NMIMS NPAT

Sample Paper

Section: English Language

Thousands of Airbus planes had to be grounded for a software update after it was discovered that intense solar radiation could interfere with onboard flight control computers. Around 6,000 A320 planes were thought to be affected - half the European firm's global fleet - but many were able to fly again within hours after undergoing the update.

The UK's aviation regulator said there would be "some disruption and cancellations to flights" though the impact at airports appears to be limited. Airbus said it discovered the issue after an investigation into an incident in which a plane flying between the US and Mexico suddenly lost altitude in October.

The JetBlue Airways flight made an emergency landing in Florida after at least 15 people were injured. As well as the A320, the company's best-selling aircraft, the vulnerability also impacts the A318, A319 and the A321 models.

It is understood that on around 5,100 Airbus planes, the issue can be addressed using a relatively simple software update which would typically take about three hours. One airline, Wizz Air, confirmed to the BBC it had completed the update overnight on all of its affected A320 aircraft and all flights on Saturday would be operating as normal.

However, across other airlines, there are 900 aircraft which are older versions, and these will need to have onboard computers physically replaced, and will not be allowed to carry passengers again until the job has been completed. The length of time that takes will depend on the availability of replacement computers.

Airbus said it acknowledged this would lead to "operational disruption to passengers and customers" and has apologised. Aviation analyst Sally Gethin told BBC News the situation is "very much out of the ordinary", saying the disruption to passengers would depend on the "different approaches" airlines take to upgrade their software.

In the UK, disruption at airports has been limited so far. London's Gatwick Airport reported "some disruption", while Heathrow said it had not experienced any cancellations. Manchester Airport said it did not anticipate significant problems. British Airways and Air India are understood not to be heavily impacted by the issue.

But Air France appeared to be experiencing some disruption on Saturday morning with several flights in and out of Paris's Charles de Gaulle Airport delayed or cancelled. Meanwhile Easyjet said it was "expecting this to result in some disruption" but later added it had started and "already completed the software update on many aircraft" and was planning a full service on Saturday.

In the US, the software issue emerged on the same weekend as Thanksgiving - one of the busiest travel periods of the year. American Airlines said 340 of its planes were affected and that it expected "some operational delays", but added the vast majority of updates would be completed on Friday or Saturday. Delta Airlines said it believed the impact on its operations would be "limited".

In Australia, budget airline Jetstar cancelled 90 flights after confirming around a third of its fleet was impacted, with disruption expected to continue all weekend despite the majority of aircraft having already undergone the update.

Instruction: Answer the following questions (1-10), based on the above given passage.

1. Why were thousands of Airbus planes grounded?

A. Fuel leakage issues

B. Solar radiation interference with flight computers

C. Pilot strike

D. Engine malfunction

2. Approximately how many A320 planes were affected?

A. 1,000

B. 3,500

C. 6,000

D. 10,000

3. What did the UK's aviation regulator warn about?

A. Increase in ticket prices

B. Possible disruptions and cancellations

C. New pilot training rules

D. New airport security checks

4. Which incident led Airbus to investigate the issue?

A. A crash landing in Europe

B. A JetBlue flight losing altitude

C. A collision at an airport

D. A mid-air engine failure

5. How many people were injured on the JetBlue flight

A. 5

B. 10

C. 15

D. 20

6. For around 5,100 Airbus planes, how long does the software update take?

A. 30 minutes

B. 1 hour

C. 3 hours

D. 10 hours

7. What must older Airbus aircraft undergo before flying again?

A. Additional pilot training

B. Full body repaint

C. Replacement of onboard computers

D. Engine upgrade

8. Which airline completed its software updates overnight?

A. Air India

B. Wizz Air

C. Delta Airlines

D. Jetstar

9. Which airport reported "some disruption"?

A. Heathrow

B. Manchester

C. Gatwick

D. Charles de Gaulle

10. Which airline cancelled 90 flights due to the issue?

A. British Airways

B. EasyJet

C. Jetstar

D. Air France

Instruction: For questions (11-15), choose the word closest in meaning to the one in bold.

