** OH^- **C.** Cl^+ **D.** Cl^-

20) Which gas is liberated when H_2SO_4 reacts with NaCl   [   ]
    A. HCl   **B.** H_2S **C.** CO_2 **D.** SO_2

21) This is not the olfactory indicator   [   ]
    A. Onion pieces   **B.** Venilla essence   **C.** Turmeric powder **D.** Clove oil

22) Human blood is a   [   ]
    A. Strong acid   **B.** Strong base   **C.** Weak acid   **D.** Weak base

23) Which one of the following types of medicines is used for treating indigestion? [   ]
    A. antibiotic   **B.** analgesic   **C.** antacid   **D.** antiseptic

24) The most accurate way of showing neutralization   [   ]
    A. Acid + base → acid-base solution
    B. Acid + base → salt + water
    C. Acid + base → sodium chloride + hydrogen
    D. Acid + base → neutral solution

25) The refractive index of glass with respect to air is 2. Then the critical angle of glass-air interface is ....   [   ]
    A. 0° **B.** 45° **C.** 30° **D.** 60°

26) Total internal reflection takes place when the light ray travels from...............   [   ]
    A. rarer to denser medium   **B.** rarer to rarer medium
    C. denser to rarer medium   **D.** denser to denser medium

27) Relative refractive index of second media with respect to first media (η_{21}) =... [   ]
    A. $\frac{n_2}{n_1}$ **B.** $\frac{n_1}{n_2}$ **C.** $\frac{1}{(n_1+n_2)}$ **D.** $\frac{1}{(n_1-n_2)}$

28) Refractive Index   [   ]
    A. $\frac{Thickness\ of\ the\ glass\ slab}{Thickness\ of\ the\ glass\ slab - Vertical\ shift}$ **B.** $\frac{Thickness\ of\ the\ glass\ slab}{Thickness\ of\ the\ glass\ slab + Vertical\ shift}$

    C. $\frac{Thickness\ of\ the\ glass\ slab}{Thickness\ of\ the\ glass\ slab - Lateral\ shift}$ **D.** $\frac{Thickness\ of\ the\ glass\ slab}{Thickness\ of\ the\ glass\ slab + Lateral\ shift}$

29) When light travels from one media to another media, Changing the direction of light ray at the interface is …..   [   ]
    A. reflection   **B.** refraction   **C.** diffraction   **D.** dispersion

30) According to the given figure, which is true   [   ]
    A. 'A' is rarer media, 'B' is denser media
    B. 'A' is denser media, 'B' is rarer media
    C. choice(A) and choice(B)
    D. Neither choice(A) nor choice(B)

31) Which one of the following materials cannot be used to make a lens?   [   ]
    A. water   **B.** glass   **C.** plastic   **D.** clay

32) Which of the following is true?   [   ]
    A. the distance of virtual image is always greater than the object distance for convex lens
    B. the distance of virtual image is not greater than the object distance for convex lens
    C. convex lens always forms a real image
    D. convex lens always forms a virtual image

33) Focal length of the Plano-convex lens whose refractive index is '**n**' and its radius of curvature of the surface is 'R'   [   ]
    A. f = R   **B.** f = R/2   **C.** f = R/(n−1)   **D.** f = (n−1)/R

34) $\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$ This formula is   [   ]
    A. Mirror formula   **B.** Lens formula
    C. Lens maker's formula   **D.** Refraction formula at curved surfaces

35) Which of the following can acts as converging lens   [   ]
    A. Biconvex lens   **B.** Plano-convex   **C.** Concavo convex **D.** All of the above

between incident ray and final emergence ray is called [ ]
   A. Reflection   **B.** Refraction   **C.** Lateral shift   **D.** Angle of deviation

37) Vamsi Madhav is a boy of 3 years old. The value of least distance of
   distinct vision for him is about [ ]
   A. 25 cm   **B.** 30 cm   **C.** 8 cm   **D.** 15 cm

38) Doctor advised to use 4D lens. What is the focal length? [ ]
   A. 25 cm   **B.** 50 cm   **C.** 75 cm   **D.** 100 cm

39) The maximum focal length of eye lens is about [ ]
   A. 2.5 cm   **B.** 2.27 cm   **C.** 5 cm   **D.** 2.3 cm

40) The size of an object as perceived by an eye depends primarily on [ ]
   A. actual size of the object   **B.** distance of the object from the eye
   C. aperture of the pupil   **D.** Size of the image formed on the retina

41) During refraction, ………………….. will not change. [ ]
   A. wave length   **B.** frequency   **C.** speed of light   **D.** All the above

42) Identify the part shown in the figure. [ ]
   A. aqueous humour   **B.** pupil
   C. cornea   **D.** retina

43) The maximum number of electrons that can be accommodated in M- shell [ ]
   A. 2   **B.** 32   **C.** 18   **D.** 8

44) …………………… Explain the shape of the orbital [ ]
   A. n **B.** l **C.** m_l **D.** m_s

45) …………………… number of p-orbitals present in K- shell [ ]
   A. 1   **B.** 3   **C.** 5   **D.** 0

46) Neils Bohr got Nobel prize in the year of [ ]
   A. 1913   **B.** 1916   **C.** 1922   **D.** 1934

47) Value of Planck's constant is [ ]
   A. 6.6×10^{-34} **B.** 6.626×10^{-34} **C.** 6.6×10^{-37} **D.** 6.602×10^{-34}

48) Configuration of Fluorine (Z=9) is given as
   Which rule does not support this ………. [ ]
   A. Aufbau's rule **B.** Hund's rule   **C.** Pauli's rule   **D.** All of the above

