

Atomic Energy Central School No 4 Rawatbhata

Multiple Choice Questions Examination (November 2019-20)

MM: 120

Class VIII (Mathematics, Science, Social Science)

Time:3hour

Name of student : _____ Roll No. _____ Class Sec _____

Date: _____ Invigilator's Sign: _____

Mathematics

1. Find the buying price when 5% Sales tax is added on the purchase of a towel at ₹50. 1
a) ₹60 b) ₹50.50
c) ₹52.50 d) None of these
2. Find the time period and rate for a sum taken for 2 years at 4% per annum compounded half yearly. 1
a) Time period = 3, rate = 2% half yearly b) Time period = 4, rate = 2%half yearly
c) Time period = 4, rate = 1% half yearly d) None of these
3. Fabina borrows Rs.12,500 at 12% per annum for 3 years at simple interest and Radha borrows the same amount for the same time period at 10% per annum, compounded annually. Who pays more interest and by how much? 1
a) None of these b) Fabina pays ₹262.50 more
c) Fabina pays ₹462.50 more d) Fabina pays ₹362.50 more
4. An item marked at Rs 840 is sold for Rs 714. What is the discount amount? 1
a) ₹140 b) ₹136
c) None of these d) ₹126
5. If 8% VAT is included in the prices, find the original price of a TV bought for ₹13,500. 1
a) None of these b) Rs 12,500
c) ₹12,000 d) ₹14,000
6. Find selling price (S.P.) if a profit of 5% is made on a cycle of Rs 700 with Rs 50 as overhead charges. 1
a) Rs.787.50 b) Rs 300
c) None of these d) Rs 600
7. The price of a motor bike was Rs 54,000 last year. It has increased by 20% this year. What is the price now? 1
a) None of these b) ₹64800
c) ₹54800 d) ₹66800
8. A shopkeeper bought two TV sets at ₹10,000 each. He sold one at a profit 10% and the other at a loss of 10%. Find whether he made an overall profit or loss. 1
a) Loss of 10% b) Profit of 10%
c) No profit no loss d) None of these
9. Find the buying price when 5% ST is added on the purchase of 5 kg of flour at ₹15 per kg. 1
a) ₹77 b) ₹75
c) ₹78.75 d) None of these
10. A shopkeeper purchased 200 bulbs for Rs 10 each. However 5 bulbs were fused and had to be thrown away. The remaining were sold at Rs 12 each. Find the gain or loss %. 1
a) Gain of 25% b) Gain of 17%
c) Loss of 17% d) Loss of 15%
11. $4x \times 5y \times 7z = ?$ 1
a) 140xy b) 140xz
c) 140 d) 140xyz
12. $x(x - 3) + 2 = ?$ 1
a) $x^2 - 3x + 2$ b) $x^2 - 2x + 2$
c) $x^2 - 5x + 3$ d) $x^2 + 3x + 5$

13. Multiply $(x - 4)$ and $(2x + 3)$. 1
- a) $2x^2 - 5x - 12$ b) $2x^2 - 12$
c) $3x + 13$ d) $5x - 12$
14. Subtract $5x^2 - 4y^2 + 6y - 3$ from $7x^2 - 4xy + 8y^2 + 5x - 3y$. 1
- a) $2x^2 - 4xy + 12y^2 + 5x - 9y + 3$ b) $2x^2 - 4xy + 12y^2 + 5x$
c) $2x^2 - 4xy + 12y^2 + 5x - 9y$ d) $5x - 9y + 3$
15. Add: $7xy + 5yz - 3zx$, $4yz + 9zx - 4y$, $-3xz + 5x - 2xy$. 1
- a) $5xy + 9yz + 3zx + 4y$ b) $5xy + 9yz + 3zx + 5x$
c) $5xy + 9z$ d) $5xy + 9yz + 3zx + 5x - 4y$
16. $3y(2y - 7) - 3(y - 4) - 63 = ?$ 1
- a) $2y - 51$ b) $6y^2 - 24y - 51$
c) $6y^2 - y - 51$ d) $y^2 - y - 51$
17. $(3a + 4b) \times (2a + 3b) = ?$ 1
- a) $6a^2 + 17ab$ b) $17ab - 5$
c) $6a^2 + 17ab + 17b^2$ d) $6a^2 + 17ab + 12b^2$
18. $3p \times (4p^2 + 5p + 7) = ?$ 1
- a) $12p^3 + 15p^2 + p$ b) $21p^2 + 12p - 2$
c) $12p^3 + 15p^2 + 21p$ d) $12p^3 + p^2 + 21p$
19. $(-3x) \times (-5y + 2) = ?$ 1
- a) $6x$ b) $54xy$
c) $15xy$ d) $15xy - 6x$
20. Which of the following is a binomial? 1
- a) $4x + y - z$ b) $3x + 5y + 7$
c) $2x$ d) $3a - 2b$
21. Which of the following is like term as $8x^2yz$? 1
- a) $9xy$ b) $9x^2yz$
c) $9xz$ d) $9xyz$
22. Using suitable Identity, find $983^2 - 17^2$. 1
- a) 1000 b) 98317
c) 966 d) 966000
23. $5xy \times (y^2 + 3) = ?$ 1
- a) $5xy^3 + 15xy$ b) $5xy^2 + 15xy$
c) $15xy$ d) $9x^2 - 12xyz$
24. $(5y + 2) \times 3x = ?$ 1
- a) $15xy$ b) $6xy + 15xz$
c) $6x$ d) $15xy + 6x$
25. Add $5m(3 - m)$ and $6m^2 - 13m$. 1
- a) $m^2 - 2m$ b) $m^2 + 2m$
c) $4m - 5$ d) $m^2 + 5m$
26. Find the common factors of $6abc$, $24ab^2$ and $12a^2b$. 1
- a) a b) b
c) 6 d) $6ab$
27. Factorise: $x^2 + 8x + 16$ 1
- a) $(x + 4)^2$ b) $(x + 2)^2$
c) $(x + 3)^2$ d) $(x + 5)^2$
28. Factorise $12a^2b + 15ab^2$ 1
- a) $3ab$ b) $3ab(5a + 4b)$
c) $(4a + 5b)$ d) $3ab(4a + 5b)$
29. Solve: $7x^2y^2z^2 \div 14xyz$ 1
- a) 4 b) $1/2xyz$
c) 2 d) 3

