

SURE TEST – STATE Board – Sample Paper

Date:

Max Marks: 120

Batch: Class X to Class XI moving students

Max Time: 1 hr 15 min

INSTRUCTIONS

Sr. No	Subject	Number Of Questions	Marks (Each Question carries 03 Marks)	Type Of Question(s)
1.	PHYSICS	06	18	MCQ (Multiple Choice Questions)
2.	CHEMISTRY	07	21	
3.	BIOLOGY	07	21	
4.	MATHEMATICS	08	24	
5.	MENTAL ABILITY	12	36	
	TOTAL		120	

Important Points to Note:

- Duration of Test is **1 hour (Reading Time – 15 minutes)**.
- The Test Booklet consists of **40 questions**. The maximum marks are **120**. There is **no negative** marking for incorrect answers.
- Pattern of the questions are as under:**
 - The question paper consists of **Five parts i.e., (Physics, Chemistry, Biology, Mathematics and Mental Ability)**.
 - Paper contains 40 MCQ'S which have **only one correct answer**, each question carries **+3 marks** for **correct answer**.
- Use of calculators and electronic devices is prohibited.

Thank you for your participation and good luck!

SYNERGY
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PHYSICS

- Q.1 The value of acceleration due to gravity
(A) Is same at the equator and poles (B) Is least at the poles
(C) Is least at the equator (D) Is maximum at the centre of the width
- Q.2 Acceleration of a body depends on:
(A) Velocity, Direction (B) Velocity, Time
(C) Velocity, Time, Mass (D) None of the above
- Q.3 If charge is applied from A to B, the current will flow from:
(A) A to B (B) B to A
(C) Opposite in the direction of current (D) None of the above
- Q.4 Heating effect of electric current is not observed in
(A) Electric oven (B) Electric motor (C) Electric iron (D) Fuse
- Q.5 An electric bulb is connected to 250 V, a current of 0.5 a passes through it what is the power of the bulb?
(A) 150 W (B) 165 W (C) 125 W (D) 100 W
- Q.6 Refraction occurs because of
(A) Change of wire (B) Change of speed of light
(C) Change of angle (D) None of these

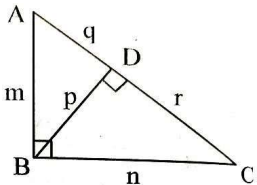
CHEMISTRY

- Q.7 _____ is the functional group of carboxylic acid.
(A) $-\text{COOH}$ (B) $-\text{CO}-$ (C) $-\text{CHO}-$ (D) $-\text{OH}$
- Q.8 In _____ of the modern periodic table, non-metals are found.
(A) s-block (B) d-block (C) p-block (D) f-block
- Q.9 Carbonate ores are strongly heated in a limited supply of air to transform them into oxides, this process is called _____.
(A) Leaching (B) Calcination (C) Roasting (D) Tinning
- Q.10 _____ is one of the combustible components of L.P.G.
(A) Ethane (B) Propane (C) Methane (D) Ethene
- Q.11 _____ element belongs to the eighteenth group.
(A) Na (B) Cl (C) Fe (D) Ne
- Q.12 The melting point of pure ethnoic acid is _____.
(A) 17°C (B) 19°C (C) 15°C (D) 27°C

BIOLOGY

- Q.14 Genetic disorder like sickle cell anaemia may be caused due to _____.
 (A) Mutation (B) Translation (C) Translocation (D) Transcription
- Q.15 Glycolysis and _____ are two steps of anaerobic respiration.
 (A) Krebs's cycle (B) Electron transfer chain reaction
 (C) Fermentation (D) Reduction
- Q.16 In plants, second male gamete fuses with two polar nuclei to form _____.
 (A) Zygote (B) Embryo (C) Embryo sac (D) Endosperm
- Q.17 In a food chain, autotrophic plants are present at the _____ level.
 (A) Tertiary nutrition (B) Secondary nutrition
 (C) Producer (D) Apex
- Q.18 Incomplete combustion of fuels leads to formation of _____.
 (A) Carbon monoxide (B) Carbon dioxide
 (C) Chlorofluorocarbon (D) Hydrogen sulphide
- Q.19 _____ is obtained by fermentation of apple juice.
 (A) Cider (B) Wine (C) Coffee (D) Cocoa
- Q.20 Protein like interleukin produced by biotechnology is used against _____ disease.
 (A) Anaemia (B) Cancer (C) Diabetes (D) Haemophilia