49) Actinides [ ]
   A. $_{90}$Th to $_{103}$Lr   **B.** $_{89}$Ac to $_{102}$No   **C.** $_{89}$Ac to $_{103}$Lr   **D.** Any one / All

50) Which of the following is the most active metal [ ]
   A. Lithium   **B.** Potassium   **C.** Sodium   **D.** Rubidium

51) An element 'X' having configuration 2,8,2 belongs to [ ]
   A. 2nd period   **B.** 2nd group   **C.** both A and B   **D.** neither A nor B

52) Identify the Metalloid [ ]
   A. Germanium   **B.** Aluminium   **C.** Phosphorous   **D.** Iodine

53) Which of the following is not a Doberiener's triod [ ]
   A. Ca,Sr,Ba   **B.** S,Se,Te   **C.** Li,Na,K   **D.** Mn.Co,Fe

54) Number of valence electrons present in elements of group 16 [ ]
   A. 2   **B.** 6   **C.** 4   **D.** 8

55) Which of the following element is electro negative? [ ]
   A. Sodium   **B.** Oxygen   **C.** Magnesium   **D.** Calcium

56) The bond in NaCl molecule is [ ]
   A. Covalent   **B.** Ionic   **C.** Polar Covalent   **D.** CoordinateCovalent

57) Shape of *Beryllium Chloride* molecule [ ]
   A. Triangle   **B.** Pyramidal   **C.** Linear   **D.** Tetrahydral

58) Bond length of H-H in H_2 molecule [ ]
   A. 0.74 A° **B.** 1.44 A° **C.** 1.95 A° **D.** 1.27 A°

59) Which of the following formed double positive anion [ ]
   A. Sodium   **B.** Magnesium   **C.** Oxygen   **D.** Chlorine

60) ………… sigma bonds present in Ethylene C_2H_4 [ ]
   A. 2   **B.** 4   **C.** 5   **D.** 3

61) 1 Joule/Coulomb = ………………   [   ]
   A. 1 Watt   **B.** 1 Volt   **C.** 1 Ampere   **D.** 1 Ohm

62) 3 resistors of values 1Ω, 2Ω, 3Ω are connected in series. The equivalent R is [   ]
   A. 6Ω **B.** 7Ω **C.** 1Ω **D.** $\frac{2}{3}\Omega$

63) The current in the wire depends   [   ]
   A. Only on the potential difference applied   **B.** Only on the resistance of the wire
   C. On both of them   **D.** None of them

64) Symbol of a battery   [   ]
   A. ⊣├──   **B.** ──┤├──   **C.** ──(•)──   **D.** ──⌇⌇──

65) The metal having least resistivity is   [   ]
   A. Gold   **B.** Copper   **C.** Silver   **D.** Aluminium

66) 1 KWH = ………….. Joule   [   ]
   A. 3.6×10^6 **B.** 4.0×10^6 **C.** 36×10^6 **D.** 6.6×10^6

67) Which converts electrical energy into mechanical energy   [   ]
   A. Motor   **B.** Battery   **C.** Generator   **D.** Switch

68) The magnetic force on a current carrying wire placed in uniform magnetic field
   if the wire is oriented perpendicular to magnetic field, is ……………..   [   ]
   A. 0   **B.** ILB   **C.** 2ILB   **D.** $\frac{1}{2}$ILB

69) Compass needle always shows …….……. Directions of earth.   [   ]
   A. North   **B.** South   **C.** North and south   **D.** North or South

70) Symbol of S.I. unit of magnetic field induction is ………..   [   ]
   A. T   **B.** Ω **C.** V   **D.** A

71) ………………… Observed electro magnetism first.   [   ]
   A. Oersted   **B.** Ohm   **C.** Lenz   **D.** Faraday

72) Which converts chemical energy into electrical energy   [   ]
   A. Motor   **B.** Battery   **C.** Generator   **D.** Switch

73) The process of extraction of metals from their ores is …………………..   [   ]
   A. Metallurgy   **B.** Mining   **C.** Curing   **D.** Refining

74) Iron (III) oxide   [   ]
   A. Fe_2O_3 **B.** Fe_3O_4 **C.** FeO   **D.** Fe_2O

75) This is not the part of a furnace   [   ]
   A. Hearth   **B.** Cmney   **C.** Fire box   **D.** Magnetic wheel

76) The metal that occurs in the native form is   [   ]
   A. Lead (Pb)   **B.** Gold (Au)   **C.** Iron (Fe)   **D.** Mercury (Hg)

77) The reducing agent in thermitte process is   [   ]
   A. Aluminium   **B.** Magnesium   **C.** Iron   **D.** Silicon

78) ………… method is useful for sulphide ores (in dressing the ore)   [   ]
   A. washing   **B.** froth floatation   **C.** hand picking   **D.** magnetic separation

79) The suffix used for naming an aldehyde is   [   ]
   A. –ol   **B.** -al   **C.** -one   **D.** -ene

80) Which one of the following hydrocarbon can show isomerism   [   ]
   A. C_2H_4 **B.** C_2H_6 **C.** C_3H_8 **D.** C_4H_{10}

81) $CH_2OH-CHOH-CH_2OH$ is called   [   ]
   A. Glycerol   **B.** propane 1,3 tri ol   **C.** both A and B   **D.** None of the above

82) General formula of a soap   [   ]
   A. H-COONa   **B.** >C=O   **C.** R-COONa   **D.** R-⟨○⟩-SO_3H

83) These participate in substitute reactions   [   ]
   A. Alkanes   **B.** Alkenes   **C.** Alkynes   **D.** None of the above

84) Identify **cyclo butane**   [   ]
A. △   **B.** ▭   **C.** ⬡   **D.** ⬠