1   If $x^2 + kx + 6 = (x + 2)(x + 3)$ for all x, then the value of k is

(A)   1   (B)   -1   (C)   5   (D)   3

2   2 is a polynomial of degree

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

3   Which of the following is irrational?

(A)   0.14   (B) $0.141\overline{6}$ (C) $0.40\overline{14}$ (D)   0.4014001400014…..,

4   Degree of the $zero$ polynomial is

(A)   0   (B)   1   (C)   any natural number   (D)   not defined

5   If $p(x) = x + 3$, then $p(x) + p(-x)$ is equal to

(A)   3   (B)   2x   (C)   0   (D)   6

6   If $x + 1$ is a factor of the polynomial $2x^2 + k\,x$, then the value of k is

(A)   –3   (B)   4   (C)   2   (D)   –2

7   Which of the following is a factor of $(x + y)^3 - (x^3 + y^3)$?

(A) x^2+y^2+2xy (B) x^2+y^2-2xy (C) xy^2 (D)   3xy

8   If $a = 2+\sqrt{3}$, the value of $a - 1/a$ will be

(A) $2\sqrt{3}$ (B) $3\sqrt{2}$ (C)   0   (D) $2-\sqrt{3}$

9   The value of x ,if $(6/5)^x(5/6)^{2x} = \frac{125}{216}$

(A)   3   (B)   2   (C)   4   (D)   0

10   If $4^{2x-1} - 16^{x-1}=384$, then value x will be

(A)   4/11   (B)   11/4   (C)   11/8   (D)   8/11

11   If $a=8+3\sqrt{7}$ and $b=\frac{1}{a}$, then value ofr $a^2 + b^2$ will be

(A)   254   (B)   452   (C)   542   (D)   None of these

12   The value of 1.999... in the form p/q, where p and q are integers and $q \ne 0$

(A) $\frac{19}{20}$ (B) $\frac{1999}{1000}$ (C)   2   (D) $\frac{1}{9}$

13   Value of $(256)^{0.16} \times (256)^{0.09}$ is

(A)   4   (B)   16   (C)   64   (D)   256.25

14   Every rational number is

(A)   a natural number   (B)   an integer   (C)   a real number   (D)   a whole number

15   The product of any two irrational numbers is

(A)   always an irrational number   (B)   always a rational number   (C)   always an integer   (D)   sometimes rational, sometimes irrational

16   If $p(x)=x^2-2\sqrt{2}x +1$ then $p(2\sqrt{2})$ is equal to

1

(A)   0   (B)   1   (C) $4\sqrt{2}$ (D) $8\sqrt{2}+1$

17   A rational number between $\sqrt{2}$ and $\sqrt{3}$ is

(A) $\dfrac{\sqrt{2}+\sqrt{3}}{2}$ (B) $\dfrac{\sqrt{2}\times\sqrt{3}}{2}$ (C) 1.5   (D)   1.8

