



MSAT – 2026

(MAHARISHI SCHOLARSHIP CUM ADMISSION TEST)

**For Students presently in Class – 09
(going to class – 10 in 2027)**

Disclaimer: This is a sample paper provided for practice purposes only. The level of difficulty, type of questions, and total number of questions may vary in the actual examination.

General Instructions:

Time: 180 minutes

Maximum Marks: 250

- Please read the instructions carefully. You are allotted 5 minutes specifically for this purpose.
- Do not start filling the OMR sheet before the announcement from the invigilator.
- Do not keep the OMR sheet exposed to others.
- Shade the correct answers only in the OMR sheet given. Do not write or mark answers or symbols (Like ✓, •, X ...) anywhere in the questions paper.
- You are allowed to carry this Question Paper Booklet after the exam.
- Kindly ensure to submit your OMR answer sheet to the invigilator after the Exam.
- Use only blue or black ball point Pen or Pencil to fill all the information on the OMR sheet and for giving responses.
- Students need to write their registration number in the space provided for the same on the OMR.
- Any usage of Electronic gadgets like Mobile Phones, Calculator, Digital Watch etc....is strictly prohibited.
- Multiple markings will be treated as invalid response.
- Do not fold the OMR sheet.
- This Question Paper booklet contains **5 Sections**.

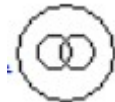
Section	Subject	Question No.	Marking Scheme for each questions	
			Correct Answer	Wrong Answer
I	MENTAL ABILITY	1 to 25	+1	0
II	MATHS	1 to 30	+3	- 1
III	PHYSICS	1 to 15	+3	- 1
IV	CHEMISTRY	1 to 15	+3	- 1
V	BIOLOGY	1 to 15	+3	- 1

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Name of the Candidate : _____

Registration Number : _____

MAT**Section – I****Single Answer Questions**

- Sunil started walking from a point 'P' towards South. After walking 40m, he took left turn. He then walked 30m and reached a point Q. What is the straight line distance between P and Q, and Q is towards which direction of P?
(A) 60 meters, South east (B) 50 meters, South west
(C) 50 meters, South east (D) None of these
- A man walks 30 m towards south. Then, turning to his right, he walks 30 m. Then, turning to his left, he walks 20 m. Again, he turns to his left and walks 30 m. How far is he from his initial position?
(A) 30 m (B) 35 m (C) 50 m (D) 60 m
- Which of the following diagrams indicates the best relation between Elephants, Wolves and Animals?
(A)  (B) 
(C)  (D) 
- Which of the following diagrams indicates the best relation between dogs, animals and birds?
(A)  (B) 
(C)  (D) 
- Find the appropriate word that fit in the place of question mark, Hill : Mountain :: stream : ?
(A) River (B) Canal (C) Glacier (D) Avalanche
- Choose the option which does not belong with the others.
(A) Inch (B) Ounce (C) Centimeter (D) Yard
- Pick the odd one out
(A) Tiger (B) Lion (C) Jackal (D) Dog
- In a certain code, PARTICLE is written as USBQFMDJ and GENERATE is written as FOFHFUBS. How is DOCUMENT written in that code?
(A) VDEPUONF (B) VDPENFUQ (C) VDPEUOFN (D) None of these
- If CARING is coded as MPDRGF, and SHARES is coded as XLPDUX, how could CASKET be possibly coded in the same code?
(A) MPXBUN (B) MXPGUN (C) MPDDUX (D) LMPGFR
- In a certain code language, if the value of CONTRACT = 56 and 'GROWTH' = 30, then what is the value of DISTRIBUTION?
(A) 130 (B) 132 (C) 140 (D) 142

Direction (Q.No.11-12) Following questions are based on the information given below:

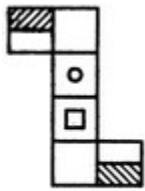
i. 'P*Q' means 'P is father of Q'

ii. 'P-Q' means 'P is sister of Q'

iii. 'P+Q' means 'P is mother of Q'

iv. 'P/Q' means 'P is brother of Q'

11. In the expression $B+D*M/N$, how is M related to B
 (A) Granddaughter (B) Son
 (C) Grandson (D) Granddaughter or grandson
12. Which of the following represents 'J is son of F'?
 (A) $J/R-T*F$ (B) $J+R-T*F$ (C) $J/M-N*F$ (D) None of the above
13. Pointing to a boy, Deepa said "He is the son of my grandfather's only child". How is boy related to Deepa?
 (A) Brother (B) Cousin (C) Sister (D) Data inadequate
14. Find the next missing number 12, 18, 36, 54, 108, _?
 (A) 90 (B) 162 (C) 216 (D) 196
15. Find the missing number in the series 0, 5, 18, 43, 84, 145, ?
 (A) 195 (B) 225 (C) 230 (D) 258
16. Find the missing number in the series 16,, 24, 12, 36?
 (A) 20 (B) 18 (C) 19 (D) 8
17. Choose the box that is similar to the box formed from the given sheet of paper (X).



