Sindh MDCAT Paper 2016 (SMC & DMC)

ENGLISH

Choose the word most similar in meaning to the capitalized one.

1. PREVENT:

   A. stop
   B. permit
   C. verify
   D. confirm

2. WICKED:

   A. good
   B. evil
   C. excellent
   D. luxury

Choose the lettered word or phrase that is most nearly opposite in meaning to the word in capital letters.

3. GLOOMY:

   A. dark
   B. bright
   C. unexciting
   D. faint

4. DEMONSTRATE:

   A. show
   B. display
   C. conceal
   D. expose

Complete the sentences by choosing the most appropriate option, from the given lettered choices (A to D) below each.

5. The doctor is going _____ vaccinate me tomorrow.

   A. of
   B. to
   C. on
   D. as

6. The recent discoveries of medical science have _____ life and health to millions of people.

   A. brought
   B. bring
   C. had bought
   D. bringing

Read the passage to answer questions 7 & 8:

The names of three men - an Englishman, a German and an Italian - stand out from the many who have opened up for us this new field of progress: James Clerk Maxwell, Heinrich Hertz and Guglielmo Marconi. Maxwell prophesied wireless, discovering its principles. Hertz discovered and demonstrated those waves which are its servant, and Marconi invented the instruments which put these ideas in practical use. A crowd of other brilliant men have made their different contributions. Sir Oliver Lodge came very near to doing what Marconi did; indeed, a year before Marconi invented his instrument, Lodge demonstrated the possibility of sending a signal by these Hertzian waves, but turned aside under pressure of other work. Professor Righi, Marconi's science master, experimented in the laboratory and showed young Marconi the potentialities Oliver Heaviside, the English telegraphic engineer, subsequently revealed to us the amazing fact that these wireless waves are thrown back to the earth from the two curious 'mirrors' which, moving in the depth of the sky hundreds of miles from the surface of the earth, act as a kind of double sounding board. These are but a few of the men whose work all over the earth has brought the miracle of wireless to its present stage. But the three names stand pre-eminent.

7. Which of the following could be the best title of the paragraph?

   A. contribution of sir oliver lodge
   B. role of technology in modern world
   C. discovery of wireless
   D. the double sounding board

8. Which of the following is mentioned in the paragraph as the contribution of Heinrich Hertz?

   A. invented the instruments for the practical use of wireless waves
   B. demonstrated the possibility of sending signal
   C. that the waves are thrown back to the earth
   D. discovered and demonstrated the wireless waves

Identify the word or phrase that needs to be changed for the sentence to be correct:

9. <u>She</u> <u>send</u> me a <u>postal-order</u> for my <u>birthday</u>. <u>No error</u>
   A B C D E

10. <u>If</u> he wants his salary <u>too</u> be <u>raised</u>, he will have to take it up with
    A B C

    the <u>manager</u>. <u>No error</u>
    D E

PHYSICS

11. Find the heat transferred to or from the system when a thermodynamics system undergoes a process in which its internal energy decreases by 300 J. If at the same time, 120 J of work is done on the system.

A. -120 J
B. -220 J
C. -320 J
D. -420 J
E. -520 J

12. What will be the energy in Joules, when an electron acquires a speed of 10^6 m/s?

A. 3.61×10^{-19} J
B. 4.55×10^{-19} J
C. 5.13×10^{-19} J
D. 6.13×10^{-19} J
E. 8.71×10^{-19} J

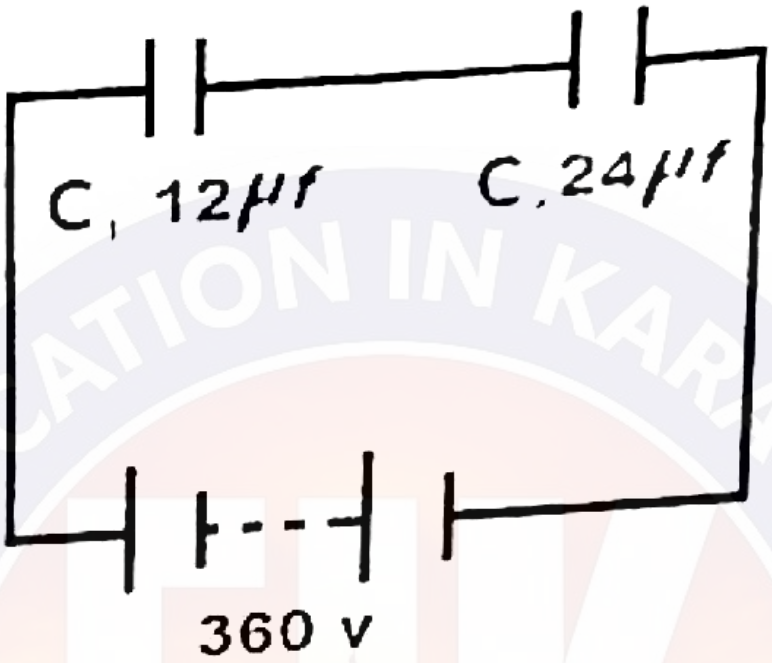
13. An object whose mass is 100 g starts from rest and moves with constant acceleration of 20 cm/s^2. At the end of 8 s its momentum is _____ in g cm/s.

A. 500
B. 8000
C. 16000
D. 33000
E. 64000

14. A 3-cm length of wire is moved at right angles across a uniform magnetic field with a speed of 2.0 m/s. If the flux density is 5.0 teslas, what is the magnitude of the induced e.m.f.?

