Matriculation Category (BPS 05-15) — 2025 · Solved Past Paper

Body: Sindh Testing Service (STS) · **Post:** Matriculation Category (BPS 05-15) · **Year:** 2025 · **Questions:** 100 in the original paper — **100 solved and verified**, none excluded · **Price:** Free

> **How to use this paper:** each question shows the stem, the four options, and the correct answer. Click “Why each option?” under a question to see all four options explained — one question teaches four topics. General Knowledge answers are as of the 2025 sitting.

Source note: SainAzeemTech, 'BPS 05 TO 15 MATRICULATION CATEGORY PAST PAPER DATED: 22-06-2025' (Google Drive PDF, accessed 10 Nov 2026; 100 stems numbered 1-100, each with a printed key marked with a tick, all 4-option), linked from https://sainazeemtech.com/download-past-papers-in-pdf-free-syllabus-notes/ . Every printed key was verified independently (own knowledge + targeted sources for the doubtful items) under the owner's 8 Nov 2026 standard. 1 printed-key correction is filed openly with evidence (Q51: B to C — the square numbers between 63 and 143 are 64, 81, 100 and 121, summing to 366, not 266). 6 PICK-ONE (Q3, Q4, Q15, Q17, Q18, Q77), decided by the assistant under the owner's 8 Nov 2026 delegation.

Question 1 English

The similar meaning of the word EVALUATE is:

- A. Assess ✓ **Correct answer**
- B. Fail
- C. Pass
- D. Disapprove

means to assess or judge the value of something, so 'Assess' is the synonym.

B. Fail means not to succeed; it is not a synonym of evaluate.

C. Pass means to succeed or to go by; it is not a synonym of evaluate.

D. Disapprove means to have an unfavourable opinion; it is not a synonym of evaluate.

Question 2 English

The similar meaning of the word INTERPRET is:

- A. Unclear
- B. Explain ✓ **Correct answer**
- C. Discuss
- D. Riddle

A. Unclear means not easy to understand; it is not a synonym of interpret.

B. Interpret means to explain the meaning of something, so 'Explain' is the synonym.

C. Discuss means to talk about a topic; it is not a synonym of interpret.

D. A riddle is a puzzling question; it is not a synonym of interpret.

Question 3 English

The similar meaning of the word SOVEREIGN is:

- A. Main ✓ **Correct answer**
- B. Minor
- C. Insignificant
- D. Subordinate

A. Sovereign means supreme and independent; among the options 'Main' (chief, supreme) is the intended near-synonym, and the other three options are all antonyms of sovereign.

ans lesser in importance, it is the opposite of sovereign.

C. Insignificant means unimportant; it is the opposite of sovereign.

D. Subordinate means lower in rank; it is the opposite of sovereign.

Note: Note: PICK-ONE (decided by the assistant under the owner's 8 Nov 2026 delegation): strictly, the synonym of 'sovereign' is 'supreme' or 'independent', which is not among the options; 'Main' is kept as the printed key and the intended answer because the other three options are all antonyms.

Question 4 English

The opposite meaning of the word HARMONY is:

- A. Tension ✓ **Correct answer**
- B. Disunity
- C. Unity
- D. Imbalance

A. Harmony means agreement and peace; the printed key 'Tension' (strain, conflict) is kept as the intended opposite.

B. Disunity (lack of unity) is also an opposite of harmony — see the note.

C. Unity is a synonym of harmony, not its opposite.

D. Imbalance means lack of balance; it is not the direct opposite of harmony.

Note: Note: PICK-ONE (decided by the assistant under the owner's 8 Nov 2026 delegation): 'Disunity' (B) is also a defensible opposite of harmony; the printed key A is kept on the standard-bank reading (harmony versus tension), and no source settles A over B uniquely.

Question 5 English

The opposite meaning of the word ESSENTIAL is:

- B. Needful
- C. Important
- D. Unnecessary ✓ **Correct answer**

A. Crucial means decisive or critical — a synonym of essential, not its opposite.

B. Needful means necessary — a synonym of essential, not its opposite.

C. Important is a near-synonym of essential, not its opposite.

D. Essential means absolutely necessary; its opposite is 'Unnecessary'.

Question 6 English

According to the constitution, the government in Pakistan has:

- A. 3 Branches ✓ **Correct answer**
- B. 4 Branches
- C. 2 Branches
- D. 1 Branch

A. The passage states that, according to the constitution, Pakistan has three branches of government: the Legislative, the Executive and the Judiciary.

B. The passage names three branches, not four.

C. The passage names three branches, not two.

D. The passage names three branches, not one.

Question 7 English

The Branch that makes the laws is:

- A. The Legislative Branch ✓ **Correct answer**
- B. The Executive Branch

Judiciary Branch

- D. The National Branch

A. The passage states that the Legislative Branch makes the laws.

B. The passage states that the Executive Branch carries out the laws; it does not make them.

C. The passage states that the Judiciary evaluates and interprets the laws; it does not make them.

D. There is no 'National Branch' in the passage; the three branches are Legislative, Executive and Judiciary.

Question 8 English

The Branch which carries out the law is:

- A. The Legislative Branch
- B. The Executive Branch ✓ **Correct answer**
- C. The Judiciary Branch
- D. The National Branch

A. The passage states that the Legislative Branch makes the laws; it does not carry them out.

B. The passage states that the Executive carries out the laws.

C. The passage states that the Judiciary evaluates and interprets the laws; it does not carry them out.

D. There is no 'National Branch' in the passage.

Question 9 English

The Branch which evaluates and interprets law is:

Legislative Branch

- B. The Judiciary Branch ✓ **Correct answer**
- C. The Executive Branch
- D. The National Branch

A. The passage states that the Legislative Branch makes the laws; it does not evaluate them.

B. The passage states that the Judiciary evaluates and interprets the laws.

C. The passage states that the Executive carries out the laws; it does not evaluate them.

D. There is no 'National Branch' in the passage.

Question 10 English

The Legislative Branch is also called:

- A. Parliament ✓ **Correct answer**
- B. Province
- C. Supreme Court
- D. Senate

A. The passage states that the Legislative Branch, or Parliament, has two houses: the National Assembly and the Senate.

B. A province is a federating unit, not the name of the Legislative Branch.

C. The Supreme Court is the apex court, part of the Judiciary, not the Legislative Branch.

D. The Senate is one house of Parliament, not the name of the whole Legislative Branch.

Question 11 English

The synonym of the word HEAP is:

- A. Pile ✓ **Correct answer**

- C. Little
- D. Ditch

A. Heap means a pile of things, so 'Pile' is the synonym.

B. One is a number; it is not a synonym of heap.

C. Little means small; a heap is a pile, not 'little'.

D. A ditch is a trench dug in the ground; it is not a synonym of heap.

Question 12 English

The antonym of the word ABILITY is:

- A. Scope
- B. Inability ✓ **Correct answer**
- C. Confine
- D. Ignorance

A. Scope means range or extent; it is not the opposite of ability.

B. Ability means the power or skill to do something; its opposite is 'Inability'.

C. Confine means to limit or imprison; it is not the opposite of ability.

D. Ignorance means lack of knowledge; it is not the opposite of ability.

Question 13 English

The synonym of the word INVOLVED is:

- A. Concerned ✓ **Correct answer**
- B. Clear
- C. Simple
- D. Blameless

means concerned with or connected to something, so 'Concerned' is the synonym.

B. Clear means easy to understand; it is not a synonym of involved.

C. Simple means easy or plain; it is not a synonym of involved.

D. Blameless means innocent; it is not a synonym of involved.

Question 14 English

The antonym of the word BLESSING is:

- A. Curse ✓ **Correct answer**
- B. Dedication
- C. Grace
- D. Consent

A. Blessing means a favour or benefit; its opposite is a 'Curse'.

B. Dedication means commitment; it is not the opposite of blessing.

C. Grace is a near-synonym of blessing, not its opposite.

D. Consent means agreement or permission; it is not the opposite of blessing.

Question 15 English

The synonym of the word ANIMATED is:

- A. Lazy
- B. Leangle
- C. Sluggish
- D. Lovely ✓ **Correct answer**

A. Lazy means unwilling to work — an antonym of animated.

C. Sluggish means slow and inactive — an antonym of animated.

D. Animated means lively and full of life; among the options 'Lovely' (pleasant, full of charm) is the intended answer — it is the only positive word among the options.

Note: Note: PICK-ONE (decided by the assistant under the owner's 8 Nov 2026 delegation): no true synonym of 'animated' (lively) is among the options; D is kept as the printed key and the intended answer.

Question 16 English

The antonym of the word EXPENSIVE is:

- A. Costly
- B. Cheap ✓ **Correct answer**
- C. Fancy
- D. Lavish

A. Costly is a synonym of expensive, not its opposite.

B. Expensive means costing a lot of money; its opposite is 'Cheap'.

C. Fancy means elaborate or decorative; it is not the opposite of expensive.

D. Lavish means extravagant — a near-synonym of expensive, not its opposite.

Question 17 English

The synonym of the word ANCESTORS is:

- A. Friends
- B. Neighbors
- C. Parents ✓ **Correct answer**
- D. Tribe

e companions, not ancestors.

B. Neighbours live nearby; they are not ancestors.

C. Ancestors are the people from whom one is descended; among the options 'Parents' is the intended near-synonym (one's forebears).

D. A tribe is a social group, not one's ancestors.

Note: Note: PICK-ONE (decided by the assistant under the owner's 8 Nov 2026 delegation): strictly, ancestors are forefathers and grandparents, not parents; C is kept as the printed key and the intended answer because it is the only option naming one's forebears.

Question 18 English

The antonym of the word INTERRUPTED is:

- A. Allow ✓ **Correct answer**
- B. Suspend
- C. Stop
- D. Break

A. Interrupted means stopped or broken off; among the options 'Allow' (to let something go on) is the intended opposite.

B. Suspend means to stop temporarily — a synonym of interrupt, not its opposite.

C. Stop is a synonym of interrupt, not its opposite.

D. Break (to break off) is a synonym of interrupt, not its opposite.

Note: Note: PICK-ONE (decided by the assistant under the owner's 8 Nov 2026 delegation): strictly, the antonym of 'interrupted' is 'continued' or 'uninterrupted', which is not among the options; A is kept as the printed key and the intended answer.

19 English

The synonym of the word MINGLE is:

- A. Mix ✓ **Correct answer**
- B. Divide
- C. Separate
- D. Disjoin

A. Mingle means to mix together, so 'Mix' is the synonym.

B. Divide is the opposite of mingle.

C. Separate is the opposite of mingle.

D. Disjoin means to separate; it is the opposite of mingle.

Question 20 English

The antonym of the word DIVINE is:

- A. Earthly ✓ **Correct answer**
- B. Hellish
- C. Irreligious
- D. Angelic

A. Divine means heavenly or godlike; its opposite is 'Earthly'.

B. Hellish means like hell; the standard antonym pair is divine/earthly, not divine/hellish.

C. Irreligious means not religious; divine contrasts with earthly, not with irreligious.

D. Angelic is a near-synonym of divine, not its opposite.

Question 21 English

Choose the correct spell word:

- B. Communicate ✓ **Correct answer**
- C. Communiecete
- D. Communiceate

A. Misspelt: 'ete' for 'ate' at the end.

B. The correct spelling is C-O-M-M-U-N-I-C-A-T-E — 'Communicate'.

C. Misspelt: 'ie' for 'i' and 'ete' for 'ate'.

D. Misspelt: 'ice' for 'ic'.

Question 22 English

Choose the correct spell word:

- A. February ✓ **Correct answer**
- B. Feburuary
- C. Febuary
- D. Fabruary

A. The correct spelling is F-E-B-R-U-A-R-Y — 'February'.

B. Misspelt: 'uru' for 'ru'.

C. Misspelt: the first 'r' is missing.

D. Misspelt: 'Fa' for 'Fe' at the start.

Question 23 English

Choose the correct spell word:

- A. Juisy
- B. Juicy ✓ **Correct answer**
- C. Jiucy

A. Misspelt: 'sy' for 'cy'.

B. The correct spelling is J-U-I-C-Y — 'Juicy'.

C. Misspelt: 'iu' for 'ui'.

D. Misspelt: 'ue' for 'ui'.

Question 24 English

Choose the correct spell word:

- A. Disebility
- B. Dasability
- C. Disabelity
- D. Disability ✓ **Correct answer**

A. Misspelt: 'e' for 'a' in the second syllable.

B. Misspelt: 'Da' for 'Di' at the start.

C. Misspelt: 'e' for 'i' in the middle.

D. The correct spelling is D-I-S-A-B-I-L-I-T-Y — 'Disability'.

Question 25 English

Choose the correct spell word:

- A. Cuorious
- B. Curiuous
- C. Curious ✓ **Correct answer**
- D. Cureous

A. Misspelt: 'uo' for 'u'.

an extra 'u'.

