

SAMPLE PAPER

Max. Marks : 180

Duration : 120 Minutes

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

CLASS VII

Write your Name and VTSE SAMPLE PAPER Student Registration No. In the space provided below.

NAME :

REG. NO. :

GENERAL INSTRUCTIONS EXAMINATION HALL

A. General :

- 1 This Question Paper contains 60 questions. Please check before starting to attempt. The question paper consists **4 parts Mathematics(1 to 30), Chemistry(31 to 40), Physics (41 to 50), Biology (51 to 60).**
- 2 Space is provided within question paper for rough work hence no additional sheets will be provided.
- 3 Blank paper, clipboard, log tables, slide rules, calculators, cellular phones, pagers and electronic gadgets in any form are **not** allowed inside the examination hall.
- 4 Do not Tamper / mutilate the **ORS** or this booklet.
- 5 **SUBMIT** the ORS to the invigilator after completing the test & take away the test paper with you.
- 6 Any student found/reported using unfair means to improve his/her performance in the test, shall be disqualified from VTSE.
- 7 Objective Response Sheet (ORS), is provided separately.
- 8 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) for filling details marking answers:

- 9 Use only HB Pencil/Blue or Black ball point pen for filling the ORS. Do not use Gel/Ink/Felt pen as it might smudge the ORS.
- 10 Write your VTSE Student Registration No. in the boxes given at the top left corner of your ORS with blue/black ball point pen. Also, darken the corresponding bubbles with HB Pencil/Blue or Black ball point pen only.
- 11 If any student does not fill his/her VTSE Student Registration No. correctly and properly, then his/her ORS will not be checked/ evaluated.
- 12 Since it is not possible to erase and correct pen filled bubble, you are advised to be extremely careful while darken the bubble corresponding to your answer.
- 13 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. Do not put any stray marks or whitener anywhere on the ORS.
- 14 If there is any discrepancy between the written data and the bubbled data in your ORS, the bubbled data will be taken as final.

C. Question paper format and Marking scheme :

- 15 In **Section I** (Total Marks : 90), for each question you will be **awarded 3 marks** if you darken **ONLY** the bubble corresponding to the correct answer and **zero marks** if no bubble is darkened. In all other cases, **minus one (-1) mark** will be awarded.
- 16 In **Section II** (Total Marks : 30), for each question you will be **awarded 3 marks** if you darken **ALL** the bubble(s) corresponding to the correct answer(s) and **zero marks** if no bubble is darkened. In all other cases, **minus one (-1) mark** will be awarded.
- 17 In **Section III** (Total Marks : 30), for each question you will be **awarded 3 marks** if you darken **ONLY** the bubble corresponding to the correct answer and **zero marks** if no bubble is darkened. In all other cases, **minus one (-1) mark** will be awarded.
- 18 In **Section IV** (Total Marks : 30), for each question you will be **awarded 3 marks** if you darken **ONLY** the bubble corresponding to the correct answer and **zero marks** if no bubble is darkened. In all other cases, **minus one (-1) mark** will be awarded.



SECTION – I
MATHEMATICS

1. Which integer is the additive inverse of itself ?
(a) 0 (b) 1 (c) -1 (d) None of these
2. What will be the sign of the product if we together multiply 93 negative integers and 6 positive integers?
(a) positive (b) negative (c) zero (d) can't say
3. Which of the following numbers is prime ?
(a) -1 (b) 1 (c) 4 (d) None of these
4. Which of the following is correct ?
(a) $0.6732 < 0.6801 < 0.6850$ (b) $0.823 < 0.713 < 0.632$
(c) $0.912 < 0.954 < 0.946$ (d) $0.543 < 0.532 < 0.562$
5. Zero is a
(a) positive integer (b) negative integer
(c) (positive integer) or (negative integer) (d) Neither positive integer nor negative integer
6. Out of the numbers $\frac{-2}{11}$, $\frac{-1}{6}$, $\frac{-2}{19}$, which is the greatest?
(a) $\frac{-2}{19}$ (b) $\frac{-1}{6}$ (c) $\frac{-2}{11}$ (d) Cannot be compared
7. If $3x - 2y = 6$ & $xy = -1$, then the value of $9x^2 + 4y^2$
(a) 48 (b) 24 (c) 0 (d) None of these
8. If $9x^2 + (a + 12)xy + 25y^2$ is a perfect square, then the value of a is
(a) -18 (b) -9 (c) -42 (d) 0
9. If $a = 2$ and $a + b = 12$ then value of $\sqrt{a^2 + b^2 - 2ab} =$
(a) 8 (b) -8 (c) ± 8 (d) None of these
10. If the value of $x^3 - 3x^2 + 2x - a$ equals to 4, when $x = -1$, then the value of 'a' is
(a) 4 (b) -10 (c) 10 (d) 8
11. The number of diagonals drawn from one vertex of n sides is
(a) $n - 3$ (b) $n - 2$ (c) $n - 1$ (d) n



