Atomic Energy Cent Multiple Choice Questi	tral School No. 4 Rawatbhata on Examination (October 2019)	
Class: VIII Subjects: Mathemat	tics, Science, Social Science	MM: 120
Name:	Class/Sec:	
Instruction: 1) Fill & darken roll nur	nber field correctly on OMR Sheet.	In case
of any error, OMR Answer Sheet wi	Il be not be read by the OMR Scann	er.
2) Darken the most suitable option n	o. on OMR Answer Sheet.	
3) There is no negative marking.		
Μ	athematics	
1. Find the cubes of 2x, 3x and 4x.		1
a) $4x^2$ , $9x^2$ , $16x^2$ c) $8x^3$ , $27x^3$ , $64x^3$	b) $8x^2$ , $27x^2$ , $64x^2$ d) $4x^3$ , $9x^3$ , $16x^3$	
2. 36x is a perfect cube number, then x =		1
a) 1	b) 4	
c) 6 3. Find the cube root of -2197.	d) 3	1
a) -13	b) 14	
c) 15	d) 13	1
4. Find the prime factorisation of $33/5$ .		1
a) $3^3 \times 2^3$	b) $2^{\circ} \times 5^{\circ}$	
$(93^{\circ} \times 3^{\circ})^{1/3} - 2n + 3$ then the value of n is	u) <b>3</b> × <b>4</b>	1
(5.11 (5201)) = 2p + 5, then the value of p is	b) 7	_
c) 8	d) 5	
6. If a is ones digit and b is tens digit of a two digit	number, then the cube of the number will be	1
a) $(10a + b)^{-3}$	b) $(10b + a)^2$	
c) $(10a + b)^3$	d) $(10b + a)^3$	
7. If $\sqrt[3]{\frac{x}{y}} = \frac{7}{8}$ , then $\frac{x}{y} =$		1
a) 343	b) <u>343</u>	
c) $\frac{512}{2}$	d) 512	
8 If $x^3 = \frac{9261}{2}$ and $u^3 = \frac{729}{2}$ then find x + y		1
42875 and $y = 2197$ , then inter $x + y$ .	1. 65	-
a) 64	b) $\frac{1}{84}$	
0. Find the cube reat of 216000	(1) $\frac{1}{65}$	1
a) None of these	b) 50	1
c) 40	d) 60	
10. The numbers 1, 8, 27 are	, ,	1
a) prime numbers	b) cube numbers	
c) negative numbers	d) square numbers	
11. The cube root of 19683 is		1
a) 23	b) 21 d) 27	
CJ 25	u) 27	

12. Find the cube root of -12167.		1
a) -23	b) -33	
c) 23	d) 27	
13. If $\sqrt[3]{\frac{x}{y}} = \frac{2}{5}$ , then $\frac{x}{y} =$		1
a) $\frac{125}{8}$	b) $\frac{8}{125}$	
c) 8	d) 125	
14. If $\sqrt[3]{\frac{x}{y}} = \frac{3}{4}$ , then $\frac{x}{y} =$		1
a) 64	b) $\frac{64}{27}$	
c) 27	d) $\frac{27}{64}$	
15. Find the cube root of 17576.	02	1
a) 26	b) 25	
c) 24	d) 23	1
16. Find the prime factorisation of $33/5$ .	ь 93 v = <b>5</b> 3	1
a) $3^{\circ} \times 2^{\circ}$ c) $3^{3} \times 5^{3}$	b) $2^5 \times 5^5$ d) $3^3 \times 4^3$	
17. If $(6859)^{1/3} = 2p - 1$ , then the value of p is		1
a) 6	b) 20	
c) 5	d) 10	
18. Find the cube root of -2197.		1
a) -13	b) 14	
() 15 19. Find the ones digit of cube root of 2197.	u) 13	1
a) 3	b) 5	-
c) 9	d) 7	
20. Find the cube root of 15625.		1
a) 24	b) 23	
C) 22 21 Find C I on ₹15 500 for 9 years at 15% per any	d) 25 num compounded annually	1
21. That e.i. on (19,000 for 2 years at 1970 per an	b) ₹4500	I
c) None of these	d) ₹5,000	
22. Amit bought a second hand washing machine fo	or Rs 9,500, then spent Rs 500 on its repairs and sold it for	1
Rs 10,600. Find his gain or loss.		
a) Loss of Rs 600	b) Gain of Rs 400	
23. A shop gives $20\%$ discount. What would the sal	e price of a dress marked at <i>Rs.</i> 120?	1
a) None of these	b) ₹20	
c) ₹30	d) <b>₹96</b>	
24. A table marked at Rs 15,000 is available for Rs 1	4,400. Find the discount per cent.	1
a) $3\%$	b) 5%	
25. An item marked at Rs 840 is sold for Rs 714. Wh	a) 470 at is the discount amount?	1
a) ₹140	b) <b>₹136</b>	
c) None of these	d) ₹126	
26. A shop gives $20\%$ discount. What would the sale	e price of a bag marked at $Rs.250$ ?	1
a) <i>Rs</i> .200	b) $Rs.10$	
c) None of these 27. Dinesh bought a second hand TV for $\neq 2400$ the	a) $\pi s.20$ en spent $3600$ on its repairs and sold it for $33500$ Find his	1
gain or loss per cent.		-
a) None of these	b) $Loss of 20\%$	
c) Gainof16.67%(Approx)	d) $Lossof15\%$	
28. Find the ratio of ₹6 to 50 paise.		1