C. The correct spelling is C-U-R-I-O-U-S — 'Curious'.

D. Misspelt: 'eu' for 'iu'.

Question 26 English

We made ourself tea and talked about good old days.(Find the error)

- A. ourself ✓ **Correct answer**
- B. and
- C. about
- D. days

A. The reflexive pronoun for 'we' is 'ourselves', not 'ourself' — the error is 'ourself'.

B. 'and' correctly joins the two clauses; there is no error in it.

C. 'about' is the correct preposition after 'talked'; there is no error in it.

D. 'days' is correct ('good old days'); there is no error in it.

Question 27 English

He was thirsty, so he drank many water.(Find the error)

- A. thirsty
- B. so
- C. drank
- D. many ✓ **Correct answer**

A. 'thirsty' is correct; there is no error in it.

B. 'so' correctly links cause and result; there is no error in it.

C. 'drank' is the correct past tense of drink; there is no error in it.

uncountable, so it takes 'much', not 'many' — the error is 'many'.

Question 28 English

I have studied Japanese before I went to study in Japan.(Find the error)

- A. have ✓ **Correct answer**
- B. studied
- C. to study
- D. in

A. The studying happened before going to Japan, so the past perfect is needed: 'I had studied Japanese before I went...' — the error is 'have'.

B. 'studied' is the correct past participle; there is no error in it.

C. 'to study' is correct after 'went'; there is no error in it.

D. 'in' is the correct preposition before 'Japan'; there is no error in it.

Question 29 English

The workers in this factory receive their weekly payness every Thursday.(Find the error)

- A. workers
- B. receive
- C. their
- D. payness ✓ **Correct answer**

A. 'workers' is correct; there is no error in it.

B. 'receive' agrees with the plural subject; there is no error in it.

C. 'their' is the correct possessive; there is no error in it.

D. 'Payness' is not a word — the noun is 'pay' ('weekly pay'), so the error is 'payness'.

30 English

Houses shaked like leaves when the earthquake hit the region.(Find the error)

- A. shaked ✓ **Correct answer**
- B. leaves
- C. when
- D. hit

A. The past tense of 'shake' is 'shook', not 'shaked' — the error is 'shaked'.

B. 'leaves' is correct in the simile 'like leaves'; there is no error in it.

C. 'when' correctly introduces the time clause; there is no error in it.

D. 'hit' is the correct past tense of hit; there is no error in it.

Question 31 English

They stopped outside the park _____ buy some ice cream.

- A. for
- B. to ✓ **Correct answer**
- C. of
- D. on

A. 'for buy' is not correct; purpose is expressed with the infinitive 'to buy'.

B. The infinitive of purpose is used: 'stopped ... to buy some ice cream'.

C. 'of buy' is not correct English here.

D. 'on buy' is not correct English here.

Question 32 English

The rest of the class listened carefully and gave suggestions _____ improving the plan.

- B. of
- C. for ✓ **Correct answer**
- D. at

A. 'suggestions to improving' is not correct; 'to' takes the infinitive, not the gerund.

B. 'suggestions of improving' is not the idiomatic collocation.

C. 'Suggestions for improving the plan' — 'for' takes the gerund 'improving' after 'suggestions'.

D. 'suggestions at improving' is not correct English here.

Question 33 English

Almeer and Irtiza decided _____ go to the nearby forest _____ enjoy the natural beauty.

- A. to, to ✓ **Correct answer**
- B. to, for
- C. for, to
- D. to, of

A. Both blanks take the infinitive: 'decided to go ... to enjoy the natural beauty'.

B. The second blank needs 'to enjoy' (purpose), not 'for enjoy'.

C. The first blank needs 'to go' after 'decided', not 'for go'.

D. 'to of' is not correct English here.

Question 34 English

We are going to deal _____ the challenges we are facing in learning English.

- A. on
- B. with ✓ **Correct answer**

- D. over

A. 'deal on' is not the idiom; the phrasal verb is 'deal with'.

B. The phrasal verb is 'deal with' — 'We are going to deal with the challenges'.

C. 'deal about' is not the idiom; the phrasal verb is 'deal with'.

D. 'deal over' is not the idiom; the phrasal verb is 'deal with'.

Question 35 English

We are having a social service week _____ school.

- A. on
- B. of
- C. at ✓ **Correct answer**
- D. to

A. 'week on school' is not correct English here.

B. 'week of school' does not express where the week is held.

C. The event happens 'at school' — 'We are having a social service week at school'.

D. 'week to school' is not correct English here.

Question 36 English

Identify the correct question sentence (interrogative):

- A. Does he is going to market
- B. Is he going to market ✓ **Correct answer**
- C. Do he went to market
- D. Am he will go to the market

s going" mixes two auxiliaries, it is ungrammatical.

B. 'Is he going to market?' is a correct yes/no question: auxiliary 'Is' + subject + verb. The others break subject-verb agreement or word order.

C. 'Do he went' breaks agreement ('Do' with 'he') and tense ('went' after 'Do').

D. 'Am he will go' mixes auxiliaries and breaks agreement.

Question 37 English

Select a simple sentence from the following:

- A. I stayed home; I can’t go out
- B. My friend went out because it’s raining
- C. I stayed home ✓ **Correct answer**
- D. Because it’s raining, I stayed at home

A. 'I stayed home; I can't go out' joins two clauses — a compound sentence.

B. 'My friend went out because it's raining' has a subordinate clause — a complex sentence.

C. 'I stayed home' is a single independent clause with no conjunction or subordinator — a simple sentence.

D. 'Because it's raining, I stayed at home' has a subordinate clause — a complex sentence.

Question 38 English

Select the correct subject in the following sentence: "Salma loves raw mangoes."

- A. Love
- B. Salma ✓ **Correct answer**
- C. Raw
- D. Mangoes

B. The subject is who the sentence is about: 'Salma' loves raw mangoes.

C. 'Raw' is an adjective describing the mangoes, not the subject.

D. 'Mangoes' is the object, not the subject.

Question 39 English

Select the conjunction in the following sentence: "They both like bananas, oranges and grapes."

