Pinnacle EduCare
Dream it • Do it
JEE / NEET / Olympiads / NTSE / Boards

P-TQE 2025
Pinnacle Talent Quest Exam

For 6th to 10th Class Students

STAGE - 1 & STAGE - 2

Pinnacle Talent Quest Exam

SAMPLE TEST PAPER

Class 8th

WE ARE THE
CHAMPIONS OF JEE MAIN 2023

13 Students Scored More than **99** Percentile

JEE Mains Percentile	Name
99.59	Garima
99.51	Sukhwinder Singh
99.46	Harshil Goyal
99.86	Dikshit Singla
99.88	Chetanya Jindal
99.90	Krrish Jindal
99.84	Mayank Jindal
99.75	Paawan Khurana
99.61	Jatin Bansal
99.44	Disha
99.85	Priyanka

EXTRAORDINARY RESULTS IN NEET

- **Aarchi** — NEET 2021 — MBBS, AIMS - Mohali
- **Arshdeep** — NEET 2021 — MBBS, GMC - Patiala
- **Harmandeep Kaur** — NEET 2021 — MBBS, SGRD Amritsar
- **Arshita Aggarwal** — NEET 2022 — DMC-Ludhiana — NEET AIR - 2446
- **Nitish Singla** — AIIMS-Bilaspur — NEET AIR - 2253
- **Anmoldeep Kaur** — NEET 2022 — AIIMS-Bathinda — NEET AIR - 2501
- **Satvir Kaur** — NEET 2020 — MBBS, GMC - Amritsar
- **Ishatpreet Singh** — NEET 2020 — AIR 1 SNST 2020 — IISER - Mohali
- **Gitika** — NEET 2020 — AIR 336 — AIIMS Delhi Nursing

TOP PERFORMANCES IN JEE MAINS & ADVANCE

- **Gagan Singla** — JEE 2022 — IIT-Hyderabad — JEE Advance AIR 2222
- **Vishal Garg** — IIT-Ropar — JEE Advance AIR 1805
- **Vaibhav Mehta** — JEE 2022 — IIT-Ropar — JEE Advance AIR 6399
- **Tanish Chugh** — JEE 2021 — IIT - BHU — JEE Advance AIR 7533
- **Kartikay Ahuja** — IIT-Roorkee — JEE Advance AIR 3675
- **Savneet Kaur** — JEE 2021 — IIT - Jammu — JEE Advance AIR 10552
- **Yadwinder** — JEE 2020 — IIT-Ropar — JEE Advance AIR 1785
- **Sanchit Garg** — IIT-Roorkee — JEE Advance AIR 1092
- **Tajinder Singh** — JEE 2020 — IIT-Ropar — JEE Advance AIR 7737

- **Monit Chawla** — PEC-Chandigarh — JEE-Main 98.56
- **Bhavansh Singla** — PEC-Chandigarh — JEE-Main 98.43
- **Krish Kumar** — JEE-Main 97.27
- **Deepak Gupta** — PEC-Chandigarh — JEE-Main 99.47
- **Disha Aggarwal** — PEC-Chandigarh — JEE-Main 98.59
- **Nakul Garg** — PEC-Chandigarh — JEE-Main 98.58
- **Rajat Garg** — DTU-Delhi — JEE-Main 99.69
- **Rahul Garg** — NIT-Allahabad — JEE-Main 99.66
- **Karan Chhabra** — NIT-Allahabad — JEE-Main 99.45

- **Best Results In Region** — Pinn.cle
- **Gurleen Saini** — JEE-Main 97.04
- **Harneet Kaur** — TIET, Patiala — JEE-Main 97.93
- **Karan Bansal** — DTU-Delhi — JEE-Main 97.59
- **Divyam Jain** — PEC-Chandigarh — JEE-Main 97.56
- **Pratham Garg** — PEC-Chandigarh — JEE-Main 99.03
- **Mohit Tuteja** — PEC-Chandigarh — JEE-Main 98.16

KVPY RESULT
- **Nitish Singla** — Rank - 532
- **Vishal Garg** — Rank - 937

ADVANCE OLYMPIADS RESULT
- **Parth Garg** — IOQM & IOQA
- **Paawan Khurana** — IOQM
- **Vishal Garg** — IOQC & IOQA
- **Krrish Jindal** — IOQA