18   The value of $\dfrac{\sqrt{32}+\sqrt{48}}{\sqrt{8}+\sqrt{12}}$ is equal to

(A) $\sqrt{2}$ (B)   2   (C)   4   (D)   8

19   Zero of the zero polynomial is

(A)   0   (B)   1   (C)   Any real number   (D)   Not defined

20   If $a + b + c = 0$, then $a^3+b^3+c^3$ equal to

(A)   0   (B)   abc   (C)   3abc   (D)   abc

21   The value of $(\frac{-3}{4})^3+(\frac{-5}{8})^3+(\frac{11}{8})^3$ is equal to

(A)   0   (B) $\dfrac{495}{256}$ (C) $\dfrac{256}{495}$ (D)   None of these

22   If $x = 1+\sqrt{2}$ then value of $(x-\frac{1}{x})^3$ will be

(A)   2   (B)   8   (C)   6   (D)   4

23   One of the factors of $(25x^2-1)+(1+5x)^2$ is

(A) $5+x$ (B) $5-x$ (C) $5x+1$ (D) $10x$

24   If $x^{51}+51$ is divided by $x+1$, the remainder is

(A)   0   (B)   1   (C)   49   (D)   50

25   If $a+b=-1$,then value of a^3+b^3+3ab will be

(A)   -1   (B)   1   (C)   0   (D)   2

26   The value of a for which the polynomial $2x^2+ax+\sqrt{2}$ has 1 as a zero will be

(A) $-(2+\sqrt{2})$ (B) $(2+\sqrt{2})$ (C) $2-\sqrt{2}$ (D)   None of these

27   The value of $p(-\frac{2}{3})$ for $p(y)=2y^3-y^2-13y-6$ is

(A) $\dfrac{44}{27}$ (B) $\dfrac{27}{44}$ (C)   0   (D)   None of these

28   The p/q form of $0.12\overline{3}$

(A) $\dfrac{111}{900}$ (B) $\dfrac{1111}{999}$ (C) $\dfrac{11}{99}$ (D)   None of these

29   If $a=\frac{2+\sqrt{5}}{2-\sqrt{5}}$ and $b=\frac{2-\sqrt{5}}{2+\sqrt{5}}$ the the value of a^2+b^2 will be

(A) $-144\sqrt{5}$ (B) $144\sqrt{5}$ (C) $140\sqrt{5}$ (D)   None of these

30   If $x + y = 12$ and $xy = 27$, find the value of $x^3 + y^3$.

(A)   756   (B)   726   (C)   426   (D)   none of these

31   The polynomial $p(x) = x^4 - 2x^3 + 3x^2 - ax + 3a - 7$ when divided by $x + 1$ leaves the remainder 19,then the values of a will be

(A)   5   (B)   4   (C)   2   (D)   0

32   If $a + b + c = 5$ and $ab + bc + ca = 10$, then value of $a^3 + b^3 + c^3 - 3abc$ will be

(A)   20   (B)   -25   (C)   -15   (D)   -10

33   The value of m ,so that $x - 1$ be a factor of $8x^4 + 4x^3 - 16x^2 + 10x + m$ will be

(A)   -6   (B)   6   (C)   4   (D)   0

34   The value of the polynomial $3x^3 - 4x^2 + 7x - 5$, when $x = -3$

(A)   -143   (B)   143   (C)   314   (D)   341

35   When an object undergoes acceleration

(A)   Its speed is   (B)   Its velocity is   (C)   It always falls   (D)   A force must be acting on
      always increases   always   towards the earth   it
                                 increases

36   When a constant force is applied on a body, it moves with constant

(A)   speed   (B)   velocity   (C)   momentum   (D)   acceleration

37   The speedometer is a device which measures

(A)   acceleration   (B)   average speed   (C)   instantaneous   (D)   average velocity
                                                     speed

38   The distance travelled by a freely falling body is proportional to the

(A)   mass of the body   (B)   square of the   (C)   time of fall   (D)   square of the acceleration
                                time of fall   due to gravity

39   If the time-displacement graph of a particle is parallel to the time-axis,the velocity of the particle is

(A)   unity   (B)   zero   (C)   infinity   (D)   none of these

40   The slope of a velocity-time graph represent

(A)   acceleration of   (B)   speed of the   (C)   velocity of the   (D)   None of these
      the body   body   body

41   A circular track has a circumference of 314 m with AB as one of its diameter.A cyclist travels from A to B
     along the circular path then displacement will be
(A)   50 m   (B)   100 m   (C)   150 m   (D)   200 m

42   A person travels a distance of 1.5 m towards east,then 8 m toward south and finally 4.5m towards east, then
     displacement will be
(A)   14 m   (B)   10 m   (C)   0 m   (D)   None of these

43   The velocity of an object is directly proportional to the time elapsed.The object has

(A)   uniform speed   (B)   uniform   (C)   uniform   (D)   variable acceleration
                               velocity   acceleration

44   A body moving along a straight line at 20 m/s undergoes an acceleration of -4m/s^2,after 2 seconds its speed will
     be
(A)   - 8 m/s   (B)   12 m/s   (C)   16 m/s   (D)   28 m/s

45   A train is travelling at a speed of 90 km/h.Brakes are applied so as to produce a uniform acceleration of
     -0.5m/s^2. How far the train will go before it is brought to rest?
(A)   360 m   (B)   500 m   (C)   625 m   (D)   None of these

46   Colourless plastids are known as

A)   Chromoplasts   B)   Chloroplasts   C)   Leucoplasts   D)   Protoplast

47   Animal cell lacking nuclei would also lack in

A)   Ribosome   B)   Lysosome   C)   Endoplasmic   D)   Chromosome
                                                    reticulum