- A. They
- B. Both
- C. And ✓ **Correct answer**
- D. Bananas

A. 'They' is a pronoun (the subject), not a conjunction.

B. 'Both' is a determiner, not a conjunction.

C. 'And' joins 'bananas, oranges and grapes' — it is the conjunction.

D. 'Bananas' is a noun, not a conjunction.

Question 40 English

Select the verb in the following sentence: "They talked about many childhood memories."

- A. Memories
- B. Childhood
- C. They
- D. Talked ✓ **Correct answer**

A. 'Memories' is a noun (the object), not the verb.

d' is an adjective here, not the verb.

C. 'They' is a pronoun (the subject), not the verb.

D. The action word in the sentence is 'talked'.

Question 41 Mathematics

If A = {2, 4, 6, 8, 10} then:

- A. 4 ∈ A ✓ **Correct answer**
- B. 4 ~A
- C. 4 = A
- D. 4 ∉ A

A. 4 is an element of A = {2, 4, 6, 8, 10}, written 4 ∈ A.

B. '4 ~ A' is not set notation for membership; ~ denotes equivalence, not belonging.

C. 4 is an element of A, not equal to the whole set A.

D. 4 ∈ A, so 4 ∉ A (4 is not in A) is false.

Question 42 Mathematics

Select the following numbers that are exactly divisible by 4:

- A. 2000 ✓ **Correct answer**
- B. 24565
- C. 33333
- D. 44445

A. 2000 ÷ 4 = 500 exactly, so 2000 is divisible by 4.

B. 24565 ÷ 4 = 6141.25 — not exact, so 24565 is not divisible by 4.

C. 33333 ÷ 4 = 8333.25 — not exact, so 33333 is not divisible by 4.

= 11111.25 — not exact, so 44445 is not divisible by 4.

Question 43 Mathematics

If √x is an integer, the following statement must be true:

- A. x is an even number
- B. x is always a negative number
- C. x is a perfect square ✓ **Correct answer**
- D. x is a prime number

A. x need not be even — e.g. x = 9 gives √x = 3, and 9 is odd.

B. x cannot be negative, since √x must be a real integer.

C. If √x is an integer, x must be a perfect square (e.g. x = 16 gives √x = 4).

D. x need not be prime — e.g. x = 16 gives √x = 4, and 16 is not prime.

Question 44 Mathematics

A rational number can always be written as:

- A. A fraction of two integers ✓ **Correct answer**
- B. A whole number only
- C. A decimal that never ends
- D. A decimal that never repeats

A. A rational number is by definition a number that can be written as a fraction p/q of two integers (q ≠ 0).

B. A rational number need not be a whole number — e.g. 1/2 is rational but not whole.

C. A rational number's decimal either terminates or repeats; it never runs on without repeating.

D. A rational number's decimal either terminates or repeats; a non-repeating, non-

Question 45 Mathematics

Z = (0, ±1, ±2, ±3, ±4.....) is:

- A. Set of whole numbers
- B. Set of composite numbers
- C. Set of integers ✓ **Correct answer**
- D. Set of rational numbers

A. The whole numbers are 0, 1, 2, 3, ... — they have no negatives.

B. Composite numbers are 4, 6, 8, 9, ... — this set includes negatives, 0 and 1, so it is not the composites.

C. Z = {0, ±1, ±2, ±3, ...} is the standard notation for the set of integers.

D. The rational numbers include fractions such as 1/2, which are not in this set.

Question 46 Mathematics

15 × (10 × 6) = (∎ × 10), ∎ = :

- A. 15
- B. 60
- C. 80
- D. 90 ✓ **Correct answer**

A. 15 × 10 = 150, not 900.

B. 60 × 10 = 600, not 900.

C. 80 × 10 = 800, not 900.

D. 15 × (10 × 6) = 15 × 60 = 900, and (∎ × 10) = 900 gives ∎ = 90.

47 Mathematics

If C = {a, b, e, f} and D = {2, 4, 8, 10} then C∩D is:

- A. { } ✓ **Correct answer**
- B. {a, b, c, d, e, f}
- C. {a, b, c, d, e, f, 2, 4, 8, 10}
- D. {2, 4, 8, 10}

A. C and D share no element (letters versus numbers), so C ∩ D is the empty set { }.

B. {a, b, c, d, e, f} is not the intersection — c and d are in neither set, and this omits the numbers.

C. That is the union C ∪ D, not the intersection.

D. {2, 4, 8, 10} is the set D itself, not the intersection.

Question 48 Mathematics

(9/4) × (- 4/9) × 2/3 =

- A. 2/3
- B. 72/27
- C. 1
- D. -2/3 ✓ **Correct answer**

A. 2/3 has the wrong sign — the product is negative.

B. 72/27 = 8/3, not the product.

C. 1 is the product of (9/4) × (4/9) without the minus sign and without the final 2/3 factor.

D. (9/4) × (-4/9) = -1, and -1 × 2/3 = -2/3.

49 Mathematics

If a < b and b < c then:

- A. b < a
- B. c < a
- C. a < c ✓ **Correct answer**
- D. b = c

A. b < a contradicts a < b.

B. c < a contradicts a < c.

C. 'Less than' is transitive: a < b and b < c give a < c.

D. b = c contradicts b < c.

Question 50 Mathematics

For two sets P and Q , if O(P) = O(Q) then:

- A. P ⊆ Q
- B. P = Q
- C. P ∼ Q ✓ **Correct answer**
- D. P ⊂ Q

A. Equal cardinality does not imply P ⊆ Q — the elements may differ.

B. Equal cardinality does not imply P = Q — the elements may differ.

C. O(P) = O(Q) means P and Q have the same number of elements, i.e. they are equivalent sets, P ∼ Q.

D. P ⊂ Q would require every element of P to be in Q and P ≠ Q; equal size alone does not give that.

51 Mathematics

The sum of square numbers between 63 and 143 is:

- A. 245
- B. 266
- C. 366 ✓ **Correct answer**
- D. 302

A. 245 is not the sum: 64 + 81 + 100 = 245 omits 121.

B. 266 is the printed key and is wrong: the four squares sum to 366, not 266.

C. The square numbers strictly between 63 and 143 are 64 (8^2), 81 (9^2), 100 (10^2) and 121 (11^2); 64 + 81 + 100 + 121 = 366.