NTSE RESULT
- **Anmoldeep Kaur** — Region Topper — NTSE 38
- **Jashandeep** — NTSE 161

NMTC-2022
- **Praney Bansal** — Stage-1
- **Pratham goyal** — Stage-1

IOQM-2023
- **Bharti** — Marks - 23
- **Vrishti Mittal** — Marks - 23
- **Bhavit** — Marks - 20

IMO-2022 RESULT
- **Vrishti Mittal** — IR - 5
- **Sanket Nagpal** — IR - 12
- **Praney Bansal** — IR - 28
- **Pulkit Kansal** — IR - 29
- **Lavish Bajaj** — IR - 42
- **Bhavit** — IR - 139
- **Ishaan Chugh** — IR - 167
- **Utsav** — IR - 279
- **Tanmay** — IR - 306
- **Aditya** — IR - 345
- **Amanveer Singh** — IR - 442
- **Gaurang Nagpal** — IR - 556
- **Hitek** — IR - 973

IOS - 2022 RESULT
- **Amanveer Singh** — IR - 4
- **Pulkit Kansal** — IR - 87
- **Jogveer Singh** — IR - 187
- **Lupita kansal** — IR - 249
- **Dhruv Mehta** — IR - 441
- **Bhavit** — IR - 726
- **Gaurang Nagpal** — IR - 848
- **Sanket Nagpal** — IR - 859

NSO RESULT
- **Vrishti Mittal** — IR - 13
- **Pulkit Kansal** — IR - 67
- **Azahi** — IR - 97
- **Praneer Singh** — IR - 127
- **Dhruv Saba** — IR - 133
- **Dhruv Mehta** — IR - 208
- **Bhavik Kansal** — IR - 208

What Makes **Pinnacle** Unique?

1. Best Faculty Team
2. Hi-Tech Classrooms
3. Customized Study material
4. Personal Attention
5. Unlimited Doubt Sessions
6. Best Testing Methodology

Lecture Recording Lab

Revision Classes & Self Study Zones

Online Testing Lab (CBT)

Smart & AC Classrooms

Objective + Subjective

Student Performance and Analysis Report

Rich Library & Researched Study Modules

Extra Support to weaker students

CCTV Campus

Biometric Attendance

Classroom Program

1 Comprehensive **Classroom Lectures**

All classes at Pinnacle are conducted by highly qualified and experienced faculty members, mostly IITians. Each chapter is started at the grass root level and is dealt to an extent which is the requirement of competitive examinations, with an aim of enabling the students to develop a comprehensive view of the whole chapter with a thorough understanding.

Doubt **Clearance** 2

"If you ask a question, you may apprear fool for some time, but if you don't, you'll remain a fool for whole life."System at Pinnacle encourages all students to ask their doubts and questions.

3 Regular Tests **Online and Offline**

As JEE Mains and Advanced have gone completely online and NEET is in the pipeline, we have launched a dedicated online testing platform where students can practise over CBT (Computer Based Tests). The combination of online and offline testing modes based on latest JEE/NEET patterns ensure that students are at par with the recent changes. Students and check their test reports and performance analysis via a unique online login ID. Their results are also communicated to parents via SMS.

Addressing the **Board Exam** 4

Pinnacle has a very distinct methodology for preparing the students for competitive examinations while in full synchronization with Board Exams as well. Board level tests are conducted alongside the regular JEE/NEET tests and the copies are graded at very meticulous level by teachers. Students receive methodological tips so as to perform excellent in the board Exams as well.

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JEE / NEET / Olympiads / NTSE / Boards

Engineering
JEE Main & Adv.

Medical
NEET

Foundation
VIII, IX, X, NTSE, Olympiads

Subjective
Boards

Section – A
Science

This section contains **30 Multiple Choice Questions**. Each question has four options out of which **ONLY ONE** is correct.