A. 0.03 V
B. 0.3 V
C. 0.6 V
D. 10 V
E. 20 V

15. Two capacitors C_1 ($12\,\mu f$) and C_2 ($24\,\mu f$) are in series connected across a 360 volts d.c. supply. Calculate the charges on C_1 and C_2 respectively.



A. 2880×10^{-6} C, 2880×10^{-6} C
B. 4770×10^{-6} C, 4770×10^{-6} C
C. 5810×10^{-6} C, 6610×10^{-6} C
D. 7170×10^{-6} C, 8140×10^{-6} C
E. 9090×10^{-6} C, 8880×10^{-6} C

16. When a transformer is connected to 120-volt ac, it supplies 3000 V to a device. The current through the secondary winding then is 0.06 A and the current through the primary is 2 A. The number of turns in the primary winding is 400. The number of turns in the secondary winding is:

A. 16
B. 30
C. 1000
D. 2000
E. 10000

17. A car going around a certain curve at a speed of 25 km/h has centripetal force acting on it of 100 N. If the speed of the car is doubled, the centripetal force:

A. is quadrupled
B. is doubled
C. is multiplied by the $\sqrt{2}$
D. is reduced to 1/2 of the original value
E. is reduced to 1/6 of the original value

18. A handball is tossed vertically upward with a velocity of 19.6 m/s. Approximately how high will it rise?

A. 15.8 m
B. 19.6 m
C. 25.6 m
D. 30 m
E. 60 m

19. Upon signal of starting the race, athlete starts from rest with a constant acceleration of 8 m/s^2. At the same time a cyclist traveling with a constant speed of 72 km/h passes the athlete. How far beyond the starting point will the athlete overtakes the cyclist and what will be the speed of the athlete at the time when it overtakes the cyclist respectively?

A. 100 m, 40 m/s
B. 110 m, 50 m/s
C. 120 m, 60 m/s
D. 130 m, 70 m/s
E. 140 m, 80 m/s

20. A stone is thrown horizontally from 2.4 m above the ground at 35 m/s. The wall is 14 m away and 1 m high. At what height the stone will reach? Where will the stone land?

A. 1.62 m, 24.5 m
B. 2.22 m, 31 m
C. 3.22 m, 41 m
D. 4.22 m, 51 m
E. 5.22 m, 61 m

21. All the heat supplied to a system is converted into work in the _____ process.

A. isochoric
B. isobaric
C. isothermal
D. isentropic

22. According to Bohr's theory of Hydrogen atom, only those atomic orbits with radii 'r' and atomic shell 'n' around the nucleus are allowed which have the angular momenta:

A. $rh/2\pi$
B. $nh/2\pi$
C. $2\pi n/h$
D. $2\pi r/h$

23. Minimum Frequency below which no electrons are emitted from metal surface is called _____ frequency.

A. minimum
B. angular
C. maximum
D. threshold

24. In a npn transistor, the current I_E that flows in the emitter circuit is:

A. $I_C + I_B$
B. $I_C - I_B$
C. $I_C \times I_B$
D. zero

25. In photodiode, the bias voltage is applied in _____ bias form.

A. forward
B. resistance
C. reverse
D. converse

26. Gamma rays are emitted from nuclei of radioactive atoms. They are nothing but:

A. X rays
B. High energy electromagnetic radiations
C. Electrons emitted from nuclei
D. Ultraviolet rays
E. Infrared rays

27. Five words are shown below:

Farthest Universe Spontaneously Photon Infinite

These words can be used in the spaces P, Q, R, S and T to complete the sentences below.

The __P__ is a stable particle and therefore it does not decay __Q__ into any other particle. Its life time is therefore ____ R ____ so long it does not undergo interaction with other particles and is why photons are supposed to be reaching our earth from the ____ S _____ distances of the universe. Thus most of our information regarding the __T__ is carried by photons.

	Farthest	photon	Spontaneously	Universe	Infinite
A	S	Q	T	P	R
B	P	Q	S	R	T
C	S	P	Q	T	R
D	T	S	P	Q	R

28. During the process of nuclear disintegration, when alpha particle emission occurs, atomic no of the atom changes by _____ and its mass number changes by _____.

A. one unit ... one unit
B. two units ... four units
C. two units ... three unit
D. two units ... two units

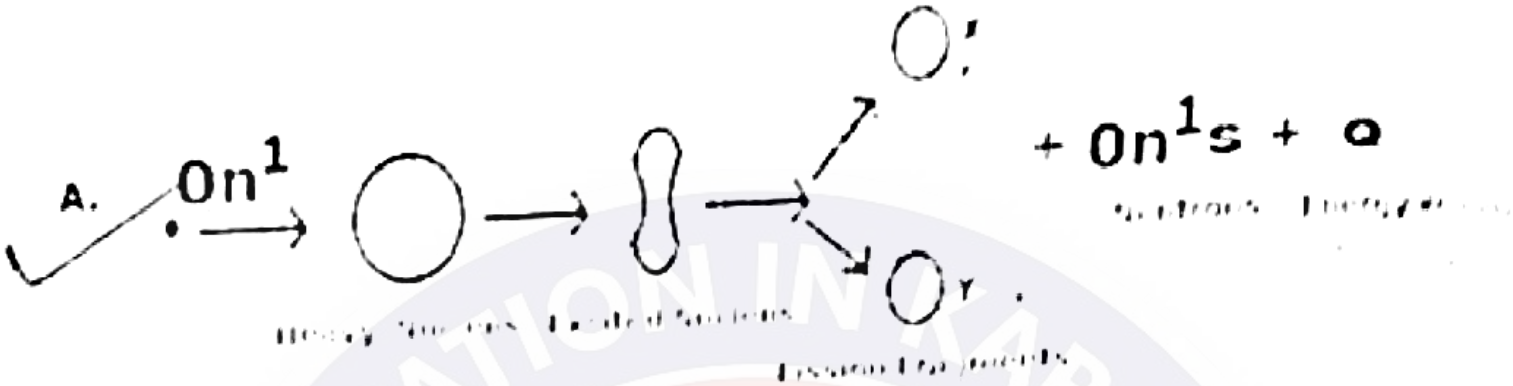
29. The resistivity in SI units is measured in:

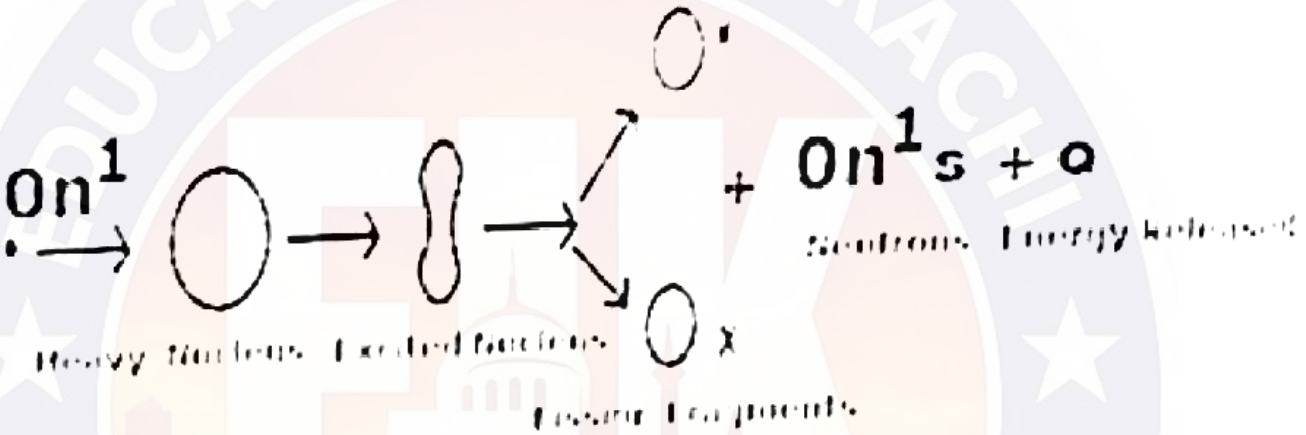
A. Ω-m
B. Ω-m^2
C. Ω/m
D. Ω/m^2

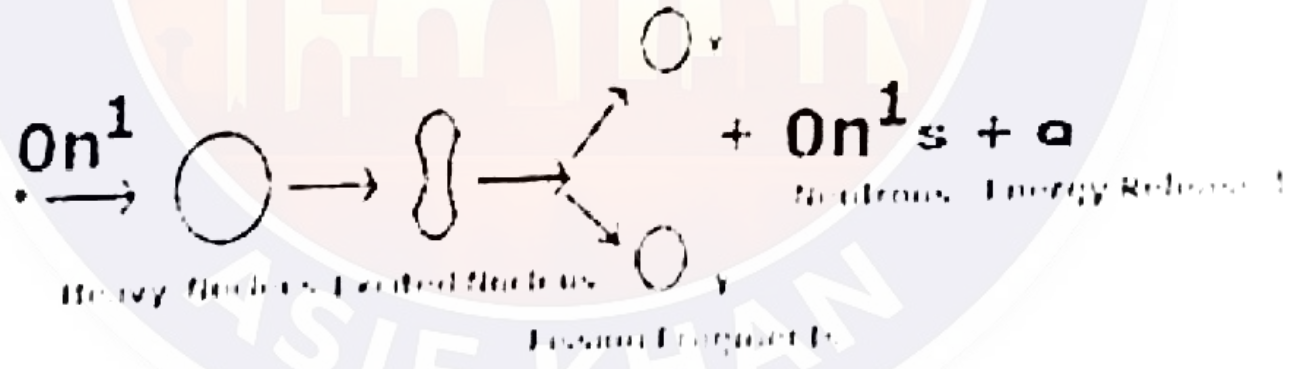
30. One kilowatt-hour is equivalent by a factor ____ in Joules.

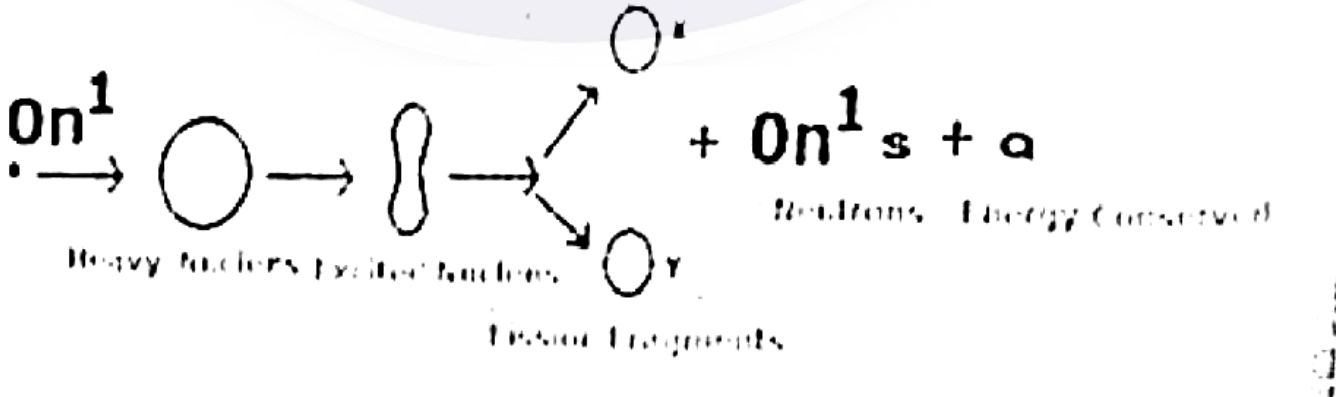
A. 1.2×10^5
B. 1.2×10^6
C. 3.6×10^5
D. 3.6×10^6

31. Identify the schematical representation of Fission Process from the following options?

A. 