11. The issue caused significant **disruption**.

A. Clarity

B. Disturbance

C. Growth

D. Progress

12. The update was described as **relatively** simple.

A. Extremely

B. Slightly

C. Comparatively

D. Rarely

13. The company **acknowledged** the inconvenience.

A. Denied

B. Ignored

C. Recognised

D. Avoided

14. The impact at airports appears to be **limited.**

A. Restricted

B. Vast

C. Strong

D. Continuous

15. The situation is **out of the ordinary**.

A. Regular

B. Usual

C. Common

D. Unusual

Instruction: For questions (16-20), choose the word opposite in meaning to the one in bold.

16. The aircraft were **grounded**.

A. Landed

B. Hovering

C. Flying

D. Stopped

17. The update was **simple**.

A. Easy

B. Complicated

C. Smooth

D. Clear

18. Many planes resumed flights **within hours**.

A. Immediately

B. After weeks

C. After minutes

D. Soon

19. The effect on operations was **limited**.

A. Minimal

B. Controlled

C. Widespread

D. Narrow

20. The airline expected the delay to be **temporary**.

A. Short

B. Quick

C. Permanent

D. Brief

Instruction: For questions (21-25), identify the part of speech of the bold word.

21. The committee was particularly **critical** of Israel's reported use of the Unlawful Combatants law.

A. Noun

B. Verb

C. Adjective

D. Adverb

22. Palestinians are **regularly** deprived of food and water.

A. Adverb

B. Adjective

C. Preposition

D. Conjunction

23. **Many** Palestinian families say they have waited months.

A. Pronoun

B. Determiner

C. Conjunction

D. Interjection

24. It is **alleged** that thousands of Palestinians have been detained.

A. Adjective

B. Verb

C. Noun

D. Adverb

25. The committee concluded that **such** treatment amounts to war crimes.

A. Adverb

B. Determiner

C. Pronoun

D. Conjunction

Instruction: For questions (26-30), find the correct option arrange the jumbled sentences into a coherent sequence.

26. Arrange the following:

P. It is alleged that thousands of Palestinians have been detained.

Q. Both Israeli and Palestinian rights groups shared details.

R. During Israel's review before the UN committee

S. About conditions in Israeli detention centres

A. RQSP

B. RQPS

C. QPRS

D. RSPQ

27. Arrange the following:

P. Many families waited months.

Q. To even know a loved one was detained.

R. The UN termed this "enforced disappearance".

S. Under Israel's administrative detention laws

A. S P Q R

B. P S Q R

C. S Q P R

D. P Q R S

28. Arrange the following:

P. Palestinians are deprived of food and water.

Q. And also subjected to severe beatings and electrocution.

R. According to evidence cited by the committee

S. They are even denied toilet access and permanently shackled

A. R P Q S

B. P Q R S

C. R Q P S

D. P S Q R

29. Arrange the following:

P. Israel denies accusations of genocide.

Q. The committee said such treatment amounts to war crimes.

R. It concluded that evidence shows widespread torture.

S. These acts constitute genocide under international law.

A. R Q S P

B. Q R S P

C. R S Q P

D. S Q R P

30. Arrange the following:

P. Suspects can be held for long periods.

Q. Without access to a lawyer or family.

R. Under Israel's Unlawful Combatants law

S. They are not classed as prisoners of war.

A. R S P Q

B. S R P Q

C. R P Q S

D. P Q R S

Instruction: For questions (31-33), find the correct option that is one word substitution for the given sentence.