(X)



(1)



(2)



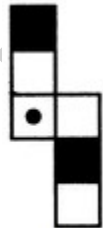
(3)



(4)

- (A) 1 only (B) 2 only (C) 3 only (D) 4 only

18. Choose the box that is similar to the box formed from the given sheet of paper (X).



(X)



(1)



(2)



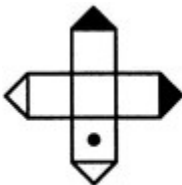
(3)



(4)

- (A) 2 and 3 only (B) 1, 3 and 4 only (C) 2 and 4 only (D) 1 and 4 only

19. Choose the box that is similar to the box formed from the given sheet of paper (X).



(X)



(1)



(2)



(3)



(4)

- (A) 1 and 2 only (B) 2 and 4 only (C) 2 and 3 only (D) 1 and 4 only

Directions (Q.No.20 – 22) On a particular day four colleagues A, B, C and D with different designations professor, lecturer, teacher and reader not in the same order, board the same train to the office, which is at station 5 but from different stations. The train starts at station 1 and ends at station 5 passing through 2, 3 and 4 in the same order. C, the lecturer boards the train after reader but traveled only one station with him. Teacher travels only one station to reach academy. Due to some work D got down before station 5. Only A travels from first station to the last station.

20. Who is the professor?
 (A) A (B) B (C) D (D) Data inadequate
21. Who is the teacher?
 (A) A (B) B (C) D (D) Data inadequate
22. At which station D got down from the train?
 (A) 3 (B) 4 (C) 5 (D) Data inadequate

Direction (Q.No.23 – 25) In each question given below are Statements followed by conclusions numbered. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which of the given conclusions logically follows from the given Statements, disregarding commonly known facts.

23. **Statement:** I. No gentleman is poor
 II. All gentlemen are rich
Conclusions: I. No poor man is rich
 II. No rich man is poor
 (A) If only conclusion I follows (B) If only conclusion II follows
 (C) If either conclusion I or II follows (D) If neither I nor II follow
24. **Statement:** I. Some books are pens
 II. No pen is pencil
Conclusions: I. Some books are pencils
 II. No book is pencil
 (A) If only conclusion I follows (B) If only conclusion II follows
 (C) If either conclusion I or II follows (D) If neither I nor II follow
25. **Statement:** I. No bat is ball
 II. No ball is wicket
Conclusions: I. No bat is wicket
 II. All wickets are bats
 (A) If only conclusion I follows (B) If only conclusion II follows
 (C) If either conclusion I or II follows (D) If neither I nor II follow

MATHS

Section – II

Single Answer Questions

1. Which of the following is true?
 (A) $2x + \frac{3}{x}$ is a polynomial whose degree is one
 (B) $x\sqrt{\pi} + \pi\sqrt{x}$ is a polynomial whose degree is one
 (C) 0 is a polynomial whose degree is zero
 (D) $\sqrt[3]{\pi}$ is a polynomial whose degree is zero

2. If $(x^2 - 1)$ is a factor of $f(x) = x^5 - x^4 + x^3 + x^2 + ax + b$ then find a and b

- (A) $a = 2, b = 1$
(C) $a = 0, b = -2$

- (B) $a = -2, b = 0$
(D) Data inadequate

3. If $x = (a-b)(a^2 + ab + b^2) + (b-c)(b^2 + bc + c^2) + (c-a)(c^2 + ca + a^2)$ and $y = a(b-c) + b(c-a) + c(a-b)$, then which of the following is not true?