30. Factorise: $xy + y + xz + z$ 1
 a) None of these b) $(y + z)$
 c) $(x + 1)(y + z)$ d) $(x + 1)$
31. Factorise: $36y^2 - 36y + 9$ 1
 a) $9(2y - 1)^2$ b) 9
 c) None of these d) $(2y - 1)^2$
32. Which of the following is quotient obtained on dividing $-18xyz^2$ by $-3xz$? 1
 a) $-6yz$ b) $6xy^2$
 c) $6xy$ d) $6Yz$
33. Factorise: $125x^3y^5z^4 - 5xy^3z^6$ 1
 a) $(5xy - z)(5xy + z)$ b) $5xy^3z^4(5xy - z)$
 c) $5xy^3z^4(5xy - z)(5xy + z)$ d) $5xy^3z^4(5xy + z)$
34. Divide the given polynomial by the given monomial: $(5x^2 - 6x) \div 3x$ 1
 a) None of these b) $\frac{1}{3}(5x - 6)$
 c) $(5x - 6)$ d) $\frac{1}{3}$
35. Factorise: $169a^2 - 144b^2$ 1
 a) $(13a + 12b)$ b) $(13a - 12b)$
 c) None of these d) $(13a + 12b)(13a - 12b)$
36. Factorise: $a^2 - 2ab + b^2 - c^2$ 1
 a) $(a - b - c)(a + b + c)$ b) $(a - b - c)(a - b + c)$
 c) $(a - b - c)(a - b - c)$ d) $(a + b + c)(a + b + c)$
37. Factorise: $15xy - 6x + 5y - 2$ 1
 a) $(3x - 1)(7y - 3)$ b) $(5y - 2)$
 c) $(3x + 1)$ d) $(3x + 1)(5y - 2)$
38. Divide as directed: $52pqr(p + q)(q + r)(r + p) \div 104pq(q + r)(r + p)$ 1
 a) $r(p + q)$ b) $\frac{1}{2}r(p + q)$
 c) $\frac{1}{2}$ d) None of these
39. Factorise: $a^4 - 2a^2b^2 + b^4$ 1
 a) $= (a - b)^2(a + b)^2$ b) $(a + b)^2$
 c) $(a + b)^2(a + b)^2$ d) $= (a - b)^2$
40. Factorise: $(2r - 5)^2 + (2r - 5)$ 1
 a) None of these b) $2(2r - 5)(r - 2)$
 c) $2(2r - 5)$ d) $(2r - 5)(r - 2)$

Science

41. Oils and lubricants help in reducing friction because they 1
 a) Make the surface coarse b) Increase the rolling friction
 c) Fill the irregularities in surface d) Decrease the rolling friction
42. Friction involves 1
 a) Unnecessary expenses of energy b) Increase the life of machine
 c) Reduce the production d) Reduce the expenses of energy
43. Which of the following living organisms have streamlined body? 1
 a) Dog and horse b) Fish and birds
 c) Lion and Donkey d) Elephant and human
44. Sand paper is used to clean the metal surface to remove rust as because 1
 a) Sand paper has rough surface to increase friction b) Sand paper has smooth surface to increase friction
 c) Sand paper has rough surface to decrease friction d) Metal and sand paper reacts easily

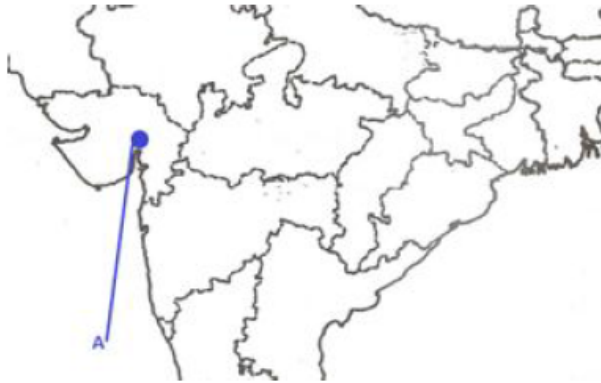
45. Alida runs her toy car on the dry marble floor, wet marble floor, newspaper and towel spread on the floor. 1
The force of friction acting on the car on different surfaces in increasing order will be:
- a) wet marble floor, dry marble floor, towel, newspaper. b) wet marble floor, dry marble floor, newspaper and towel.
c) newspaper, towel, dry marble floor, wet marble floor. d) towel, newspaper, dry marble floor, wet marble floor.
46. It is difficult to apply brakes to stop the moving ship because 1
a) There is no friction between solid and liquid b) Friction exerted by water is very small
c) Friction exerted by water is very high d) Friction exerted by water is absent
47. The heat in metals is conducted by the process of 1
a) Conduction b) Absorption
c) Radiation d) Convection
48. Streamlining is 1
a) making back thick b) making back thin
c) Making tips thin d) making tips thick
49. When we attempt to move any surface, we apply a force to overcome 1
a) Interlocking between surfaces b) Gravitational force of earth
c) Electrostatic force between particles d) Vander wall force between surfaces
50. Sonic boom is due to 1
a) Friction between air and supersonic object b) Gravitational Force between Earth and plane
c) Friction between air and gravitation
d) Attraction between earth and atmosphere
51. The frictional force that counterbalance the applied force during stationary state is called 1
a) Static friction b) Kinetic friction
c) Momentary friction d) Rolling friction
52. A coin and a feather are dropped from same height, which one will reach first on the ground? 1
a) Depends upon size of coin b) Both together
c) Coin d) Feather
53. Frictional force is necessary in 1
a) Playing carom b) Accelerating the car
c) Using matchstick d) Pushing heavy load
54. Sound can travel through 1
a) solids, liquids and gases b) liquids only
c) solids only d) gases only
55. A car with worn out treads on tyres is more likely to skid due to 1
a) Smaller size of tyres b) Less friction
c) Less weight of tyres d) More friction
56. Striker moves longer distance on carom when 1
a) Striker is old b) Striker is new
c) Powder is sprinkled d) Carom board is neat and clean
57. Which of the following method is applied to increase friction of vehicles? 1
a) Regular oiling of engine b) Less inflating the tyres
c) Cleaning of vehicles d) Treading of tyres
58. The force responsible for changing the state of motion of an object is 1
a) Molecular force b) Muscular force
c) Friction d) Gravitational force
59. What does air resistance do to falling objects? 1
a) Increase its mass b) Make them rise
c) Slows down them d) Speeds them up

