TEST ID		QUESTION BOOKLET CODE
601	Brilliant STUDY CENTRE PALA	C

FOUNDATION PROGRAMME CLASS X MOCK TEST

23-10-2021

(Students who are studying in Class IX)

PHYSICS + CHEMISTRY + BIOLOGY + MATHS

Time : 120 minutes	**Number of Questions : 100**	**Maximum Marks : 400**
Name of the Candidate :		
Signature of Candidate :		
Phone Number / Mobile No. :		
Name of the School Studying :		
Class Studying :		**Roll. No.**
Test Centre: Signature of Invigilator		

INSTRUCTIONS

1. Please fill in the items such as name, signature, centre etc. of the candidate in the columns given above.
2. Please ensure the given question booklet, is for your class itself.
3. This question booklet contains 100 questions. For each question, four answers are suggested and given against (A), (B), (C) and (D) of which, only one will be the **Most Appropriate Answer**. Mark the bubble containing the letter corresponding to the 'Most Appropriate Answer' in the OMR answer sheet, by using either **Blue or Black ball - point pen only**
4. Each correct answer will be awarded **FOUR** marks. **ONE** mark will be deducted for each **incorrect answer.** More than one answer marked against a question will be deemed as an incorrect response and will be negatively marked. No negative mark for unattended questions.
5. All the rough work is to be done in the blank space provided in the question paper.
6. ***WARNING:*** *Any malpractice or any attempt of malpractice, in the Examination, will* ***DISQUALIFY THE CANDIDATE.***
7. **Return the OMR Answer sheet to the invigilator at the end of the examination.**

IMMEDIATELY AFTER OPENING THIS QUESTION BOOKLET, THE CANDIDATE SHOULD VERIFY WHETHER THE QUESTION BOOKLET ISSUED CONTAINS ALL THE 100 QUESTIONS IN SERIAL ORDER. IF NOT, REQUEST FOR REPLACEMENT

PHYSICS

1. A collection of rays of light is called :

   A) beam B) radiation C) propagation D) None

2. Example of diffused reflection is reflection from

   A) a plane mirror B) a concave mirror C) a news paper D) none

3. Light is :

   A) an electromagnetic radiation B) Mechanical wave

   C) Longitudinal wave D) All of these

4. An object is placed at a distance x from a convex mirror of focal length 15cm when an image is formed at distance of 6cm behind the mirror. The value of x is

   A) –15cm B) –10cm C) –25cm D) None of the above

5. Light travels from air into glass of refractive index 1.5. The time taken by the light to travel through a piece of glass of 50cm thickness is

   A) 2.25s B) 2.25×10^{-7}s C) 2.25×10^{-8}s D) 2.50×10^{-9}s

6. The danger signals installed at the top of tall buildings are red in colour. These can be easily seen from a distance because among all other colours, the red light

   A) is scattered the most by smoke or fog B) is scattered the least by smoke or fog

   C) is absorbed the most by smoke of fog D) moves fastest in air

7. Generally upper part of clouds has

   A) Positive charge B) Negative charge C) Any type of charge D) Zero charge

8. We hear a thunder because

   A) a lot of charges goes in lightning B) Lightning is very bright

   C) Air heats up and expands all of a sudden D) Clouds bang against each other

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SPACE FOR ROUGH WORK

9. Which theory explains the location of earthquakes, volcanic eruptions and newly forming mountains?

A) Theory of plate tectonic B) Theory of evolution

C) None of these D) Both A and B

10. Which of the following scales are not linear in nature?

i) Decibel ii) Richter iii) Meter

A) i only B) ii and iii C) ii only D) i and ii

11. The speed of wave is 340m/s. What is the wavelength of the wave if its frequency is 500Hz

A) 0.68m B) 6.8m C) 68m D) 0.68cm

12. Voltmeter is connected _____ in electrical circuit

A) Series B) Parallel C) Both A & B D) None

13. If a glass rod rubbed with silk, glass rod _____ electrons and silk _____electrons

A) loses, gains B) gains, loses C) loses, loses D) gains, gains

14. Semiconductors may become conductors by

A) increasing area B) increasing temperature

C) decreasing temperature D) decreasing area

15. An apparatus in which electrolysis is carried out is commonly called

A) Voltmeter B) Voltameter C) Electroplating D) Electrodes

16. The units of electric field intensity and electric potential respectively are:

A) N/C and J/C B) C/N and V C) V/m and V/C D) J/C and N/C

17. An electric bulb is connected in an electric circuit. If $10\mu C$ charge flows through the bulb in 20 second, the current flowing in bulb will be:

A) 0.05 μ A B) 0.5 μ A C) 5 μ A D) 50 μ A

18. Nearest star from the earth other than the sun :

A) Sirius B) Pole star C) Alpha Cenlauri D) Morning star

SPACE FOR ROUGH WORK

19. Asteroids move mainly in the gap between the orbits of

A) Mercury and Venus B) Venus and Earth C) Mars and Earth D) Mars and Jupiter

20. The milky way galaxy has a / an

A) Elliptical shape B) Spiral shape C) Irregular shape D) Spherical shape

21. The planet which takes the maximum time to revolve around itself is

A) Mercury B) Pluto C) Venus D) Neptune

22. In which constellation there are maximum number of bright stars?

A) Orion B) Scorpio C) Draco D) Ursa Major

23. Which among the following is a plutoid?

A) Xena B) Triton C) Comet D) Indra

24. The inner core of the earth is mainly composed of

A) Sulphur B) Magnesium C) Iron D) Silica

25. The Richter scale records the intensity of an earthquake becomes 7, then the level of an earthquake is

A) Mild B) Moderate C) Strong D) Disastrous

CHEMISTRY

26. White phosphorous is stored

A) In air B) under water C) under kerosene D) under CS_2

27. Which type of coal has highest percentage of carbon

A) Anthracite B) Bituminous C) Peat D) Lignite

28. Coal gas is a mixture of

A) CH_4+H_2+CO B) $C_4H_{10}+H_2$ C) $C_4H_{10}+H_2O$ D) $C_2H_6+H_2+O_2$

29. Incomplete combustion of methane forms

A) $CO_2 + H_2O$ B) $CO + H_2O$ C) $CO_2 + H_2$ D) $CO + O_2$

SPACE FOR ROUGH WORK

30. The fuel having lowest calorific value is

A) H_2 B) $C_6H_{12}O_6$ C) Kerosene D) CH_4

31. The head of a safety match contains

A) Potassium sulphide and antimony trisulphide

B) Antimony chloride and potasium sulphide

C) Antimony carbonate

D) Antimony trisulphide and potasium chlorate

32. The colour of luminous zone of a candle flame is

A) Black B) Blue C) Yellow D) None

33. Water gas is

A) $CO + CO_2$ B) $CO + N_2$ C) $CO + H_2$ D) $CO + N_2 + H_2$

34. Which of the following is boiling range of diesel oil

A) 573 K to 623 K B) 423 K to 573 K C) 622 K to 673 K D) None

35. Polyester microfibres are how much times fines than human hairs

A) 50 times B) 200 times C) 100 times D) 150 times

36. Caprolactum is related to

A) Polyester B) Nylon-66 C) Nylon-6 D) Teflon

37. Mylar is related to

A) Teflon B) Terylene C) Terry wool D) None of these

38. Which of the following is the poorest conductor of heat?

A) Gold B) Silver C) Mercury D) Copper

39. Which among the following metal has highest density

A) Tungsten B) Lead C) Carbon D) Osmium

SPACE FOR ROUGH WORK

40. Which of the following is not a necessary condition for easy combustion

A) Presence of a combustible substance

B) Presence of air or oxygen

C) Presence of light

D) Low ignition temperature of combustible substance

41. Let 'X' is a substance, which can cool a combustible substance below its ignition temperature. Then 'X' can be used as