B. 

C. 

D. 

32. In SI units, the unit of Candela is used for the measurement of:

A. Heat intensity
B. Light intensity
C. Energy/time
D. Energy/area

33. What is the projection of $F = 2i-3j+6k$ onto the direction of vector $F = i+2j+2k$.

A. 1/2
B. 8/3
C. 3/5
D. 5/7
E. 7/9

34. Two bodies 'X' and 'Y' are attached to the ends of a string which passes over a pulley so that the two bodies hang vertically. If the mass of the body 'X' is 10 kg and that of 'Y' is 9.8 kg. Find the acceleration? ($g = 9.8\ m/s^2$)

A. $0.2\ m/s^2$
B. $2.2\ m/s^2$
C. $3.2\ m/s^2$
D. $4.2\ m/s^2$
E. $5.2\ m/s^2$

35. A 400 gram ball is tied to the end of a cord and whirled in a horizontal circle of radius 0.6 m. If the ball makes five complete revolutions in 2 s, what is the ball's linear speed?

A. 4.42 m/s
B. 5.42 m/s
C. 7.42 m/s
D. 8.42 m/s
E. 9.42 m/s

36. Find the gravitational force of attraction between two balls each weighing 10 kg, when placed at a distance of 1 meter apart.

A. $6.673 \times 10^{9}\ N$
B. $7.71 \times 10^{9}\ N$
C. $8.91 \times 10^{9}\ N$
D. $9.91 \times 10^{9}\ N$
E. $10.31 \times 10^{9}\ N$

37. When a 7000 N elevator moves from street level to the top of a building 300 m above the street level, what is the change in gravitational potential energy?

A. 1.1×10^6 J
B. 2.1×10^6 J
C. 3.1×10^6 J
D. 4.1×10^6 J
E. 5.1×10^6 J

38. A body of mass 4 kg attached to a spring is displaced through 0.04 m from its equilibrium position and then released. If the spring constant is 400 N/m. Find the time period of vibration?

A. 4.567 s
B. 3.416 s
C. 2.315 s
D. 1.325 s
E. 0.628 s

39. What will be the position of the object, when a convex lens of focal length 20 cm, is used to form an erect image which is twice as large as the object?

A. The object is 2 cm from the lens
B. The object is 4 cm from the lens
C. The object is 6 cm from the lens
D. The object is 8 cm from the lens
E. The object is 10 cm from the lens

40. A conductor carrying a current 'I' has length 'l'. When it is placed in a magnetic field 'B' at 90° it experiences a force

A. BLI
B. $B^2 Il$
C. BLI^2
D. zero
E. infinity

37. When a 7000 N elevator moves from street level to the top of a building 300 m above the street level, what is the change in gravitational potential energy?

A. 1.1×10^6 J
B. 2.1×10^6 J
C. 3.1×10^6 J
D. 4.1×10^6 J
E. 5.1×10^6 J

38. A body of mass 4 kg attached to a spring is displaced through 0.04 m from its equilibrium position and then released. If the spring constant is 400 N/m. Find the time period of vibration?

A. 4.567 s
B. 3.416 s
C. 2.315 s
D. 1.325 s
E. 0.628 s

39. What will be the position of the object, when a convex lens of focal length 20 cm, is used to form an erect image which is twice as large as the object?

A. The object is 2 cm from the lens
B. The object is 4 cm from the lens
C. The object is 6 cm from the lens
D. The object is 8 cm from the lens
E. The object is 10 cm from the lens

40. A conductor carrying a current 'I' has length 'L'. When it is placed in a magnetic field, 'B' at 90° it experiences a force:

A. BLI
B. B^2LI
C. BLI^2
D. zero
E. infinity

CHEMISTRY

41. IUPAC name of this is $(CH_3)_2$ CH $CH(C_2H_5)$ $C(CH_3)_3$

A. 3-ethyl-2, 2, 4-trimethyl pentane
B. 4-ethyl-2, 2, 4-trimethyl pentane
C. 5-ethyl-2, 2, 4-trimethyl pentane
D. 2-ethyl-2, 2, 4-trimethyl pentane
E. 1-ethyl-2, 2, 4-trimethyl pentane

