

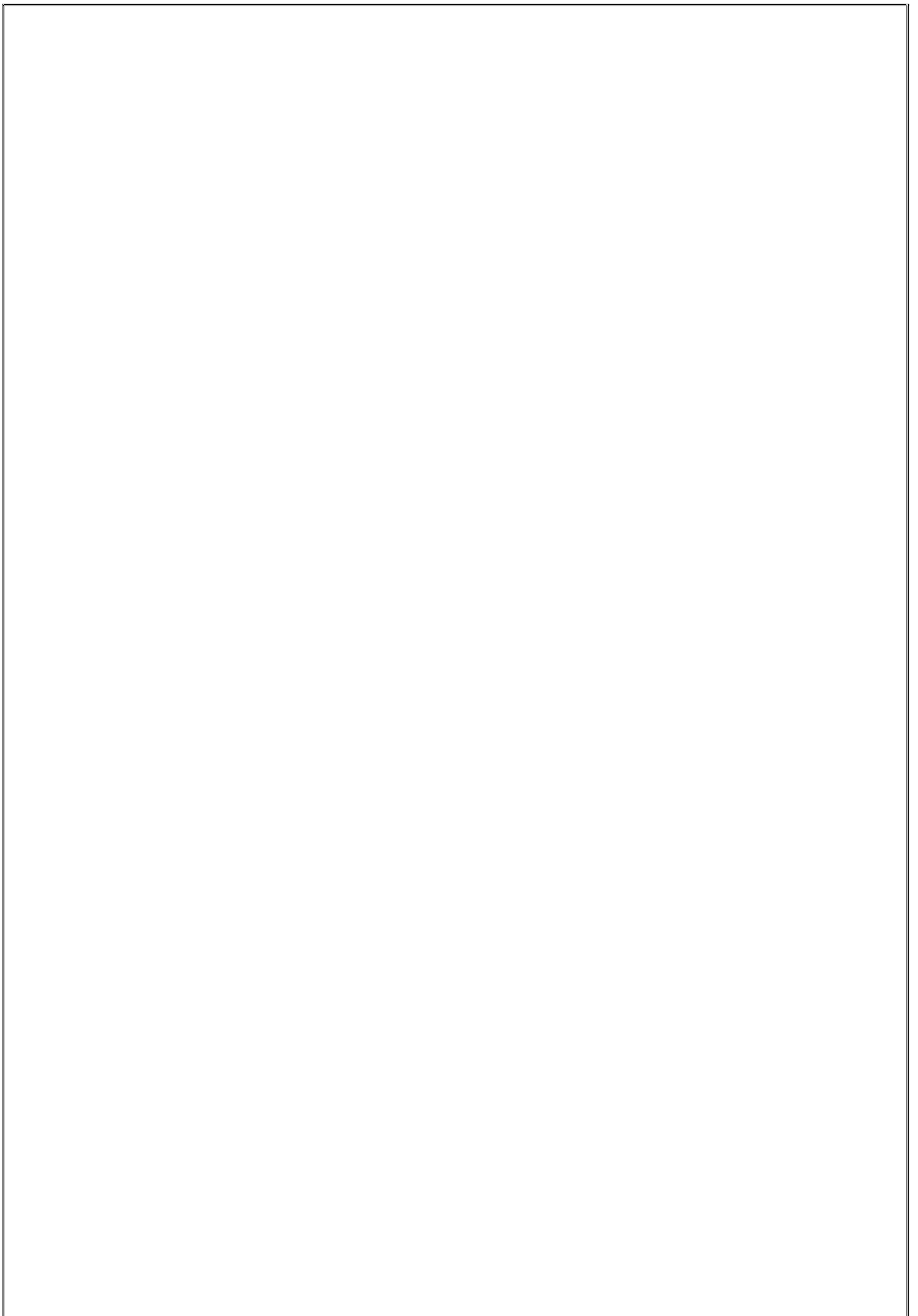
A GRAND STEP TO BE A VIJAY RATNA

*Sample  
Test paper*

**CLASS IX**

STUDENTS WHO ARE MOVING TO CLASS X IN 2018





**TEST PAPER**NAME : REG. NO. :   
9 Digits

Section	Subject	No. of Que.	Serial No.	Marking Scheme	
1	SCIENCE	20	1 to 20	Marked Correct	+2
2	MATHS	20	21 to 40	Marked Incorrect	0
3	SO.SCIENCE	20	41 to 60	Not Attempted	0
4	LR(MAT)	20	61 to 80	Max.Marks	200
5	GK	20	81 to 100	Duration	2 Hrs.
<b>Total</b>		<b>100</b>	<b>1 to 100</b>		

**EXAMINATION HALL****GENERAL INSTRUCTIONS**

Please read the instructions carefully. You are allotted additional 5 minutes specifically for this purpose.