(A) $x + y = 0$

(B) $2025^x = 1947^y$

(C) $x^y = 1$

(D) $\sqrt{x} = \sqrt[3]{y}$

4. $\frac{30}{\sqrt{5} + \sqrt{12} + \sqrt{20} + \sqrt{27}} = ?$

(A) $5\sqrt{3} + 3\sqrt{5}$

(B) $5\sqrt{3} - 3\sqrt{5}$

(C) $5\sqrt{5} + 3\sqrt{3}$

(D) $5\sqrt{5} - 3\sqrt{3}$

5. If $5^{x+1} - 5^{x-1} = 24\sqrt{5}$, find x

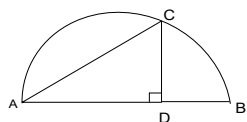
(A) $\frac{1}{2}$

(B) $\frac{3}{2}$

(C) $\frac{2}{3}$

(D) $\frac{1}{4}$

6. In the diagram, AB is the diameter of the semi-circle and $CD \perp AB$. If AD = 2cm and BD = 1cm, find the length of AC



(A) $\sqrt{6}$ cm

(B) $\sqrt{5}$ cm

(C) $\sqrt{2}$ cm

(D) $\sqrt{3}$ cm

7. $(64)^{0.8\bar{3}} - (256)^{0.125} = ?$

(A) 32

(B) 16

(C) 30

(D) None

8. $2025x + 1947y = 10047$

$1947x + 2025y = 9813$

Solve for x and y

(A) $x = 1, y = 3$

(B) $x = 3, y = 1$

(C) $x = 4, y = 1$

(D) $x = 1, y = 4$

9. If -1 is a zero of the polynomial $f(x) = \frac{2}{3}x^2 - \frac{3}{4}x - K$, find the value of K

(A) $\frac{12}{17}$

(B) $\frac{17}{12}$

(C) $\frac{12}{13}$

(D) $\frac{13}{12}$

10. Find the remainder of the polynomial

$f(x) = x^5 - 4x^4 + 3x^3 - 7x^2 + 9x - 1$ when divided by $(x+1)$

(A) 25

(B) -25

(C) -17

(D) None

11. When a polynomial $f(x)$ is divided by $(x-1)$ it gives remainder 2, and it gives remainder 1 when divided by $(x-2)$. Find the remainder when $f(x)$ is divided by $(x-1)(x-2)$

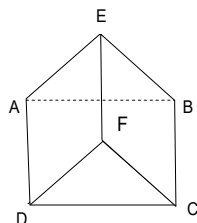
(A) $x-3$

(B) $x+3$

(C) $-x+3$

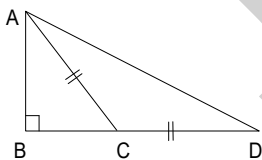
(D) $-x-3$

12. Which of the following is not a factor of $x^3 - 23x^2 + 142x - 120$?
 (A) $(x-1)$ (B) $(x+10)$ (C) $(x-10)$ (D) $(x-12)$
13. If $a+b+c=11$, $a^2 + b^2 + c^2 = 45$, $abc=40$, find $a^3 + b^3 + c^3$
 (A) 200 (B) 198 (C) 197 (D) 199
14. Which of the following point (x,y) is not a solution of $2x+3y=5$
 (A) $(31,-19)$ (B) $(-29,21)$ (C) $(22,-13)$ (D) $(20,-15)$
15. Which of the following is true about the line " $x=2$ " in the coordinate plane?
 (A) The line is parallel to x-axis (B) The line passes through the point $(0,2)$
 (C) The line is perpendicular to x-axis (D) The line is perpendicular to y-axis
16. In $\triangle ABC$, altitudes AD, BE and CF meet each other at the orthocenter H. If $\angle ABC = 70^\circ$, $\angle ACB = 30^\circ$, find $\angle BHF$
 (A) 20° (B) 60° (C) 80° (D) None
17. A prism is made by three rhombus ABCD, AEFD and BEFC as shown in the figure. Find the sum of $\angle AEB$ and $\angle FCD$



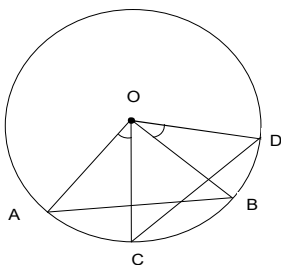
- (A) 180° (B) 120° (C) 90° (D) 150°

18. For a triangle one side is 3 times the other side, and the third side is 10 cm. If all the sides of the triangle are integers, how many such triangle is possible?
 (A) 1 (B) 2 (C) 3 (D) 4
19. The sides of a triangle are 35 cm, 54 cm and 61 cm. Find the length of its longest altitude
 (A) $16\sqrt{5}$ cm (B) $12\sqrt{5}$ cm (C) $24\sqrt{5}$ cm (D) 28 cm
20. Which of the following is a criteria for congruency of triangles?
 (A) S-S-A (B) A-A-A (C) S-A-A (D) None
21. $\triangle ABC$ is an isosceles triangle right angled at B. $\triangle ACD$ is also an isosceles triangle with $AC = CD$. Find $\angle ADB$.