60. Which of the following is correct order in descending frictional force 1
a) Static > sliding > rolling b) Rolling > static > sliding
c) Static > rolling > sliding d) Rolling > sliding > static
61. The police use high frequency whistles which can be heard by 1
a) Horse b) Human
c) Bat d) Dogs
62. Ultrasound equipment for investigating and tracking medical problems, works at frequency 1
a) Higher than 20 kHz b) At 20 kHz only
c) Lower than 20 kHz d) At any frequency
63. Name the medium in which sound travels slower? 1
a) Gas b) None of these
c) Solid d) Liquid
64. A pendulum oscillates 40 times in 4 seconds. The time period of vibration will be 1
a) 4s b) 0.4 s
c) 1s d) 0.1s
65. If the thunder is heard by a man 4 seconds after the lightening is seen. How far is the lightening from man? (Speed of sound in air is 330m/s) 1
a) 1320 m b) 1230 m
c) 1420 m d) 330 m
66. Voice of male is heavy compared to woman because 1
a) Male vocal cord is small b) Male vocal cord is larger
c) Female vocal cord is large d) Female vocal cord is small
67. Which of the following quantities are proportional to each other? 1
a) Frequency and wavelength b) Amplitude and loudness
c) All of the above d) Time-period and frequency
68. In most of the cases vibration of objects are not visible because 1
a) Frequency is very less b) Wavelength is very large
c) Amplitude is very small d) Wavelength is very small
69. Which nerve transmits sound impulse to brain form ear? 1
a) Optic nerve b) Cardiac nerve
c) Auditory nerve d) Eye nerve
70. Which of the following sounds cannot be heard by human beings? 1
a) Frequency of 10 kHz b) Frequency of 10 Hz
c) Frequency of 1000 Hz d) Frequency of 100 Hz
71. A child with hearing loss may have 1
a) Defective speech b) Longer tongue
c) Short stature d) Black skinned
72. Which of the following is not a bone present in human ear? 1
a) Stirrup b) Hammer
c) Anvil d) Femur
73. The time period of a vibration 500Hz is equal to 1
a) 0.002 seconds b) 0.5 seconds
c) 0.2 seconds d) 0.02 seconds
74. When the amplitude of sound is large, the sound produced is 1
a) Not audible b) Feeble
c) Loud d) No change due to amplitude
75. Which of the following vibrates with a low frequency? 1
a) Whistle b) Sitar
c) Flute d) Drum

76. The frequency of a sound wave is 200 Hz, how many times will it vibrates in one minute? **1**
 a) 6,000 times b) 200 times
 c) 4,000 times d) 12,000 times
77. Speed of sound in sea water is slightly more than distilled water because **1**
 a) Density of distilled water is more b) Density of sea water is less
 c) Sea is larger in size d) Density of sea water is more
78. Which of the following health problem is not caused due to noise pollution? **1**
 a) Diabetes b) Lack of sleep
 c) Anxiety d) Hypertension
79. We are not able to hear the sound of pendulum although it is oscillating because **1**
 a) Frequency is more than 20,000Hz b) Wavelength is very less
 c) Frequency is less than 10Hz d) Frequency is more than 10 Hz
80. Sound travels faster in solid medium as compared to liquid and gases because **1**
 a) Particles moves easily b) Intermolecular force is weak
 c) Particles are away from each other d) Particles of solid are very close

Social Science

81. Choose the city where the Tata Iron and Steel Compnay (TISCO)was established in 1912 . **1**
 a) Calcutta b) Bhuvaneshwar
 c) Jamshedpur d) Raipur
82. From the outline map of India, identify the place marked A in blue circle, where was the first mill was established in 1861. **1**



- a) Udaipur b) Surat
 c) Ahmedabad d) Jamnagar
83. Wootz is an anglicised version of the Kannada word ukku. Telugu word hukku and Tamil and Malayalam urukku. What does this word actually mean ? **1**
 a) Sword b) Tool
 c) Metal d) Steel
84. Identify this personality based on the clues given. He toured Mysore in 1800 and left an impressionable account of the technique by which Wootz steel was produced. **1**
 a) John Fryer b) Francis Buchanan
 c) John Albert de Mandesto d) Marco Polo
85. Complete the following. By 1919, the colonial government bought _____ percent of steel manufactured by TISCO. **1**
 a) 50 percent b) 40 percent
 c) 70 percent d) 90 percent
86. One of the most important Indian ports of the 17th century. **1**
 a) Calcutta b) Bombay
 c) Surat d) Madras
87. Spot from the list given below, the important hand spun material urged by Mahatma Gandhi to use. **1**
 a) Khadi b) Polyster
 c) Wool d) Silk
88. The experiences of a famous personality are given below. Identify this famous personality based on the clues given : **1**
 He hated going to school

The school appeared like a prison , for he could never do what he felt like doing
 When the other children listened to the teacher, his mind would wander away.
 On growing up he wanted to set up a school where the child was happy, free and creative - a school of self learning

- a) Gopalkrishna Gokhale
- b) Mahatma Gandhi
- c) Swami Vivekananda
- d) Rabindranath Tagore

89. Some important viewpoints of Gandhiji's and Rabindranath Tagore's thought of education are given below. 1
 State the statements that are not TRUE with respect to their thought on education.

- a) Gandhiji believed that creative learning could be encouraged only within a natural environment.
- b) Gandhiji was highly critical of Western civilisation and its worship of machines and technology
- c) Tagore wanted to combine elements of modern Western civilization with what he saw as the best within Indian tradition .
- d) Tagore emphasized the need to teach Science and technology at Santhiniketan along with art, music and dance in a natural environment

90. William Adam toured the districts of 1

- a) Bihar and Bengal
- b) Bihar and Orissa
- c) Assam and Bengal
- d) Bengal and Rajasthan

91. What was the new service started to recruit teachers for educational institutions all over the country. 1

- a) Bharat Shikshan
- b) Indian Training Service
- c) Indian Knowledge Service
- d) Indian Education Service

92. Name the first woman chancellor of the Aligarh Muslim University. 1

- a) Sultan Jahan Begum
- b) Noor Ahmed Begum
- c) Fathima Begum
- d) Sarojini Naidu

93. Name the college established on the banks of the river Hoogly near Calcutta by William Carrey. 1



- a) Vidyasagar College
- b) Bethune College
- c) Serampore College
- d) Scottish Church college

94. Name the person who put forward a demand for free and compulsory education before the British 1

- a) Rabindranath Tagore
- b) Mahatma Gandhi
- c) Madan Mohan Malaviya
- d) Gopal Krishna Gokhale