**A. General :**

- 1 Space is provided within question paper for rough work hence no additional sheets will be provided.
- 2 Blank paper, clipboard, log tables, slide rules, calculators, cellular phones, pagers and electronic gadgets in any form are **not** allowed inside the examination hall.
- 3 Do not Tamper / mutilate the **ORS sheet** or this booklet.
- 4 **SUBMIT** the ORS sheet to the invigilator after completing the test and take the test paper with you.
- 5 Any student found/reported using unfair means to improve his/her performance in the test, shall be disqualified from VTSE.
- 6 Objective Response Sheet (ORS sheet), is provided separately.
- 7 Do not break the seals of the question-paper booklet before instructed to do so by the invigilators.

**B. How to fill Objective Response Sheet (ORS sheet) for filling details marking answers:**

- 8 Use only HB Pencil/Blue or Black ball point pen for filling the ORS sheet. Do not use Gel/Ink/Felt pen as it might smudge the ORS sheet.
- 9 Write your VTSE Student Registration No. in the boxes given in your ORS sheet with blue/black ball point pen. Also, darken the corresponding bubbles with HB Pencil/Blue or Black ball point pen only.
- 10 If any student does not fill his/her VTSE Student Registration No. correctly and properly, then his/her ORS sheet will not be checked/ evaluated.
- 11 Since it is not possible to erase and correct pen filled bubble, you are advised to be extremely careful while darkening the bubble corresponding to your answer.
- 12 Neither try to erase / rub / scratch the option nor make the Cross (X) mark on the option once filled, do not scribble, smudge, cut, tear, or wrinkle the ORS sheet. Do not put any stray mark or whitener anywhere on the ORS sheet.
- 13 If there is any discrepancy between the written data and the bubbled data in your ORS sheet, the bubbled data will be taken as final.

**SECTION – 1 : SCIENCE**

1. A body falling from rest describes distances  $S_1$ ,  $S_2$  and  $S_3$  in the first, second and third seconds of its fall. Then the ratio of  $S_1 : S_2 : S_3$  is :  
(a) 1 : 1 : 1                      (b) 1 : 3 : 5                      (c) 1 : 2 : 3                      (d) 1 : 4 : 9
2. An apple falls towards the earth because the earth attracts it. The apple also attracts the earth by the same force. Why do we not see the earth rising towards the apple ?  
(a) Acceleration of the earth is very large when compared to that of apple.  
(b) Acceleration of the earth is equal to that of apple.  
(c) Acceleration of the earth is neither high nor too low.  
(d) Acceleration of the earth is very small when compared to that of apple.
3. The equation for pressure is  
(a)  $hg/d$                       (b)  $hdg$                       (c)  $hd/g$                       (d)  $h/dg$
4. Two pieces of metal when immersed in a liquid have equal upthrust on them; then  
(a) both pieces must have equal weights  
(b) both pieces must have equal densities  
(c) both pieces must have equal volumes  
(d) both are floating to the same depth
5. Two bodies have their masses  $m_1/m_2 = 3$  and their kinetic energies  $\frac{K.E_1}{K.E_2} = \frac{1}{3}$ . The ratio of their velocities are  
(a) 1 : 1                      (b) 1 : 2                      (c) 1 : 3                      (d) 2 : 3
6. The momentum of a body is doubled. What is the percentage increase in kinetic energy ?  
(a) 500%                      (b) 300%                      (c) 200%                      (d) 600%