- (A) 45° (B) $22\frac{1}{2}^\circ$ (C) $67\frac{1}{2}^\circ$ (D) 60°

22. In the figure, O is the centre of the circle and $\angle AOC = \angle BOD$. If $AB = 10$ cm, then find the length of CD.



- (A) 10 cm (B) 5 cm (C) 20 cm (D) Data inadequate
23. A boat can travel 100 km upstream and 70 km downstream in 6 hours. It can also travel 50 km upstream and 105 km downstream in 5 hours. Find the speed of boat and speed of the stream.
 (A) Speed of boat = 30 km/hr, speed of water = 10 km/hr
 (B) Speed of boat = 20 km/hr, speed of water = 5 km/hr
 (C) Speed of boat = 20 km/hr, speed of water = 10 km/hr
 (D) Speed of boat = 30 km/hr, speed of water = 5 km/hr
24. If the sum of two numbers is 48 and their difference is 18, find their product.
 (A) 475 (B) 495 (C) 485 (D) 525
25. Find the area of the triangle with sides 13 cm, 14 cm and 15 cm.
 (A) 84 cm^2 (B) 48 cm^2 (C) 56 cm^2 (D) 96 cm^2
26. Which of the following is not an irrational number?
 (A) π (B) $\sqrt{2}$ (C) 1.5050050005..... (D) $\frac{22}{7}$

Comprehension (For questions 27 and 28) : In Rhombus ABCD, $\angle B = 120^\circ$ and $AD = 2$ cm.

27. Find the length of the diagonal AC in rhombus ABCD
 (A) $\sqrt{3}$ cm (B) $2\sqrt{3}$ cm (C) $3\sqrt{3}$ cm (D) 2 cm
28. Find the area of rhombus ABCD.
 (A) $2\sqrt{3} \text{ cm}^2$ (B) 4 cm^2 (C) $3\sqrt{3} \text{ cm}^2$ (D) $\sqrt{3} \text{ cm}^2$

Comprehension (For questions 29 and 30) : Let $f(x) = x^4 - x^3 + 1$ and $g(x) = x^2 + 1$

29. When $f(x)$ is divided by $g(x)$, find the quotient
 (A) $x^2 + x + 1$ (B) $x^2 + x - 1$ (C) $x^2 - x + 1$ (D) $x^2 - x - 1$
30. When $f(x)$ is divided by $g(x)$, find the remainder
 (A) $x+2$ (B) $x-2$ (C) $-x+2$ (D) $-x-2$

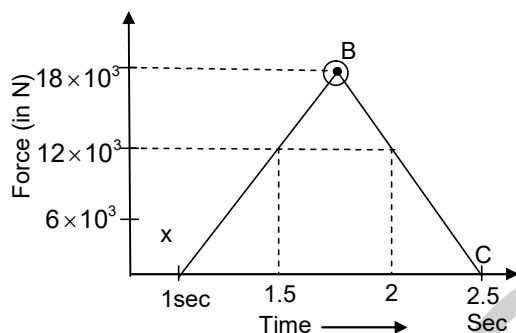
PHYSICS

Section – III

Single Answer Questions

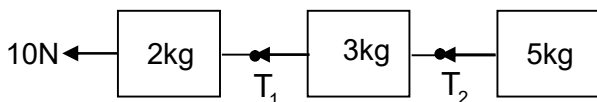
1. A body of mass 2kg is moving with velocity 8 m/s on a smooth surface. If it is to be brought to rest in 2 seconds, then the magnitude of the force applied is
 (A) 8 N (B) 4 N (C) 2 N (D) 1 N

2. A driver accelerates his car first at the rate of 1.8 m/s^2 and then at the rate of 1.2 m/s^2 . The ratio of the forces exerted by the engines will be respectively equal to
 (A) 2 : 3 (B) 1 : 2 (C) 2 : 1 (D) 3 : 2
3. A body starts from rest and travels 100 m in 5 second with uniform acceleration then the value of acceleration is,
 (A) 20 m/s^2 (B) 10 m/s^2 (C) 4 m/s^2 (D) 8 m/s^2
4. Figure shows an estimated force – time graph for a base ball struck by a bat. For this curve determine average force exerted on ball