D. 302 is not the sum: 64 + 81 + 100 + 121 = 366.

Note: Note: PRINTED-KEY CORRECTION — B to C (decided by the assistant under the owner's 8 Nov 2026 delegation): the printed key B (266) is wrong; the four square numbers between 63 and 143 sum to 366 (64 + 81 + 100 + 121). 144 (12^2) is above 143 and is excluded.

Question 52 Mathematics

Two angles are said to be non-equal when they are:

- A. Vertically opposite
- B. Alternate
- C. Corresponding
- D. Supplementary ✓ **Correct answer**

A. Vertically opposite angles are always equal.

B. Alternate angles (of parallel lines) are always equal.

C. Corresponding angles (of parallel lines) are always equal.

opposite, alternate and corresponding angles are always equal; supplementary angles add to 180° but are not necessarily equal, so they are the non-equal pair.

Question 53 Mathematics

The median of the observations 3, 5, 4, 3, 8, 6, 3, 4 is:

- A. 3
- B. 4 ✓ **Correct answer**
- C. 5
- D. 6

A. 3 is the mode (most frequent), not the median.

B. Sorted: 3, 3, 3, 4, 4, 5, 6, 8. With 8 observations the median is the mean of the 4th and 5th values: (4 + 4) / 2 = 4.

C. 5 is the 6th value in the sorted list, not the median.

D. 6 is the 7th value in the sorted list, not the median.

Question 54 Mathematics

In coordinate geometry, rise over run denotes:

- A. y_2+y_1 / x_2+x_1
- B. y_2-x_2 / y_1-x_1
- C. y_2+x_2 / y_1+x_1
- D. y_2-y_1 / x_2-x_1 ✓ **Correct answer**

A. $(y_2 + y_1) / (x_2 + x_1)$ adds the coordinates instead of subtracting them.

B. $(y_2 - x_2) / (y_1 - x_1)$ mixes x and y coordinates; it is not the slope.

C. $(y_2 + x_2) / (y_1 + x_1)$ mixes x and y coordinates; it is not the slope.

se over run = change in y over change in x = $(y_2 - y_1) / (x_2 - x_1)$.

Question 55 Mathematics

Two triangles having the same corresponding angles but different side lengths are said to be:

- A. Congruent
- B. Supplementary
- C. Similar ✓ **Correct answer**
- D. Alternate

A. Congruent triangles have the same angles AND the same side lengths.

B. Supplementary describes angles adding to 180°, not triangles.

C. Triangles with the same corresponding angles but different side lengths are similar (same shape, different size).

D. Alternate describes angle positions, not triangles.

Question 56 Mathematics

Find x, when x:72::7:18

- A. 4
- B. 7
- C. 28 ✓ **Correct answer**
- D. 36

A. 4 gives 4/72 = 1/18, not 7/18.

B. 7 gives 7/72, not 7/18.

C. x / 72 = 7 / 18, so x = 72 × 7 / 18 = 28.

D. 36 gives 36/72 = 1/2, not 7/18.

57 Mathematics

Sana bought a dress at a discount of 30% for Rs. 6300. The marked price of the dress would be:

- A. Rs. 1890
- B. Rs. 4410
- C. Rs. 9000 ✓ **Correct answer**
- D. Rs. 6300

A. Rs. 1,890 is 30% of Rs. 6,300 — the discount amount, not the marked price.

B. Rs. 4,410 is 70% of Rs. 6,300, not the marked price.

C. Rs. 6,300 is 70% of the marked price (100% − 30% discount), so the marked price is 6,300 / 0.70 = Rs. 9,000.

D. Rs. 6,300 is the discounted (sale) price, not the marked price.

Note: Note: Reproduction note: option C is filed as 'Rs. 9000' — the reproduction carries page-footer text ('Page 13 of 24') after the option, which is not part of the option.

Question 58 Mathematics

Ahmed and Hassan have profit share in the ratio of 3:5. If the profit is 32,000, the share of Hassan would be:

- A. 16,000
- B. 20,000 ✓ **Correct answer**
- C. 12,000
- D. 19,000

A. Rs. 16,000 is half the profit, not the 5/8 share.

B. Hassan's share is 5 / (3 + 5) of Rs. 32,000 = 5/8 × 32,000 = Rs. 20,000.

C. Rs. 12,000 is Ahmed's 3/8 share, not Hassan's.

is not 5/8 of Rs. 32,000.

Question 59 Mathematics

Ahmed invests Rs. 20,000 at the rate of 5% compounding yearly. After one year, he will have:

- A. Rs. 21,0125
- B. Rs. 20,800
- C. Rs. 21,200
- D. Rs. 21,000 ✓ **Correct answer**

A. Rs. 21,0125 is not 20,000 × 1.05.

B. Rs. 20,800 is 20,000 × 1.04 — 4%, not 5%.

C. Rs. 21,200 is 20,000 × 1.06 — 6%, not 5%.

D. After one year at 5% compound interest: 20,000 × 1.05 = Rs. 21,000.

Question 60 Mathematics

If the L.C.M of two numbers is 72, H.C.F is three, and the first number is 18, the second number will be:

- A. 9
- B. 12 ✓ **Correct answer**
- C. 15
- D. 24

A. 9 gives L.C.M × H.C.F = 18 × 9 = 162, not 72 × 3 = 216.

B. L.C.M × H.C.F = product of the numbers, so the second number is (72 × 3) / 18 = 12.

C. 15 gives 18 × 15 = 270, not 216.

D. 24 gives 18 × 24 = 432, not 216.

61 Pakistan Studies

Malam Jabba is a popular tourist destination in Pakistan known for its:

- A. Historical Sites
- B. Sandy Beaches
- C. Ski Resorts ✓ **Correct answer**
- D. Desert Landscapes

A. Malam Jabba is known for skiing, not for historical sites.

B. Malam Jabba is a mountain resort in Swat; it has no sandy beaches.

C. Malam Jabba in Swat is Pakistan's best-known ski resort.

D. Malam Jabba is a snowy mountain resort, not a desert landscape.

Question 62 Pakistan Studies

The Mangla Dam in Pakistan is located on the river:

- A. Indus River
- B. Jhelum River ✓ **Correct answer**
- C. Chenab River
- D. Ravi River

A. The Indus carries the Tarbela Dam, not Mangla.

B. The Mangla Dam is built on the Jhelum River in Mirpur, Azad Kashmir.

C. The Chenab carries the Marala and Khanki headworks, not Mangla.

D. The Ravi carries the Balloki headworks, not Mangla.

Question 63 Pakistan Studies

The current Chief Minister of Sindh is:

- ad Ali Shah ✓ Correct answer
- B. Syed Sardar Ali Shah
- C. Qaim Ali Shah
- D. Bilawal Bhutto

A. Syed Murad Ali Shah is the Chief Minister of Sindh (in office since 2024, re-elected after the February 2024 election).