31. "A person who is held without charge for long periods"

A. Captive

B. Detainee

C. Fugitive

D. Offender

32. "A formal conclusion given by an official body after investigation"

A. Verdict

B. Statement

C. Observation

D. Review

33. "Violent treatment intended to cause suffering"

A. Discipline

B. Torture

C. Tribunal

D. Repression

Instruction: For questions (34-36), find the correct form of indirect narration of the given sentence

34. The committee said, "This treatment amounts to war crimes."

A. The committee said that the treatment amounts to war crimes.

B. The committee said that the treatment amounted to war crimes.

C. The committee said this treatment amounted to war crimes.

D. The committee said this treatment amounts to war crimes.

35. Israel said, "We reject these accusations."

A. Israel said that they rejected those accusations.

B. Israel said they reject these accusations.

C. Israel said that they reject those accusations.

D. Israel said that we rejected these accusations.

36. Families said, "We have waited months to know their whereabouts."

A. Families said they had waited months to know their whereabouts.

B. Families said they waited months to know their whereabouts.

C. Families said they have waited months to know their whereabouts.

D. Families said we had waited months to know their whereabouts.

Instruction: For questions (37-40), find correct passive voice of the given sentence

37. Israel detains thousands of Palestinians.

A. Thousands of Palestinians are detained by Israel.

B. Thousands of Palestinians were being detained by Israel.

C. Thousands of Palestinians have been detained by Israel.

D. Thousands of Palestinians were detained by Israel.

38. The committee reviewed Israel's records.

A. Israel's records were reviewed by the committee.

B. Israel's records have been reviewed by the committee.

C. Israel's records are reviewed by the committee.

D. Israel's records had been reviewed by the committee.

39. Palestinian groups gave harrowing details.

A. Harrowing details are being given by Palestinian groups.

B. Harrowing details were given by Palestinian groups.

C. Harrowing details had been given by Palestinian groups.

D. Harrowing details are given by Palestinian groups.

40. Evidence suggests widespread torture.

A. Widespread torture is suggested by evidence.

B. Widespread torture was suggested by evidence.

C. Widespread torture has been suggested by evidence.

D. Widespread torture had been suggested by evidence.

Section: Quantitative Aptitude

Q1. A tank has capacity 1200 L. Pipe A fills it in 20 min, Pipe B in 30 min, and Pipe C empties it in 60 min. All three run for 10 min, and then Pipe C is closed. How much time more is required to fill the tank?

A. 12 min

B. 14 min

C. 15 min

D. 18 min

Q2. A pipe can fill a tank in 24 h. Due to a leak at bottom, it actually fills in 32 h. If tank is full, leak alone can empty in—

A. 96 h

B. 128 h

C. 192 h

D. 256 h

Q3. If $\sin\theta + \cos\theta = \sqrt{2}/2$, find the value of $\sin3\theta + \cos3\theta$.

A. 0

B. 1/2

C. –1/2

D. √2/4

Q4. If tanA = 3/4 and A is acute, find sin(2A + 15°).

A. 4/5

B. 3/5

C. √15/8

D. Cannot be determined

Q5. A dishonest dealer sells goods at 20% profit but uses a 900 g weight instead of 1 kg. What is his actual profit percent?

A. 33.33%

B. 44.44%

C. 25%

D. 50%

Q6. A shopkeeper bought 2 items for ₹1500 each. He sold one at 30% profit and the other at x% loss. If his overall loss is 5%, find x.

A. 35%

B. 40%

C. 45%

D. 50%

Q7. A vessel contains milk and water in ratio 5:3. If 16 L of mixture is replaced with water, ratio becomes 5:7. Find initial quantity.

A. 40 L

B. 48 L

C. 56 L

D. 64 L

Q8. Two sugar solutions contain 20% and 50% sugar. How much of each must be mixed to get 40 L of 35% mixture?

A. 20 L & 20 L

B. 15 L & 25 L

C. 10 L & 30 L

D. 12 L & 28 L

Q9. In a triangle ABC, sides are 9, 10, and 17. Find the area using Heron's formula.

A. 36√2

B. 40

C. 30√3

D. 24√5

Q10. The diagonals of a rhombus are 24 cm and 32 cm. Find perimeter.