42. Metaboric acid when heated produces:

A. B_2O_3
B. HBO_2
C. $H_2B_4O_7$
D. H_3BO_3

43. Amylopectin has _____ linkage

A. α 1 – 4 glycosidic
B. β 1 – 4 and 1 – 6 glycosidic
C. α 1 – 4 and 1 – 6 glycosidic
D. β 1 – 4 glycosidic

44. Which one is not a monosaccharide?

A. Galactose
B. Fructose
C. Mannose
D. Lactose

45. All are enzymes involved in fermentation process except one:

A. Zymase
B. Invertase
C. Lipase
D. Diastase

46. For which mechanism the first step involved is the same?

A. E_1 and E_2
B. S_N1 and E_2
C. E_1 and S_N2
D. E_1 and S_N1.

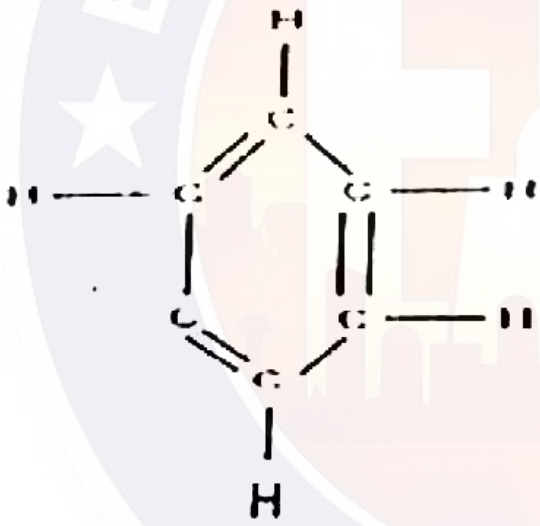
47. All are dehydrating agents for alcohols to produce alkene except:

A. Al_2O_3
B. P_2O_5
C. Dilute H_2SO_4
D. H_3PO_4

48. In the end of periodic table _____ are found.

A. s block element
B. p block element
C. d block element
D. Noble gases

49. Which of the following element is needed to add in the given diagram to make it aromatic benzene?



A. —H
B. —OH
C. —CH
D. $—H_2$

50. Four words are shown below:

Equilibrium crystalline solid melting point temperature

These words can be used in the spaces P, Q, R, and S to complete the sentences below.

When a pure __P__ is heated, a temperature is reached where it changes sharply into liquid. This is __Q__ of solid. It is defined as that ___R___ at which there is ___S___ between solid and liquid phases.

	temperature	melting point	equilibrium	crystalline solid
A.	S	Q	R	P.
B.	P	Q	S	R
C.	S	P	Q	R
D.	R	S	P	Q
E.	P	Q	R	S

51. The radius of third Bohr orbit is:

A. 0.529 Å
B. 0.529/4 Å
C. 0.529 x 2 Å
D. 0.529 x 3^2 Å

52. The change in concentration of reactant or product per unit time is called:

A. Rate constant
B. Rate of reaction
C. Rate equation
D. Rate law
E. Both A & D

53. The internal energy of an ideal gas depends upon its:

A. Molecular size
B. Pressure only
C. Volume only
D. Temperature only

54. How many chain isomers can be obtained from the alkane C_6H_{14}?

A. 7
B. 6
C. 5
D. 4

55.The ground state of an atom corresponds to a state of :

A. Maximum energy
B. Minimum energy
C. Negative energy
D. Positive energy

56.A sample of gas weighs 1.25 g, at 28°C occupying a volume of $2.50 \cdot 10^2$ ml and its pressure is 715 torr. What is the molar mass in grams?

A. 131.1
B. 1.311
C. 1.212
D. 122.1

57.Common name of Octadecanoic acid is:

A. Propionic acid
B. Stearic acid
C. Palmitic acid
D. Formic acid
E. Acetic acid

58.Shape of the orbital occupied by an electron is defined by:

A. Principal quantum number
B. Azimuthal quantum number
C. Spin quantum number
D. Magnetic quantum number

59.Which structures show a primary alcohol that cannot be dehydrated to form an alkene?

I. CH_3OH
II. CH_3CH_2OH
III. $CH_3CH(OH)CH_3$

A. Only I
B. Only I and II
C. Only II and III
D. Only I and III

60.A catalyst:

A. increases the rate of forward reaction
B. increases the rate of both forward and reverse reaction
C. changes equilibrium position
D. increases the rate of reverse reaction

61. What volume in dm^3 of KCl is obtained in the following equation:

$$2KClO_3 \rightarrow 2KCl + 3O_2$$

- A. 2 dm^3
- B. 74.5 dm^3
- C. 50 dm^3
- D. 40 dm^3
- E. 20 dm^3

62. J.J Thomson determined the:

- A. charge of an electron
- B. mass of an electron
- C. e/m value of an electron
- D. charge of a proton
- E. mass of a proton

63. The number of electrons present in n=2, l=1 and m=-1, 0, +1 are:

- A. 2
- B. 6
- C. 8
- D. 10
- E. 18

64. If the difference between electronegativity values between two atoms is less than 1.7, the bond is necessarily:

- A. ionic
- B. covalent
- C. electrovalent
- D. polar
- E. non-polar

65. Which one of the following has the lowest % ionic character?

- A. CCl_4
- B. BCl_3
- C. $BeCl_2$
- D. LiCl
- E. HCl

66. Consider the following reaction

$N_{2(g)} + O_{2(g)} \rightleftharpoons 2NO_{(g)}$ $K_c = 0.1$ at 2000°C

If original concentrations of N_2 and O_2 were 0.1M each. Calculate the concentrations of NO at equilibrium.