1. The coefficient of static friction between two surfaces depends on
   (a) Nature of surfaces
   (b) The shape of the surfaces in contact
   (c) The area of contact
   (d) All of the above

2. The given diagram shows a series of images of a moving ball captured by a camera.
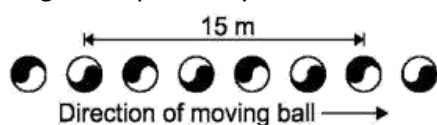
   The ball was moving at a constant velocity and the images were taken at a constant rate of 10 per second. What is the speed of the ball in kmph?
   (a) 108 kmph
   (b) 110 kmph
   (c) 145 kmph
   (d) 115 kmph

3. A block of mass 2 kg is placed on the floor. The coefficient of static friction is 0.4. Force of 2.8 N is applied on the block. The force of friction between the block and the floor is (g=9.8 m/s^2)
   (a) 2.8 N
   (b) 7.84 N
   (c) 2.0 N
   (d) zero

4. A girl stands on a box having 60 cm length, 40 cm breadth and 20 cm height in three ways. Pressure exerted by the brick will be
   (a) Max. when length and breadth form the base
   (b) Max. when breadth and height form the base
   (c) Max. when height and length form the base
   (d) The same in all the above three cases

5. The two high bones (femurs), each of cross-sectional area 10 cm^2 support the upper part of a human body of mass 40 kg. Estimate the total pressure sustained by both the femurs. (Given g = 10 m s^{-2})
   (a) 1×10^5 Pa
   (b) 2×10^5 Pa
   (c) 3×10^5 Pa
   (d) 4×10^5 Pa

6. The vessels shown below all contain water to the same height. Rank them according to the pressure exerted by the water on the vessel bottoms, least to greatest.

   (a) 3,4,2,1
   (b) 4,3,2,1
   (c) 2,3,4,1
   (d) All pressures are the same

7. A box is given a push across the floor. It comes to stop shortly after moving some distance, which one of the following reasons explains this?
   (a) Gravity is acting on the box in the direction opposite to the box's movement
   (b) Friction is acting on the box in the same direction of the box's movement
   (c) Friction is acting on the box in the direction opposite to the box's movement
   (d) The heat produced during the box's movement slows down the box

8. A ray deviates 90° after suffering reflection from a mirror. The angle of incidence is
   (a) 90°
   (b) 30°
   (c) 45°
   (d) 60°

9. When you stand in front of a plane mirror, your image is
   (a) Real, erect and smaller than you
   (b) Real, erect and the same size as you
   (c) Virtual, erect, and smaller than you
   (d) Virtual, erect, and the same size as you

10. What should be the angle between two plane mirrors so that whatever be the angle of incidence the incident ray and the reflected ray from the two mirrors be parallel to each other?
    (a) 60°
    (b) 90°
    (c) 120°
    (d) 175°

11. The nature of oxides of non-metals is:
    (a) Acidic
    (b) Neutral
    (c) Basic
    (d) Both a and b

12. Carpets made of rayon are blended with:
    (a) Cotton
    (b) Silk
    (c) Nylon
    (d) wool

13. Choose the correct option for the given statements
    (i) Plastics are generally bad conductors of electricity
    (ii) Ropes made by bakelite are used in cranes and elevators
    (iii) Teflon is a special plastic on which oil and water do not stick
    (iv) Plastic is non-biodegradable, hence is environment friendly.
    (a) (i) → T; (ii) → T; (iii) → F; (iv) → F
    (b) (i) → F; (ii) → F; (iii) → T; (iv) → T
    (c) (i) → T; (ii) → F; (iii) → T; (iv) → F
    (d) (i) → F; (ii) → T; (iii) → F; (iv) → T

14. Different components of petroleum are separated by fractional distillation. What is the correct sequence of fractions obtained in the fractionating column from bottom to top?
    (a) Petroleum gas, lubricating oil, kerosene, gasoline
    (b) Lubricating oil, Kerosene, gasoline, petroleum gas
    (c) Petroleum gas, gasoline, kerosene, lubricating oil.
    (d) Gasoline, kerosene, petroleum gas, lubricating oil

15. Sumit was performing an experiment with a blue coloured solution (X) in a beaker. By mistake a shaving blade fell into the beaker. After half an hour, he found that the colour of the solution in beaker changed to green (Y). What could be the solutions X and Y respectively?