12. On simplification the product of the given expression $(x - y)(x + y)(x^2 + y^2)(x^4 + y^4)$ is
- (a) $x^8 + y^8$ (b) $x^4 - y^4$ (c) $x^8 - y^8$ (d) $x^4 + y^4$
13. $4^4 + 4^4 + 4^4 + 4^4$ is equal to
- (a) 4^5 (b) 4^{16} (c) 2^{16} (d) None of these
14. The value of $\frac{x^{-4} \times y^{-5} \times z^4}{x^{-5} \times y^{-6} \times z^3}$ is
- (a) $(xyz)^{-1}$ (b) $(xyz)^{-2}$ (c) xyz (d) None of these
15. If $\sqrt{2^{n+4}} = 64$, then n is
- (a) 8 (b) 2 (c) 4 (d) 6
16. If $4^x = 600$, then the value of 4^{x-2} is
- (a) $\frac{150}{4}$ (b) $\frac{50}{8}$ (c) $\frac{500}{8}$ (d) None of these
17. If $\left(\frac{3}{2}\right)^{2x+5} \times \left(\frac{2}{3}\right)^{-7} = \left(\frac{2}{3}\right)^4$, then x is
- (a) -8 (b) 8 (c) -4 (d) 4
18. If $\left(\frac{1}{5}\right)^{3x-3} = 0.008$, then $(0.2)^x$
- (a) 0.2 (b) 0.04 (c) 0.008 (d) None of these
19. Express 25 seconds as a fraction of 1 hour
- (a) $\frac{5}{12}$ (b) $\frac{1}{24}$ (c) $\frac{1}{144}$ (d) $\frac{1}{4}$
20. If $\frac{1}{2}$ of a number is 166, then what is 30% of the number ?
- (a) 64.5 (b) 99.6 (c) 98.2 (d) 83
21. If the two legs of a right angled triangle are equal and the square of hypotenuse is 100 cm^2 , then the length of each leg is
- (a) $10\sqrt{2} \text{ cm}$ (b) 10 cm (c) $\frac{10}{\sqrt{2}} \text{ cm}$ (d) 5 cm



22. In a $\triangle ABC$, $AB = AC$ and $\angle B$ is twice that of $\angle A$. Then $\angle B$ is
(a) 144° (b) 108° (c) 72° (d) 36°
23. In a rhombus PQRS, $\angle P = 60^\circ$ and $RS = 10 \text{ cm}$. The diagonal QS is
(a) 12 cm (b) 6 cm (c) 5 cm (d) 10 cm
24. The difference between the length and breadth of a rectangle is 24 m. If the perimeter is 208 m, then the area is
(a) 2560 m^2 (b) 2520 m^2 (c) 2420 m^2 (d) 2500 m^2
25. The supplement of an obtuse angle is
(a) Acute angle (b) Obtuse angle (c) Right angle (d) None of these
26. A bus travelled 18 km in 20 minutes. How far could it travel in 1 hr 20 minutes?
(a) 72 km (b) 118 km (c) 360 km (d) 108 km
27. By selling an article for ₹ 660, Pradeep loses ₹ 60. At what price must he sell the article to gain 15%?
(a) ₹ 928 (b) ₹ 828 (c) ₹ 728 (d) ₹ 628
28. A place P is 85 m above the sea-level and another place is 16 m below the sea-level. What is the distance between the two places?
(a) 95 m (b) 91 m (c) 101 m (d) 69 m
29. A milkman sells 45 litres of milk at ₹ 19.75 per litre to a hostel. How much money should he get from the hostel?
(a) ₹ 829.50 (b) ₹ 1892 (c) ₹ 865.50 (d) None of these
30. The side of a square plot is 80 m. A path of 4m width along the sides of the square are constructed in the middle of the plot. Determine the area of the path.
(a) 624 m^2 (b) 1200 m^2 (c) 1216 m^2 (d) None of these

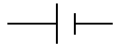
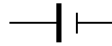
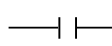
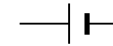