A. 0.028 M
B. 0.0012 M
C. 0.18 M
D. 0.0018 M
E. 0.002 M

67. The geometry of H_2S and its dipole moment are:

A. angular and non-zero
B. angular and zero
C. linear and zero
D. linear and non-zero

68. Which one of the following is most abundant in the earth crust?

A. Al
B. B
C. In
D. Ga

69. Which of the following has maximum number of unpaired *d* electrons?

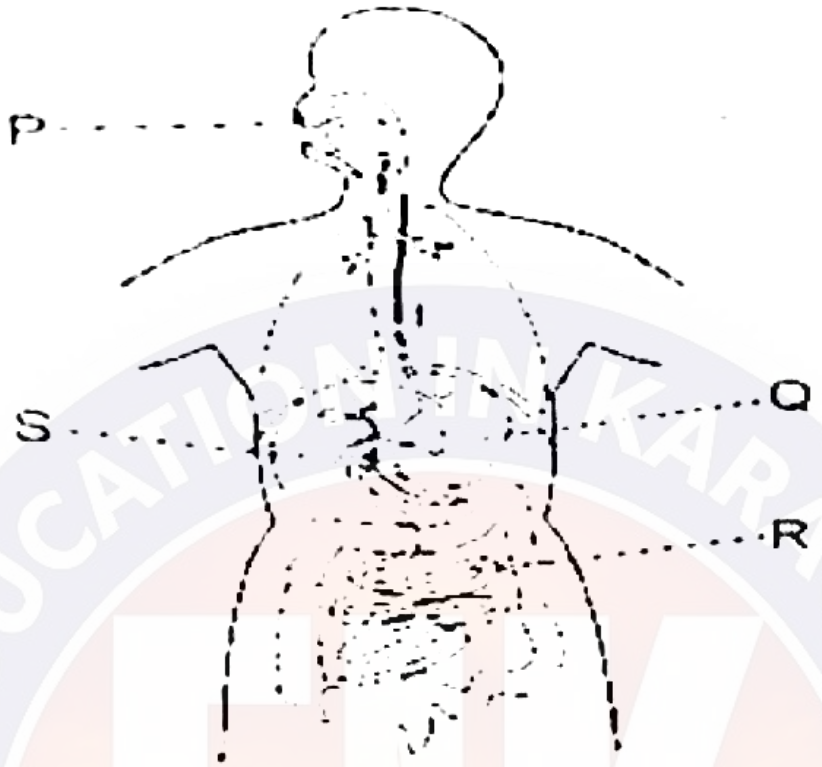
A. Mg^{2+}
B. Ti^{3+}
C. V^{3+}
D. Fe^{2+}

70. $CH_3CH_2CH_2COCH_3$ is the functional isomer of:

A. $CH_3CH_2CH_2CH_2CHO$
B. $CH_3CH_2CH_2CH_2OH$
C. $CH_3CH_2COCH_2CH_3$
D. $CH_3-(CH)_2COCH_2CH_3$

BIOLOGY

71. The diagram shows some of the organs of the human body.



In which organs does the digestion of carbohydrates take place?

A. P and Q
B. P and R
C. Q and R
D. Q and S

72. Which of the following are animals with pointed ends and a tube like digestive track?

A. Annelida
B. Arthopoda
C. Nematoda
D. Mollusca

73. The dark reactions of photosynthesis are characterized by:

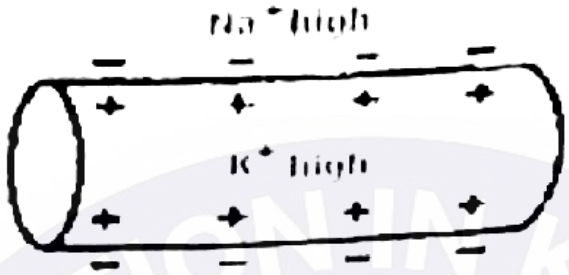
A. Synthesis of ATP, O_2 and NADH
B. Utilization of ATP, CO_2 and NADPH
C. Electron transfer from NADPH to RuBP
D. Carbon dioxide transfer from RuBP to glucose

74. Inheritance of acquired characteristics is based on:

A. Genetic role in reproduction
B. Use and disuse of organ
C. Survival of the fittest
D. Mutations

75. Which diagram illustrates the distribution of sodium and potassium ions in a section of a non-myelinated axon which is at resting potential?

A.

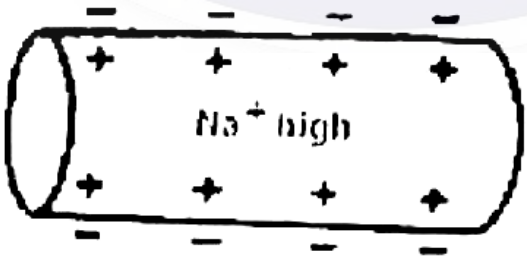


B.

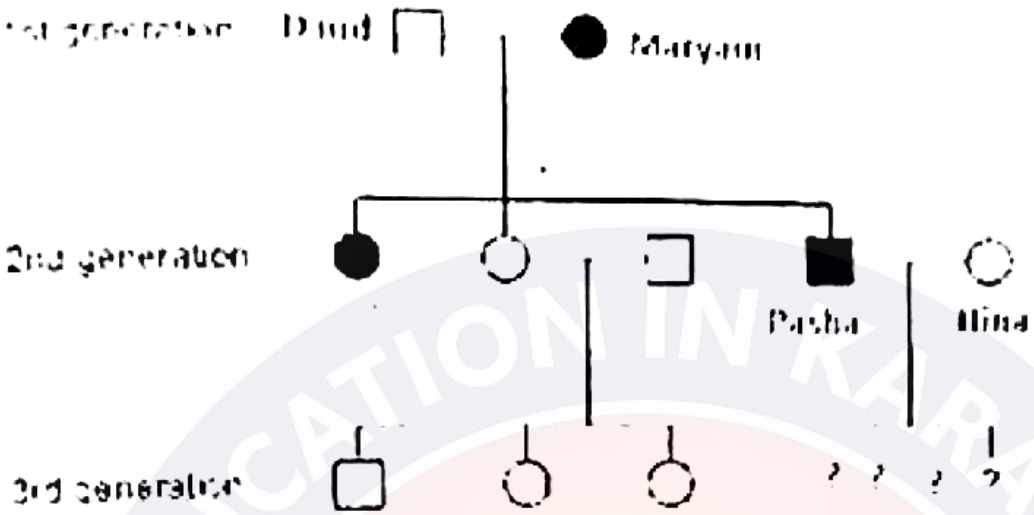
C.