Reddish brown deposition
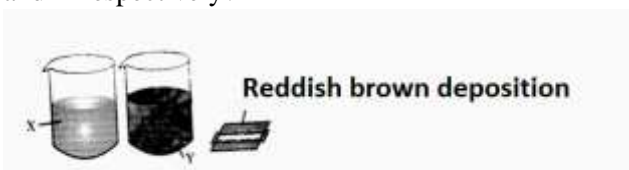
    (a) Copper sulphate, Iron sulphate
    (b) Iron sulphate, copper sulphate
    (c) Iron sulphate, zinc sulphate
    (d) Copper sulphate, zinc sulphate

16. Substance X reacts with dilute HCl violently, Y reacts slowly while Z does not react at all. Y, Z and X could be respectively
    (a) Cu, Al, Fe
    (b) Al, Cu, K
    (c) Na, Cu, Fe
    (d) Al, Cu, Na

17. Match the columns

Column I	Column II
I. Sulphuric Acid	(P) Ca_3P_2
II. Calcium Phosphide	(Q) Na_2ZnO_2
III. Sodium Zincate	(R) H_2SO_4

    (a) I-R, II-Q, III-P
    (b) I-P, II-Q, III-R
    (c) I-R, II-P, III-Q
    (d) I-Q, II-P, III-R

18. Match the columns

Column I	Column II
I. Ag	(P) Mercury
II. Au	(Q) Silver
III. Hg	(R) Sodium
IV. Na	(S) Gold

    (a) I-S, II-Q, III-R, IV-P
    (b) I-Q, II-S, III-P, IV-R
    (c) I-P, II-Q, III-R, IV-S
    (d) I-R, II-S, III-Q, IV-P

19. Which one of the following four metals would be displaced from the solution of its salt by the other three metals?
    (a) Zn
    (b) Ag
   (c) Cu
    (d) Mg

20. $Al_2(SO_4)_3 + b\ NaOH \rightarrow Al(OH)_3 + d\ Na_2SO_4$
    Sum of a+b+c+d is
    (a) 7
    (b) 6
    (c) 10
    (d) 12

21. How many of the following living organisms can increase fertility of soil
    (i) Rhizobium (ii) Earthworm (iii) Some blue green algae (iv) Lactobacillus (v) Yeast
    (a) Two
    (b) Three
    (c) Four
    (d) Five

22. The given diagram of cell could probably be a
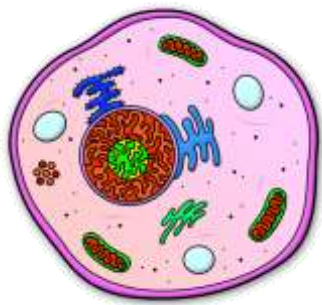
    (a) Bacterial cell
    (b) Mycoplasma
    (c) Animal cell
    (d) Data insufficient

23. Which of the following is primary sex organ in females?
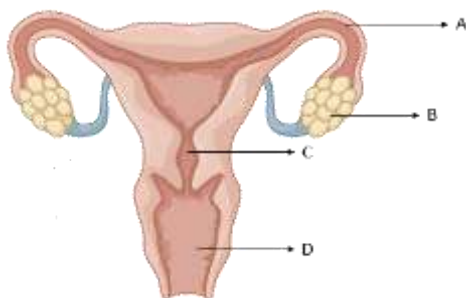
    (a) A
    (b) B
    (c) C
    (d) D

24. Which of the following statements are incorrect?
    i)   Prolactin is milk 'let down' hormone
    ii) Pituitary gland is known as master gland
    iii) Sebaceous gland is an endocrine gland
    iv) Pituitary gland is heterocrine gland
    (a) I, ii and iii
    (b) I and ii
    (c) ii, iii and iv
    (d) i, iii and iv

25. Consider the following statements and select the option which correctly identifies true (T) and false (F) ones.
    (i) Ploughing is an essential step in Soil Preparation

(ii) Freshly harvested grains must be dried before storage
(iii) Green manure is prepared by ploughing down certain plants into the soil
(iv) Broadcasting of seeds is done by seed drill
    (a) (i) → T; (ii) → T; (iii) → F; (iv) → F
    (b) (i) → F; (ii) → T; (iii) → F; (iv) → F
    (c) (i) → T; (ii) → T; (iii) → T; (iv) → F
    (d) (i) → F; (ii) → T; (iii) → F; (iv) → T

26. Pick the odd one out from each series given below and select the correct option.
    (i)   Uterus, Cervix, Prostate Gland, Vagina
    (ii) Scrotum, Epididymis, Seminal vesicle, Fallopian tube
    (iii) Sperm, ovum, gametes, fertilization
    (a) (i) Cervix; (ii) Scrotum; (iii) Gametes
    (b) (i) Vagina; (ii) Seminal vesicle; (iii) Gametes
    (c) (i) Prostate gland; (ii) Fallopian tube; (iii) Fertilization
    (d) (i) Prostate Gland; (ii) Seminal vesicle; (iii) gametes