A) Supporter of combustion B) Fire promoter

C) Fire developer D) Fire extinguisher

42. The superior quality of coal known as

A) Anthracite B) Peat C) Lignite D) Bituminous

43. Formation of coal from plant matter is called

A) Distructive distillation B) Carbonization

C) Both A & B D) None of these

44. Minimum carbon containing coal is

A) Peat B) Lignite C) Bituminous D) Anthracite

45. Producer gas is a mixture of

A) CO & H_2 B) CO & N_2 C) CO_2 and H_2 D) C and H_2

46. Ammoniacal liquor is

A) Ammonia absorbed in water B) Ammonium hydroxide

C) Aqueous solution of ammonia D) All of the above

47. An example for renewable resources

A) Natural gas B) Fossil fuels C) Biomass D) Ground water

SPACE FOR ROUGH WORK

48. Heating of coal in the absence of air is called

A) Distructive distillation B) Carbonization C) Both A & B D) None of these

49. Which of the following is not true regarding combustion

A) Combustion is exothermic B) All combustion produces flame

C) Combustion require presence of air D) Fossil fuels are combustible

50. During combustion heat is

A) Liberated B) Absorbed

C) neither absorbed nor liberated D) none of these

BIOLOGY

51. Metamorphosis is controlled by

A) Thyroxine B) Adrenaline C) Glucagon D) Insulin

52. i) Stimulate thyroxine production

ii) Controls growth

iii) Also called master gland

iv) Controls the activity of other endocrine gland

All above statements are related with

A) Thyroid B) Adrenal C) Pancreas D) Pituitary

53. Dinosaurs can be included in which of the following category?

A) Threatened B) Extinct C) Endangered D) Vulnerable

54. Which of the following hormone is a modified amino acid?

A) Prostaglandin B) Estrogen C) Epinephrine D) Progesterone

55. Hormone secreting cells called neurosecretory cells are abundant in the

A) hypothalamus B) pons C) cerebral corny D) Medulla oblongata

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SPACE FOR ROUGH WORK

56. Name the disease caused by the deficiency of thyroxine in adults

A) Diabetes insipidus B) Myxedema

C) Diabetes mellitus D) Exophthalmic goitre

57. The hormone, which brings about characteristic changes in male at puberty, is called

A) testosterone B) estrogen C) FSH D) LH

58. Growth hormone is secreted by the

A) anterior lobe of the pituitary B) posterior lobe of the pituitary

C) adrenal gland D) gonads

59. Gestation period is the duration

A) of fertilisation B) between egg grown and ovulation

C) between fertilisation and parturition D) none of the above

60. In a mammalian sperm, spirally arranged mitochondria around an axial filament occurs in

A) middle piece B) head

C) end piece of tail D) principal piece of tail

61. Natural parthenogenesis occurs in

A) honeybee B) frog C) man D) rabbit

62. LH surge occurs during which phase of menstrual cycle

A) menstrual phase B) just before end of proliferation phase

C) at the middle of the cycle D) beginning of proliferative phase

63. Amniocentesis is a process to

A) determine any disease in heart

B) determine any hereditary disease in the embryo

C) know about the disease of brain

D) all of these

SPACE FOR ROUGH WORK

64. Who is known as the father of Microscopy?

A) Leuwenhoek B) T.Schwann C) H.G. Khorana D) M.J. Schleiden

65. Bacterial cell wall is composed mainly of

A) cellulose B) chitin C) Peptidotoglycan D) Pectin

66. Smooth ER is well developed in cells that synthesize

A) steroids and lipids B) proteins C) carbohydrates D) all of the above

67. Which of the following structures is exceptionally rich in hydrolytic enzymes?

A) lysosomes B) microsomes C) chromosomes D) ER

68. Fluid-mosaic model of plasma membrane was given by

A) Schleiden and Schwann B) Goiter and Grendell

C) Singer and Nicholson D) Nageli and Cramer

69. Nucleosome is made of

A) only DNA

B) the histones with DNA wrapped around them

C) histones

D) DNA and RNA

70. Depending upon their shape bacteria can be classified as

A) Coccus, Bacillus, Spiral B) Coccus, Helix, Spiral

C) Coccus, Spiral, Spindle D) Spiral, Helix, Bacillus

71. Cholera and leprosy are

