NMIMS NPAT

Sample Paper

English Language

Instructions: For questions (1-10), choose the option that is correct according to the given passage.

Scientists believe they may have solved the mystery of how 31 pyramids, including the world-famous Giza complex, were built in Egypt more than 4,000 years ago. A research team from the University of North Carolina Wilmington has discovered that the pyramids are likely to have been built along a long-lost, ancient branch of the River Nile - which is now hidden under desert and farmland.

For many years, archaeologists have thought that ancient Egyptians must have used a nearby waterway to transport materials such as the stone blocks needed to build the pyramids on the river. But up until now, "nobody was certain of the location, the shape, the size or proximity of this mega waterway to the actual pyramids site", according to one of the study's authors, Prof Eman Ghoneim.

Speaking to the BBC, one of the study's co-authors, Dr Suzanne Onstine, said "locating the actual [river] branch and having the data that shows there was a waterway that could be used for the transportation of heavier blocks, equipment, people, everything, really helps us explain pyramid construction".

The team found that the river branch - named the Ahramat branch, with "ahramat" meaning pyramids in Arabic - was roughly 64km (39 miles) long and between 200-700m (656-2,296 ft) wide. And it bordered 31 pyramids, which were built between 4,700 and 3,700 years ago. The discovery of this extinct river branch helps explain the high pyramid density between Giza and Lisht (the site of Middle Kingdom burials), in what is now an inhospitable area of the Saharan desert.

The river branch's proximity to the pyramid complexes suggests that it was "active and operational during the construction phase of these pyramids", the paper said. Dr Onstine explained that ancient Egyptians could "use the river's energy to carry these heavy blocks, rather than human labour," adding, "it's just a lot less effort". The River Nile was the lifeline of Ancient Egypt - and remains so to this day.

Q1. What recent discovery helps explain how 31 pyramids were constructed?

a) New tools used by workers

b) A long-lost branch of the River Nile

c) A newly found pyramid blueprint

d) Evidence of advanced machines

Q2. Why did archaeologists believe a waterway was used in pyramid construction?

a) It made travelling easier for tourists

b) Waterways were sacred to Egyptians

c) Heavy stones needed transportation via river ✔

d) Workers could not walk long distances

Q3. What major uncertainty existed before the new study?

a) The age of the pyramids

b) The workers' identity

c) The exact location and size of the waterway ✔

d) The number of pyramids

Q4. According to Dr Onstine, what does locating the Ahramat branch help explain?

a) How mummies were preserved

b) How heavy blocks and equipment were transported ✔

c) Why the pyramids were shaped like triangles

d) Why Egyptians worshipped the Nile

Q5. What is the approximate length of the Ahramat branch?

a) 10 km

b) 64 km ✔

c) 120 km

d) 5 km

Q6. What does the name "Ahramat" mean in Arabic?

a) Desert

b) Pharaohs

c) Pyramids ✔

d) Stones

Q7. How many pyramids were located along the Ahramat branch?

a) 12

b) 31 ✔

c) 50

d) 5

Q8. Why does the discovery explain the high pyramid density between Giza and Lisht?

a) The area had fertile farmland

b) It was a religious centre

c) The ancient river made construction easier ✔

d) Workers preferred desert conditions

Q9. What does the study suggest about the Ahramat branch during pyramid construction?

a) It was completely dry

b) It was active and usable ✔

c) It flooded the pyramids

d) It was only used for farming

Q10. How did the river help in transporting heavy blocks?

a) It froze and eased movement

b) It created strong winds

c) Its energy carried heavy materials ✔

d) Workers pushed blocks across sand

Q11. Which of the following is most similar in meaning of the given word?

“Long-lost”

a) ancient

b) forgotten ✔

c) narrow

d) dangerous

Q12. Which of the following is most similar in meaning of the given word?

“Certain”

a) doubtful

b) obvious

c) sure ✔

d) confused

Q13. Which of the following is most similar in meaning of the given word?

“Active”

a) weak

b) functional ✔

c) harmful

d) closed

Q14. Which of the following is most similar in meaning of the given word?