**SPACE FOR ROUGH WORK**

7. A big explosion on the moon cannot be heard on the earth because
- (a) the explosion produces high frequency sound waves which are inaudible
  - (b) sound waves require a material medium for propagation
  - (c) sound wave are absorbed in the moon's atmosphere
  - (d) sound waves are absorbed in the earth's atmosphere
8. Gases can be liquified by
- (a) Lowering pressure and increasing temperature
  - (b) Lowering pressure and decreasing temperature
  - (c) Increasing pressure and increasing temperature
  - (d) Lowering temperature and increasing pressure
9. The chemical formula of sodium sulphate is
- (a)  $Na_2S$
  - (b)  $Na_2SO_4$
  - (c)  $NaS$
  - (d)  $Na_2SO_3$
10.  $470k = \text{_____}^\circ C$
- (a)  $743^\circ C$
  - (b)  $197^\circ C$
  - (c)  $47^\circ C$
  - (d)  $273^\circ C$
11. Which one of the following is an emulsion ?
- (a) Butter
  - (b) Gemstone
  - (c) Milk
  - (d) Fog
12. The mass of  $1.2044 \times 10^{23}$  molecules of  $O_2$  would be
- (a) 64u
  - (b) 6.4u
  - (c) 0.64u
  - (d) 3.2u
13. An element 'X' forms a compound  $XNO_3$ . What is the valency of 'X'?
- (a) 3
  - (b) 1
  - (c) 2
  - (d) None of these
14. The ion of an element has 3 positive charges. Mass number of atom is 27 and number of neutrons is 14. What is the number of electrons in the ion ?
- (a) 13
  - (b) 10
  - (c) 14
  - (d) 16
15. Cell theory was given by
- (a) Schleiden and Schwann
  - (b) Virchow
  - (c) Hooke
  - (d) Schleiden

16. Guard cells are present in  
 (a) cork (b) cortex (c) stomata (d) vascular bundle
17. Which of the following is common among plants and animals ?  
 (a) Both are prokaryotic (b) Both are eukaryotic  
 (c) Both are heterotrophic (d) Both are autotrophic
18. Female Anopheles mosquito is a carrier of a pathogen that causes  
 (a) yellow fever (b) filariasis (c) malaria (d) dengue
19. Greenhouse is related to  
 (a) global warming (b) terrace gardening  
 (c) kitchen garden (d) increase growth of algae
20. Sustainable agriculture involves  
 (a) mixed farming (b) mixed cropping (c) crop rotation (d) all of the above

**SECTION – 2 : MATHEMATICS**

21. The 100<sup>th</sup> root of  $10^{(10^{10})}$  is  
 (a)  $10^{8^{10}}$  (b)  $10^{10^8}$  (c)  $(\sqrt{10})^{(\sqrt{10})^{10}}$  (d)  $10(\sqrt{10})^{\sqrt{10}}$
22. The value of  $\frac{1}{1 \times 2} + \frac{1}{2 \times 3} + \frac{1}{3 \times 4} + \dots + \frac{1}{99 \times 100}$  is  
 (a) Less than  $\frac{99}{100}$  (b) Equal to  $\frac{99}{100}$  (c) Greater than  $\frac{100}{99}$  (d) Equal to  $\frac{100}{99}$
23. The greater between  $\sqrt{17} - \sqrt{12}$  and  $\sqrt{11} - \sqrt{6}$  is  
 (a)  $\sqrt{17} - \sqrt{12}$  (b)  $\sqrt{11} - \sqrt{6}$  (c) Both are equal (d) Cannot compare

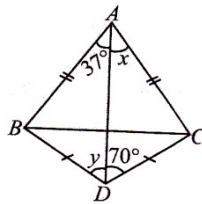
24. Factors of  $\left(x^2 + \frac{x}{6} - \frac{1}{6}\right)$  are

- (a)  $\frac{1}{6}, (2x+1), (3x+1)$  (b)  $\frac{1}{6}, (2x+1), (3x-1)$  (c)  $\frac{1}{6}, (2x-1), (3x-1)$  (d)  $\frac{1}{6}, (2x-1), (3x+1)$

25. An angle is  $14^\circ$  more than its complementary angle, then angle is

- (a)  $30^\circ$  (b)  $52^\circ$  (c)  $50^\circ$  (d) None of these

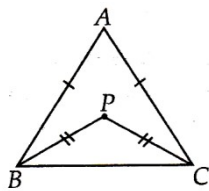
26. In the given figure, x and y are



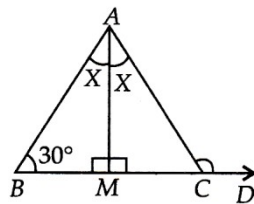
- (a)  $x = 70^\circ, y = 37^\circ$  (b)  $x = 37^\circ, y = 70^\circ$  (c)  $x + y = 117^\circ$  (d)  $x - y = 100^\circ$