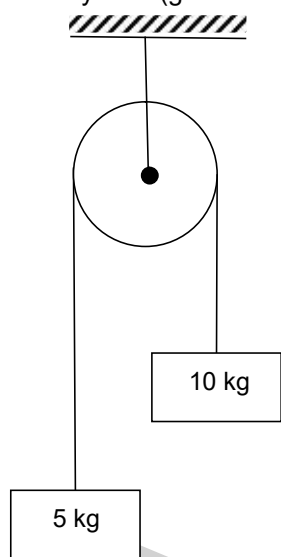


- (A) 9000 N (B) 10000 N (C) 18000 N (D) 12000 N
5. A balloon starts from the ground with an acceleration of 1.25 m/s^2 . After 8 sec, a stone is released from the balloon, the stone will
 (A) Cover a distance of 40m (B) have a displacement of 50m
 (C) reach the ground in 4 sec (D) none of the above
6. An auto's velocity decreases uniformly from 20 ms^{-1} to 6 ms^{-1} in a distance of 70 m. Then its acceleration is
 (A) -2.6 ms^{-2} (B) 6.2 ms^{-2} (C) 2.6 ms^{-2} (D) 4.2 ms^{-2}
7. Two bodies of different mass M_a and M_b are dropped from two different heights 'a' and 'b'. The ratio of time taken by the two bodies to cover these heights are
 (A) a : b (B) b : a (C) $\sqrt{a} : \sqrt{b}$ (D) $a^2 : b^2$
8. An automobile of mass 200 kg travelling with speed 60 km/h, can be brought to rest by applying brakes within a distance of 20m. If the car is going twice as fast i.e. 120 km/h, the stopping distance will be
 (A) 20m (B) 40 m (C) 60 cm (D) 80m
9. The initial velocity of a body moving with a uniform acceleration of 2 m/s^2 is 10m/s. It's velocity after an interval of 6 sec is
 (A) 18 m/s (B) 20 m/s (C) 22m/s (D) None of these
10. The Newton's second law gives the measure of
 (A) Acceleration (B) Force (C) Momentum (D) None of these
11. The SI unit of momentum is
 (A) joule (B) kg ms^{-1} (C) dyne (D) Newton

12. A particle is moving with a constant speed along a straight line path. A force is not required to
 (A) Increase its speed (B) Decrease the momentum
 (C) Change the direction (D) Keep it moving with uniform velocity
13. A ball of mass 1 kg is accelerating at the rate of 1 m/s^2 . The rate of change of momentum in 1 sec is
 (A) 1 kgm/s^2 (B) 2 kgm/s^2 (C) 1 kgm/s (D) 2 kgm/s
14. 3 blocks of masses 2kg, 3 kg and 5kg are connected to each other with light string and are then placed on a Frictionless surface as shown in the figure. The system is pulled by a force $F = 10\text{N}$, then tension $T_2 = ?$



- (A) 1 N (B) 5 N (C) 8 N (D) 10 N
15. Two masses of 5 kg and 10 kg are connected to a pulley as shown. What will be the acceleration of the system ($g =$ acceleration due to gravity)



- (A) g (B) $g/2$ (C) $g/3$ (D) $g/4$

CHEMISTRY

Section – IV

Single Answer Questions

1. What is the main characteristic of a homogeneous mixture?
 (A) The components settle over time
 (B) The components are visibly different
 (C) The components are uniformly distributed
 (D) The components can be separated by physical means
2. Which of the following changes is reversible?
 (A) Melting of wax (B) Burning of paper (C) Rusting of iron (D) Cooking of food
3. What is the main cause of evaporation?
 (A) Decrease in temperature (B) Increase in pressure
 (C) Increase in temperature (D) Decrease in volume