a) None of these	b) It is 12 : 1	
c) It is 1 : 12 29. Find the time period and rate for a sum taken fo	d) It is 1 : 30 or 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 30. If $60\%$ people in a city like cricket, $30\%$ like foot cent of the people like other games? If the total r like football game.	d) None of these tball and the remaining like other games, then what per number of people are 50 lakh, find the exact number who	1
a) $10\%, 15$ lakh	b) None of these	
c) 10%, 20 Lakh	d) 10%, 17 Lakh	
31. If Amit had Rs 750 left after spending 70% of his	money, how much did he have in the beginning?	1
a) ₹2800 c) ₹2500	b) None of these dy <b>≆2000</b>	
32. The price of a refrigerator is Rs 20,000. The sales	s tax charged on it is at the rate of 10%. Find the amount	1
that Ashish will have to pay if he buys it.		
a) Rs <b>23000</b>	b) Rs <b>22000</b>	
c) Rs20000	d) Rs 25000	
33. An item marked at $Rs.540$ is sold for $Rs.500$ . V	Vhat is the discount amount?	1
a) ₹50 c) <b>≆30</b>	b) ₹40 d) None of these	
34. A shopkeeper bought two TV sets at ₹10,000 ea	ch. He sold one at a profit $10\%$ and the other at a loss of $10$	1
%. Find whether he made an overall profit or lo	SS.	
a) Loss of $10\%$	b) Profit of $10\%$	
c) No profit no loss	d) None of these	
35. Rajinder bought a second hand motor bike for R Rs 30,000. Find his loss or gain per cent.	s 22,500, then spent Rs 2,500 on its repairs and sold it for	1
a) Gain of ₹5000	b) Loss of ₹8000	
c) None of these 36. A football team won 10 matches out of the total	a) Loss of <b>35000</b> number of matches they played. If their win percentage	1
was $40\%$ , then how many matches did they play	<i>y</i> in all?	1
a) 26 c) 25	b) 30 d) 20	
37. I purchased a hair-dryer for Rs 5,400 including 8	8% VAT. Find the price before VAT was added.	1
a) ₹4000	b) None of these	
c) <b>₹3000</b>	d) <b>₹5000</b>	
38. Dinesh bought a second hand T.V. for ₹2400, the gain or loss per cent.	en spent $ ightarrow 600$ on its repairs and sold it for $ ightarrow 3500$ . Find his	1
a) None of these	b) $Lossof 20\%$	
c) Gaino f16.67% (Approx)	d) <i>Lossof</i> 15%	1
35. A chain market at KS 1,500 is available for KS 1,4	$^{140}$ , Find the discount per cent.	T
a) 5% c) 4%	d) None of these	
40. An item marked at Rs 900 is sold for Rs 650. What	at is the discount amount?	1
a) <b>₹300</b>	b) ₹250	
c) None of these	d) <b>₹200</b>	
:	Science	
41. A force applied on an object may change its		1
a) Colour	b) Mass	
c) Weight	d) Speed	4
42. The upward force experienced by a body when	submerged in a fluid is called	1
a) Buoyant force	d) Frictional force	
of Equilibric		
	3	

43. A body will remain in state of motion on rolling on	ground if 1
a) Friction is very large b) J	Friction is absent
c) All of the above d) I	Friction is acting on same direction
44. Friction opposes the between two surface	es in contact. 1
a) Rotary motion b) I	Relative motion
c) Refractive motion d) I	Reflective motion
45. The lateral pressure exerted by liquid at same heigh	ht is 1
a) Less in right direction b) I	Equal in all direction
c) More in left direction d) I	Not equal in all direction
46. A force which opposes the motion is called	1
a) Linear b) S	Sliding
c) Friction d) (	Gravitational
47. The frictional force exerted by fluids is also called	1
a) Slag b) S	Smug
c) Rung d) J	Drag
48. Two boys exert force of 40 N and 60 N in opposite d	lirection on an object. The resultant force is <b>1</b>
a) 20 N b) 1	100 N
c) 40 N d) 2	240 N
49. If the force applied on a moving body in direction o	f motion than 1
a) Mass of the body increases b) S	Speed of the body increases
c) Speed of body decreases d) I	Mass of the body decreases
50. A motorcycle with worn out treads on tyres is more l	likely to skid due to 1
a) Smaller size of tyres b) I	Less weight of tyres
c) More friction d) I	Less friction
51. Which of the following effect is not produced by force	re? 1
a) Change in direction b) (	Change in shape
c) Change in speed d) (	Change in mass
52. Brakes of vehicle is stopped by using brake that worl	ks on property of 1
a) Retardation b) I	Friction
c) Acceleration d) I	Pressure
53. When batsman hits the ball, it changes its	1
a) Changes its direction only b) S	Shape and size
c) Changes its speed only (a) I	Direction as well as speed
3) Magnetic force of earth	Set:
a) Magnetic force of earth b) i	nosphere
c) The force of gravitation d) l	Magnetic force of Sun
55. The motion imparted to objects is due to the	1
a) Action of gravity b)	Action of weight
c) Action of pressure d) A	Action of force
56. One Newton is equal to	1
a) 1 kg x 1cm b) 1	1gm x 1cm
c) 1 gm x 1m d) 1	1kg x 1m
57. A force of 200 N is applied to an object of area 2 sq. n	n. the pressure will be 1
a) 200 Pa b) 4	400 Pa
c) 50 Pa d) 1	100 Pa
58. When we press the bulb of a dropper with its nozzle the form of bubbles. Once we release the pressure or water in the dropper is due to -	kept in water, air in the dropper is seen to escape in <b>1</b> n the bulb, water gets filled in the dropper. The rise of