27.  $\triangle ABC$  and  $\triangle PBC$  are two isosceles triangles on the same base BC and vertices A and P are on the same side of BC. A and P are joined, then

- (a)  $\triangle ABP \cong \triangle ACP$  and  
(b) AP bisects  $\angle A$   
(c)  $\angle ABC = \angle ACP$   
(d) Both (a) & (b)

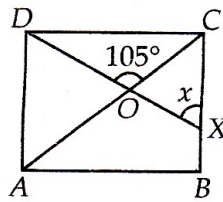


28. In the given figure, find the measure of  $\angle ACD$ .



- (a)  $150^\circ$  (b)  $120^\circ$  (c)  $140^\circ$  (d)  $160^\circ$

29. In the given figure, if ABCD is a square, the value of x is

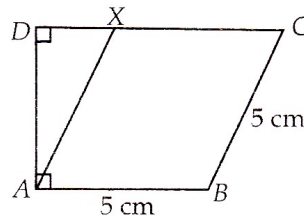


- (a)  $45^\circ$                       (b)  $60^\circ$                       (c)  $70^\circ$                       (d)  $36^\circ$

30. The length and breadth of a rectangle are in the ratio 4 : 3. If the diagonal measures 25 cm, then the perimeter of the rectangle is

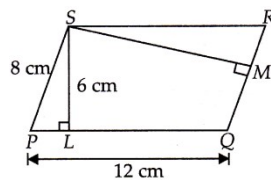
- (a) 58 cm                      (b) 60 cm                      (c) 70 cm                      (d) 80 cm

31. In the given figure, the angles BAD and ADC are right angles and  $AX \parallel BC$ . If  $AB = BC = 5$  cm and  $DC = 8$  cm, then the area of ABCX is



- (a)  $20 \text{ cm}^2$                       (b)  $64 \text{ cm}^2$                       (c)  $32 \text{ cm}^2$                       (d)  $42 \text{ cm}^2$

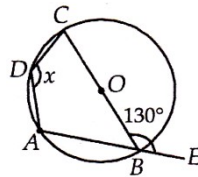
32. Find SM.



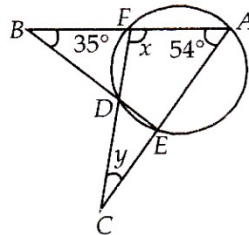
- (a) 9 cm                      (b) 7 cm                      (c) 5 cm                      (d) 12 cm



33. ABCD is a cyclic quadrilateral with centre O in the given figure. Chord AB is produced to E where  $\angle CBE = 130^\circ$ , the value of x is equal to

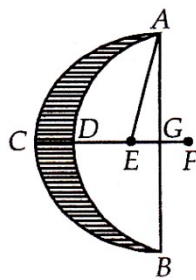


- (a)  $130^\circ$                       (b)  $260^\circ$                       (c)  $140^\circ$                       (d)  $280^\circ$
34. In the given figure, AEDF is a cyclic quadrilateral. The values of x and y respectively are



- (a)  $79^\circ, 47^\circ$                       (b)  $89^\circ, 37^\circ$                       (c)  $89^\circ, 47^\circ$                       (d)  $79^\circ, 37^\circ$
35. The length of longest rod that can be placed in a room 20 m long, 16 m broad and 12 m high, is
- (a) 20 m                      (b) 16.4 m                      (c) 48 m                      (d) 28.2 m
36. Let U be the upper class boundary of a class in a frequency distribution and M be the midpoint of the class. Which one of the following is the lower class boundary of the class ?
- (a)  $M + \frac{(M+L)}{2}$                       (b)  $L + \frac{M+L}{2}$                       (c)  $2M - u$                       (d)  $M - 2L$
37. In a school, 14% of students take computer classes and 67% take drama classes. What is the probability that a student neither takes computer class nor takes drama class ?
- (a)  $\frac{8}{100}$                       (b)  $\frac{29}{100}$                       (c)  $\frac{53}{100}$                       (d)  $\frac{19}{100}$

38. The percentage increase in the surface area of a cube when each side is doubled, is  
 (a) 25%                      (b) 50%                      (c) 150%                      (d) 3005%
39. The length of the sides forming right angle of a right angled triangle are  $5x$  cm and  $(3x - 1)$  cm. If the area of the triangle is  $60 \text{ cm}^2$ , find its hypotenuse.  
 (a) 17 cm                      (b) 18 cm                      (c) 19 cm                      (d) 16 cm
40. A crescent is formed of two circular arcs ACB, ADB of equal radius, centres E and F in the given figure. The perpendicular bisector of AB cuts the crescent at C and D, where  $CD = 12$  cm,  $AB = 16$  cm. The radius of arc ACB is