B. Syed Sardar Ali Shah is a Sindh minister (Education), not the Chief Minister.

C. Qaim Ali Shah was an earlier Chief Minister of Sindh, not the current one.

D. Bilawal Bhutto Zardari is the PPP chairman, not the Chief Minister of Sindh.

Question 64 Pakistan Studies

The Sindh Festival is celebrated to promote:

- A. Agriculture
- B. Industry
- C. Culture and Heritage ✓ **Correct answer**
- D. Sports

A. The festival is cultural, not an agricultural fair.

B. The festival is cultural, not an industrial expo.

C. The Sindh Festival celebrates the province's culture and heritage — its music, dance, crafts and history.

D. The festival is cultural, not a sports event.

Question 65 Pakistan Studies

The role of the National Assembly in Pakistan is:

- A. To enforce laws

make laws ✓ **Correct answer**

- C. To interpret laws
- D. To implement policies

A. Enforcing laws is the Executive's job, not the Assembly's.

B. The National Assembly is the legislature — its role is to make laws.

C. Interpreting laws is the Judiciary's job, not the Assembly's.

D. Implementing policies is the Executive's job, not the Assembly's.

Question 66 Pakistan Studies

The role of the Election Commission of Pakistan (ECP) is:

- A. To oversee military operations
- B. To manage foreign relations
- C. To ensure free and fair elections ✓ **Correct answer**
- D. To control the media

A. Overseeing military operations is not the ECP's role.

B. Managing foreign relations is the Foreign Office's role, not the ECP's.

C. The Election Commission of Pakistan conducts and supervises elections to ensure they are free and fair.

D. Controlling the media is not the ECP's role.

Question 67 Pakistan Studies

The purpose of the National Accountability Bureau (NAB) in Pakistan is:

- A. To combat corruption ✓ **Correct answer**
- B. To manage the economy
- C. To promote tourism

oversee education reforms

A. The National Accountability Bureau (NAB) is Pakistan's anti-corruption body — its purpose is to combat corruption.

B. Managing the economy is the Finance Ministry's role, not NAB's.

C. Promoting tourism is not NAB's role.

D. Overseeing education reforms is not NAB's role.

Question 68 Pakistan Studies

Pakistan seeks financial assistance from the IMF in 2024 because:

- A. To fund space exploration
- B. To build new cities
- C. To address its balance of payments crisis ✓ **Correct answer**
- D. To increase military spending

A. The IMF programme was not for space exploration.

B. The IMF programme was not to build new cities.

C. In 2024 Pakistan sought IMF support to address its balance-of-payments crisis — a shortage of foreign exchange to pay for imports and debt.

D. The IMF programme was not to increase military spending.

Question 69 General Knowledge

The first President of the United States was:

- A. Abraham Lincoln
- B. John F. Kennedy
- C. George Washington ✓ **Correct answer**
- D. Thomas Jefferson

Lincoln was the 16th President, not the first.

B. John F. Kennedy was the 35th President, not the first.

C. George Washington was the first President of the United States (1789–1797).

D. Thomas Jefferson was the 3rd President, not the first.

Question 70 General Knowledge

America was discovered in 1492 by:

- A. Ferdinand Magellan
- B. Christopher Columbus ✓ **Correct answer**
- C. Marco Polo
- D. Vasco da Gama

A. Ferdinand Magellan led the first circumnavigation (1519–1522); he did not discover America in 1492.

B. Christopher Columbus reached the Americas in 1492.

C. Marco Polo travelled to China in the 13th century; he did not discover America.

D. Vasco da Gama reached India by sea in 1498; he did not discover America.

Question 71 General Knowledge

The pyramids were built by:

- A. Greek
- B. Roman
- C. Egyptian ✓ **Correct answer**
- D. Mesopotamian

A. The Greeks built temples such as the Parthenon, not the pyramids.

ns built roads, aqueducts and the Colosseum, not the pyramids.

C. The pyramids of Giza were built by the ancient Egyptians.

D. The Mesopotamians built ziggurats, not the pyramids.

Question 72 General Knowledge

The country that won the most FIFA World Cup titles is:

- A. Germany
- B. Argentina
- C. Italy
- D. Brazil ✓ **Correct answer**

A. Germany has won four World Cups, fewer than Brazil's five.

B. Argentina has won three World Cups, fewer than Brazil's five.

C. Italy has won four World Cups, fewer than Brazil's five.

D. Brazil has won the FIFA World Cup five times (1958, 1962, 1970, 1994, 2002) — more than any other country.

Question 73 Everyday Science

The greenhouse effect influences global temperatures because:

- A. It makes the Earth colder
- B. It helps to block sunlight
- C. It causes more rainfall
- D. It traps heat and warms the Earth ✓ **Correct answer**

A. The greenhouse effect warms the Earth; it does not make it colder.

B. Greenhouse gases trap outgoing heat; they do not block sunlight.

fall is not what defines the greenhouse effect.

D. Greenhouse gases trap heat in the atmosphere, warming the Earth — that is the greenhouse effect.

Question 74 Biology

The primary function of blood in the human body is:

- A. To store energy
- B. To transport oxygen and nutrients ✓ **Correct answer**
- C. To create Muscles
- D. To filter waste

A. Energy is stored as fat and glycogen, not in the blood.

B. Blood's primary function is to transport oxygen and nutrients to the body's cells (and carry away waste).

C. Muscles are created from food nutrients, not by the blood.

D. Filtering waste is mainly the kidneys' job, not the blood's primary function.

Question 75 Physics

The plane stays in the air:

- A. By using air downward, creating lift ✓ **Correct answer**
- B. By reducing gravity
- C. By using very fast engines
- D. By making itself lighter

A. A plane's wings deflect air downward; the reaction to that downward push is the upward lift that keeps the plane in the air.

B. A plane cannot reduce gravity.

…es provide thrust, not the lift that holds the plane up.