a) gravity of the earth	b) pressure of water	
c) shape of rubber bulb	d) atmospheric pressure	
59. One Pascal is equal to		1
a) Gm per sq. cm	b) N per sq. m	
c) Gm per sq. cm	d) Hg per sq. m	
60. Liquid pressure increases with		1
a) Increase with atmospheric pressure	b) Decrease with air pressure	
c) Increase in depth	d) Decrease in depth	
61. Menstrual cycle is repeated at an average inter	val of	1
a) One year	b) 25 days	
c) 15 days	d) 29 days	1
62. Starting of first menstrual cycle is termed as		1
a) Menopause	b) Menarche	
C) Publicly	a) Mensuration	1
a) 200 cm tall	b) 140 cm toll	1
a) 200 cm tall $(1.1)$	$\frac{1}{2}$	
64. The change from larva to adult is called		1
a) Spormatogonosis	b) Mutagonocis	1
c) Gamete genesis	d) Metamorphosis	
65. Which of the following activity do not cause HI	V infection?	1
a) Sharing syringe with HIV infected person	b) Sexual contact with HIV infected person	
c) Infected mother to their child	d) Shaking hands with HIV positive person	
66. Ovulation occurs on the day of men	strual cycle.	1
a) 8 to 10	b) 14 to16	
c) Last	d) 12 to 14	
67. Hormone responsible for milk ejection after th	e birth of baby is:-	1
a) Estrogens	b) Oxytocin	
c) Prolactin	d) Progesterone	
68. It is misconception that		1
a) Male are responsible of sex of child	b) Sex is determined by vigor of male	
c) women are responsible for sex of child	a) Sex is determined by choice	1
a) Calcium	b) Iodine	1
c) Iron	d) Magnesium	
70. Which of the following is correct statement?		1
a) The mother is responsible for the sex of	b) Boys attain puberty earlier than girls	
child		
c) Menstruation starts at the age of 25	d) Ovulation occurs in the middle of	
71 Which hormone controls metamorphosis in fro	menstrual cycle	1
a) Thurovin	b) Inculin	1
c) Adrenal	d) Growth hormone	
72. Which of the following is a exocrine gland?		1
a) Adrenal	b) Salivary gland	
c) Pancreas	d) Pituitary	
73. Facial hair in some women due to effect of		1
a) Temperature	b) Pollution	
c) UV radiation	d) Hormones	
74. The period of pregnancy is known as		1
a) Gestation period	b) Blastulation	
c) MERSU dauon 75. Table salt is often indised for certain areas to m	u) meusanon perioù	1
a) Scurvy	h) Goitre	1
c) Acromegaly	d) Rickets	
	5	

76. Which of the following is not a secondary sexual	feature?	1
a) Pimples	b) Moustache	
c) Ovulation	d) Body hair	
77. The development of a new individual from a sing	gle gamete without fertilization is called	1
a) Pragmatism	b) Parentheses	
c) Parthenocarpy	d) Parthenogenesis	
78. We should not use drugs as they are		1
a) Banned by government	b) Addictive	
c) Very costly	d) Not available easily	
79. Chips and packed snacks should never replace re	egular meals as they do not have	1
a) Hygienic value	b) Sufficient sugar and salt	
c) Adequate fats and protein	d) Adequate nutritional value	
80. Voice is high pitched in		1
a) Females	b) Adult man	
c) Boys	d) Aged person	
Soci	ial Science	
91 Who travelled along with Charles Weld in Char	ttiograph in accurch of incur and demosite in 1004.2	1
81. Who travelled along with charles weld in china	tusgarti în search of fron-ore deposits în 1904 ?	1
a) J R D Tata	b) Ratan Tata	
c) Jamsetji Tata	a) Dorabji Tata	1
southern part of India stretching from	weaving centre existed in the Coromandel coast, in the	1
a) Madras to Northern Andhra Pradesh	b) Dacca to Orissa	
c) Madras to Maharashtra	d) Mumbai to Gujarat	
83. Wootz steel was produced all over		1
a) North – east India	b) South India	
c) North India	d) Central India	
84. Which state owned enterprise turned to TISCO v	when the imports of British steel into India declined ?	1
a) Power industry	b) Petroleum industry	
c) Indian Railways	d) Textile industry	
85. Give one good reason as to why Bombay had gro	own as an important port for the export of raw cotton.	1
a) The vast number of women weaver	b) The presence of vast black soil tract	
workers		
c) The vast number of weavers	d) The presence of vast number of dying	
00 Which are of the following was at the control of	units	1
86. Which one of the following was at the centre of	the tricolor hag of the Indian National Congress?	1
a) Weaving Machine	b) Rangrez	
C) Clidi Kild	u) Idkii nd snun material urged by Mahatma Candhi to use	1
o, spor nom me nat given below, me important ha	ha spun materiar urgeti by Manatina Ganuni to use.	1
a) Knadi	d) silk	
88. The first cotton mill in the India was established	u) siik	1
a) Madras	h) Maat Dan gal	1
a) Mauras	d) Cuiarat	
89. Name the place in Eastern Bengal, in present day	7 Bangladesh, famous for its textile centre in the 18th	1
century.		
a) Dacca	b) Jessore	
c) Kishoreganj	d) Puthia	
90. The job of a rangrez was to		1
a) Transport goods of the markets	b) dye thread	
c) Spin thread on the charkha	d) Weave cloth	
	6	

91. Wootz is an anglicised version of the Kannada w urukku. What does this word actually mean ?	ord ukku. Telugu word hukku and Tamil and Malayalam 🛛 1	L
a) Sword	b) Tool	
c) Metal	d) Steel	
92. As European trade expanded, trading settlement	s with fortification were established at various ports like 1	L
the one shown in the image. This major port city Identify the place.	y of the West coast is situated in the state of Kerala today.	
a) Pondicherry	b) Tuticorin	
c) Cochin	d) Madurai	
93. A few statements pertaining to the weavers of Ir respect to the weavers.	ndia are given below. Identify the one that is not True with <b>1</b>	
a) Weaving skills were not passed on from	b) Weaving provided livelihood for many	
one generation to another	Indians	
c) Weavers often belonged to the	d) The tanti weavers, julahas are some of	
communities that specialized in weaving.	the important weavers.	
94. A few important aspects about the education the not TRUE with respect to a pathashala	rough a pathashala are given below. Pick out the one that is 1	
a) Classes were held under trees or even at	b) Teaching was oral and the guru taught	
gurus? home.	only the children of rich families.	
c) There was no fixed fee , no printed	d) Mostly the shishyas stayed in the guru?s	
books, no benches etc	house and studied and had flexible timings	
	according to the harvest time	
95. What was the important measure taken by the E	East India Company to improve the vernacular education?	
a) They introduced high fees and	b) They allowed only higher education	
introduced grants	neglecting primary education.	
c) They appointed a number of government pandits incharge of schools and asked them	d) They closed down many local schools	
to inspect the schools .	a improve the system of your equipy education?	
96. Which year did the East India Company decide t	to improve the system of vernacular education?	ł
a) 1854	b) 1860	
c) 1800		
97. Name the college established on the banks of the	e river Hoogly near Calcutta by William Carrey.	
THERE		
a) Vidyasagar College	b) Bethune College	
c) Serampore College	d) Scottish Church college	
98. This is the picture of a Class in progess in Santhi	niketan in the 1930s. Name the person who started this 1	
famous institution in 1901.		
Contraction of the second		