95. Name the crop that is also known as Paddy? 1

- a) Rice
- b) Millets
- c) Maize
- d) Wheat

96. Name the country that is the leading producer of Rice in the world. 1

- a) China
- b) India
- c) Pakistan
- d) Srilanka

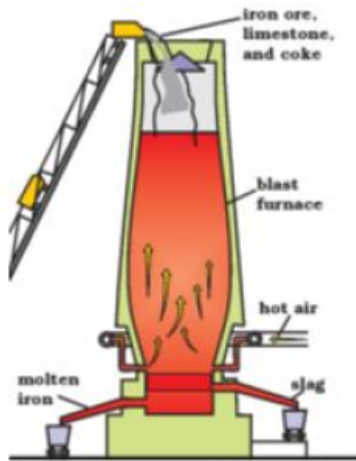
97. This crop is grown for its tender leaves. India is one of the leading producers of world, and 70% is consumed within India itself. Shown below is an important garden in Darjeeling famous for this crop. 1

Identify this crop



- a) Maize
c) Tea
- b) Rice
d) Wheat

98. From the given options, which one is the apt definition for the term Agriculture? 1
- a) The Process of preparing the land for the cultivation of crops , and also to rear livestock.
b) The extraction and production of resources by the nature
c) The temperature and the amount of rainfall required for certain crops to grow
d) The size of land holdings in an area
99. Name the type of farming practiced to meet the needs of the farmer's family? 1
- a) Commercial Farming
b) Mixed Farming
c) Plantation agriculture
d) Subsistence Farming
100. Pick out the example of secondary economic activity from the given list of options. 1
- a) Processing of Steel
b) Mining
c) Transport
d) Agriculture
101. Which of these is a tertiary activity? 1
- a) None of these
b) Manufacturing wool
c) Agriculture
d) Selling grocery
102. Analyse the image given below and choose the correct process related to it from the given list. 1
- 'Raw material is put in the blast furnace where it goes for smelting and then refined to obtain the output'.



- a) The process of converting iron ore to steel
b) The extraction of Coal
c) The extraction of carbon
d) The process of making cloth from fibres
103. Complete the following: India's steel production increased from 1 million tonnes in 1947 to 49.67 million tonnes during 2007-08. 1
- India is now the _____ largest producer of steel in the world.
- a) 8th
b) 5th
c) 1st
d) 10th
104. Why was Jamshedpur chosen to set up the steel plant? Pick out the most appropriate answer from the given options. 1
- (i) Abundant iron ore deposits
(ii) Abundant coal and manganese deposits
(iii) Availability of limestone and solomite
(iv) Cheap labour
(v) Direct link to major markets and ports of Kolkatta and Mumbai
- a) Only(i),(iii),(iv) are TRUE
b) Only (v)is TRUE
c) Only (i),(ii),(iii) and (iv) are TRUE
d) All the above reasons ie (i), (ii),(iii),(iv),(v) are TRUE
105. Which of these factors affect the location of industries? 1
- a) Availability of raw material
b) All of the given
c) Power
d) Transport

106. Which one among the following is not an industrial region of India? 1
- a) Madurai- Thanjavur region b) Mumbai-Pune cluster
c) Bangalore- Tamil Nadu region d) Gurgaon- Delhi-Meerut region
107. Which of these states has some major steel producing centres? 1
- a) Maharashtra b) Punjab
c) Jharkhand has some major steel producing centres. d) Tamil Nadu
108. Chintzes was a very popular cloth material in the olden days. In which place of India was it produced? 1
- a) Calicut b) Masulipatnam
c) Burhanpur d) Dhaka
109. The Protection of women from Domestic Violence Act came into effect in the year..... 1
- a) 2005 b) 2002
c) 1919 d) 2004
110. When was the Protection of Women from Domestic Violence Act passed? 1
- a) 2007 b) 2001
c) 2005 d) 1990
111. When was the Hindu Succession (Amendment) Act passed? 1
- a) 2005 b) 1870
c) 1979 d) 1962
112. When did the Protection of Women from Domestic Violence Act come into effect? 1
- a) 2006 b) 1990
c) 2001 d) 2005
113. A bill finally becomes an Act after the assent of _____. 1
- a) President b) Prime Minister
c) Supreme Court d) Speaker
114. Which of the following is a repressive law? 1
- a) The Seditious Act, 1870 b) All of these
c) The Domestic Violence Act, 2005 d) Hindu Succession Amendment Act, 2005
115. Supreme court was earlier located in the Chamber of Princes in the 1
- a) Judicial House b) Parliament House
c) Prime minister house d) President house
116. The number of High Court is..... 1
- a) 25 b) 30
c) 24 d) 28
117. This refers to the court declaring that a person is not guilty of the crime which he/she was tried for by the court 1
- a) Acquit b) Violation
c) Impartial d) Accused
118. Memo should also be attested by at least ___ witness who could include a family member of the 1
- a) One b) Four
c) Three d) Two
119. The number of courts at the apex level is..... 1
- a) One b) Four
c) Two d) Three
120. In 2001, the drought in _____, millions faced an acute shortage of food. 1
- a) Punjab and Gujarat b) Rajasthan and Odisha
c) Rajasthan and West Bengal d) Punjab and Haryana

Solution
Class 08 - Mathematics
MULTIPLE CHOICE QUESTION EXAMINATION

Section A

1. (c)
₹52.50

Explanation:

Price of towel = ₹50

$$\text{Sale Tax (5\%)} = 50 \times \frac{5}{100}$$

$$= ₹2.50$$

$$\text{Buying price} = ₹(50 + 2.50)$$

$$= ₹52.50$$

2. (b)
Time period = 4, rate = 2% half yearly

Explanation:

In half yearly cases time will be double and rate will be half

Therefore, Time period = 4, rate = 2% half yearly

3. (d)
Fabina pays ₹362.50 more

Explanation:

Fabina borrows = ₹12,500

Rate(R) = 12%

Time(T) = 3 years

$$\text{S.I.} = \frac{PRT}{100}$$

$$= \frac{12500 \times 12 \times 3}{100}$$

$$= ₹4,500$$

Amount paid by Radha at the end of three years = $A = P\left(1 + \frac{R}{100}\right)^n$

$$\text{or, } A = 12500\left(1 + \frac{10}{100}\right)^3$$

$$= 12500\left(\frac{110}{100}\right)^3$$

$$= ₹16,637.50$$

C.I. = Amount - Principal

$$= ₹(16,637.50 - 12,500)$$

$$= ₹4,137.50$$

The Interest paid by Fabina is ₹4,500 and by Radha is ₹4137.50

Thus, Fabina pays more Interest.

Fabina pays ₹362.50 more.