D.

E.



76. The family tree shows the inheritance of the ability to taste a certain substance. The allele for the ability to taste this substance is dominant to the allele for the inability to taste it.



Key

- ■ represents a male 'taster'
- ● represents a female 'taster'
- □ represents a male 'non-taster'
- ○ represents a female 'non-taster'

What percentage of children of Pasha and Hina would be 'non-tasters'?

A. 25%
B. 50%
C. 75%
D. 100%

77. The first step in nitrogen cycle is:

A. Nitrification
B. Ammonification
C. Oxidation
D. Denitrification

78. The enzyme used to seal the DNA is:

A. Restriction enzymes
B. Ligase
C. Polymerase
D. Lipase

79. Which of the following correctly describes the thermoregulation in hot temperature?

	blood vessels in the surface of skin	sweat production
A.	constrict	decreases
B.	constrict	increases
C.	dilate	decreases
D.	dilate	increases

80. Which row correctly shows the areas of the gas exchange system that contain cartilage, ciliated epithelium and goblet cells?

	cartilage	ciliated epithelium	goblet cells
A.	bronchiole, trachea	bronchiole, trachea	bronchus, trachea, alveoli
B.	bronchus, trachea	bronchiole, bronchus	alveoli, trachea
C.	bronchiole, trachea, alveoli	bronchus, trachea	bronchiole, bronchus
D.	bronchus, trachea	Nasal cavity, trachea	bronchus, trachea

81. Match the processes listed under Column I with the hormones given under Column II. Choose the answer which gives the correct combination of alphabets of the columns

	Column I (Processes)		Column II (Hormones)
A	Production of milk from mammary gland	q	Progesterone
B	Release of milk	r	Vasopressin
C	Thickening of endometrium	s	Prolactin
		t	oxytocin

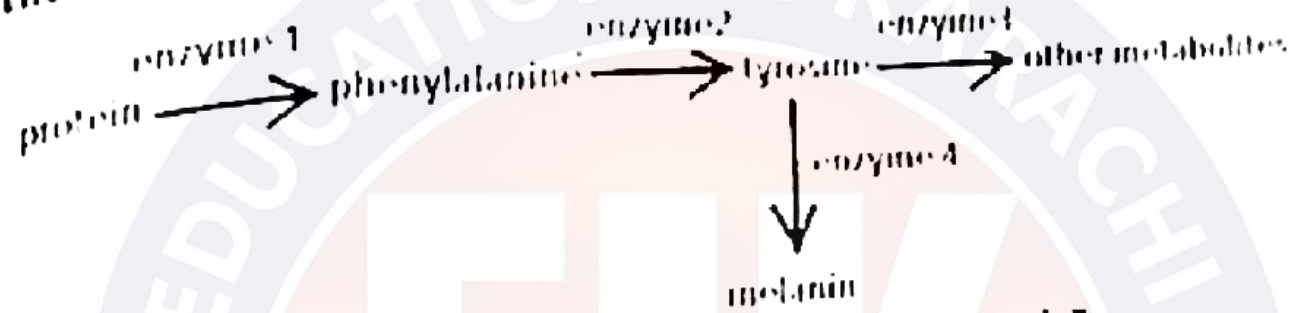
A. A=s, B=q, C=r
B. A=s, B=t, C=q
C. A=q, B=t, C=s
D. A=s, B=r, C=q

82. During which stage of meiosis do centromeres divide?

A. prophase I
B. metaphase I
C. prophase II
D. ✓ metaphase II

83. Newborn babies are screened for the presence of high levels of the amino acid phenylalanine in the blood, which indicates the hereditary disease phenylketonuria. Pale skin colour is also the indication of sufferers from this disease.

The following series of reactions occurs in normal metabolism.



Which enzyme is lacking in persons with phenylketouria?

A. ✓ 1
B. 2
C. 3
D. 4

84. Pseudopodia are found in:

A. Flagellates
B. ✓ Rhizopods
C. Ciliophora
D. Suctoria

85. Two animals are mated. One is homozygous dominant for one character and homozygous recessive for another. The other animal is heterozygous for both characters.
How many phenotypes are expected in the offspring of this cross?

A. ✓ 1
B. 2
C. 3
D. 4

86. Part of the amino acid sequences in normal and sickle cell haemoglobin are shown.

normal haemoglobin	sickle cell haemoglobin
thr - pro - glu – glu	thr - pro - val – glu

mRNA codons for these amino acids are

glutamine (glu) GAA GAG	proline (pro) CCU CCC
threonine (thr)ACU ACC	valine (val) GUA GUG

Which transfer RNA molecule is involved in the formation of this part of the sickle cell haemoglobin?