a) Sarojini Naidu	b) Rabindranath Tagore	
c) Mahatma Gandhi	d) Subhash Chandra Bose	1
neither the end of education nor even the begin	ning. Whose words are these?	1
a) Jawaharlal Nehru	b) Mahatma Gandhi	
c) Sarojini Naidu	d) Rabindranath Tagore	
100. Complete by choosing the most appropriate we The introduction of brought with it	ord from the following list of options. t ideas of democracy, liberty, fraternity among the minds of	1
a) Doctrine of Lapse	b) Subsidiary alliance	
101 The experiences of a famous personality are gi	u) Expansion poincies	1
clues given :	ven below. Identify this fundus personality based on the	-
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.	
learning	ere the child was happy, free and creative - a school of self	
a) Gopalkrishna Gokhale	b) Mahatma Gandhi	
c) Swami Vivekananda	d) Rabindranath Tagore	
102. The ideas of William Jones were supported by		1
a) James mill	b) Charles Wood	
c) Thomas Macaulay	d) Henry Thomas Colebrooke	1
103. William Adam toured the districts of		I
a) Bihar and Bengal	b) Bihar and Orissa d) Bongal and Bajasthan	
104 The following image is a nictorial representation	a) bengai and Kajasulan	1
century depicting the everyday life of a village p	pathshala.	•
YT		
- Alle		
ACCURATE THE AND		
Name this Dutch painter		
a) Lord Macualay	b) William Adam	
c) Francois Solvyn	d) William Carry	
105. Who was of the opinion that Colonial education	n created sense of inferiority in the minds of Indians?	1
a) Mahatma Gandhi	b) Rabindranath Tagore	
c) Sarojini Naidu	d) Subhash Chandra Bose	
106. Complete the following sentence. Mahatma Ga teaching.	ndhi felt that the ought to be the medium of	1
a) Sanskrit	b) Arabic	
c) Indian languages	d) English	
107. Which one of the following cannot be listed un	der Fossil Fuels	1
a) Petroleum	b) Fire wood	
c) Natural gas	a) Coal	1
108. Which continent is the leading producer of iro	n ore in the World?	I
a) Asia	d) Australia	
c) Europe	u) Australia	

109. Select the correct reason from the following op gold?	tions as to why Petroleum is called Black gold or Liquid	1
a) It is highly valuable	b) More than half of the total reserves are found in the Middle East countries of the world.	
c) As the mineral oil is taken from the sedimentary rocks.	d) It is black in colour	
110. The wind power plant at Lamba in India is the	largest in Asia. Name the state where Lamba is located.	1
a) Karnataka c) Gujarat	b) Rajasthan d) Tamil nadu	
111. The greatest nuclear power producers are Euro	ope and Name the other country	1
a) South America	b) USA	
c) South Africa	d) Australia	
112. From the options, select the major bauxite proc	lucing area of India.	1
a) West Bengal	b) Jharkhand	
c) Kerala	d) Goa	
	y generated from the image given	1
a) Solar energy	b) Wind Energy	
c) Tidal energy	d) Geothermal Energy	
114. Memo should also be attested by at least wi	tness who could include a family member of the	1
a) One	b) Four	
c) Three	d) Two	
115. Decision like that no teacher can beat a student they can punish people for particular crimes are	t, or about the sharing of river waters between states, or e taken by	1
a) Court	b) Ministers	
c) Police	d) Citizens	1
116. Which of the following is the function of Public	prosecutor?	1
a) cross examine the witnesses	b) Record the evidence	
117 The High Court of Delhi came up in	d) write the Judgement	1
a) 1965	b) 1064	1
a) 1963 c) 1962	d) 1966	
118. In India, we have an integrated judicial system	, means that	1
a) the decisions made by district courts are	b) the decisions made by higher courts are	
binding on the apex courts	binding on the high court?s only	
c) the decisions made by higher courts are	d) the decisions made by lower courts are	
binding on the lower courts	binding on the supreme courts	
119. Issue of dispute between two state comes unde	r	1
a) High Court	b) District Court	
c) Supreme Court	d) Lower court	
120. Supreme Court is presided over by the		1
a) High Justice of India	b) Vice Justice of India	
c) District Justice of India	d) Chief Justice of India	

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### Solution

### Class 08 - Mathematics

### Multiple Choice Examination (October-2019)

#### Section A

1. (c)  $8x^3$ ,  $27x^3$ ,  $64x^3$ **Explanation:** The answer is 8  $x^3$ , 27  $x^3$ , 64  $x^3$  $(2x)^{\ 3} = 2x imes 2x imes 2x = 8 \ x^3$  $(3x)^3=3x imes 3x imes 3x=27\ x^3$  $(4x)^3 = 4x imes 4x imes 4x = 64 \; x^3$ 2. (c) 6 **Explanation:**  $36x = 6 \times 6 \times x$ Since 36x is a perfect cube number so to make 36 x a perfect cube one 6 should be multiplied in place of x. So, x=6 3. (a) -13 **Explanation:** -2197 = -13 imes-13 imes -13  $\sqrt[3]{-2197} = \sqrt[3]{(-13)^3}$  $\sqrt[3]{-2197} = -13$ 4. (c)  $3^3 imes~5^3$ **Explanation**:  $3375 = 3 \times 3 \times 3 \times 5 \times 5 \times 5$ =  $3^3 \times 5^3$ 5. (a) 9 **Explanation**:  $(9261)^{1/3} = \ 2 \mathrm{p} \ + \ 3,$  $\sqrt[3]{9261} = 2p + 3$ 21 = 2p + 321—3= 2p 18 = 2p  $\frac{18}{2} = p$ 9=p 6. (d)  $(10b + a)^3$ **Explanation**: Ones digit = a tens digit = b

Number =  $(10 \times b) + a = (10b + a)$ Now the cube of number =  $(10b + a)^3$ 