“Heavy”

a) thin

b) bulky ✔

c) small

d) fragile

Q15. Which of the following is most similar in meaning of the given word?

“Lifeline”

a) support ✔

b) boundary

c) disaster

d) threat

Q16. Which of the following is nearest opposite in meaning of the given word? “hidden”:

a) visible ✔

b) ancient

c) buried

d) rough

Q17. Which of the following is nearest opposite in meaning of the given word? “inhospitable”:

a) dry

b) welcoming ✔

c) lifeless

d) dusty

Q18. Which of the following is nearest opposite in meaning of the given word? “extinct”:

a) dry

b) lost

c) existing ✔

d) buried

Q19. Which of the following is nearest opposite in meaning of the given word? “less”:

a) tiny

b) more ✔

c) equal

d) mild

Q20. Which of the following is nearest opposite in meaning of the given word? “explains”:

a) supports

b) strengthens

c) confuses ✔

d) clarifies

Instructions: For questions (21-25), identify the part of the given sentence containing the error.

Q21. Downing Street has denied Rachel Reeves (a) misled the public (b) about the state of the public finances (c) ahead of this week's Budget (d).

a) a

b) b ✔

c) c

d) d

Q22. The Conservatives have accused Reeves (a) of giving an overly pessimistic impression (b) of the public finances (c) as a "smokescreen" (d) to raised taxes.

a) a

b) b

c) c

d) d ✔

Q23. The letter also reveals (a) that on the 31 October (b) the OBR told the Treasury (c) it was on course to met its main rule (d).

a) a

b) b

c) c

d) d ✔

Q24. She told BBC Radio 5 Live (a) that sticking with the manifesto commitments (b) would require deep cuts (c) in capital spending (d), she added.

a) a

b) b

c) c

d) d ✔

Q25. The OBR has now confirmed (a) that although productivity was downgraded (b) yet higher wages (c) would increase tax revenues (d).

a) a

b) b

c) c ✔

d) d

Instructions: For questions (26-30), identify the option that is one-word substitution for the given sentence.

Q26. A false appearance used to hide the truth is called:

a) Allegory

b) Mirage

c) Smokescreen ✔

d) Illusion

Q27. A formal written message addressed to a group of officials:

a) Manuscript

b) Letter

c) Dispatch

d) Memorandum ✔

Q28. A person who predicts future economic conditions:

a) Analyst

b) Forecaster ✔

c) Treasurer

d) Economist

Q29. A government's estimate of income and spending:

a) Ledger

b) Budget ✔

c) Blueprint

d) Forecast

Q30. A statement issued before the main announcement or event:

a) Prologue

b) Precursor

c) Pre-Budget speech ✔

d) Preface

Instructions: For questions (31-34), which of the options is the correct indirect narration of the given sentence?

Q31. Reeves said, “UK productivity is weaker than previously thought.”

a) Reeves said that UK productivity was weaker than previously thought. ✔

b) Reeves said UK productivity is weaker than previously thought.

c) Reeves said that UK productivity had been weaker than previously thought.

d) Reeves told that productivity is weaker.

Q32. “We told the chancellor the finances were better,” said the OBR.

a) The OBR told that the finances were better.

b) The OBR said they told the chancellor the finances were better.

c) The OBR said that they had told the chancellor the finances were better. ✔

d) The OBR told that finances had been better.

Q33. She said, “Cuts would be needed to keep the commitments.”

a) She said cuts will be needed.

b) She said that cuts would be needed to keep the commitments. ✔

c) She told cuts would be needed.

d) She said that cuts were needed.

Q34. The Treasury said, “We will not speculate on OBR processes.”

a) The Treasury said they would not speculate on OBR processes. ✔

b) The Treasury said they will not speculate.

c) The Treasury told they would not speculate.

d) The Treasury said that it will not speculate.

Instructions: For questions (35-38), which of the options is the correct passive voice of the given sentence in active voice?

Q35. Conservatives have accused Reeves of lying.

a) Reeves was accused of lying by Conservatives.

b) Reeves had been accused by Conservatives.

c) Reeves is accused of lying by Conservatives.

d) Reeves has been accused of lying by the Conservatives. ✔

Q36. The OBR revealed the forecast on Friday.

a) The forecast was revealed by the OBR on Friday. ✔

b) The forecast is revealed by the OBR on Friday.

c) The OBR was revealed the forecast on Friday.

d) Revealing of forecast was done by OBR.