A. GUG
B. CAU
C. UGC
D. GAG

87. Which of the following statements correctly describes homologous chromosomes?

A. They are formed during meiosis.
B. They are held together by centromeres.
C. They are chromatids of the same chromosome
D. They carry both morphologically similar members with same set of genes

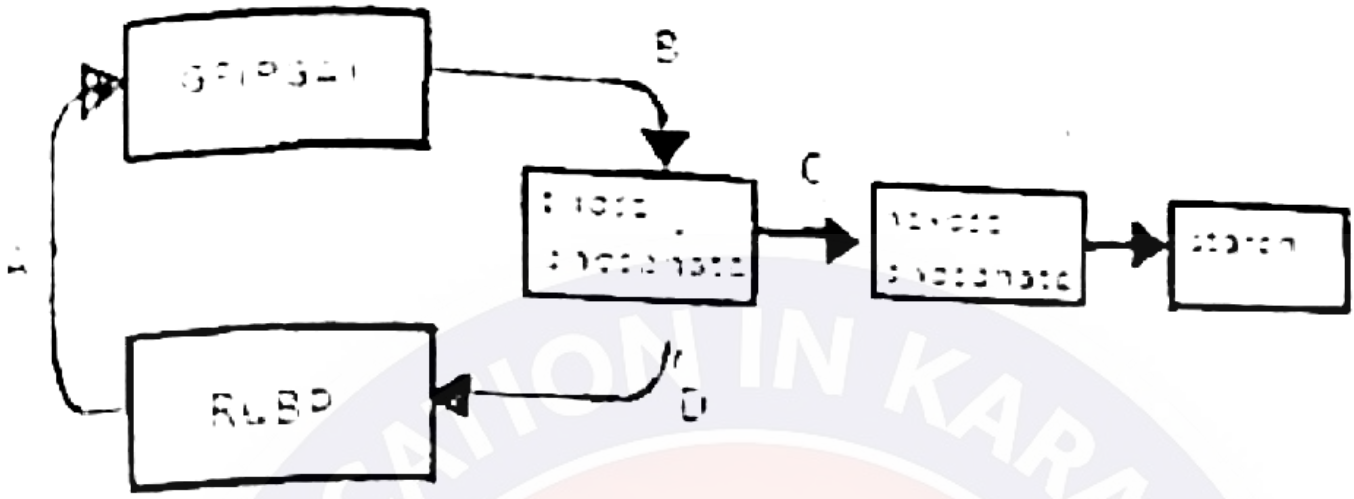
88. Movement of ions and large molecules with the help of protein molecules in and out of cell is called _____.

A. Diffusion
B. Facilitated diffusion
C. Passive transport
D. Osmosis

89. Molluscs have an exoskeleton made up of:

A. Protein
B. Silica
C. $CaCO_3$
D. Cuticles

90. The diagram represents the Calvin cycle. At which stage is CO_2 incorporated?



A. A
B. B
C. C
D. D

91. Match the parts of the human brain listed under Column I with the functions given under Column II. Choose the answer which gives the correct combination of alphabets of the two columns.

	Column I (Part of the Brain)		Column II (Functions)
A	Cerebral hemisphere	p	Relaying impulses
B	Thalamus	q	Posture and balance
C	Cerebellum	r	Control of sleep and wakening
D	Medulla oblongata	s	Reflex actions
		t	Intelligence memory

A. A=r, B=q, C=p, D=s
B. A=r, B=s, C=q, D=t
C. A=t, B=p, C=q, D=r
D. A=t, B=q, C=p, D=s

ENGLISH

Choose the word most similar in meaning to the capitalized one.

1. PREVENT:

   A. stop
   B. permit
   C. verify
   D. confirm

2. WICKED:

   A. good
   B. evil
   C. excellent
   D. luxury

Choose the lettered word or phrase that is most nearly opposite in meaning to the word in capital letters.

3. GLOOMY:

   A. dark
   B. bright
   C. unexciting
   D. faint

4. DEMONSTRATE:

   A. show
   B. display
   C. conceal
   D. expose

Complete the sentences by choosing the most appropriate option, from the given lettered choices (A to D) below each.

5. The doctor is going _____ vaccinate me tomorrow.

   A. of
   B. to
   C. on
   D. as

6. The recent discoveries of medical science have _____ life and health to millions of people.

   A. brought
   B. bring
   C. had bought
   D. bringing

Read the passage to answer questions 7 & 8:

The names of three men - an Englishman, a German and an Italian - stand out from the many who have opened up for us this new field of progress: James Clerk Maxwell, Heinrich Hertz and Guglielmo Marconi. Maxwell prophesied wireless, discovering its principles. Hertz discovered and demonstrated those waves which are its servant, and Marconi invented the instruments which put these ideas in practical use. A crowd of other brilliant men have made their different contributions. Sir Oliver Lodge came very near to doing what Marconi did; indeed, a year before Marconi invented his instrument, Lodge demonstrated the possibility of sending a signal by these Hertzian waves, but turned aside under pressure of other work. Professor Righi, Marconi's science master, experimented in the laboratory and showed young Marconi the potentialities Oliver Heaviside, the English telegraphic engineer, subsequently revealed to us the amazing fact that these wireless waves are thrown back to the earth from the two curious 'mirrors' which, moving in the depth of the sky hundreds of miles from the surface of the earth, act as a kind of double sounding board. These are but a few of the men whose work all over the earth has brought the miracle of wireless to its present stage. But the three names stand pre-eminent.

7. Which of the following could be the best title of the paragraph?

   A. contribution of sir oliver lodge
   B. role of technology in modern world
   C. discovery of wireless
   D. the double sounding board

8. Which of the following is mentioned in the paragraph as the contribution of Heinrich Hertz?

   A. invented the instruments for the practical use of wireless waves
   B. demonstrated the possibility of sending signal
   C. that the waves are thrown back to the earth
   D. discovered and demonstrated the wireless waves

Identify the word or phrase that needs to be changed for the sentence to be correct:

9. <u>She</u> <u>send</u> me a <u>postal-order</u> for my <u>birthday</u>. <u>No error</u>
   A B C D E

10. <u>If</u> he wants his salary <u>too</u> be <u>raised</u>, he will have to take it up with
    A B C

    the <u>manager</u>. <u>No error</u>
    D E