- (a) 18 cm                      (b) 16 cm                      (c) 12 cm                      (d) 10 cm

### SECTION – 3 : SOCIAL SCIENCE

41. India was originally considered to be a part of the land called -  
 (a) Bharat                      (b) Hindustan                      (c) India                      (d) Jambudvipa
42. The word 'India' developed from the name of a -  
 (a) Ganga                      (b) Sindhu                      (c) Tigris                      (d) Nile
43. The first Surveyor General of Bengal was founded in-  
 (a) 1815                      (b) 1767                      (c) 1821                      (d) 1849
44. The study of coins is known as -  
 (a) Epigraphy                      (b) Numismatics                      (c) Paleography                      (d) Archeology

45. Trade between India and Rome is mentioned in the ancient foreign work-
- (a) Indica (b) Fa Hien's writings (c) Origin of species (d) None
46. Extreme south of Himalaya is called
- (a) Himadri (b) Himachal (c) Shivaliks (d) Sahyadri
47. Among the following one match is not correct
- (a) Nanda Devi — Uttarakhand (b) Dehang Debang — Sikkim  
(c) Panchmarhi — Madhya Pradesh (d) Dibru — Sai Khowa
48. In term of area which is India's largest state
- (a) Uttar Pradesh (b) Maharashtra (c) Rajasthan (d) Madhya Pradesh
49. Which plateau is in between Aravalli and Vindhya Hills?
- (a) Malwa plateau (b) Chhota Nagpur plateau  
(c) Bundelkhand (d) Baghelkhand
50. Which of these countries does not have common boundary line with India?
- (a) Afghanistan (b) Sri Lanka (c) Bhutan (d) Thailand
51. Which of the following regions is the most suitable for human settlement?
- (a) Equatorial region (b) Mediterranean region  
(c) Tropical desert (d) Taiga region
52. Read the following statements:
- (i) National Anthem and National Flag are the symbols of India's unity.  
(ii) National Integration is declared as the country's primary goal.  
(iii) The special feature of the country is unity in diversity.
- Which alternative is correct?
- (a) (i) (ii) and (iii) are true (b) (i) and (ii) are true but (iii) is false  
(c) (i) is true but (ii) and (iii) are false (d) (i) (ii) and (iii) are false

53. Read the following statements:

- (i) The Indian Constitution clearly states the Fundamental Duties of citizens.
- (ii) The Fundamental Rights are also granted by the Indian Constitution to the citizens of India.

Which one of the following is correct?

- (a) Both (i) and (ii) are true
- (b) Both (i) and (ii) are false
- (c) (i) is true (ii) is false
- (d) (i) is false, (ii) is true

54. Which of the following proclaims that “all human beings are born free and equal in dignity and rights”?

- (a) The Indian Constitution
- (b) The Algiers Conference
- (c) The Universal Declaration of Human Rights
- (d) The Bandung Conference

55. Which of the following is not a feature of Secularism as spelled out in the Constitution of India?

- (a) No State religion
- (b) Freedom of conscience
- (c) Theological State
- (d) Freedom to manage religious affairs

56. Read the following statements.

- (A) India is Secular because it observes an attitude of impartiality towards all religions.
- (B) Religious instructions can be imparted in educational institutions recognized by or receiving aid from the State.
- (C) Every religious group has the right to manage its own affairs in matters of religion.
- (D) Religious instructions can be imparted in educational institutions wholly funded by the State.

Which statements are true?

- (a) A, C
- (b) B, C, D
- (c) A, B, C
- (d) A, B, D

57. Which one of the following states was among the first to try out modern farming methods in India?

- (a) Jharkhand
- (b) Haryana
- (c) Bihar
- (d) Orissa

58. Government has set schools in each district called

- (a) Army Schools
- (b) Navodaya Vidyalaya
- (c) Sainik School
- (d) Missionary School

59. High yielding variety seeds (HYV) were introduced to Indian farmers as a result of  
 (a) White Revolution (b) Green Revolution (c) Orange Revolution (d) Red Revolution
60. Which one of the following is considered important to create a 'virtuous cycle' by the parents?  
 (a) To send their children to the school  
 (b) To provide good food to their children  
 (c) To join their children in corporate schools  
 (d) To take care of the health and education of their children

**SECTION – 4 : LOGICAL REASONING**

61. If 'MERCURY' is written as 'FGAECAB' in a code then how would 'CURE' be written in the same code ?  
 (a) GCFI (b) ECAB (c) ECAG (d) EAGC
62. Which one of the answer figure would occupy the next position in the problem figure, if they continue in the same order?