A) viral disease B) fungal disease C) bacterial disease D) deficiency disease

72. The mosquite which transmits malaria is

A) female anopheles B) male anopheles C) female culex D) male culex

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SPACE FOR ROUGH WORK

73. Find out the odd one

A) Chlamydomonas B) Fucus C) Gelidium D) Trypanosoma

74. Nitrogen fixation is performed by

A) Green algae and fungi B) Mycorrhiza

C) Mycoplasma D) Blue green algae and bacteria

75. During fermentation by yeast, alcohol is produced from

A) Sugar B) Mucopolysaccharides

C) Proteins D) Fats

MATHEMATICS

76. The value of m for which $5^{m} \div 5^{-3} = 5^{5}$ is

A) 3 B) 2 C) 4 D) 5

77. The value of $\left(5^{-1} \times 2^{-1}\right) \times 6^{-1}$ is

A) $1/60$ B) $1/50$ C) $1/40$ D) $1/20$

78. How many terms are there in the expression $5xy + 9yz + 3zx + 5x - 4y$?

A) 1 B) 3 C) 4 D) 5

79. Which of the following is the simplified form of $2 + pq + 3p^2 - 4(pq + 8) + 5(p^2 + pq)$

A) $30 - 2pq + 8p^2$ B) $30 + 2pq - 8p^2$

C) $-30 + 2pq - 8p^2$ D) $-30 + 2pq + 8p^2$

80. The value of $x^2 - 2yx + y^2$ when $x = 1,\ y = 2$ is

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

SPACE FOR ROUGH WORK

81. Which of the following expression is a binomial?

A) $2 - mn - m^2$ B) $5xy - y^2$ C) 6ab D) $p + q + 2$

82. The value of $\left(2^{-1} \times 4^{-1}\right) \div 2^{-2}$ is

A) ¼ B) ⅓ C) ½ D) ⅕

83. The cost price of an air conditioner at a shop is Rs. 35,000. The sales Tax changed is 14%. Then the bill amount is

A) 4,9000 B) 39, 900 C) 31, 100 D) 44, 800

84. If 6 workers can paint a home in 24 hr, how many workers will be required to do the same work in 18 hr?

A) 4 B) 72 C) 8 D) 3

85. Find the compound interest on Rs. 10, 000 for 2 years at 10% per annum compounded annually

A) 12, 100 B) 2,000 C) 12, 000 D) 2, 100

86. If the mean of 6, 4, 7, P and 10 is 8. The P is

A) 67 B) 13 C) 37 D) 27

87. There are 100 students in a hostel. Food provision for them is for 20 days. How long will these provisions last, if 25 more students join the group?

A) 25 B) 20 C) 18 D) 16

88. Which of the following cannot be the probability of an event?

A) ⅔ B) ⅖ C) 1 D) $\frac{5}{2}$

89. A man got a 10% increase in his salary. If his new salary is 1, 54, 000. Then his original salary is

A) 14, 0000 B) 44, 000 C) 14, 000 D) 24, 000

90. A machine manufactures 100 bulbs in 5 min. How many bulbs will it manufacture in 20 min?

A) 200 B) 400 C) 100 D) 250

SPACE FOR ROUGH WORK

91. Which of these can be the coordinates of a point not lying on the y-axis and having y - coordinate as 5?

A) $(5, 4)$ B) $(4, 5)$ C) $(0, 5)$ D) $(5, 0)$

92. If a die is rolled once, find the probability that an even number is obtained

A) $\frac{1}{6}$ B) $\frac{1}{3}$ C) $\frac{1}{2}$ D) 1

93. A bag contains 5 red balls, 8 white balls, 4 green balls and 7 black balls. If one ball is drawn at random find the probability that it is black ball

A) $\frac{7}{24}$ B) $\frac{5}{24}$ C) $\frac{8}{24}$ D) $\frac{4}{24}$

94. The product of two rational numbers is $\frac{-28}{81}$. If one of the number is $\frac{14}{27}$, then the other number is

A) $\frac{-2}{3}$ B) $\frac{2}{3}$ C) $\frac{1}{3}$ D) $\frac{1}{4}$

95. What number should be subtracted from $\frac{27}{13}$. So as to get $\frac{-3}{7}$?

A) $\frac{328}{91}$ B) $\frac{128}{91}$

C) $\frac{288}{91}$ D) $\frac{228}{91}$

96. The surface area of a cube is 216 cm^2. Then its volume is

A) 1296 cm^3 B) 648 cm^3 C) 864 cm^3 D) 216 cm^3

97. Find the value of x, $5x + \frac{7}{2} = \frac{3}{2}x - 14$

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

SPACE FOR ROUGH WORK

98. If "p" is added to -5 the result is 7. The value of 3p is

A) 6 B) 18 C) 36 D) 4

99. Two adjacent angles of a parallelogram are $(2x + 25)^0$ and $(3x - 5)^0$. The value of x is

A) 28 B) 32 C) 36 D) 42

100. The four angles of a pentagon are 40^o, 75^o, 125^o and 135^o. The measure of the fifth angle is

A) 165^o B) 170^o C) 160^o D) 175^o

SPACE FOR ROUGH WORK

FOUNDATION PROMOTION - CLASS X (STUDYING-IX) - KEY

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