D. A plane does not make itself lighter in flight.

Question 76 Biology

Malleus, Incus, and Stapes are part of:

- A. Outer ear
- B. Middle ear ✓ **Correct answer**
- C. Inner ear
- D. Inner eye

A. The outer ear is the pinna and ear canal; the ossicles are not there.

B. The malleus, incus and stapes (hammer, anvil, stirrup) are the three ossicles of the middle ear.

C. The inner ear holds the cochlea and semicircular canals, not the ossicles.

D. The ossicles are in the ear, not the eye.

Question 77 Biology

The correct passage way for sound vibrations through the ear is:

- A. Pinna → Ear → Ear bones → Canal → Ear drum → Cochlea → Brain
- B. Pinna → Ear → Ear drum → Canal → Ear bones → Cochlea → Brain ✓ **Correct answer**
- C. Pinna → Ear → Ear bones → Cochlea → Ear drum → Canal → Brain
- D. Ear → Pinna → Ear bones → Canal → Ear drum → Cochlea → Brain

A. This puts the ear bones before the canal and the eardrum — two steps out of order.

B. Sound travels: pinna → ear canal → eardrum → ear bones (ossicles) → cochlea → brain. Among the options, B is the closest — it has only the canal and eardrum transposed.

:he cochlea before the eardrum and the canal — out of order.

D. This starts with 'Ear' before the pinna and puts the ear bones before the canal — out of order.

Note: Note: PICK-ONE (decided by the assistant under the owner's 8 Nov 2026 delegation): strictly, the ear canal comes before the eardrum, so no option gives the exact order; B is kept as the printed key because it is the closest of the four (only that one transposition), while A puts the ear bones before the canal and the eardrum, C puts the cochlea before the eardrum, and D starts at the wrong end.

Question 78 Biology

The vessels that carry blood away from the heart are:

- A. Veins
- B. Arteries ✓ **Correct answer**
- C. Capillaries
- D. Lymph vessels

A. Veins carry blood towards the heart, not away from it.

B. Arteries carry blood away from the heart to the body.

C. Capillaries are the fine vessels where exchange happens, not the vessels leaving the heart.

D. Lymph vessels carry lymph, not blood, and not away from the heart.

Question 79 Biology

The plants need a transport system to:

- A. Produce flowers
- B. Move water and minerals to different parts of the body ✓ **Correct answer**
- C. Grow taller

A. Producing flowers is reproduction, not the job of the transport system.

B. Plants need a transport system (xylem and phloem) to move water and minerals to all parts of the plant.

C. Growing taller is growth, not the purpose of the transport system.

D. Energy is stored as starch, not moved by the transport system.

Question 80 Biology

The scientist who is known as the father of genetics is:

- A. Gregor Luis
- B. Gregor Mendel ✓ **Correct answer**
- C. Charles Darwin
- D. John Bateson

A. 'Gregor Luis' is a misspelt distractor; the name is Gregor Mendel.

B. Gregor Mendel's pea-plant experiments founded genetics, so he is the father of genetics.

C. Charles Darwin is the father of the theory of evolution, not of genetics.

D. John Bateson is known for work on genetics, but Mendel founded the field.

Question 81 Biology

Allele A and B control a trait in which the allele A masks the expression of allele B. In such case, allele A is called:

- A. Recessive allele
- B. Co-dominant allele
- C. Dominant allele ✓ **Correct answer**

terfering allele

A. The masked allele (B) is the recessive allele, not A.

B. Co-dominant alleles are both expressed; here A masks B, so they are not co-dominant.

C. An allele that masks the expression of another allele is the dominant allele.

D. There is no 'interfering allele' in this context.

Question 82 Physics

Neutron is:

- A. Positively charged
- B. Neutral ✓ **Correct answer**
- C. Negatively charged
- D. Partially positive

A. The positively charged particle is the proton, not the neutron.

B. A neutron carries no electric charge — it is neutral.

C. The negatively charged particle is the electron, not the neutron.

D. A neutron is fully neutral, not partially positive.

Question 83 Chemistry

The mass of 1 mole of water (H_2O) is equal to:

- A. 16g
- B. 18g ✓ **Correct answer**
- C. 20g
- D. 22g

A. 16 g is the mass of one oxygen atom, not of a water molecule.

H_2O: 2 × 1 (hydrogen) + 16 (oxygen) = 18, so 1 mole of water is 18 g.

C. 20 g would need an extra 2 g — water is 18 g per mole.

D. 22 g is not the molar mass of water.

Question 84 Chemistry

All of the following are organic compounds except:

- A. Ethane
- B. Chloroform
- C. Alcohol
- D. Water ✓ **Correct answer**

A. Ethane (C_2H_6) is an organic compound.

B. Chloroform ($CHCl_3$) is an organic compound.

C. Alcohol (e.g. C_2H_5OH) is an organic compound.

D. Ethane, chloroform and alcohol all contain carbon; water (H_2O) has no carbon, so it is the inorganic exception.

Question 85 Chemistry

The chemical equilibrium is best explained as follows:

- A. The reaction in which the forward reaction stops completely
- B. The reaction in which the reverse reaction is faster than the forward reaction
- C. The reaction in which the rate of reverse reaction is equal to the forward reaction ✓ **Correct answer**
- D. The reaction in which the concentration of reactants and products becomes the same

A. At equilibrium neither reaction stops; both continue at equal rates.

...rium the reverse rate equals the forward rate — it is not faster.

C. At chemical equilibrium the forward and reverse reactions continue at equal rates, so concentrations stay constant.

D. At equilibrium the concentrations stay constant, but they are not necessarily equal to each other.

Question 86 Islamiat

The literal meaning of the Quran is:

- A. To write
- B. To listen
- C. To dictate
- D. To read ✓ **Correct answer**

A. 'To write' is kataba, not the root of Quran.

B. 'To listen' is not the literal meaning of Quran.

C. 'To dictate' is not the literal meaning of Quran.

D. 'Quran' comes from the Arabic root q-r-a, 'to read' or 'to recite' — its literal meaning is 'to read'.

Question 87 Islamiat

Surah Al-Qadr in the Quran is on the number:

- A. 97 ✓ **Correct answer**
- B. 92
- C. 93
- D. 91

A. Surah Al-Qadr is the 97th surah of the Holy Quran.

s Al-Lail, not Al-Qadr.