4. (d)
₹126

Explanation:

Discount = ₹(840 - 714) (marked price - sale price)

$$= ₹126$$

5. (b)
Rs 12,500

Explanation:

let the price before VAT = ₹100

VAT = 8%

Price after VAT = ₹(100 + 8)

= ₹108

If the price after VAT is ₹108 then price before VAT is = ₹100

If the price after VAT is ₹13,500 then price before VAT is = $\frac{100}{108} \times 13500$

= ₹12,500

6. (a)
Rs.787.50

Explanation:

Purchase price of cycle = Rs 700

overhead charges = Rs. 50

Total Purchase price = Rs.(700 + 50) = Rs.750

Profit = Rs. $\frac{750 \times 5}{100}$

= Rs 37.5

Selling Price = Rs.(750 + 37.50)

= Rs.787.50(Purchase price +profit)

7. (b)
₹64800

Explanation:

Price of the motor bike = ₹54000

Increased price = ₹ $\frac{54000 \times 20}{100}$ = ₹10800

Price Now = ₹(54000 + 10800) = ₹64800

8. (c)
No profit no loss

Explanation:

Purchase price of TV set = ₹10,000

Profit = 10,000 × $\frac{10}{100}$

= ₹1,000

Loss = 10,000 × $\frac{10}{100}$

= ₹1,000

No profit no loss

9. (c)
₹78.75

Explanation:

Purchase price of 1 kg floor = ₹15

5 kg floor = ₹(15 × 5)

= ₹75

Sale tax (5%) = 75 × $\frac{5}{100}$

= ₹3.75

Buying price = ₹(75 + 3.75)

= ₹78.75

10. (b)
Gain of 17%

Explanation:

Total Purchase Price of Bulbs = 200×10

= Rs.2000

5 bulbs are fused so 195 bulbs remain to sell

selling price Rs. 12/- each

Total selling price $195 \times 12 = \text{Rs. } 2340/-$

Total gain = $2340 - 2000$

= Rs.340

Gain % = $\frac{\text{gain} \times 100}{\text{purchase}}$

= $\frac{340 \times 100}{2000}$

= 17%

11. (d)

$140xyz$

Explanation:

$4x \times 5y \times 7z$

Multiply the constants and variables we get,

$4 \times 5 \times 7 \times x \times y \times z$

$140xyz$

12. (a)

$x^2 - 3x + 2$

Explanation:

$x(x - 3) + 2$

Open the brackets we get,

$x^2 - 3x + 2$

13. (a)

$2x^2 - 5x - 12$

Explanation:

$(x - 4)(2x + 3)$

solving brackets we get,

$x(2x + 3) - 4(2x + 3)$

$2x^2 + 3x - 8x - 12$

$2x^2 - 5x - 12$

14. (a)

$2x^2 - 4xy + 12y^2 + 5x - 9y + 3$

Explanation:

$(7x^2 - 4xy + 8y^2 + 5x - 3y) - (5x^2 - 4y^2 + 6y - 3)$

opening brackets we get,

$7x^2 - 4xy + 8y^2 + 5x - 3y - 5x^2 + 4y^2 - 6y + 3$

solving like terms we get,

$7x^2 - 4xy + 8y^2 + 5x - 3y - 5x^2 + 4y^2 - 6y + 3$

$7x^2 - 5x^2 + 8y^2 + 4y^2 + 5x - 3y - 6y - 4xy + 3$

$2x^2 + 12y^2 + 5x - 9y - 4xy + 3$

$2x^2 - 4xy + 12y^2 + 5x - 9y + 3$

15. (d)

$5xy + 9yz + 3zx + 5x - 4y$

Explanation:

$$(7xy + 5yz - 3zx) + (4yz + 9zx - 4y) + (-3xz + 5x - 2xy)$$

opening brackets we get, $7xy + 5yz - 3zx + 4yz + 9zx - 4y - 3xz + 5x - 2xy$

adding like terms and unlike terms

$$7xy - 2xy + 5yz + 4yz - 3zx - 3xz + 9zx + 5x - 4y$$

$$5xy + 9yz + 3xz + 5x - 4y$$

16. (b)

$$6y^2 - 24y - 51$$

Explanation:

$$3y(2y - 7) - 3(y - 4) - 63$$

open brackets we get,

$$6y^2 - 21y - 3y + 12 - 63$$

$$6y^2 - 24y - 51$$

17. (d)

$$6a^2 + 17ab + 12b^2$$

Explanation:

$$(3a+4b)(2a+3b)$$

solving brackets we get,

$$3a(2a + 3b) + 4b$$

$$6a^2 + 9ab + 8ab + 12b^2$$

$$6a^2 + 17ab + 12b^2$$

18. (c)

$$12p^3 + 15p^2 + 21p$$

Explanation:

$$3p \times (4p^2 + 5p + 7)$$

$$3p(4p^2 + 5p + 7)$$

Open the brackets we get,

$$12p^3 + 15p^2 + 21p$$

19. (d)

$$15xy - 6x$$

Explanation:

$$(-3x) \times (-5y + 2)$$

$$(-3x)(-5y+2)$$

Open the brackets we get,

$$[(-3x)(-5y) - 6x]$$

$$15xy - 6x$$

20. (d)

$$3a - 2b$$

Explanation:

An algebraic expression which consists of two non-zero terms is called a binomial.

$3a - 2b$ is a binomial as it contains two terms i.e $3a$, $-2b$.

21. (b)

$$9x^2yz$$

Explanation:

like terms are the terms which contain same variables and same power.

here the terms are $8x^2yz$, $9x^2yz$

variables are same i.e x^2yz
hence $9x^2yz$ is like term as $8x^2yz$

22. (d)
966000

Explanation:

Use identity,

$$a^2 - b^2 = (a + b)(a - b)$$

$$983^2 - 17^2 = (983 + 17)(983 - 17)$$

$$983^2 - 17^2 = (1000)(996)$$

$$983^2 - 17^2 = 96600$$

23. (a)
 $5xy^3 + 15xy$

Explanation:

$$5xy \times (y^2 + 3)$$

$$5xy(y^2 + 3)$$

Open the brackets we get,

$$5xy^3 + 15xy$$

24. (d)
 $15xy + 6x$

Explanation:

$$(5y + 2) \times 3x$$

$$(5y+2)3x$$

Open the brackets we get,

$$15xy+6x$$

25. (b)
 $m^2 + 2m$

Explanation:

$$5m(3 - m) + 6m^2 - 13m$$

open brackets we get,

$$15m - 5m^2 + 6m^2 - 13m$$

solving like terms we get,

$$-5m^2 + 6m^2 + 15m - 13m$$

$$m^2 + 2m$$

26. (d)
6ab

Explanation:

$$6abc, 24ab^2 \text{ and } 12a^2b.$$

$$6abc = 2 * 3 * a * b * c$$

$$24ab^2 = 2 * 2 * 2 * 3 * a * b * b$$

$$12a^2b = 2 * 2 * 3 * a * a * b$$

by finding common factor

$$6ab$$

27. (a)
 $(x + 4)^2$

Explanation:

$$x^2 + 8x + 16$$

By substituting, we get,

$$= x^2 + 4x + 4x + 16$$

By grouping

$$= x(x + 4) + 4(x + 4)$$

$$= (x + 4)(x + 4)$$

$$= (x + 4)^2$$

28. (d)
3ab (4a + 5b)