7. (b)

 $\frac{343}{512}$ 

**Explanation:** 

 $\sqrt[3]{\frac{x}{y}} = \frac{7}{8}$ Cubing both sides,  $\sqrt[3]{\left(\frac{x}{y}\right)^3} = \left(\frac{7}{8}\right)^3$   $\frac{x}{y} = \frac{343}{512}$ (d)

8.  $\frac{84}{65}$ 

Explanation:  $x^3 = \frac{9261}{42875}$  and  $y^3 = \frac{729}{2197}$   $x^3 = (\frac{21}{35})^3$  $x = \frac{21}{35}$  (By cancelling the powers)  $y^{3} = \left(\frac{9}{13}\right)^{3}$   $y = \frac{9}{13}$  (By cancelling the powers) Now x =  $\frac{21}{35}$ x =  $\frac{3}{5}$  (By lowest term method) x + y =  $\frac{3}{5} + \frac{9}{13}$ =  $\frac{39+45}{65}$ =  $\frac{84}{65}$ 

60

**Explanation:**  $\sqrt[3]{216000} = \sqrt[3]{2^{\ 3} imes 2^{\ 3} imes 3^3 imes 5^{\ 3}}$  $\sqrt[3]{216000} = 2 imes 2 imes 3 imes 5$  $\sqrt[3]{216000} = 60$ 

#### 10. (b)

cube numbers

**Explanation:** The answer is cube numbers As the numbers 1, 8, 27... are the cubes of 1,2 3.....

#### 11. (d)

12.

27

Explanation:  
19683 = 
$$3 \times 3 \times 3$$
 (By taking triplets)  
 $\sqrt[3]{19683} = \sqrt[3]{3^3 \times 3^3 \times 3^3}$   
 $\sqrt[3]{19683} = 3 \times 3 \times 3$   
 $\sqrt[3]{19683} = 27$   
(a)  
-23

**Explanation**: -12167 = -23 ×-23 ×-23  $\sqrt[3]{-12167} = \sqrt[3]{(-23)^3}$  $\sqrt[3]{-12167} = -23$ 13. (b)  $\frac{8}{125}$ **Explanation:**  $\sqrt[3]{\frac{x}{y}} = \frac{2}{5}$ Cubing both sides,  $\sqrt[3]{\left(\frac{x}{y}\right)^3} = \left(\frac{2}{5}\right)^3$  $\frac{x}{y} = \frac{8}{125}$ 14. (d)  $\frac{27}{64}$ **Explanation**: IF  $\sqrt[3]{\frac{x}{y}} = \frac{3}{4}$  , then  $\frac{x}{y} =$  \_\_\_\_\_. Cubing both sides,  $\sqrt[3]{\left(\frac{x}{y}\right)^3} = \left[\frac{3}{4}\right]^3$  $\frac{x}{y} \cdot = \frac{27}{64}$ 15. (a) 26 **Explanation**: 17576 = 2  $\times$  2  $\times$  2  $\times$  13  $\times$  13  $\times$  13  $\sqrt[3]{17576} = \sqrt[3]{2^{-3} \times 13^{-3}}$  $\sqrt[3]{17576}=2 imes13$  $\sqrt[3]{17576} = 26$ 16. (c)  $3^3 imes~5^3$ **Explanation**: 3375 = 3  $\times$  3  $\times$  3  $\times$  5  $\times$ 5  $\times$ 5 =  $3^3 \times 5^3$ 17. (d) 10 Explanation:  $(6859)^{1/3}=2{
m p}-1 \ \sqrt[3]{6859}=2p-1$ 19 = 2p - 120 = 2p  $\frac{20}{2} = p$ 10 = p 18. (a) -13

```
Explanation:
       -2197 = -13 × -13 × -13
       \sqrt[3]{-2197} = \sqrt[3]{(-13)^3}
       \sqrt[3]{-2197} = -13
19.
      (a)
       3
      Explanation:
       The answer is 3
       2197
      Unit's place of 2197= 7
      The ones digit of cube root of 2197 will be 3 as 3^3=27 which has 7 as unit's place
20.
      (d)
       25
       Explanation:
       15625 = 5 \times 5 \times 5 \times 5 \times 5 \times 5
       \sqrt[3]{15625} = \sqrt[3]{5^3 \times 5^3}
       \sqrt[3]{15625} = 5 \times 5
       \sqrt[3]{15625} = 25
      (a)
21.
       ₹4,998.75
       Explanation:
      C.I. =P(1 + \frac{r}{100})^n - P
= 15,500(1 + \frac{15}{100})^2 - 15,500
       = 20,498.75 - 15,500
       = ₹4,998.75
22.
      (c)
       Gain of Rs 600
       Explanation:
       Purchase price = Rs.9500
       Spent on repairs = Rs.500
      Total purchase price=₹10000
       Selling price = ₹10600 - 10000
       Gain = ₹600
23.
      (d)
       ₹96
       Explanation:
       Marked price=₹120
      Discount(%) = ₹\frac{120 \times 20}{100}
       = ₹24
      Selling price= \mathbf{R}(120 - 24)
       = ₹96
24.
      (d)
       4\%
       Explanation:
```

$$\begin{array}{l} Discount(\%) = \frac{Markedprice-Sellingprice}{Markedprice} \times 100 \\ = \frac{15,000-14,400}{15,000} \times 100 \\ = \frac{600 \times 100}{15,000} \\ = 4\% \end{array}$$

25. (d)

₹126

Explanation: Discount =  $\P(840 - 714)$  (marked price- sale price) = $\P126$ 

26. (a)

Rs.200

Explanation: Marked price= Rs 250 Discount (%) =  $\underbrace{\underbrace{250 \times 20}_{100}}_{100}$ = Rs.50Selling price=Rs.(250 - 50)= Rs.200

27. (c)

Gain of 16.67% (Approx)

```
Explanation:

Purchase price of T.V. =₹2400

Repairs = ₹600

Total Purchase Price =₹(2,400+600)

= ₹3000

Selling Price=₹3500

Gain=₹(3,500-3,000)

= ₹500

Gain (%)=\frac{500}{3000} \times 100

= 16.67%(Approx)
```

### 28. (b)

It is 12:1

Explanation: ₹1=100 paise ₹6=600 paise So, the ratio is, 600 : 50 = 12 : 1

### 29. (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

30. (a)

 $10\%, 15 \; \mathrm{lakh}$ 

Total Percent =100% Percent of the people like other games =100% - (60 + 30)% =10% Total number of people=50 lakh Number who like cricket game = 50,00,000 ×  $\frac{30}{100}$ = 15,00,000 = 15Lakh (c) ₹2500 Explanation: Let the money in the begning = xAccording to question  $x - \frac{70 \times x}{100} = 750$ or,  $x - \frac{7x}{10} = 750$ 

or, 
$$\frac{3x}{10} = 750$$
  
or,  $x = \frac{750 \times 10}{3}$   
= ₹2500

31.