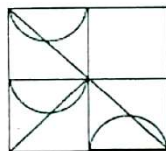
**Problem – figures**



**Answer – figures**



63. One segment of the given design/pattern is missing. Select the alternative which will complete the design when placed on the missing area.



64. If '-' stand for division, '+' for multiplication, '÷' for subtraction and '×' for addition, which one of the following equation is correct?

- (a)  $6 \div 20 \times 12 + 7 - 1 = 70$  (b)  $6 + 20 - 12 \div 7 \times 1 = 62$   
 (c)  $6 - 20 \div 12 \times 7 + 1 = 57$  (d)  $6 + 20 - 12 \div 7 - 1 = 38$

**Directions: (Q. No. 65 & 66) :** Find the missing number/numbers in the series.

65. 2, 65, 7, 59, 12, 53, ?, ?

- (a) 15, 42 (b) 17, 45 (c) 17, 47 (d) 18, 48

66. 5255, 5306, ?, 5408, 5459

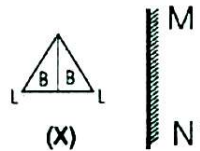
- (a) 5057 (b) 5357 (c) 5257 (d) 5157

67. If  $54 + 43 = 2$ ,  $60 + 51 = 10$

Then  $62 + 72 = ?$

- (a) 30 (b) 18 (c) 20 (d) 9

68. Choose the correct mirror image of the Figure (X) from four alternatives given along with it. The mirror has been represented by MN.



- (a) (b) (c) (d)

69. If 'REEXAMINATION' is written as 'EXAMINATIONER' how can 'REFORMER' be written in that code?

- (a) REFORMRE (b) REFROMER (c) FORREMER (d) FORMERER

70. Arrange the following words as per dictionary.

- (A) Live (B) Litter (C) Little (D) Literary  
 (E) Living

- (a) D, C, E, B, A (b) D, B, C, A, E (c) C, D, B, A, E (d) C, B, D, E, A

71. At 12:30 the hour hand of a clock faces north and the minute hand faces south. At 2:45 the minutes hand will be in which direction?

- (a) North-West                      (b) West                              (c) South-East                      (d) East

72. Find the missing number :

20160	4
?	4
480	8
96	24

- (a) 860                                  (b) 1140                              (c) 2880                              (d) 3240

**Directions: (Q. No. 73 to 75) :** If  $a + b$  means a is sister of b.

$a - b$  means a is brother of b.

$a \times b$  means a is daughter of b.

$a \div b$  means a is mother of b.

73. Which of the following relationship shows that l and n are wife and husband ?

- (a)  $l \div m \times n$                       (b)  $l - m \times n$                       (c)  $l + m \times n$                       (d)  $l + m - n$

74. How many females does this relationship shows ?

$$l + m - n + o - p \times q$$

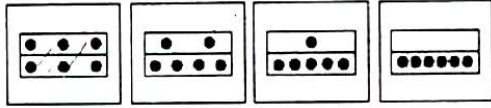
- (a) 2    (b) 3  
(c) 4    (d) can't be determined

75. The relationship  $p + q - r \times s \div t$  shows that:

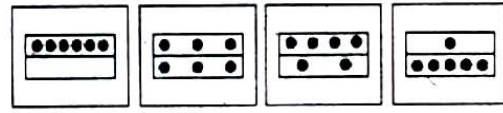
- (a) p, q, r, s all are children of t                      (b) p, q, r, t all are children of s  
(c) p, q, r all are children of t and s                      (d) p, q, r, s, t all are siblings

**Directions: (Q. No. 76 to 79) :** In each of the following questions, which one of the answer figure would occupy the next position in the problem figure. If they continue in the same order.