Q37. She made her choices to cut the cost of living.

a) Her choices were made to cut the cost of living by her. ✔

b) Choices were made to cut cost of living.

c) The cost of living was cut by her choices.

d) She was made to cut cost of living.

Q38. Higher wages increase government revenues.

a) Government revenues are increased by higher wages. ✔

b) Government revenues were increased by higher wages.

c) Higher wages are increasing government revenues.

d) Government revenues have been increasing.

Instructions: For questions (38-40), which of the options is the correct order of sentences?

Q39.

P: The OBR said productivity had been downgraded.

Q: But it added higher wages would offset the loss.

R: This clarified the true financial position.

S: Reeves had earlier warned of weak productivity.

a) S P Q R ✔

b) P S Q R

c) S R P Q

d) P Q S R

Q40.

P: The Treasury refused to speculate on OBR processes.

Q: It said the chancellor made choices for the public good.

R: The choices aimed at cutting living costs and hospital waiting lists.

S: They also intended to reduce national debt.

a) Q R S P

b) P Q R S ✔

c) P R S Q

d) Q S R P

Quantitative Aptitude

Q1. A number is increased by 20% and then decreased by 25%. What is the net percentage change?

A. –10%

B. –5%

C. –15%

D. –20%

Q2. A value becomes 1848 after increasing by 23%. What was the original value?

A. 1500

B. 1440

C. 1490

D. 1300

Q3. The ratio of incomes of A and B is 7:5 and their expenditures are in ratio 5:3. If A saves ₹600 and B saves ₹450, what is A's income?

A. 2100

B. 2800

C. 2400

D. 3000

Q4. A and B's salaries are in ratio 9:14. If both are increased by ₹600, ratio becomes 15:22. What is A's original salary?

A. 1800

B. 2700

C. 3000

D. 3200

Q5. Mean of 9 numbers is 41. If one number 59 is replaced by x, new mean becomes 39. Find x.

A. 23

B. 24

C. 25

D. 26

Q6. The mode of a distribution is 32 and mean is 36. Using empirical relation, find median.

A. 34

B. 35

C. 33

D. 36

Q7. If $\tan\theta + \cot\theta = 2$, find $\tan^2\theta + \cot^2\theta$.

A. 0

B. 2

C. 4

D. 8

Q8. For an acute angle θ, if $\sin\theta - \cos\theta = 1/5$, find $\sin 2\theta$.

A. 24/25

B. 7/25

C. 12/25

D. 48/25

Q9. A trader sells two items for ₹1200 each; one at 20% profit and one at 20% loss. Find net effect.

A. 0%

B. 4% loss

C. 4% profit

D. 5% loss

Q10. Shopkeeper marks goods 40% above Cost price and gives two successive discounts of 10% each. What is net profit %?

A. 12%

B. 18%

C. 20%

D. 15%

Q11. Two alloys A (gold 30%) and B (gold 50%) are mixed in ratio 3:2. What is percentage of gold in mixture?

A. 38%

B. 42%

C. 40%

D. 44%

Q12. A vessel contains milk and water in ratio 7:3. If 10 L mixture is replaced with water, new ratio becomes 7:5. Find capacity.

A. 50 L

B. 40 L

C. 60 L

D. 70 L

Q13. In a triangle, sides are 13, 14, 15. Find radius of incircle.

A. 3

B. 4

C. 5

D. 6

Q14. A regular hexagon has side 8 cm. Find its area.

A. 166√3

B. 192√3

C. 128√3

D. 96√3

Q15. At a point 40 m from tower base, angle of elevation changes from 30° to 60° after moving 20 m closer. Height of tower?

A. 20√3

B. 40√3

C. 30√3

D. 50√3

Q16. Angle of elevation of a balloon is 60°. After ascending 50 m, angle becomes 75°. Find initial height.