Explanation:

$$12a^2b + 15ab^2$$

by finding common factor

$$3ab (4a + 5b)$$

29.
30. (c)
(x + 1) (y + z)

Explanation:

$$\underline{xy + y} + \underline{xz + z}$$

$$y(x + 1) + z(x + 1)$$

$$(x+1)(y + z)$$

31. (a)
 $9(2y - 1)^2$

Explanation:

$$36y^2 - 36y + 9$$

$$= 9(4y^2 - 4y + 1)$$

$$= 9[(2y)^2 - 2(2y)(1) + (1)^2] \text{ (By using property of } (a - b)^2)$$

$$= 9(2y - 1)^2$$

32. (d)
6 Yz

Explanation:

$$6 Yz$$

33. (c)
 $5xy^3z^4(5xy - z)(5xy + z)$

Explanation:

$$125x^3y^5z^4 - 5xy^3z^6$$

$$= 5xy^3z^4(25x^2y^2 - z^2)$$

$$= 5xy^3z^4(5xy - z)(5xy + z)$$

34. (b)
 $\frac{1}{3}(5x - 6)$

Explanation:

$$(5x^2 - 6x) \div 3x$$

$$(5x^2 - 6x) / 3x$$

$$x(5x - 6) / 3x$$

by divide
 $\frac{1}{3}(5x - 6)$

35. (d)
 $(13a + 12b)(13a - 12b)$

Explanation:
 $169a^2 - 144b^2$
 $(13a)^2 - (12b)^2$
 $(13a + 12b)(13a - 12b)$

36. (b)
 $(a - b - c)(a - b + c)$

Explanation:
 $a^2 - 2ab + b^2 - c^2$
 $= (a - b)^2 - c^2$ by using property $a^2 - b^2$
 $= (a - b - c)(a - b + c)$

37. (d)
 $(3x + 1)(5y - 2)$

Explanation:
 $15xy - 6x + 5y - 2$
by grouping
 $15xy - 6x + 5y - 2$
 $3x(5y - 2) + 1(5y - 2)$
 $(3x + 1)(5y - 2)$

38. (b)
 $\frac{1}{2}r(p + q)$

Explanation:
 $52pqr(p + q)(q + r)(r + p) \div 104pq(q + r)(r + p)$
 $= 52pqr(p + q)(q + r)(r + p) / 104pq(q + r)(r + p)$
By cancelling
 $= \frac{1}{2}r(p + q)$

39. (a)
 $= (a - b)^2(a + b)^2$

Explanation:
 $a^4 - 2a^2b^2 + b^4$
 $= (a^2)^2 - 2a^2b^2 + (b^2)^2$
 $= (a^2 - b^2)^2$
 $= (a - b)^2(a + b)^2$

40. (b)
 $2(2r - 5)(r - 2)$

Explanation:
 $(2r - 5)^2 + (2r - 5)$
 $= (2r - 5)[(2r - 5) + 1]$
 $= (2r - 5)(2r - 4)$
 $= 2(2r - 5)(r - 2)$

Solution
Class 08 - Science
Multiple Choice Question Eamination

Section A

41. (c)
Fill the irregularities in surface

Explanation:

Oils and lubricants help in reducing friction because the lubricants fill the irregularities in the surface of moving bodies and hence reduce friction.

42. (a)
Unnecessary expenses of energy

Explanation:

Friction involves unnecessary expenses of energy because due to friction heat is generated which leads to more consumption of energy or fuel.

43. (b)
Fish and birds

Explanation:

Fish and birds have streamlined body to reduce the friction offered by water and air respectively. They have pointed tips and broader middle portion that help in reducing friction.

44. (a)
Sand paper has rough surface to increase friction

Explanation:

Sand papers are used to clean the metal surface to remove rust because sand papers has rough surface to increase the friction to removes the rust.

45. (b)
wet marble floor, dry marble floor, newspaper and towel.

Explanation:

Force of friction depends on the nature of surfaces in contact. The rougher the surface, the more is the friction between the surfaces in contact and vice-versa. Roughness present in the given surfaces can be arranged in an ascending order as wet marble floor, dry marble floor, newspaper and towel. Hence, the correct sequence of these surfaces when arranged according to the increase in the force of friction acting on the car is—wet marble floor, dry marble floor, newspaper and towel.

46. (b)
Friction exerted by water is very small

Explanation:

It is difficult to apply brakes to stop the moving ship because friction exerted by water is very small to stop the moving ship having very high momentum.

47. (a)
Conduction

Explanation:

The process of heat transfer in which particles transfer heat one after the other in contact is called conduction. The heat in metals is conducted by the process of conduction because molecules in solid are tightly packed. they just transfer their energy to adjacent molecule without leaving their place.

48. (c)
Making tips thin

Explanation:

Streamlining is making the tips thin. Streamlining shape reduce the friction in fluids like air and water as it has narrow tips which reduces the area of contact

49. (a)
Interlocking between surfaces

Explanation:

When we attempt to move any surface, we apply a force to overcome interlocking between the surfaces called static friction present due to irregularities on the surface .

50. (a)
Friction between air and supersonic object

Explanation:

When a body moves with speed greater than speed of sound craking sound is produced in air called sonic boom. Sonic boom is due to friction between air and supersonic objects.

51. (a)
Static friction

Explanation:

The movement in a stationary body is possible only when applied force is greater than frictional force. The frictional force that counterbalance the applied force is called static friction. In static friction both the surfaces interlock each other strongly.

52. (c)
Coin

Explanation:

When a coin and a feather are dropped from same height, the coin will reach first on the ground. Due to more friction on feather as it is lighter and has more surface area as compare to coin.