Rs22000

```
Explanation:

Price of the refrigetor = Rs.20000

Sale tax = \frac{20000 \times 10}{100}

= Rs2000

Amount Ashish will have to pay = ₹(20000 + 2000)

= ₹22000
```

## 33. (b)

₹40

Explanation: Discount = Rs.(540 - 500) (Marked price- Sales price) =.Rs.40

### 34. (c)

No profit no loss

```
Explanation:

Purchase price of TV set=₹10,000

Profit=10,000 \times \frac{10}{100}

= ₹1,000

Loss = 10,000 \times \frac{10}{100}

=₹1,000

No profit no loss
```

### 35. (a)

Gain of ₹5000

Explanation: Purchase price of motor bike = ₹22500Spent on repairs = ₹2500Total Price ₹(22500 + 2500) = ₹25000

```
Gain = ₹(30000 - 25000) (purchase price- sale price)
= ₹5000 (Gain)
```

36. (c)

25

```
Explanation:
Let the total matches be = x
According to question,
x \times \frac{40}{100} = 10
or, x = \frac{10}{40} \times 100
or, x = 25 matches
```

37. (d)

₹5000

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 ₹5400then price before VAT is=₹ $\frac{5400 \times 100}{108}$  = ₹5000

### 38. (c)

Gain of 16.67% (Approx)

```
Explanation:

Purchase price of T.V. =₹2400

Repairs = ₹600

Total Purchase Price =₹(2,400 + 600)

= ₹3000

Selling Price=₹3500

Gain=₹(3,500 - 3,000)

= ₹500

Gain (%)=\frac{500}{3000} \times 100

= 16.67%(Approx)
```

# 39. (c)

4%

```
Explanation:
Discount = ₹(1500 - 1440)
= ₹60
Discount (%) = \frac{60 \times 100}{1500}
= 4%
```

```
40. (b)
```

₹250

```
Explanation:
Discount =₹(900 - 650) (marked price- sale price)
= ₹250
```

# Solution

# Class 08 - Science Multiple Choice Examination (October-2019)

### Section A

### 41. **(d)**

Speed

### Explanation:

A force applied on an object may change its speed. When force is applied in direction of motion speed will increase and if the force is applied in a direction, opposite to its motion, the speed decreases.

42. (a)

Buoyant force

#### Explanation:

The upward force experienced by the body when submerged in a fluid is called buoyant force. Pressure increases with depth as a result of the weight of the overlying fluid.So, the pressure at the bottom of an object submerged in a fluid is greater at the tob of the object.This pressure difference results in a net upwards force on the object. Buoyant force depends upon nature of fluid and density of substance.

43. (b)

Friction is absent

### Explanation:

Frictional force always acts in opposite direction of motion to slow down or stopped the body from moving. A body will remain in state of motion on rolling on ground if friction is absent or the body will not move at all as friction is due air also.

44. (b)

**Relative motion** 

#### Explanation:

Friction opposes the relative motion between two surfaces in contact. It always acts in the direction opposite to the direction of motion of the object. Two moving objects in contact with each other are always in relative motion.

45. (b)

Equal in all direction

#### **Explanation**:

The lateral pressure exerted by liquid at same height is equal in all direction and pressure increases with depth.

46. (c)

Friction

#### Explanation:

A force which opposes the motion is called friction.Friction always acts in the direction opposite to the direction of motion. This is the reason why moving objects slow down and stop. Friction is an example of contact force.

47. (d)

Drag

The frictional force exerted by fluids is also called as drag.Water and other liquids exert force of friction when objects move through them.The friction force exerted by fluids depends on its speed with respect to fluid and also on the shape of the object and the nature of the fluid.

# 8. (a)

20 N

## Explanation:

Since the two forces are acting in opposite directions, the net force is the difference between the two forces. The net force will act in the direction of the larger force.

Force exerted by the first boy=40N

Force exerted by the second boy= 60N

The resultant force exerted by two boys on same objet will be : Force exerted by the second boy (60N) - Force exerted by the first boy(40N) = 20N

49. (b)

Speed of the body increases

### Explanation:

If the force applied on a moving body in the same direction of motion than the speed of the body increases.As both the forces are acting in the same direction, they add up to make a bigger force.This large force makes the speed increases. And if force acts in the opposite direction, speed decreases.

### 50. (d)

Less friction

### Explanation:

A motorcycle with worn out threads on tyres is more likely to skid due to less friction on slippery road. Tyres have grooves to increase the friction, if these grooves are worn out the grip loses and the friction between the tyre and the surface of the road decreases.There will be less friction between the motorcycle and the road which is most likely to skid.

51. **(d)** 

Change in mass

### Explanation:

Force can change the state of motion, the shape and size of object and change the state of motion but can never change the mass of the body.Force is the product of mass and acceleration.

52. **(b)** 

Friction

### Explanation:

Wheels of vehicle is stopped by using brake that works on property of friction.We deliberately increase friction by using brake pads in the brake system and arrest the motion of the rim and finally the wheel, which helps in slowing and stopping the vehicle.

### 53. (d)

Direction as well as speed

### Explanation:

When a batsman hits the ball, it changes the direction of ball as well as speed of the ball. Due to the force applied by the bat along the direction of motion the speed of the ball increases.