A. 40√2

B. 50√2

C. 60

D. 68

Q11. From the top of a tower, angle of depression of a car is 30°. After it moves 40 m towards the tower, angle becomes 45°. Find height of tower.

A. 40 m

B. 30√3 m

C. 20(√3 + 1) m

D. 40(√3 − 1) m

Q12. Angle of elevation of top of a cliff is 30°. When observer moves 200 m nearer, it becomes 60°. Height of cliff?

A. 200√3

B. 100√3

C. 150

D. 200

Q13. A number is increased by 40% and then decreased by 20%. What is net effect?

A. 22% increase

B. 12% increase

C. 10% decrease

D. 8% increase

Q14. 30% of A = 45% of B. If A = 240, find B.

A. 120

B. 160

C. 180

D. 200

Q15. Two numbers are in ratio 7:9. If each is increased by 15, ratio becomes 2:3. Sum of original numbers?

A. 64

B. 72

C. 80

D. 90

Q16. Ratio of A's and B's ages is 5:3. After 6 years ratio becomes 7:5. Find A's current age.

A. 20

B. 24

C. 30

D. 36

Q17. Numbers: 18, 22, x, 30, 40, 50 → median is 31. Find x.

A. 32

B. 21

C. 25

D. 28

Q18. Mode = 26, Mean = 30. Using empirical formula, find Median.

A. 28

B. 29

C. 27

D. 30

Q19. How many 5-letter words can be made using letters of "LOGICS" without repeating?

A. 720

B. 360

C. 840

D. 600

Q20. How many ways can 5 boys and 4 girls sit in a row such that no two girls sit together?

A. 5! × 4!

B. 5! × 6P4

C. 6P4 × 5!

D. 4! × 6!

Q21. A is twice as fast as B. Together they finish work in 12 days. Time taken by B alone?

A. 18

B. 24

C. 30

D. 36

Q22. A can complete work in 15 d, B in 20 d, C in 30 d. If A works everyday, B and C work alternate days starting with B, work finishes in—

A. 7 days

B. 8 days

C. 6 days

D. 10 days

Q23. In a 500 m race, A beats B by 50 m and B beats C by 40 m. By how much does A beat C?

A. 82 m

B. 90 m

C. 92 m

D. 100 m

Q24. A can run 200 m in 25 sec, B in 28 sec. How much start must A give B in a 200 m race to make it a dead heat?

A. 10 m

B. 12 m

C. 14 m

D. 20 m

Q25. A shopkeeper offers 20% discount and still gains 25%. If cost price is ₹480, find marked price.

A. ₹600

B. ₹750

C. ₹800

D. ₹720

Q26. Two successive discounts of 15% and 20% are equal to a single discount of—

A. 32%

B. 34%

C. 35%

D. 28%

Q27. Smallest 5-digit number divisible by 72?

A. 10008

B. 10044

C. 10080

D. 10116

Q28. If 23a59 is divisible by 11, find a.

A. 1

B. 3

C. 5

D. 7

Q29. A hemisphere bowl of radius 7 cm is filled with water. How many cones of radius 3.5 cm and height 6 cm can be filled?

A. 4

B. 6

C. 8

D. 10

Q30. Edge of cube is 8 cm. A sphere is inscribed inside it. Find the volume difference.

A. 512 – 256π

B. 512 – 128π

C. 512 – 64π

D. 512 – 512π

Q31. Least number to be added to 4572 to make divisible by 11?

A. 1

B. 2

C. 3

D. 5

Q32. Largest 4-digit number divisible by 36?

A. 9972

B. 9996

C. 9936

D. 9960

Q33. Ratio of ages of father and son is 7:2. After 10 years it becomes 9:4. Find father's age now.

A. 35

B. 40

C. 42

D. 45

Q34. Present ages of A and B are such that after 5 years ratio will be 4:3. Five years ago ratio was 5:2. Find A's present age.