53. (c)
Using matchstick

Explanation:

Frictional force is necessary in using matchstick. When matchstick is strike with matchbox friction is caused due to which heat is generated. The phosphorous in matchstick catch fire.

54. (a)
solids, liquids and gases

Explanation:

Sound needs a medium through which it can travel. Sound cannot travel through vacuum. Sound can travel through solid, liquid and gases.

55. (b)
Less friction

Explanation:

A car with worn out treads on tyres is more likely to skid due to less friction. The treads in tyres produce more friction that prevents the vehicle from skidding by providing more grip on road.

56. (c)
Powder is sprinkled

Explanation:

The striker of carom moves longer distance with same force when powder is sprinkled on board. The minute particles of powder fills the irregularities on surface that reduce the friction and striker easily cover more distance.

57. (d)
Treading of tyres

Explanation:

Friction is necessary for movement of vehicle on road. To increase friction treading of tyres is done. Regular oiling of engine, cleaning of vehicle and less inflating of the tyres reduce friction.

58. (c)
Friction

Explanation:

The force responsible for changing the state of motion of an object is friction. Moving body slows down due to friction and finally come to rest.

59. (c)
Slows down them

Explanation:

Air resistance slows down the falling object as it increase with the increase in surface area of the object and acts against the gravitational force due to which it slows down the speed of object to fall down

60. (a)
Static > sliding >rolling

Explanation:

Rolling friction is always less than sliding friction and sliding friction is less than static friction. So, correct order is static friction, sliding friction and rolling friction in decreasing order. In static friction more area of contact is there due to which it is very higher than the others.

61. (d)
Dogs

Explanation:

The police use high frequency whistles which can be heard by dogs but not by human beings.

62. (a)
Higher than 20 kHz

Explanation:

Ultrasound equipment is used for investigating and tracking medical problems. The sound of frequency greater than 20kHz is called ultrasound.

63. (a)
Gas

Explanation:

The medium in which sound travels slower is gas.

64. (d)
0.1s

Explanation:

Number of oscillation= 40, time taken = 4 seconds.

Frequency = $40 \div 4 = 10\text{Hz}$ (number of oscillations made per second)

Time period = $1 \div \text{Frequency}$

Time period = $1 \div 10 = 0.1\text{s}$

65. (a)
1320 m

Explanation:

Speed of sound = 330 m/s, time = 4 seconds. Distance = speed \times time = $330 \text{ m/s} \times 4 = 1320\text{m}$. so, lightening occurs at a distance of 1320m.

66. (b)
Male vocal cord is larger

Explanation:

Voice of male is heavy compared to woman because male voice has low frequency as compared to female and male vocal cord is larger than female.

67. (b)
Amplitude and loudness

Explanation:

Loudness of sound depends upon amplitude of sound waves. Loudness of sound is proportional to amplitude of sound.

68. (c)
Amplitude is very small

Explanation:

The vibrations of object are not visible because in most of the cases amplitude of waves are very small. Amplitude is the maximum displacement from mean position.

69. (c)
Auditory nerve

Explanation:

Auditory nerve transmits sound impulses to brain from ear. Optic nerve, cardiac nerves are present in eyes and heart respectively.

70. (b)
Frequency of 10 Hz

Explanation:

Human ear can hear sounds of frequency between 20Hz to 20,000Hz. So, sound of frequency 10Hz cannot be heard by human beings.

71. (a)
Defective speech

Explanation:

Generally, a child with hearing impairment from birth have defective speech.

72. (d)
Femur

Explanation:

Femur bone is not present in ear. Anvil, Hammer and stirrups are present in the ears.

73. (a)
0.002 seconds

Explanation:

Frequency of sound = 500Hz. Time-period = $1/\text{frequency} = 1/500 = 0.002\text{seconds}$.

74. (c)
Loud

Explanation:

The loudness of sound depends upon amplitude of sound. So, when the amplitude of sound is large, the sound produced is large.

75. (d)
Drum

Explanation:

Drum has thin membrane of skin that vibrates on beating. The number of vibration per second is less in drum in comparison to whistle, flute and sitar.

76. (d)
12,000 times

Explanation:

Frequency of sound = 200Hz, time = 1minute = 60 seconds. Number of vibration = $60 \times 200 = 12000\text{times}$.

77. (d)
Density of sea water is more

Explanation:

Speed of sound increase with increase density. So, the speed of sound in sea water is slightly more than distilled water because density of sea water is more due to presence of salts.

78. (a)
Diabetes

Explanation:

Noise pollution may cause a number of health problem like hypertension, anxiety and lack of sleep. Diabetes is a hormonal problem not caused due to noise pollution.

79. (c)
Frequency is less than 10Hz

Explanation:

Human ear can hear sounds of frequency 20Hz to 20,000Hz. So, we are not able to hear the sound of pendulum of frequency less than 10Hz.

80. (d)
Particles of solid are very close

Explanation:

Sound travels faster in solid medium as compared to liquid and gases because particles of solid are very close to each other.

Solution
Class 08 - Social Science
MULTIPLE CHOICE QUESTION EXAMINATION

Section A

81. (c) Jamshedpur

Explanation:

The areas surrounding Jamshedpur are rich in minerals, including iron ore, coal, manganese bauxite and limestone. The largest factory is that of Tata Iron and steel industry is situated almost at the centre of the city.

82. (c)

Ahmedabad

Explanation:

First mill in Ahmedabad was floated by Shri Ranchodlal Chotalal in 1859. It was a small mill containing 2500 throstle spindles and employed 63 workers. It started its production on 30th May 1861.

83. (d) Steel

Explanation:

The word ukku is based on the meaning "melt, dissolve"; other Dravidian languages have similar-sounding words for steel.

84. (b) Francis Buchanan

Explanation:

Several European travellers including Francis Buchanan and Voysey from the 17th century onwards observed the manufacture of steel in south India by a crucible process at several locales including Mysore, Malabar and Golconda.

85. (d) 90 percent

Explanation:

As the First World war dragged on for several years, TISCO had to produce shells and carriage wheels for the war. By 1919 the colonial government was buying 90% of the steel manufactured by TISCO.

86. (c)

Surat

Explanation:

Dutch and English trading ships used this port for the trade.

87. (a) Khadi

Explanation:

Mahatama Gandhi urged people to boycott imported textiles and use hand-spun and hand-woven cloth. Khadi gradually became a symbol of nationalism.

88. (d)

Rabindranath Tagore

Explanation:

Rabindranath Tagore found school suffocating and oppressive. So he wanted to set up a school where the child was able to explore his own thoughts and desires, for which he set up Santiniketan.