4. What is a colloid?
(A) A solution in which the solute is in large quantities
(B) A homogeneous mixture with small particles
(C) A heterogeneous mixture with tiny particles
(D) A homogeneous mixture with large particles
5. Which of the following is a technique used to separate different colored pigments in a mixture?
(A) Distillation (B) Chromatography (C) Filtration (D) Centrifugation
6. Water evaporates faster in
(A) still air (B) humid air
(C) in dry air (D) In windy & dry air
7. Which of the following mixtures cannot be separated by sublimation?
(A) Ammonium chloride & Sodium chloride (B) ammonium chloride & sand
(C) ammonium chloride & Iodine (D) ammonium chloride & copper sulphate
8. Recovery of salt from its aqueous solution can be done by:
(A) Evaporation (B) Distillation (C) Filtration (D) None of these
9. Which of the following statements is incorrect about Plasma?
(A) fluorescent tube and neon sign bulbs consists of plasma
(B) the gas gets ionized when electrical energy flows through it
(C) it consists of super energetic and super excited particles
(D) the plasma glows with colour which does not depend upon the nature of gas
10. Which of the following is not endothermic process?
(A) fusion (B) evaporation (C) freezing (D) melting
11. The components of water can be separated by
(A) physical methods (B) chemical methods
(C) both (D) they cannot be separated
12. Thermometer is an instrument that measures
(A) temperature of substance (B) heat of substance
(C) radiation of substance (D) flow of energy in a substance
13. Brass is a
(A) compound (B) element
(C) homogeneous mixture (D) heterogeneous mixture
14. An example of physical change is
(A) rusting of iron (B) burning of wood (C) cooking an egg (D) melting of ice
15. Milk of Magnesia is an example of
(A) true solution (B) colloidal solution (C) suspension (D) none of these

BIOLOGY**Section – V****Single Answer Questions**

1. The organisms which are devoid of a nucleus and membrane bound organelles are called
(A) Megakaryotes (B) Prokaryotes (C) Eukaryotes (D) None of these

2. In a plant cell which is placed in hypertonic solution exosmosis results in _____
(A) Swelling (B) Bursting (C) Shrinkage (D) All of these
3. The entry of water into the root hair cells occurs due to
(A) Diffusion (B) Osmosis (C) Active transport (D) Plasmolysis
4. The fluid filled space, containing enzymes, within a chloroplast is
(A) Thylakoid (B) Lamella (C) Grana (D) Stroma
5. Power house : Mitochondria, suicidal bags : _____
(A) Ribosomes (B) Peroxisomes (C) Lysosomes (D) Glyoxysomes
6. The folds of inner mitochondrial membrane for cellular respiration is
(A) Matrix (B) Cisternae (C) Cristae (D) Oxysomes
7. In mature tomato fruit, the green turns into red colour, is due to the presence of
(A) Chloroplast (B) Leucoplast (C) Chromoplast (D) All of these
8. Cell wall is found in
(A) Plant cell only (B) Bacterial Cell (C) Yeast cell (D) All of these
9. The process of cellular uptake of particular substances by plasma membrane is called
(A) Cyclosis (B) Endocytosis (C) Exocytosis (D) Endosmosis
10. In which cells of the following organs, SER plays a crucial role in detoxification of drugs ?
(A) Lungs (B) Liver (C) Heart (D) All of these
11. Identify the organelle that plays all important role in animal cell division
(A) Ribosomes (B) RER
(C) Centrosome with centrioles (D) Vacuoles
12. In which among the following types of cell division, newly formed cells have half the number of chromosomes than that of a parent cell?
(A) Mitosis (B) Meiosis (C) Amitosis (D) None of these
13. The chromosomes, are visible as rod-shaped structures in _____
(A) Immature cells (B) Mature cells (C) Dividing cells (D) None of these
14. In which among the following cells mitosis can happen?
(A) Prokaryotic cell (B) Haploid cells only
(C) Diploid cells only (D) Both in haploid and diploid cells
15. In an organism, meiosis is associated with
(A) Growth (B) Healing of wound
(C) Sexual reproduction (D) Asexual reproduction

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Answer key – Class - 09**MAT**

1.C	2.C	3.B	4.D	5.A
6.B	7.D	8.C	9.A	10.B
11.C	12.D	13.A	14.B	15.C
16.D	17.A	18.B	19.C	20.A
21.B	22.B	23.D	24.C	25.D

MATHS

1.D	2.B	3.C	4.B	5.B
6.A	7.C	8.C	9.B	10.B
11.C	12.B	13.C	14.D	15.C
16.C	17.B	18.B	19.C	20.C
21.B	22.A	23.D	24.B	25.A
26.D	27.B	28.A	29.D	30.A

PHYSICS

1.A	2.D	3.D	4.A	5.C
6.A	7.C	8.D	9.C	10.B
11.B	12.D	13.C	14.C	15.C

CHEMISTRY

1.C	2.A	3.C	4.C	5.B
6.D	7.C	8.A	9.D	10.C
11.B	12.A	13.C	14.D	15.B

BIOLOGY

1.B	2.C	3.B	4.D	5.C
6.C	7.C	8.D	9.B	10.B
11.C	12.B	13.C	14.D	15.C