A. 50(√3 – 1)

B. 25(√3 + 1)

C. 50(2 – √3)

D. 100(√3 – 1)

Q17. Shopkeeper marks goods 50% above CP and gives 20% discount. Profit %?

A. 20%

B. 25%

C. 30%

D. 15%

Q18. Two successive discounts equivalent to 28%. Find discount % each, if equal.

A. 15%

B. 16%

C. 17%

D. 20%

Q19. Greatest 5-digit number exactly divisible by 72?

A. 99936

B. 99912

C. 99984

D. 99972

Q20. If 23a47 is divisible by 9, find a.

A. 4

B. 6

C. 8

D. 3

Q21. A cylinder has radius 7 cm and height 20 cm. Sphere of max radius carved out. Volume removed?

A. 1436π

B. 1372π

C. 2058π

D. 2401π

Q22. Total surface area of cube is same as that of sphere. Ratio of their volumes?

A. √π : 6√6

B. 6√6 : √π

C. π : 6

D. 6 : π

Q23. Smallest number to be added to 7234 to make divisible by 11?

A. 3

B. 5

C. 7

D. 9

Q24. Largest 4-digit divisible by both 12 and 21?

A. 9972

B. 9996

C. 9960

D. 9945

Q25. Present ages of A and B are in ratio 7:4. After 6 years, ratio becomes 13:8. Find present age of A.

A. 42

B. 48

C. 38

D. 56

Q26. A's mother was 24 when he was born. After 6 years, age ratio will be 4:1. Present age of A?

A. 10

B. 12

C. 8

D. 6

Q27. A fills tank in 10 h, B in 15 h, C empties in 30 h. If all opened together, time to fill?

A. 6 h

B. 5 h

C. 10 h

D. 8 h

Q28. A tank has two inlet pipes filling in 12 h and 18 h and one outlet pipe empties in 36 h. If all opened, net time?

A. 9 h

B. 8 h

C. 12 h

D. 10 h

Q29. SI on a sum becomes ₹810 in 3 years at 9% rate. Find principal.

A. 3000

B. 2700

C. 2500

D. 3500

Q30. A sum amounts to ₹15600 in 3 years at 8% SI. Find interest.

A. 3200

B. 3600

C. 4000

D. 3400

Q31. Two cards drawn from deck. Probability both are kings?

A. 1/221

B. 1/111

C. 1/52

D. 1/26

Q32. One die rolled twice. Probability that sum is 8?

A. 5/36

B. 4/36

C. 3/36

D. 6/36

Q33. Number of ways to arrange letters of 'STATISTICS'.

A. 50400

B. 25200

C. 113400

D. 94500

Q34. Number of 4-digit even numbers using digits 1–7 without repetition?

A. 720

B. 480

C. 600

D. 420

Q35. A alone completes work in 12 days, B alone in 18 days. They work alternately starting with A. Time taken?

A. 10 days

B. 11 days

C. 9 days

D. 8 days

Q36. A can do work in 20 days; B is 25% more efficient. Together time?

A. 9 days

B. 8 days

C. 10 days

D. 11 days

Q37. In 1000 m race, A beats B by 100 m, B beats C by 200 m. How much does A beat C by?

A. 280 m

B. 300 m

C. 250 m

D. 220 m

Q38. A runs at 6 m/s, B at 5 m/s. If A gives B a 50 m start in a 600 m race, who wins?

A. A

B. B

C. Tie

D. Depends on time

Q39. A boat rows 30 km downstream in 2 h and same distance upstream in 6 h. Find speed of stream.

A. 5 km/h

B. 7 km/h

C. 10 km/h

D. 6 km/h

Q40. Speed of boat in still water is 10 km/h. Speed of stream is 4 km/h. Time to travel 24 km upstream + 24 km downstream?

A. 5 h

B. 6 h

C. 8 h

D. 4 h

Logical reasoning

Q1. (Instruction: Identify the rule changing every term and find the next term.)

Series: 11, 24, 50, 102, 206, ?

A. 411

B. 415

C. 418

D. 420

Q2. (Instruction: Identify dual pattern + and × alternation.)

Series: 7, 16, 36, 76, 156, ?