48   The phenomenon by which protoplast of a cell shrinks from the wall is

A)   Osmosis   B)   Plasmolysis   C)   Diffusion   D)   Glycolysis

49   Which of the following are examples of prokaryotes?

A)   Algae   B)   Fungi   C)   Cynobacteria   D)   Protozoa

50   The barrier between the protoplasm and the outer environment in an animal cell is

A)   Cell wall   B)   Plasma   C)   Nuclear   D)   Cytoplasm
                             membrane   membrane

3

51 Ribosomes are the site of

A) Photosynthesis   B) Respiration   C) Protein synthesis   D) Absorption

52 Which is the largest cell organelle present in plant cell?

A) Nucleus   B) Chloroplast   C) Endoplasmic reticulum   D) Mitochondria

53 Animal cell will shrink if kept in ………………solution

A) hypotonic   B) hypertonic   C) isotonic   D) Both B & C

54 A unicellular organism that can be crystallised is……………..

A) amoeba   B) lactobacillus   C) spirogyra   D) Polio virus

55 Function of centriole is

A) Initiate cell division   B) Cell wall formation   C) Formation of spindle fibre   D) Nucleolus formation

56 Chromosomes are made up of nucleic acids and

A) Phosphorus   B) Proteins   C) Sugar   D) Calcium

57 Carbon dioxide is solid in state below

A) -78.6ºC   B) -79.6ºC   C) -77.6ºC   D) -77.9ºC

58 Which among the following shows Tyndal effect?

A) Sugar solution   B) Salt solution   C) Egg albumin in water   D) Both B & C

59 Which is most effective in cooling

A) Water at 0ºC   B) Ice at 0ºC   C) Water at 100ºC   D) Ice at 100ºC

60 Which of the following is not matter?

A) Humidity   B) Blood   C) Electron   D) Moon rock

61 When a sample of hot water is cooled slowly to room temperature, the temperature of the sample

A) increases   B) decreases   C) remains constant   D) Either increases or decreases

62 Which one of the following sets of phenomena would increase on raising the temperature?

A) Diffusion, evaporation, compression of gases   B) Diffusion, solubility, compression of gases   C) Diffusion, evaporation, expansion of gases   D) Diffusion, evaporation, solubility, compression of gases

63 Evaporation always causes

A) Thermal expansion   B) Liquification   C) Cooling down   D) All of these

64 Thermal conduction takes place in

A) Solids   B) Liquids   C) Gases   D) All of these

65 A colloidal solution in which dispersing medium and dispersed phase are liquid and gas, respectively is called

A) Sol   B) Foam   C) Emulsion   D) Gel

66 Which one of the following has maximum number of atoms?

A) 18 g of H2O   B) 18 g of O2   C) 18 g of CO2   D) 18 g of CH4

67 Seema visited a Natural Gas Compressing Unit and found that the gas canbe liquefied under specific conditions of temperature and pressure. Whilesharing her experience with friends she got confused. Help her to identitythe correct set of conditions.

A) Low temperature, low pressure   B) High temperature,   C) Low temperature, high pressure   D) High temperature, high pressure