54. **(c)** 

The force of gravitation

The force of gravitation is responsible for stability of our universe. Gravitational force acts on each and every object which attracts the bodies towards itself. The planets revolve around the sun in their own axis is because of the gravitational force of the sun. Gravitational force depends on the mass and the distance of the object.

### 55. **(d)**

Action of force

### Explanation:

The motion imparted to object is due to the action of force. If force acts on the object along the direction of motion, its speed increases. If force is applied on a direction opposite to the direction of motion, its speed decreases.

### 56. **(d)**

1kg x 1m

### Explanation:

One Newton is equal to 1gm x 1m. One newton of force is the force required to accelerate an object with a mass of 1kg to a distance of one meter.

### 57. **(d)**

100 Pa

Explanation: Here, Force = 200N, Area = 2 sq m. Pressure = Force/Area. Pressure = 200N / 2 sq m =100 Pascal (Pa).

### 58. **(b)**

pressure of water

### Explanation:

When we press the bulb of a dropper with its nozzle kept in water, air in the dropper is seen to escape in the form of bubbles and creates the vacuum in the bulb. Once we release the pressure on the bulb, water gets filled in the dropper because the pressure in water is more than the pressure in the bulb so water moves from the higher pressure to the lower pressure.

### 59. (b)

N per sq. m

### Explanation:

The S.I. unit of pressure is Pascal.One pascal is the pressure that results from the action of 1 N of force acting on a unit area.

60. (c)

Increase in depth

### Explanation:

Pressure exerted by liquid increases with increase in depth. As the depth of liquid increases the weight of liquid column pushing down from above increases and hence the pressure also increases. To protect this pressure, sea divers uses special suit.

### 61. (d)

29 days

### Explanation:

Menstrual cycle is repeated at an average interval of 29 days if fertilization of egg does not take place. During this cycle, ovulation occurs in the middle of it.

62. (b)

### Menarche

### Explanation:

Menarche is starting of first menstrual cycle in girls. Menstrual cycle starts at puberty in which ovulation takes place.

### 63. (c)

160 cm tall

### Explanation:

In boys 75% of growth takes place at the age of 9 years. A boys having height of 120 cm at the age of 9 will likely to be 160 cm in height at the end of growth period.

### 64. (d)

Metamorphosis

### Explanation:

The change from larva to adult is called metamorphosis. During metamorphosis organism changes suddenly into new form of organism.

#### 65. (d)

Shaking hands with HIV positive person

#### Explanation:

Shaking hands with HIV positive person do not cause HIV infection. It is transmitted by sexual contact with HIV infected person, sharing syringe with HIV infected person and from infected mother to their child.

#### 66. (b)

14 to16

#### Explanation:

Ovulation is the release of ovum from ovary of female. Ovulation occurs on the 14-16th day of menstrual cycle, the middle of menstrual cycle.

#### 67. (b)

Oxytocin

#### Explanation:

Milk ejection start from mammary gland of female just after parturition of baby. Oxytocin hormone is responsible for milk ejection after the birth of baby.

#### 68. (c)

Women are responsible for sex of child

#### Explanation:

It is misconception that women are responsible for sex of child. Male sperm is actually responsible for sex of child as it may contain X or Y sex chromosome.

# 69. (b)

Iodine

### Explanation:

Iodine is essential for formation of thyroxin hormone. Thyroxin hormone is essential for metabolism of nutrients and mental development.

#### 70. (d)

Ovulation occurs in the middle of menstrual cycle

Ovulation occurs in the middle of menstrual cycle. Father is responsible for the sex of child. Menstruation starts at the age of 13 years. Girls attain puberty at earlier than boys.

71. (a)

Thyroxin

### Explanation:

Metamorphosis in frogs is controlled by thyroxin hormone. Metamorphosis is drastic change in shape of organisms as tadpole to frog.

72. (b)

Salivary gland

### Explanation:

Those glands that have ducts to pass secretion to target organ is called exocrine gland. Salivary gland is an example of exocrine gland. Pancreas, pituitary and adrenal glands are endocrine glands.

73. (d)

Hormones

### Explanation:

Facial hair in some women occurs due to effect of hormone. Some woman start producing testosterone hormone that causes secondary sexual character in female.

### 74. (a)

Gestation period

### Explanation:

The period of pregnancy is known as gestation period. It ranges from fertilization of ovum to parturition. It is of about 40 weeks.

75. (b)

Goitre

### Explanation:

Table salt is often iodized for certain areas to prevent goitre. Goitre disease occurs due to under secretion of thyroxin hormone which require iodine for secretion.

76. (c)

Ovulation

Explanation:

pimples, moustache and body hairs are secondary sexual character in male and female. Ovulation is the release of ovum from ovary which is a primary sexual feature.

### 77. (d)

Parthenogenesis

### Explanation:

The development of a new individual from a single gamete without fertilization is called parthenogenesis. In honey bee, production takes place by pathogenesis.

78. (b)

Addictive

### Explanation:

We should not use drugs as drugs are addictive in nature as a person start using it, it becomes difficult to give up the same that ruin the family and health.

79. (d)

Adequate nutritional value

Explanation:

Chips and packed snacks should never replace regular meals comprising of bread and rice along with vegetables and pulses as these things do not have adequate nutritional value.

80. (a)

Females

Explanation:

The voice of females is high pitched in comparison to male. Pitch of voice change with age

# Solution

## **Class 08 - Social Science**

## **Multiple Choice Examination (October-2019)**

### Section A

#### 81. (d)

Dorabji Tata

### Explanation:

Charles Weld and Dorabji Tata, the eldest son of Jamshedji Tata, were travelling in Chattisgarh in search of iron ore deposits. They had spent many months on a costly venture looking for sources of good iron ore to set up a modern iron and steel plant in India.

82. (a) Madras to Northern Andhra Pradesh

Explanation:

Along the Coromondal coast we find a clusture of cotton weaving centres from Madras to Northern Andhra Pradesh.Here chintz was produced in Masaulipatnam,Andhra Pradesh.