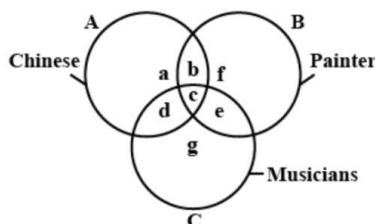
MATHEMATICS

- Q.21 $\triangle ABC \sim \triangle DEF$. If $BC = 5$ cm, $EF = 7.5$ cm and $A(\triangle ABC) = 45\text{cm}^2$, then $A(\triangle DEF) =$
 (A) 10cm^2 (B) 20cm^2 (C) 30cm^2 (D) 40cm^2
- Q.22 For the figure given below, which of the following relation is correct?
- 
- (A) $p^2 = qr$ (B) $m^2 + n^2 = q^2 + r^2$ (C) $p^2 = q^2 + r^2$ (D) $p^2 = mn$
- Q.23 If $A(h, -5)$, $B(-1, -6)$ and $C(4, k)$ are the co-ordinates of vertices of $\triangle ABC$ whose centroid is $G(2, -4)$, then
 (A) $h = 3, k = 1$ (B) $h = -3, k = 1$ (C) $h = 3, k = -1$ (D) $h = -3, k = -1$
- Q.24 If $\sin\theta + \cos\theta = m$ and $\sin\theta - \cos\theta = n$, then
 (A) $m^2 + n^2 = 1$ (B) $m^2 - n^2 = 1$ (C) $m^2 + n^2 = 2$ (D) $m^2 - n^2 = 2$
- Q.25 If capacity of a water reservoir is 92.43 m^3 , then it can hold _____ litres of water
 (A) 92430000 (B) 9243 (C) 92430 (D) 924300

- Q.26 The denominator of a fraction is 4 more than twice its numerator. Denominator becomes 12 times the numerator, if both the numerator and the denominator are reduced by 6. Find the fraction.
 (A) $\frac{x}{y} = \frac{18}{7}$ (B) $\frac{x}{y} = \frac{7}{18}$ (C) $\frac{x}{y} = \frac{14}{6}$ (D) $\frac{x}{y} = \frac{4}{12}$
- Q.27 For the sequence $S_n = \frac{n}{n+1}$ then, what is the value of S_{10}
 (A) $\frac{10}{11}$ (B) $\frac{11}{10}$ (C) $\frac{10}{13}$ (D) $\frac{11}{9}$
- Q.28 Sunny enterprise purchased yarn from market paying GST of ₹ 1,250 and sold to Riya enterprise collecting ₹ 2,500 GST. Vikram Brothers paid Riya enterprise GST of ₹ 3,650. Then, the tax paid by Riya enterprises is
 (A) 1,250 (B) 1,150 (C) 2,500 (D) 2,400

MENTAL ABILITY

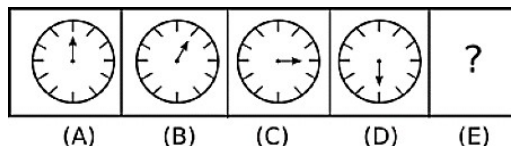
- Q.29 If in a code language STAR = 50 and CIRUS = 65 then PLANET will be
 (A) 68 (B) 78 (C) 84 (D) 94
- Q.30 If Ajit is the brother of the son of Sethi's son, what is the relationship between Ajit and Sethi?
 (A) Cousin (B) Grandson (C) Brother (D) Nephew
- Q.31 A clock loses 5 min for every hour and another gains 5 min for every hours. If they are set correct at 10 am on Monday then when will they be 12 hrs apart?
 (A) 10 am on Thursday (B) 10 am on Wednesday
 (C) 10 am on Tuesday (D) 10 am on Monday
- Q.32 Chinese who are painters as well as musicians –



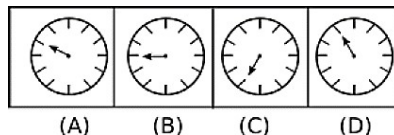
- (A) a (B) b (C) c (D) d
- Q.33 In the question below, given two statements and two conclusions numbered I and II. You have to take the given two statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and then decide which of the given conclusions logically follows from the two given statements.
 (1) Only conclusion I follows (2) Only conclusion II follows
 (3) Both I and II follow (4) Neither I nor II follows.
- Statements:** All dogs are reptiles some cats are reptiles
Conclusions: (I) Some dogs are cats.
 (II) Some cats are not reptiles.
- (A) I (B) II (C) Both I & II (D) None of these

Q.34 Find the missing figure of the series from the answer figure:

Problem figure:



Options:



Q.35 Fill the blanks from the choices given below:

129 : 145 :: 3811 : ?

- (A) 3713 (B) 328 (C) 3615 (D) 3614

Q.36 In the group of words given below all except one, share a common similarity. Select the odd one.
Select the odd one

- (A) Rupees (B) Dollar (C) Lira (D) Ghana

Q.37 Six persons P, Q, R, S, T and U are sitting in a circle facing one another front to front. P is sitting front Q. Q is sitting to the right of T and left of R. P is to the left of U and right of S.
If the positions of P and R are ex-changed, who will be sitting between S and U?

- (A) P (B) R (C) Q (D) T

Q.38 The question is based on a dice numbered 1 to 6 in different ways as indicated
The question are based on a dice numbered 1 to 6 in different ways as indicated.
If 1 is opposite to 5 and 2 is opposite to 3, then

- (A) 4 is adjacent to 3 and 6 (B) 2 is adjacent to 4 and 6
(C) 4 is adjacent to 5 and 6 (D) 6 is adjacent to 3 and 4

Q.39 You go North, turn right, then right again and then go to the left. In which direction are you now?

- (A) North (B) South (C) East (D) West

Q.40 Six persons P, Q, R, S, T and U are sitting in a circle facing one another front to front. P is sitting front Q. Q is sitting to the right of T and left of R. P is to the left of U and right of S.
Who is sitting opposite to R?

- (A) P (B) Q (C) S (D) U