A. 20

B. 25

C. 30

D. 35

Q35. A sum becomes 3/2 of itself in 8 years at simple interest. Rate %?

A. 6.25%

B. 8%

C. 12.5%

D. 10%

Q36. SI on a sum for 5 years at 12% is ₹1800. Find the principal.

A. 2500

B. 2800

C. 3000

D. 3500

Q37. Two dice are rolled. Probability that product is divisible by 4?

A. 1/2

B. 2/3

C. 3/5

D. 4/9

Q38. Two cards drawn from a pack without replacement. Probability that both are black?

A. 25/102

B. 13/51

C. 1/4

D. 3/17

Q39. A boat rows 45 km downstream in 3 hours and upstream in 9 hours. Find speed of boat in still water.

A. 10 km/h

B. 12.5 km/h

C. 15 km/h

D. 17.5 km/h

Q40. Speed of boat in still water is 18 km/h. Speed of current is 6 km/h. Time taken for a round trip of 48 km upstream & downstream?

A. 6 h

B. 5 h

C. 4 h

D. 8 h

Section: Logical reasoning

Q1. A sequence follows: Term(n) = (previous term × 2) − (prime number increasing).

First number= 9, Next primes used: 2, 3, 5, 7, 11, … What is the 6th term?

A. 85

B. 89

C. 97

D. 101

Q2. In a series, terms increase by:

+5 → +11 → +23 → +47 → +95 → ?

A. 180

B. 191

C. 200

D. 215

Q3. What will be next in pattern:

12, 40, 84, 144, 220, ?

A. 300

B. 312

C. 330

D. 340

Q4. Find missing term:

5, 16, 34, 60, 95, ?

A. 135

B. 140

C. 145

D. 150

Q5. Find next in the Pattern: A2, D6, H12, M20, ?

A. S30

B. S28

C. R30

D. T32

Q6. Series: Z9, W16, S25, N36, ?

A. H49

B. J49

C. K44

D. L50

Q7. Pattern shifts: (A+5), (digit −3), alternating.

If it starts with C9, Find 6th term.

A. R−3

B. R6

C. T6

D. T3

Q8. In a code, each letter is replaced by: Position × 2, then convert back to letter. Find code for CAT.

A. FEV

B. EHU

C. GIZ

D. HJW

Q9. If MEET → NGFV (pattern +1, +2, +3, +4), Then SENT → ?

A. TFQZ

B. TFOW

C. TGOY

D. UGPZ

Q10. In a reversed alphabet (A=26, Z=1), CODE will be ?

A. XLOW

B. XRMV

C. XILV

D. XVPM

Q11. If SMART is coded as TLSWU, How is CHAIR coded?

A. DICTT

B. DGBKT

C. DJCLT

D. CGBKT

Q12. A man points to a lady and says: "Her mother's husband is the brother of my uncle's father." The lady is the man's—

A. Cousin

B. Sister

C. Aunt

D. Niece

Q13. Pointing to a boy, Asha says: "He is the son of my grandfather's only daughter-in-law." The boy is Asha's—

A. Brother

B. Cousin

C. Nephew

D. Uncle

Q14. Ravi says about Mohan: "He is the husband of my wife's only sister." How is Ravi related to Mohan?

A. Brother-in-law

B. Cousin

C. Uncle

D. Father-in-law

Q15. Pointing to a woman, a man says: "Her brother's father is the brother of my mother's only son." The woman is the man's—

A. Sister

B. Cousin

C. Nephew

D. Niece

Q16. 8 people sit around a circle. P is 3rd right of Q. R is 2nd left of Q. S sits between P & R. Who is opposite Q?

A. S

B. P

C. T

D. Cannot be determined

Q17. 7 persons sit in a row. A is left of B but right of C. D is right of B. E sits at one extreme. F is left of C. Who sits exactly in the middle?

A. A

B. B

C. C

D. D

Q18. In a circular seating of 6 people: L is opposite M. N is between M & O. P is left of L. Q is right of M. Who is opposite O?