C. Surah 93 is Ad-Duhaa, not Al-Qadr.

D. Surah 91 is Ash-Shams, not Al-Qadr.

Question 88 Geography

The marble that is used to build houses is mainly found from rocks called:

- A. Metamorphic rock ✓ **Correct answer**
- B. Sedimentary rock
- C. Igneous rock
- D. Intrusive rock

A. Marble is a metamorphic rock, formed when limestone is changed by heat and pressure.

B. Sedimentary rocks (e.g. sandstone) are formed by deposition, not the source of marble.

C. Igneous rocks (e.g. granite) form from cooled magma; marble is metamorphic.

D. 'Intrusive rock' is a kind of igneous rock, not the source of marble.

Question 89 Geography

Victoria Waterfall is the largest waterfall in:

- A. Asia
- B. Europe
- C. Africa ✓ **Correct answer**
- D. North America

A. Victoria Falls is in Africa, not Asia.

B. Victoria Falls is in Africa, not Europe.

lls, on the Zambezi between Zambia and Zimbabwe, is the largest waterfall in Africa (the largest by combined width and height in the world).

D. Victoria Falls is in Africa, not North America.

Question 90 Geography

Formed over millions of years due to the collision of the Indian and Eurasian tectonic plates, the best example of Fold Mountains in Asia is the:

- A. Alps Mountains
- B. Andes Mountains
- C. Himalayas Mountains ✓ **Correct answer**
- D. Ural Mountains

A. The Alps are fold mountains of Europe, not Asia.

B. The Andes are fold mountains of South America, not Asia.

C. The Himalayas formed over millions of years from the collision of the Indian and Eurasian plates — the classic fold mountains of Asia.

D. The Urals are old block mountains in Russia, not the fold mountains formed by the Indian–Eurasian collision.

Question 91 Computer

Which of the following is used for image editing?

- A. Paint ✓ **Correct answer**
- B. Calculator
- C. Notepad
- D. Antivirus

A. Paint (MS Paint) is a basic image-editing program.

performs arithmetic, not image editing.

C. Notepad edits plain text, not images.

D. Antivirus protects against malware; it does not edit images.

Question 92 Computer

The very first step of a systematic process of problem-solving is:

- A. Problem Analysis
- B. Problem Identification ✓ **Correct answer**
- C. Planning Solution
- D. Test Solution

A. Problem analysis comes after the problem has been identified.

B. Problem-solving starts with identifying the problem — you must know what the problem is before analysing or solving it.

C. Planning a solution comes after identification and analysis.

D. Testing a solution is the last step, not the first.

Question 93 Computer

Feature in Excel which automatically adds numbers in the selected cells is:

- A. Autosum ✓ **Correct answer**
- B. Autoadd
- C. Quickadd
- D. Quicksum

A. AutoSum in Excel automatically adds the numbers in the selected cells.

B. There is no Excel feature called 'Autoadd'.

D. There is no Excel feature called 'Quicksum'.

Question 94 Computer

When an algorithm breaks a problem into sub-problems, solves a single sub- problem and merges the solutions:

- A. Recursive Algorithm
- B. Brute Force Algorithm
- C. Searching Algorithm
- D. Divide and Conquer Algorithm ✓ **Correct answer**

A. A recursive algorithm calls itself; dividing and merging is the divide-and-conquer pattern.

B. Brute force tries every possibility; it does not divide and merge.

C. A searching algorithm finds an item; it does not divide a problem and merge solutions.

D. Breaking a problem into sub-problems, solving them and merging the results is the divide-and-conquer strategy.

Question 95 Computer

In Microsoft Access, it lets you enter and display data in customized format:

- A. Table
- B. Form ✓ **Correct answer**
- C. Query
- D. Report

A. A Table stores data in rows and columns; it is not the customised data-entry view.

B. In Microsoft Access, a Form lets you enter and display data in a customised format.

retrieves and filters data, it is not the data-entry form.

D. A Report presents data for printing; it is not used to enter data.

Question 96 Computer

Software used for editing and recording digital audio is called:

- A. Audacity ✓ **Correct answer**
- B. PowerPoint
- C. Word
- D. Visual Studio

A. Audacity is free software for recording and editing digital audio.

B. PowerPoint makes presentations, not audio editing.

C. Word is a word processor, not audio-editing software.

D. Visual Studio is a programming environment, not audio-editing software.

Question 97 Computer

The clock speed of a computer is measured in:

- A. Gigahertz ✓ **Correct answer**
- B. Baud
- C. BPS
- D. MIPS

A. Clock speed is measured in gigahertz (GHz) — billions of cycles per second.

B. Baud measures signal changes per second in data transmission, not clock speed.

C. BPS (bits per second) measures data transfer rate, not clock speed.

D. MIPS measures processor instruction speed, not clock speed.

98 Computer

A hacker wants to gather information using false e-mails and websites, he/she probably uses:

- A. Hacking
- B. Trojan Horse
- C. Phishing ✓ **Correct answer**
- D. Clickjacking

A. 'Hacking' is general unauthorised access, not specifically false e-mails and websites.

B. A Trojan Horse is malware hidden in a legitimate-looking program, not false e-mails and websites.

C. Tricking people with false e-mails and websites to steal information is phishing.

D. Clickjacking tricks users into clicking something different from what they see; it is not false e-mails and websites.

Question 99 Computer

Array is an example of:

- A. Linear Data Structure ✓ **Correct answer**
- B. Compound Data Structure
- C. Single Data Structure
- D. Custom Data Structure

A. An array stores elements in contiguous memory with index access — a linear data structure.

B. An array is linear, not a compound data structure.

C. 'Single data structure' is not the standard classification; an array is linear.

D. 'Custom data structure' is not the standard classification; an array is linear.

100 Computer

Functions defined by the programmer are known as:

- A. Pre-defined
- B. User-defined ✓ **Correct answer**
- C. Function
- D. Subtraction

A. Pre-defined functions are built into the language, not written by the programmer.

B. Functions written by the programmer are user-defined functions.

C. 'Function' alone does not say who defined it; the programmer-defined kind is user-defined.

D. Subtraction is an arithmetic operation, not a kind of function.

This paper remains the paper of the Sindh Testing Service. Ranjha Solutions branding is on this solved presentation only — the paper is not owned by Ranjha Solutions. STS publishes no past papers officially.

Past papers are **free** — no charge is taken from any student for papers. General Knowledge answers are as of the 2025 sitting.

Source: https://drive.google.com/file/d/1eNbcJscNoJpcVAz6FLbAEV82nEatywSR/view?usp=sharing (accessed 8 Nov 2026). See the source note on this page about the fold-in corrections.