27. Which of the following statements are correct?
    i)   Sex of a baby is determined by the Y chromosome in males
    ii) Metamorphosis is observed in humans also
    iii) Menarche is the beginning of reproductive phase in women
    (a) i only
    (b) i and ii
    (c) i and iii
    (d) All three are correct

28. A bacteria undergoes binary fission in every two minutes. This bacterium can fill up a cup in 1 hour. In how much time will the cup be half filled?
    (a) 48 minutes
    (b) 58 minutes
    (c) 30 minutes
    (d) Data insufficient

29. Consider the following statements and select the option which correctly identifies true (T) and false (F) ones.

(i) *Clostridium botulinum* is one of the bacteria that can cause food poisoning

(ii) The body of fungus has thread like structural unit called hyphae

(iii) Vaccine stimulates the immune system of an individual

(iv) Adding sugar is one of the preservation method in case of jams

(a) (i) – F; (ii) – F; (iii) – T; (iv) – F

(b) (i) – T; (ii) – T; (iii) – T; (iv) – F

(c) (i) – T; (ii) – T; (iii) – F; (iv) – T

(d) (i) – T; (ii) – T; (iii) – T; (iv) – T

30. Who discovered the first living cell?

(a) Robert Brown

(b) Robert Hooke

(c) Leeuwenhoek

(d) Purkinje

Section – B
Mathematics
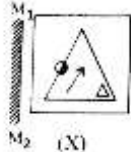
This section contains **20 Multiple Choice Questions**. Each question has four options out of which **ONLY ONE** is correct.

31. If the radius of a circle is a rational number, then its area is given by a number which is:
    (a) Rational
    (b) Irrational
    (c) Integral
    (d) A perfect square

32. The sum of rational and irrational number is:
    (a) Rational
    (b) Irrational
    (c) Zero
    (d) Integers

33. Any number n divided by 3 leaves remainder 1. When n^3 divided by 3, leaves a remainder
    (a) 3
    (b) 2
    (c) 1
    (d) 0

34. The additive inverse of $\dfrac{-a}{b}$ is:

    (a) $\dfrac{a}{b}$

    (b) $\dfrac{b}{a}$

    (c) $\dfrac{-b}{a}$

    (d) $\dfrac{-a}{b}$

35. A and B are friends. A is older to B by 5 years. C is half the age of B while A's father D is 8 years older than twice the age of B. If the present age of D is 48 years, find the present age of A.
    (a) 25 years
    (b) 26 years
    (c) 24 years
    (d) 28 years

36. The least square number exactly divisible by 4, 6, 10, 15 is
    (a) 400
    (b) 100
    (c) 25

(d) 900

37. Find the value of $\sqrt[3]{\sqrt{0.000064}}$ is:
    (a) 0.03
    (b) 0.02
    (c) 0.2
    (d) 0.3

38. If 'x' is a perfect square then, the next perfect square is
    (a) x + 1
    (b) $x^2 + 1$
    (c) $x^2 + 2x + 1$
    (d) $x + 2\sqrt{x} + 1$

39. If 9, (x+20), (x + 21) is a Pythagorean triplet, then value of x is:
    (a) 20
    (b) 30
    (c) 35
    (d) 40

40. Hemant purchased 120 rims of paper at ₹ 80 per rim. He spent ₹ 280 on transportation, paid octroi at the rate of 40 paise per rim and paid ₹ 72 to the coolie. If he wants to have a gain of 8%, the selling price per rim must be
    (a) ₹ 85
    (b) ₹ 88
    (c) ₹ 90
    (d) ₹ 95

41. Population of a town increases at a certain rate per cent per annum. Present population of the town is 3600 and in 5 years' time it becomes 4800. How much will it be in 10 years times?
    (a) 5000
    (b) 6000
    (c) 6400
    (d) 7000

42. Find the value of $\sqrt{901^2 - 899^2}$
    (a) 55
    (b) 60
    (c) 65

(d) 70

43. The factors of $x^4 - 81$ are:
    (a) $(x^2 - 9)(x + 9)^2$
    (b) $(x-3)(x+3)(x^2 + 9)$
    (c) $(x + 3)(x^2 - 9)^2$
    (d) $(x-3)^4$