A. P

B. N

C. Q

D. L

Q19. Five sit in a row. W left of X. Y sits right of Z. Z not adjacent to W . V is between X & Y. Who is at extreme left?

A. W

B. X

C. Z

D. Y

Q20. Six persons: A, B, C, D, E, F. B between A & C. D left of A. E between C & F. D is rightmost. Who is second from left?

A. F

B. E

C. C

D. B

Q21. A walks 10 m north, 6 m west, 10 m south, 3 m east. Distance from start?

A. 3 m west

B. 3 m east

C. 4 m west

D. 4 m east

Q22. Man walks 12 m east, 5 m north, 12 m west, 10 m south. How far from start?

A. 5 m

B. 7 m

C. 10 m

D. 12 m

Q23. A person walks 20 m north, then 15 m east, then 8 m south. How far from starting point?

A. 13 m

B. 17 m

C. 15 m

D. 21 m

Q24. If × is considered as +, + is considered as −, − is considered as ÷, ÷ is considered as ×. Then solve: 24 ÷ 6 + 3 × 2

A. 8

B. 6

C. 5

D. 7

Q25. If + becomes ×, − becomes +, × becomes −. Then: 18 − 6 × 2 + 4

A. 18

B. 24

C. 26

D. 30

Q26. If ÷ becomes −, − becomes +, + becomes ×, Evaluate: 16 ÷ 4 − 2 + 1

A. 12

B. 13

C. 14

D. 15

Q27. Four friends A, B, C, D live in four cities: Delhi, Pune, Chennai, Jaipur.

A not in south, C not in north.

B lives west of D.

Chennai is south, Jaipur is west.

Where does B live?

A. Jaipur

B. Pune

C. Delhi

D. Chennai

Q28. Five persons P, Q, R, S, T with different heights:

P taller than Q but shorter than R.

S taller than R.

T shorter than Q.

Who is shortest?

A. T

B. Q

C. P

D. R

Q29. Among A, B, C, D, E each teaches one subject: Math, Physics, Bio, Eng, Chem.

A not Math, not Physics.

C teaches Eng.

D teaches Chem.

B does not teach Bio.

Who teaches Physics?

A. A

B. B

C. D

D. E

Q30. 5 boxes numbered 1–5; colors: red, blue, green, yellow, white.

1 not red/blue.

3 is green.

4 is left of blue.

5 is yellow.

What color is box 1?

A. White

B. Red

C. Blue

D. Yellow

Q31. Find the correct option for the given analogy

16 → 68

20 → 92

25 → 122

30 → ?

A. 160

B. 162

C. 156

D. 164

Q32. Find the correct option for the given analogy

(8, 6) → 102

(12, 4) → 160

(15, 5) → ?

A. 200

B. 210

C. 220

D. 225

Q33. Find the correct option for the given analogy

7 → 120

8 → 168

9 → 216

10 → ?

A. 270

B. 300

C. 330

D. 360

Q34. Find the correct option for the given analogy

4 → 32

5 → 55

6 → 90

7 → ?

A. 136

B. 132

C. 125

D. 146

Q35. Find the incorrect option in the given analogy: 15, 35, 77, 143

A. 15

B. 35

C. 77

D. 143

Q36. 5:125, 7:343, 9:729, 11:1440

A. 5:125

B. 7:343

C. 9:729

D. 11:1440

Q37. Find the odd one: Mango, Orange, Apple, Tomato

A. Mango

B. Orange

C. Apple

D. Tomato

Q38. Find the odd one : Lens : Camera :: Processor : ?

A. Laptop

B. Mobile

C. CPU

D. Keyboard

Q39. Find the odd one . Bark : Dog :: Bray : ?

A. Lion

B. Donkey

C. Bear

D. Elephant

Q40. Find the odd one . Page : Book :: Brick : ?

A. Stone

B. Wall

C. House

D. Floor

ANSWER KEY

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