83. (b)

South India

### Explanation:

South India has the special type high carbon steel called wootz availability which was used to make Tipu Sultan's sword.

84. (c) Indian Railways

Explanation:

British experts in the Indian Railways were unwilling to believe that good quality steel could be produced in India. In 1914 the First World War broke out. Steel produced in Britain now had to meet the demands of war in Europe. Imports of British steel into India declined dramatically and the Indian Railways turned to TISCO.

- 85. (b) The presence of vast black soil tract
  - Explanation:

Bombay was close to the vast black soil tract of western India where cotton was grown. When the cotton textile mills came upthey could get supplies of raw material with ease.

86. (c) Charkha

Explanation:

Khadi gradually became a symbol of nationalism.The charkha came to represent India,and it was put at the centre of tricolour flag of the Indian National Congress adopted in 1931.

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. (c) Bombay
  - Explanation:

Because it was close to the vast black soil tract of western India where cotton was grown and because it has an important port for the export of raw cotton from India to England and China.

89. (a) Dacca

Explanation:

Dacca in Eastern Bengal(now Bangladesh)was the foremost textile centre in the eighteenth century.It was famous for its mulmul and jamdani weaving.

90. (b)

dye thread

Explanation:

With the help of spinning wheel once the thread was woven, it was sent to the dyer to colour the thread in order to produce coloured cloth.

### 91. (d) Steel

### Explanation:

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

#### 92. (c)

Cochin

### Explanation:

The Dutch settlements in Cochin came up in the seventeenth century. Dutch presence in the region started with the capture of Portuguese Quilon in 1661 and ended with the occupation of Malabar by the British in 1795.

# 93. (a) Weaving skills were not passed on from one generation to another

### Explanation:

Weavers often belonged to communities that specialised in weaving. Their skills were often passed on from one generation to the next. In most communities weaving was a task done by men.

#### 94. **(b)**

Teaching was oral and the guru taught only the children of rich families.

#### Explanation:

Classes were not held during harvest time when rural children often worked in the fields which means that children coming from poor families also studied in the pathshalas

#### 95. (c)

They appointed a number of government pandits incharge of schools and asked them to inspect the schools

### Explanation:

The task of the pandit was to visit the pathshalas and try and improve the standard of teaching.Each guru was asked to submit periodic reports and take classes according to the timetable.

### 96. (a)

1854

### Explanation:

Up to the mid -nineteenth century, the Company was concerned primarily with higher education, so it allowed the local pathshalas to function but in 1854 it descided to improvce the system.

### 97. (c)

Serampore College

### Explanation:

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

98. (b)

Rabindranath Tagore

### Explanation:

Rabindranath Tagore was of the view that creative learning could be encouraged only within a natural envioronment, so he chose to set up his school 100kms away from Calcutta, in a rural setting.

99. (b)

Mahatma Gandhi

Explanation:

Mahatma Gandhi had written literacy is only one of the means whereby man and women can be educated.Literacy in itself not education.

### 100. (c)

Western education

#### Explanation:

Macaulay believed teaching English could be a way of civilizing people, changing their taste, values and culture.

#### 101. (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.

102. (d)

Henry Thomas Colebrooke

#### Explanation:

Both were discovering the ancient Inidan heritage, mastering Indian languages and tranlating Sanskrit and Persian works into English.

#### 103. (a)

Bihar and Bengal

#### Explanation:

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

#### 104. (c)

Francois Solvyn

#### Explanation:

Francois Solvyn came to India in the late eighteenth century and tried to depict the everyday life of people in his paintings.

105. (a)

Mahatma Gandhi

#### Explanation:

Mahatma Gandhi felt that colonial education made Indians see Western civilisation as superior, and destroyed the pride they had in their own culture.

#### 106. (c)

Indian languages

### Explanation:

Mahatma Gandhi strongly felt education in English crippled Indians,distanced them from their own social surroundings and made them strangers in their own lands.Speaking aforiegn tongue,despising local culture,the English educated did not know how to relate to the masses.

### 107. (b) Fire wood

Explanation:

Fossil fuel such as coal, petroleum and natural gas are the main sources of conventional energy. Firewood is not a fossil fuel.

### 108. (c) Europe

Europe has large iron ore deposits.Hence,Europe is the leading producer of iron-ore in the world

109. (a) It is highly valuable Explanation:

Petroleum and its derivatives are called Black Gold as they are very valuable.

- 110. (c) Gujarat
  - Explanation:

Lamba in Gujarat is famous for wind power plant.It has the largest wind mill in Asia.

111. (b) USA

Explanation:

The greatest producers of nuclear power are USA and Europe.

- 112. (b) Jharkhand
  - Explanation:

Major bauxite producing areas are Jharkhand, Orissa, Chhattisgarh, Madhya Pradesh, Gujarat,Maharashtra and Tamil Nadu.

113. (a)

Solar energy

# Explanation:

Solar energy trapped from the sun can be used in solar cells to produce electricity. The given image is of Solar Panels to trap solar energy.

114. (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.

115. (a) Court

### Explanation:

Courts take decisions on a very large number of issues. They can decide that no teacher can beat a student, or about the sharing of river waters between states, or they can punish people for particular crimes.

- 116. (a) cross examine the witnesses
  - Explanation:

The public prosecutor is an important officer who cross examines the witness.

117. (d) 1966

Explanation: The High Court of Delhi came up in 1966.

118. (c)

the decisions made by higher courts are binding on the lower courts

# Explanation:

Integrated judicial system means that decisions made by higher courts are binding on the lower courts. All the lower courts from the Gram Panchayat to the High Courts are integrated into the Supreme Court of India. The integration is through the appellate system existing in the Indian Constitution.

119. (c)

Supreme Court

# Explanation:

Dispute Resolution: The judicial system provides a mechanism for resolving disputes between citizens, between citizens and the government, between two state governments and between the centre and state

governments.

120. (d) Chief Justice of India

Explanation:

The Chief Justice of India (CJI) is the head of the judiciary of India and the Supreme Court of India. The present CJI is Justice Dipak Misra and is the 45th CJI since January 1950, the year the Constitution came into effect and the Supreme Court came into being