76. **Problem – figures**

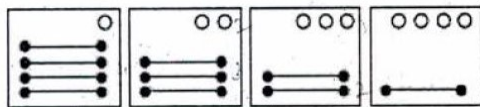


**Answer – figures**

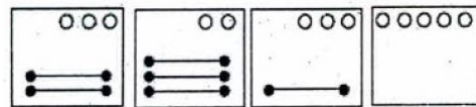


(a) (b) (c) (d)

77. **Problem – figures**

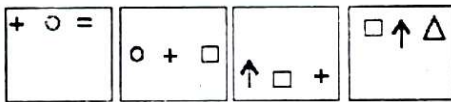


**Answer – figures**

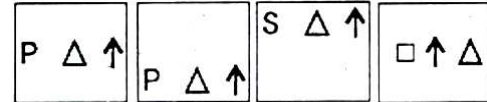


(a) (b) (c) (d)

78. **Problem – figures**

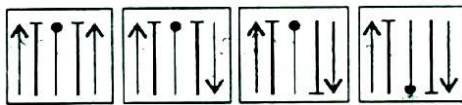


**Answer – figures**

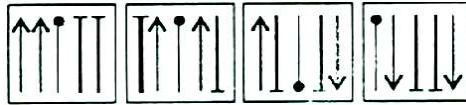


(a) (b) (c) (d)

79. **Problem – figures**



**Answer – figures**



(a) (b) (c) (d)

80. Which of the following number is wrong in the series ?

3, 6, 10, 16, 21, 28

(a) 16 (b) 10 (c) 21 (d) 28



**SECTION – 5 : GENERAL KNOWLEDGE**

81. Date on which demonetisation started in India.  
(a) Dec 31, 2016 (b) March 31, 2017 (c) Nov 8, 2016 (d) Dec 1, 2017
82. What is meaning of GST.  
(a) Geo Stationary Telescope (b) Good & Simple Tax  
(c) Great Secure Tower (d) Goods & Services Tax
83. Who is current Miss World.  
(a) Priyanka Chopra (b) Susmita Sen (c) Neha Dhupia (d) Manushi Chhillar
84. Who is the current Indian President of India.  
(a) Ram Nath Kovind (b) Pranav Mukherjee  
(c) Dr. A.P.J. Abdul Kalam (d) Sumitra Mahajan
85. Which is the latest Version of Android operating system for mobiles.  
(a) Nougat (b) OREO (c) Marshmallow (d) Kitkat
86. What is the full form of IIS.  
(a) Indian Institute of Services (b) Indian Institute of Science  
(c) International Institute of Services (d) International Institute of Science
87. Which is the most Renowned Institute for medical course in India.  
(a) MGM Indore (b) AFMC Pune (c) SMS Jaipur (d) AIIMS Delhi
88. Queen Padmawati belongs to which place.  
(a) Japiur (b) Udaipur (c) Chittorgarh (d) Jaisalmer
89. What is the Name of the horse of Maha Rana Pratap  
(a) Arawat (b) Badal (c) Gora (d) Chetak.
90. Which is the first Coaching Institute in India to Introduce “Live Coaching View.”  
(a) Vijay Education Academy (b) Fiitjee  
(c) Allen (d) Aakash

91. JEE-Advanced 2018 will be conducted in (Mode?)  
(a) Pen & Paper (b) Pencil & Rubber  
(c) Subjective-Oral (d) Online-computer based test
92. Where is IISER Located in Madhya Pradesh  
(a) Indore (b) Mhow (c) Jabalpur (d) Bhopal
93. How many digits Aadhar Number has  
(a) 10 (b) 11 (c) 12 (d) 13
94. Who was Steve Jobs ?  
(a) Head of Twitter (b) Head of Google (c) President of U.S. (d) Head of Apple
95. Which is the online platform for Professional Social Network.  
(a) Facebook (b) Linked In (c) Twitter (d) WhatsAPP
96. The Latest Technology for light bulbs is based on  
(a) LED (b) LCD (c) Mercury (d) Halogen
97. In the Month of Dec. 2017 which Indian state will go for assembly elections.  
(a) M.P. (b) U.P. (c) Gujrat (d) Maharashtra
98. Name the day of the week as on Jan. 1, 2018.  
(a) Monday (b) Sunday (c) Tuesday (d) Saturday
99. Who is the singing sensation in the movie Secret Superstar.  
(a) Kiran Rao (b) Zaira Wasim (c) Aamir Khan (d) Salman Khan
100. Which item is NOT included in the prizes of VTSE 2017  
(a) Laptop (b) Smart Phones (c) Desktop (d) Books.


**ANSWERS KEY**

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