4

low pressure

68 With which of the following country does India share its northern boundary?

A) Myanmar B) Bangladesh C) China D) Pakistan

69 Which of the following divides India into two equal parts?

A) The Tropic of Cancer B) Prime Meridian C) Standard Meridian D) None of these

70 How much India's distance from Europe has reduced, after opening of Suez Canal?

A) 7000 B) 6000 C) 3000 D) 17,500

71 Name the Strait which separates India from Sri Lanka.

A) The Palk Strait B) Gibrader Strait C) Berring Strait D) None

72 Name the Gulf which separates India from Sri Lanka.

A) Gulf of Mannar B) Gulf of Kuch C) Gulf of Kambat D) None

73 A landmass bounded by sea on three sides is known as:

A) Coast B) Barchan C) Island D) Peninsula

74 Narrow valleys between Shiwalik and Himachal are known as:

A) Tarai B) Duns C) Khadar D) Bhangar

75 Mountain peak that lies in the Karakoram Range is:

A) K2 B) Kanchanjunga C) Mt. Everest D) Dhaulagiri

76 It is located on the west side of the Aravalies:

A) Northern Plains B) Peninsular Plateau C) Coastal Plains D) Thar Desert

77 Out of which sea the Himalayas uplifted?

A) Tethys Sea B) Oral Sea C) Caprian Sea D) Dead Sea

78 Which is the northern most range of Great Himalayas?

A) Himadri B) Kumao Himalayas C) Shiwalik D) Hiredra

79 Peninsular India is a part of which ancient landmass?

A) The Gondwana land B) Angara C) Pangea D) Hubris

80 By which name the mountain spread along the eastern boundary of India are known?

A) Purvachal B) East coast C) Odisha D) Mahendragiri

81 Name the largest river of Thar desert.

A) Gobi B) Luni C) Nile D) Meghana

82 To the south of Bhavar belt, the stream and rivers re-emerge and create a wet, swampy and marshy region, it is called --------------

A) Kankar B) Bhangar C) Terai D) Khadar

83 Which is the largest continent of the world?

A) Europe B) Asia C) Australia D) America

84 Which of these is largest revirine island in the world?

A) Majuli B) Kalijai C) Oman D) None

85 Where is Chilika lake located?

	A) Odisha	B) Telengana	C) Haryana	D) Maharastra

86 Where is the Great Barrier Reef located?

	A) Australia	B) Austria	C) Norway	D) Sweden

87 Circular or horse shoe shaped coral reefs are called-----------

	A) Dune	B) Reef	C) Atoll	D) Barrier

88 What are distributaries?
A) The rivers in the upper course supply water to the river
B) Creation of small islands in the course of river
C) The rivers, in their lower course, split into numerous channels due to the deposition of silt
D) Horsh shoe shaped depostional feature in the course of river

89 Which of the following country larger than India?

	A) Sri Lanka	B) Pakistan	C) China	D) Myanmmar

90 The main production activity in village of India is:

	A) Dairy	B) Animal husbandry	C) Agriculture	D) Transportation

91 Wheat is grown in the:

	A) Rabi season	B) Kharif season	C) Zayad season	D) None of these

92 Raw materials and money in hand are called:

	A) Physical capital	B) Working capital	C) Fixed capital	D) None of these

93 Knowledge and enterprise is known as:

	A) Human capital	B) Working capital	C) Fixed capital	D) None of these

94 What is the standard unit of measuring land?

	A) Hectare	B) Miles	C) Square	D) None of these

95 The ways of increasing production from same land is:

	A) Multiple cropping	B) Modern farming methods	C) Both of these	D) None of these

96 The highest peak in the Eastern Ghats is _____.

	A) Shevroy hills	B) Javadi hills	C) Mahendragiri	D) Doda Betta

97 The largest part of the northern plain formed of older alluvium is called _____.

	A) Bhabar	B) Bhangar	C) Terai	D) Khadar

98 Chhota Nagpur plateau is drained by _____ river.

	A) Kaveri	B) Gandak	C) Damodar	D) Kali

99 Himalayan plane lying between Tista and Dihang river is known as _____ Himalaya.

	A) Punjab	B) Nepal	C) Assam	D) Kumaon

100 The width of Shiwaliks range of the Himalayas is _____ kms.

	A) 50-100	B) 10-50	C) 50-60	D) 300-350

Answer Key

MCQ April May

Class IX

1	2	3	4	5	6	7	8	9	10
C	B	D	D	D	C	D	A	A	A
11	12	13	14	15	16	17	18	19	20
A	C	A	C	D	B	C	B	C	C
21	22	23	24	25	26	27	28	29	30
B	B	C	D	A	A	A	A	D	A
31	32	33	34	35	36	37	38	39	40
A	B	A	A	D	D	C	B	B	A
41	42	43	44	45	46	47	48	49	50
B	B	C	B	C	C	D	B	C	B
51	52	53	54	55	56	57	58	59	60
C	B	B	D	C	B	A	C	B	A
61	62	63	64	65	66	67	68	69	70
B	C	C	D	B	D	C	C	A	A
71	72	73	74	75	76	77	78	79	80
A	A	D	B	A	D	A	A	A	A
81	82	83	84	85	86	87	88	89	90
B	C	B	A	A	A	D	C	C	C
91	92	93	94	95	96	97	98	99	100
A	B	A	A	C	C	B	C	C	B