89. (a)

Gandhiji believed that creative learning could be encouraged only within a natural environment.

Explanation:

Tagore believed that creative learning could be encouraged only within a natural environment. Gandhiji strongly felt that Indian languages ought to be the medium of teaching.

90. (a)
Bihar and Bengal

Explanation:

He toured Bihar and Bengal to make a report on the progress of education in vernacular schools.

91. (d)
Indian Education Service

Explanation:

Indian Education Service was formed based on the recommendations of 1886 Public Service Commission as part of Superior Education Service which comprised also the Provincial Education Service.

92. (a)
Sultan Jahan Begum

Explanation:

Sultan Jahan Begum was the first female ruler who vehemently worked for the promotion of education amongst the Muslim community and established a Trust with an endowment of Four Lakh rupees for educational advancement of females.

93. (c)
Serampore College

Explanation:

In 1818 William Carey who was a missionary founded Serampore College to train indigenous ministers for the growing church and to provide education in arts and sciences to anyone regardless of caste or country.

94. (d)
Gopal Krishna Gokhale

Explanation:

As a nationalist leader Gokhale visualised the importance of primary education in socio-political awakening in India. He made heroic efforts to make the government accept the principles of compulsory primary education.

95. (a) Rice

Explanation:

Rice is the major food crop of the world. It is also known as paddy. It is the staple diet of the tropical and sub-tropical regions. Rice needs high temperature, high humidity and rainfall. It grows best in alluvial clayey soil, which can retain water. China leads in the production of rice followed by India, Japan, Sri Lanka and Egypt.

96. (a) China

Explanation:

Rice is the major food crop of the world. It is the staple diet of the tropical and sub-tropical regions. Rice needs high temperature, high humidity and rainfall. It grows best in alluvial clayey soil, which can retain water. China leads in the production of rice followed by India, Japan, Sri Lanka and Egypt. In favourable climatic conditions as in West Bengal and Bangladesh two to three crops a year are grown.

97. (c)
Tea

Explanation:

Tea: Tea is a beverage crop grown on plantations. This requires cool climate and well distributed high rainfall throughout the year for the growth of its tender leaves. It needs well-drained loamy soils and gentle slopes. Labour in large number is required to pick the leaves. Kenya, India, China, Sri Lanka produce the best quality tea in the world.

98. (a) The Process of preparing the land for the cultivation of crops , and also to rear livestock.
 Explanation:
 The word agriculture is derived from Latin words ager or agri meaning soil and culture meaning,cultivation or tilling of soil.Agriculture is a primary activity. It includes growing crops, fruits, vegetables, flowers and rearing of livestock
99. (d) Subsistence Farming
 Explanation:
 Subsistence Farming is practised to meet the needs of the farmer’s family. Traditionally, low levels of technology and household labour are used to produce on small output. Subsistence farming can be further classified as intensive subsistence and primitive subsistence farming.
100. (a) Processing of Steel
 Explanation:
 Secondary activities are concerned with the processing of resources. Manufacturing of steel, baking of bread and weaving of cloth are examples of this activity.
101. (d)
 Selling grocery

 Explanation:
 Tertiary activities provide support to the primary and secondary sectors through services. Transport, trade, banking, insurance and advertising are examples of tertiary activities.
102. (a)
 The process of converting iron ore to steel

 Explanation:
 It is the process of conversion from iron ore to steel in a blast furnace.
103. (b)
 5th

 Explanation:
 Because, India also has the Iron and steel industries since early 1800s.
104. (d)
 All the above reasons ie (i), (ii),(iii),(iv),(v) are TRUE

 Explanation:
 Because, This place was only 32 km away from Kalimati station on the Bengal-Nagpur railway line. It was close to the iron ore, coal and manganese deposits as well as to Kolkata, which provided a large market. TISCO, gets coal from Jharia coalfields, and iron ore, limestone, dolomite and manganese from Odisha and Chhattisgarh. The Kharkai and Subarnarekha rivers ensured sufficient water supply. Government initiatives provided adequate capital for its later development
105. (b)
 All of the given

 Explanation:
 The factors affecting the location of industries are the availability of raw material, land, water, labour, power, capital, transport and market.
106. (a)
 Madurai- Thanjavur region

 Explanation:

India has several industrial regions like Mumbai-Pune cluster, Bangalore-Tamil Nadu region, Hugli region, Ahmedabad-Baroda region, Chottanagpur industrial belt, Vishakhapatnam-Guntur belt, Gurgaon-Delhi-Meerut region and the Kollam-Thiruvananthapuram industrial cluster.

107. (c)
Jharkhand has some major steel producing centres.

Explanation:
Jharkhand

108. (b)
Masulipatnam

Explanation:
Chintzes were hand spun and hand woven cloth of Masulipatnam were known worldwide for their quality and design.

109. (a)
2005

Explanation:
The Protection of Women from Domestic Violence Act 2005 extends the understanding of the term 'domestic' to include all women who 'live or have lived together in a shared household' with the male member who is perpetrating the violence.

110. (c)
2005

Explanation:
The Protection of Women from Domestic Violence Act 2005 extends the understanding of the term 'domestic' to include all women who 'live or have lived together in a shared household' with the male member who is perpetrating the violence.

111. (a)
2005

Explanation:
The Hindu Succession (Amendment) Act passed in 2005.

112. (d)
2005

Explanation:
The Protection of Women from Domestic Violence Act came into effect in 2005.

113. (a)
President

Explanation:
A bill finally becomes an Act after the assent of President.

114. (a)
The Seditious Act, 1870

Explanation:

The Seditious Act, 1870

115. (b)
Parliament House

Explanation:

Supreme Court was earlier located in the Chamber of Princes in the Parliament House. It moved to its present building on Mathura Road in New Delhi in 1958.

116. (c)
24

Explanation:

Currently there are 24 High Courts.

117. (a) Acquit

Explanation:

Acquit: This refers to the court declaring that a person is not guilty of the crime which he/she was tried for by the court.

118. (a)
One

Explanation:

The police officer carrying out the arrest of the arrestee shall prepare a memo of arrest at the time of arrest and such memo shall be attested by at least one witness who may either be a member of the family of the arrestee or a respectable person of the locality from where the arrest is made. It shall also be countersigned by the arrestee and shall contain the time and date of arrest.

119. (a) One

Explanation:

The Supreme Court is the apex(highest) court of the country.

120. (b) Rajasthan and Odisha

Explanation:

In 2001, the drought in Rajasthan and Orissa and millions faced an acute shortage of food.