



RJ VISION PVT. LTD.

Code
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RJ – CET (2015 – 16)

(Entrance cum Scholarship Test)

COURSE - SAMARTH (CLASS 9TH)

(Test Syllabus - Class 8th)

TIME : 1 HR MM : 160

This Booklet contains _____ pages

Important Instructions :

1. The test is of **1 hour** duration and Test Booklet contains **40** questions. Each question carries **4** marks. For each correct response, the candidate will get **4** marks. For each incorrect response, **one mark** will be deducted from the total scores. The maximum marks are **160**.
2. Use **Blue/Black Ball point pen only** for writing particulars on this page/marking responses.
3. Rough work is to be done on the space provided for this purpose in the Test Booklet only.
4. **On completion of the test, the candidate must handover the Answer Sheet to the invigilator in the Room/Hall.**
5. Use of white fluid for correction is **NOT** permissible on the Answer Sheet.
6. Each candidate, must show on demand his/her Admission Card to the Invigilator.
7. No candidate, without special permission of the Superintendent or Invigilator, would leave his/her seat.
8. Use of Electronic/Manual Calculator is prohibited.
9. No part of the Booklet and Answer Sheet shall be detached under any circumstances.
10. The candidates will write the Correct Test Booklet Code as given in the Test Booklet/Answer Sheet Attendance Sheet.

Do not open this Test Booklet until you are asked to do so.

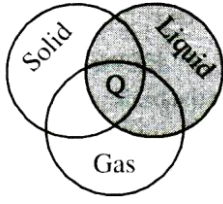
Name of the Candidate (in Capitals) : _____

Roll Number : _____

School : _____

Centre of Examination (in Capitals) (Vasna / Niz / Anand / Others) _____

Candidate's Signature : _____ Invigilator Signature : _____

- Practical unit of heat is
 - Calorie
 - Horse power
 - Joule
 - Watt
- Consider the following statements regarding translatory motion.
 - A car moving on a straight road.
 - A planet moving around sun in an elliptical orbit.
 - A shell fired from a cannon.
 The correct choice is
 - A and B
 - B only
 - A, B and C
 - B and C
- A ball thrown vertically upward returns to its starting point in 4s. Its initial speed is
 - 23.6 m/s
 - 6 m/s
 - 19.6 m/s
 - zero
- China wares are wrapped in straw of paper before packing. This is the application of concept of
 - impulse
 - momentum
 - acceleration
 - force
- When a body is stationary, then
 - there is no force acting on it
 - the body is in vacuum
 - the force acting on it is not in contact with it
 - the net forces acting on it balances each other
- Work is always done on a body when
 - A force acts on it
 - It moves through a certain distance
 - It experience an increase in energy through a mechanical influence
 - None of the above
- Shown below in venn diagram directing different states of matter. Which of the following can be placed at place shown as 'Q' in the diagram ?
 
 - Dry ice
 - Table salt
 - Jelly
 - Water
- The correct order on the basis of inter molecular space is :
 - solid > liquid > gas
 - gas > solid > liquid
 - gas > liquid > solid
 - liquid > gas > solid
- The property of diffusion is shown to the maximum extent in
 - solid
 - liquid
 - gas
 - same in all cases
- Select a pure substance
 - Brass
 - Bronze
 - Magnesium
 - All of these
- Which one is the smallest unit of a compound?
 - An electron
 - An ion
 - An atom
 - A molecule
- Which of the following involves combination of two elements ?
 - $\text{CaO} + \text{CO}_2 \longrightarrow \text{CaCO}_3$
 - $4\text{Na} + \text{O}_2 \longrightarrow 2\text{Na}_2\text{O}$
 - $2\text{SO}_2 + \text{O}_2 \longrightarrow 2\text{SO}_3$
 - $\text{NH}_3 + \text{HCl} \longrightarrow \text{NH}_4\text{Cl}$

13. Which of the following has a charge of +1 and a mass of 1 amu -
- (1) a neutron
 - (2) a proton
 - (3) an electron
 - (4) a helium nucleus
14. Which of the following is not a rabi crop ?
- (1) Wheat
 - (2) Mustard
 - (3) Sugarcane
 - (4) Peas
15. The process of turning and loosening of soil is called
- (1) Tilling
 - (2) Harvesting
 - (3) Threshing
 - (4) Irrigation
16. Which of the following organisms is considered to be on the borderline of living and non-living?
- (1) Bacteria
 - (2) Algae
 - (3) Virus
 - (4) Fungi
17. Amoeba and Paramecium belongs to group
- (1) Bacteria
 - (2) Algae
 - (3) Fungi
 - (4) Protozoan
18. Which disease is caused by virus ?
- (1) Tuberculosis
 - (2) Common cold
 - (3) Typhoid
 - (4) Malaria
19. The human activity that is responsible for loss of biodiversity is
- (1) Urbanization
 - (2) Afforestation
 - (3) Establishment of biosphere reserve
 - (4) Respiration
20. The scientist who described cell as "many little boxes" was
- (1) Robert Hooke
 - (2) Theodar Schwann
 - (3) Anton Van Leeuwenhoek
 - (4) Rudolf Virchow

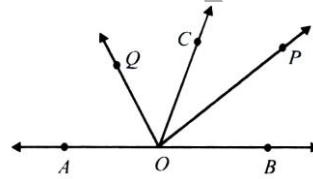
21. LCM of $1\frac{1}{4}$, $1\frac{2}{3}$, $2\frac{1}{2}$ is