A. 312

B. 316

C. 320

D. 330

Q3. (Instruction: Find missing term using cubic-based jumps.)

Series: 10, 38, 100, 214, 386, ?

A. 622

B. 614

C. 612

D. 600

Q4. (Instruction: Use alternating square differences.)

Series: 3, 14, 43, 92, 165, ?

A. 265

B. 268

C. 270

D. 274

Q5. (Instruction: Determine both letter and number patterns independently.)

A5, D9, H17, N33, ?

A. V49

B. T49

C. T65

D. V65

Q6. (Instruction: Identify reverse alphabet shift + arithmetic growth.)

Z4, W9, S16, N25, ?

A. H36

B. I36

C. J36

D. K36

Q7. (Instruction: Apply alternating operations: +4 letters, −2 digits. If the first term is B8, Find 5th term.

A. P2

B. N4

C. O4

D. R2

Q8. (Instruction: Apply (position × 3) and convert back to letters.)

Code CAT using the rule: Each letter = (alphabet position × 3) → reconvert to letter.

A. FHX

B. GIZ

C. ILC

D. KNE

Q9. (Instruction: Decipher alternating +2, –1 shifting.) If SMART → ULBQV, Then CLOCK = ?

A. ENQBJ

B. ENRBJ

C. ENQCJ

D. ENPAJ

Q10. (Instruction: Use reverse alphabet A=26, Z=1.) Code "RANGE" using reverse positions.

A. IZMVT

B. IVMTZ

C. VIUTM

D. ITMVZ

Q11. (Instruction: Two-step rule: reverse word + shift backward by 2.)

What will be the code for WORLD.

A. BMFJU

B. EMJFB

C. DJSFA

D. YNPJH

Q12. (Instruction: Draw a relation tree. Identify final relation.)

Pointing to a woman, A says: "She is the mother of my daughter's husband. Who is she to A?

A. Mother-in-law

B. Wife

C. Sister-in-law

D. Grandmother

Q13. (Instruction: Track relation via three generations.)

A points to B: “He is the son of the daughter of my mother’s only daughter.” Who is B to A?

A. Son

B. Nephew

C. Grandson

D. Cousin

Q14. (Instruction: Convert verbal relationships into family tree.)

Rita says about Suman: “She is the daughter of my father’s sister’s only son.” Suman is Rita’s—

A. Cousin

B. Sister

C. Niece

D. Aunt

Q15. (Instruction: Solve through mother–brother relation chain.

A man says, “The woman speaking is the wife of my mother’s brother’s son.” The woman is his—

A. Sister-in-law

B. Cousin

C. Aunt

D. Niece

Q16. (Instruction: Solve circular seating with directional cues.)

8 persons sit facing center. A is 3rd right of B. C is 2nd left of A. D sits between C & E. F sits opposite A. Who is opposite C?

A. B

B. F

C. D

D. H

Q17. Six persons P–U sit in line. Q left of S but right of T. P sits at extreme left. R sits between Q and S. Who is 3rd from right?

A. Q

B. R

C. S

D. U

Q18. 7 people face center. A between B and C. D is 2nd right of C. E opposite A. F 3rd left of D. Who is left of F?

A. G

B. A

C. B

D. C

Q19. In a circle: L sits opposite P. P is 2nd left of N. M sits right of L.O is left of N. Who is opposite M?

A. N

B. P

C. O

D. L

Q20. Five persons sit in a row. W sits right of V. X sits between W & Y. Z is at rightmost end. but Y not leftmost. Who is 2nd from left?

A. W

B. X

C. V

D. Y

Q21. (Instruction: Plot path on graph. Find final displacement.)

A walks for 15 m North, then he moves 12 m towards West, now he walks for 10 m South and finally 5 m East. Final position = ?

A. 7 m West

B. 8 m West

C. 5 m West

D. 7 m East

Q22. A Person walks 8 m east, then he walks for 15 m north, and finally 8 m west. Distance from start = ?

A. 7 m

B. 15 m

C. 8 m

D. 10 m

Q23. Abhinav move for 12 m south, then for 16 m in east, and finally 12 m north.find distance from start?