SECTION – II
CHEMISTRY

- 31.** The scientific name of mulberry is :
(a) *Morus alba* (b) *Naja* (c) *Magnifera indica* (d) *Mollusca*
- 32.** When methyl orange is added to an acid the solutions colour becomes :
(a) Orange (b) green (c) yellow (d) red
- 33.** When treated with base the substance changes colour from pink to green, the substance is :
(a) china rose (b) red cabbage (c) turmeric (d) methyl pink
- 34.** Acids can be diluted by :
(a) adding acid to water (b) adding water to acid (c) both of them (d) none of them
- 35.** Sodium carbonate turns :
(a) turmeric to red (b) red cabbage to green (c) red litmus to blue (d) all of them
- 36.** The formula for rust is :
(a) $\text{FeO} \cdot 3\text{H}_2\text{O}$ (b) $\text{Fe}_2\text{O}_3 \cdot x \text{H}_2\text{O}$ (c) $\text{Fe}_2\text{O}_3 \cdot \text{FeCl}_2$ (d) $\text{FeO} \cdot 2\text{FeCl}_2$
- 37.** After white washing the shine appears on walls because of :
(a) calcium oxide (b) calcium hydroxide (c) calcium carbonate (d) All of the above
- 38.** Iron is galvanised by coating it with :
(a) nickel (b) chromium (c) copper (d) zinc
- 39.** The colour of rust in silver is :
(a) Black (b) green (c) red (d) brown
- 40.** Chemical changes are :
(a) always irreversible (b) always reversible (c) mostly irreversible (d) mostly reversible



SECTION – III
PHYSICS

- 41.** What is the value of one Kcal :
- (a) 4.184 j (b) 41.84 j (c) 418.4 j (d) 4184 j
- 42.** A clinical thermometer can measure the minimum temperature of :
- (a) 0°C (b) 7°C (c) 35°C (d) 42°C
- 43.** Asbestos is a :
- (a) conductor of heat (b) non conductor of heat (c) Insulator (d) semiconductor
- 44.** A boy travels from his home to school at an average speed of 20 km/h and returns back at an average speed of 30 km/h. Calculate the average speed for the complete motion ?
- (a) 25 Km/h (b) 24 Km/h (c) 26 Km/h (d) 28 Km/h
- 45.** The direction of flow of electrons in an electric circuit is :
- (a) from positive to negative terminal (b) from negative to positive terminal
(c) depends on current (d) none of these
- 46.** Which of the following is the correct symbol of the cell :
- (a)  (b)  (c)  (d) 
- 47.** Which of the following is a converging mirror ?
- (a) concave (b) convex (c) plane (d) all of them
- 48.** An object is placed between two plane mirrors inclined at an angle of 60° to each other. How many images are expected to be seen ?
- (a) 3 (b) 4 (c) 5 (d) 6
- 49.** The slope of distance – time graph represents :
- (a) speed (b) velocity (c) motion (d) acceleration
- 50.** The area of a velocity – time graph represents :
- (a) distance (b) displacement (c) acceleration (d) motion



SECTION – IV
BIOLOGY

- 51.** Amarbel is an example of
(a) autotroph (b) parasite (c) Saprotroph (d) host
- 52.** The plant which traps and feeds on insects is
(a) cuscuta (b) china rose (c) pitcher plant (d) rose
- 53.** Fat is completely digested in the
(a) stomach (b) mouth (c) small intestine (d) large intestine
- 54.** Glycogen formed from excessive glucose in the blood gets stored in
(a) heart (b) adipose tissue (c) liver (d) stomach
- 55.** The chemicals that help to digest the food are called :
(a) digestive juice (b) vitamins (c) enzymes (d) hormones
- 56.** Which of following does not yield wool ?
(a) Yak (b) Camel (c) Goat (d) Woolly dog
- 57.** In cockroaches, air enters the body through
(a) lungs (b) gills (c) spiracles (d) skin
- 58.** During exhalation, the ribs :
(a) move outwards (b) move down and inwards (c) move upwards (d) do not move at all
- 59.** Pulmonary vein carries :
(a) deoxygenated blood (b) oxygenated blood (c) mixed blood (d) none of these
- 60.** Mature ovary forms the
(a) seed (b) stamen (c) pistil (d) fruit



CLASS - VII

ANSWER KEY

MATHEMATICS

51	52	53	54	55	56	57	58	59	60
A	B	D	A	D	A	B	C	A	B
61	62	63	64	65	66	67	68	69	70
A	C	A	C	A	A	A	B	C	B
71	72	73	74	75	76	77	78	79	80
C	C	D	A	A	A	B	C	D	C

CHEMISTRY

81	82	83	84	85	86	87	88	89	90
A	D	A	A	D	B	C	D	A	C

PHYSICS

91	92	93	94	95	96	97	98	99	100
D	C	B	B	B	D	A	C	A	B

BIOLOGY

101	102	103	104	105	106	107	108	109	110
B	C	C	C	C	D	C	B	B	D