- (1) $\frac{5}{12}$
- (2) 5
- (3) $\frac{125}{12}$
- (4) 125

22. The $a\frac{x-b}{a-b} + b\frac{x-a}{b-a} = 1$, then $x =$

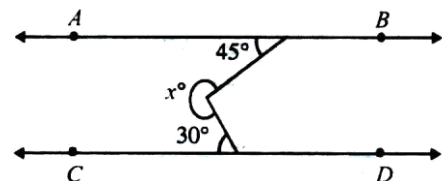
- (1) a
- (2) b
- (3) 1
- (4) ab

23. In the given fig OP bisect $\angle BOC$ and OQ bisects $\angle AOC$. Then $\angle POQ =$



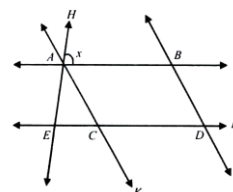
- (1) 90°
- (2) 120°
- (3) 60°
- (4) 100°

24. In the given figure , $AB \parallel CD$. Value of angle x is



- (1) 295°
- (2) 305°
- (3) 275°
- (4) 285°

25. In the given figure, $AB \parallel CD$ and $AC \parallel BD$. If $\angle EAC = 40^\circ$, $\angle FDG = 55^\circ$ then the value of x is



- (1) 75°
- (2) 85°
- (3) 95°
- (4) 65°

DIRECTION (Qs. 26 to 28)

The King, Queen and Jack of clubs are removed from a deck of 52 playing cards and then well shuffled. One card is selected from the remaining cards.

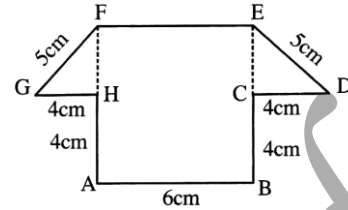
26. The probability of getting a king is
 (1) $\frac{4}{49}$ (2) $\frac{1}{13}$
 (3) $\frac{3}{49}$ (4) $\frac{1}{49}$
27. The probability of getting a club is
 (1) $\frac{10}{49}$ (2) $\frac{5}{26}$
 (3) $\frac{1}{13}$ (4) $\frac{1}{4}$
28. The probability of getting the 10 of hearts, is
 (1) $\frac{4}{49}$ (2) $\frac{1}{13}$
 (3) $\frac{1}{4}$ (4) $\frac{1}{49}$
29. Which of the following numbers are perfect/complete cube ?
 (1) 64 (2) 216
 (3) 343 (4) 256
30. Which of the following statements are correct ?
 (1) $m \times m \times m = 3m$
 (2) $x^3 = n \Rightarrow x = n^{y_3}$
 (3) $\sqrt[3]{a} + \sqrt[3]{b} = \sqrt[3]{a+b}$
 (4) $\sqrt[3]{a} \div \sqrt[3]{b} = \sqrt[3]{a \div b}$
31. The third proportional between $(a^2 - b^2)$ and $(a + b)^2$ is
 (1) $\frac{a+b}{a-b}$ (2) $\frac{a-b}{a+b}$
 (3) $\frac{(a-b)^2}{a+b}$ (4) $\frac{(a+b)^3}{a-b}$
32. The remainder when $x^4 - 3x^2 + 4x + 5$ is divided by $x^2 + 1 - x$ is
 (1) -8
 (2) 4
 (3) 8
 (4) 0
33. Which of the following expressions are polynomials ?
 (1) $3x^2 - 4x + 5$

(2) $\frac{1}{2}x^2 - \frac{2}{3}x + \frac{5}{7}$

(3) $9x + 2$

(4) 2

34. Area of the following shape is



(1) 50 cm^2

(2) 54 cm^2

(3) 60 cm^2

(4) 64 cm^2

35. The ratio of area of a square to another a square drawn on its diagonal is

(1) 3 : 4

(2) 4 : 5

(3) 2 : 3

(4) 1 : 2

36. Cause and Effect

'Goitre' is related to 'Iodine' as 'Anaemia' is related to

(1) Vitamin

(2) Blood

(3) Iron

(4) Weakness

37. Subset to set

'Page' is related to 'Book' as 'Leaf' is related to

(1) Root

(2) Green

(3) Tree

(4) Forest

38. Anoop starts walking towards South. After walking 15 metres he turns towards North. After walking 20 metres, he turns towards East and walks 10 meters. He then turns towards South and walks 5 metres. How far is he from his original position and in which direction?

(1) 10 metres, North

(2) 10 metres, South

(3) 10 metres, East

(4) None of these

39. What are missing letters in the following series?

pq r - - r s prs - - spq -

(1) pppq

(2) spqpr

(3) sqpqr

(4) sqprq

40. What are the last five missing letters in the following series ?

b - b - cab - baca - cba - a -

(1) acbbb

(2) acbcb

(3) abcba

(4) accbc

ANSWERS
(SAMARTH - CLASS 9TH)

Q	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans	1	3	3	1	4	3	4	3	3	3	4	2	2	3	1
Q	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans	3	4	2	1	1	2	3	1	4	2	3	1	4	1,2,3	2,4
Q	31	32	33	34	35	36	37	38	39	40					
Ans	4		1,2,3,4	2	4	3	3	3	3	2					