A. 16 m

B. 12 m

C. 10 m

D. 8 m

Q24. Find final direction angle. If a person walks 10 m east, and then 24 m south. Direction from start?

A. South-east

B. East

C. South

D. Cannot be determined

Q25. Replace symbols BEFORE solving. If × becomes +, + becomes –, – becomes ÷, ÷ becomes ×, then solve: 36 ÷ 6 × 3 + 4

A. 14

B. 12

C. 10

D. 8

Q26. . Replace symbols BEFORE solving. If + becomes ×, × becomes –, then solve: 20 + 5 × 3= ?

A. 35

B. 25

C. 15

D. 10

Q27. . (Instruction: Replace symbols BEFORE solving. If – = ×, × = +, + = ÷, then evaluate: 18 × 2 – 3 + 6

A. 15

B. 12

C. 10

D. 9

Q28. If ÷ is considered as –, × is considered as ÷, – is considered as +, Find the answer of given expression.

40 × 4 ÷ 2 – 3

A. 17

B. 13

C. 15

D. 11

Q29. Assign places based on directional constraints. Four friends A, B, C, D live in East, West, North, South. A not East. C not North. D in West. B not South. Where is A living?

A. North

B. South

C. East

D. West

Q30. Compare heights using relational constraints. There are five persons P Q R S T:

P > R, R > S, T < Q, Q > P

Who is tallest?

A. Q

B. P

C. R

D. T

Q31. Match teacher-subject pairs. 5 people teach 5 subjects: Math, Physics, Chem, Bio, Eng.

A not Math or Chem.

B teaches Bio.

C teaches Eng.

D not Physics.

Who teaches Math?

A. A

B. C

C. E

D. D

Q32. Complete 5-item matching grid. Five boxed numbered 1 2 3 4 5:

1 ≠ red/blue

2 is green

3 left of blue

4 right of green

5 is yellow

Color of box 1?

A. White

B. Yellow

C. Green

D. Blue

Q33. Determine order of medals. Five runners A B C D E:

A beats C & D, B beats A, E beats only D, then Who is 2nd?

A. A

B. B

C. C

D. E

Q34. Identify polynomial rule, and find correct answer

8 → 80

10 → 120

12 → 168

14 → ?

A. 212

B. 220

C. 224

D. 230

Q35. Solve operation-based mapping.

(7, 5) → 84

(6, 4) → 60

(8, 3) → ?

A. 72

B. 64

C. 48

D. 96

Q36. (Instruction: Mixed addition-multiplication logic.)

(4→28), (6→66), (8→120), then 10 → ?

A. 154

B. 156

C. 165

D. 200

Q37. Identify exponential growth.

2 → 10, 3 → 30, 4 → 68, 5 → ?

A. 130

B. 120

C. 110

D. 100

Q38. (Instruction: Identify functional relationship.)

Keyboard : Typing :: Steering Wheel : ?

A. Braking

B. Turning

C. Speeding

D. Accelerating

Q39. (Instruction: Spot conceptual non-fit.)

Circle, Square, Rectangle, Cube

A. Circle

B. Square

C. Rectangle

D. Cube

Q40. (Instruction: Find logical word relationship.)

Growth : Tree :: Development : ?

A. Country

B. Human

C. Society

D. Machine

ANSWER KEY

Number	English Language	Quantitative Aptitude	Logical Reasoning
1	b	A	A
2	c	A	B
3	c	B	A
4	b	A	D
5	b	A	A
6	c	A	A
7	b	C	C
8	c	A	B
9	b	B	C
10	c	A	A
11	b	C	D
12	c	B	A
13	b	A	A
14	b	D	A
15	a	B	A
16	a	A	C
17	b	C	A
18	c	B	D
19	b	C	C
20	c	A	C
21	b	B	A
22	d	B	B
23	d	A	A
24	d	A	A
25	c	A	A
26	c	A	B
27	d	B	C
28	b	A	B
29	b	A	A
30	c	B	B
31	a	A	C
32	c	A	A
33	b	A	A
34	a	B	C
35	d	B	D
36	a	A	C
37	a	A	A
38	a	A	B
39	a	A	D
40	b	C	C