44. $\dfrac{8(3.75)^3 + 1}{(7.5)^2 - 6.5}$ is equal to:
    (a) 2.75
    (b) 9/5
    (c) 4.75
    (d) 8.5

45. If $a^b = b^a$ then $\left(\dfrac{a}{b}\right)^{\frac{a}{b}} =$
    (a) 1
    (b) $a^{\frac{a}{b}}$
    (c) 2
    (d) $a^{\frac{a}{b}-1}$

46. The scientific notation of 165000000000000 is given by:
    (a) 16.5×10^{13}
    (b) 16.5×10^{12}
    (c) 16.50×10^{11}
    (d) 1.65×10^{14}

47. Value of the expression
    $\dfrac{x + y + z}{x^{-1}y^{-1} + y^{-1}z^{-1} + z^{-1}x^{-1}}$ is

    (a) $\dfrac{1}{x + y + z}$
    (b) $\dfrac{xyz}{x + y + z}$
    (c) $\dfrac{1}{xyz}$
    (d) xyz

48. $[27]^{-\frac{1}{3}} \times \left[\dfrac{64}{729}\right]^{-\frac{1}{3}} \times [0.125]^{-\frac{2}{3}}$

    The above expression, on simplification, gives
    (a) 3
    (b) 0.3
    (c) 0.25
    (d) 0.75

49. The least value must be given to x so that 97215x6 is divisible by 11, is:
    (a) 1
    (b) 2
    (c) 3
    (d) 5

50. If $x^{x\sqrt{x}} = (x\sqrt{x})^x$, then Find x:
    (a) $\dfrac{3}{2}$
    (b) $\dfrac{2}{9}$
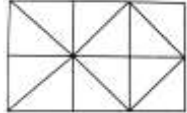   (c) $\dfrac{9}{4}$
    (d) $\dfrac{4}{9}$

Section – C
Mental Ability

This section contains **10 Multiple Choice Questions**. Each question has four options out of which **ONLY ONE** is correct.

51. Complete the series
    220, 200, 100, 80, 40, 20, ?
    (a) 20
    (b) 10
    (c) 30
    (d) 40

52. If the letter of RUTHLESS are arranged alphabetically then which letter would be the last letter?
    (a) T
    (b) E
    (c) H
    (d) U

53. If REASON is coded as 5, BELIEVED as 7, what is the code number of GOVERNMENT?
    (a) 6
    (b) 8
    (c) 9
    (d) 10

54. A bus for Delhi leaves every thirty minutes from a bus stand. An enquiry clerk told a passenger that the bus had already left ten minutes ago and the next bus will leave at 9.35 a.m. At what time did the enquiry clerk give this information to the passenger?
    (a) 9.10 a.m.
    (b) 8.55 a.m.
    (c) 9.08 a.m.
    (d) 9.15 a.m.

55. A lady said, 'The person standing there is my grandfather's only son's daughter' How is the lady related to the standing person?
    (a) Sister
    (b) Mother
    (c) Aunt
    (d) Cousin

56. If 20 – 10 means 200, 8 ÷4 means 12, 6×2 means 4 then 100 -10 ×1000÷1000 + 100×10=?
    (a) 0
    (b) 20
    (c) 1000
    (d) 1900

57. Deepak starts walking straight towards east. After walking 75 metres, he turns to the left and walks 25 metres straight. Again he turns to the left, walks a distance of 40 metres straight, again he turns to the left and walks a distance of 25 metres. How far is he from the starting point?
    (a) 25 metres
    (b) 50 metres
    (c) 115 metres
    (d) 35 metres

58. Choose the correct mirror image


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

59. In certain language, if 1 is coded as A, 2 as B, 3 as C, and so on, how is FLOWER coded in that code?
    (a) 6121523518
    (b) 6121823515
    (c) 6211523518
    (d) 6218123515

60. How many squares does the figure have?

    (a) 6
    (b) 7
    (c) 9
    (d) 10

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SPACE FOR ROUGH WORK

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SPACE FOR ROUGH WORK

PTQE-2025

ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	a	a	a	b	b	d	c	c	d	b	d	b	c	b	a	d	c	**b**	b	d
Que.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Ans.	b	c	b	b	c	**c**	**c**	**b**	**d**	**c**	**b**	**b**	**c**	**a**	**a**	**d**	**c**	**d**	**a**	**c**
Que.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	c	b	b	d	d	d	d	a	c	c	b	d	**c**	d	a	a	d	a	a	c