

ASSERTION REASON QUESTIONS

Q1.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{a^n B^n \mid n \geq 1\}$ is a context free language.

Reason: The language satisfies the pumping lemma for context-free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Answer(B)

Q2.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{a^n b^n \mid n \geq 100000\}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for regular sets.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Answer (B)

Q3.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The regular expression $(a^*b^*(c+dav)^*)ace^*$ denotes a regular set.

Reason: By Kleene's theorem every finite automata accepts a set that can be denoted by a regular expression.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Answer:(B)

Q4.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The regular expression $(a^*b^*(c+dav)^*)ace^*$ denotes a regular set.

Reason: By Kleene's theorem every finite automata accepts a set that can be denoted by a regular expression and every regular expression can be converted to an equivalent finite automata.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Answer:(A)

Q5.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The regular expressions $0^*(10^*)^*$ and $(1^*0)1^*$ are equal.

Reason: Both the regular expressions are equivalent to $(0+1)^*$.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Answer:(A)

Q6.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The regular expressions r^*+s^* and $(r+s)^*$ are not equivalent.

Reason: rs is not contained in the former but contained in the latter.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Answer:(A)

Q7.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{a^m B^n \mid m > n\}$ is a context free language.

Reason: The language satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Answer(B)

Q8.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{a^m B^n \mid m \geq n, m, n > 1987690\}$ is a context free language.

Reason: The language satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Answer(B)

Q9.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{a^m B^n \mid m \text{ not equal to } n\}$ is a context free language.

Reason: The language satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Answer(B)

Q10.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{a^n B^n c^n \mid n \geq 1\}$ is a context free language.

Reason: The language satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Answer(C)

Q11.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{a^n\}$ is a context free language.

Reason: The language satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Answer(C)

Q12.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language of powers of two in base 2 is a context free language.

Reason: The language satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Answer(B)

Q13.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language of primes in binary is a context free language.

Reason: The language satisfies the pumping lemma for context-free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Answer(C)

Q14.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^2 m \mid m \geq 1098\}$ is a context-free language.

Reason: The language L is infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Answer(B)

Q15.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^{100m} \mid m \geq 0\}$ is a context free language.

Reason: The language is not infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Answer(D)

Q16.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(a^n)^n \mid n \geq 1098765\}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Answer(D)

Q17.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is a context free language.

Reason: The language satisfies the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Answer(B)

Q18.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for context free lanaguages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Answer(D)

Q19.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is a context free language.

Reason: The language does satisfies the pumping lemma for context-free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Answer(B)

Q20.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is a context free language.

Reason: There exists a pda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Answer(A)

Q21.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is a context free language.

Reason: L can be accepted by a Turing Machine.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q22.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is a context free language.

Reason: A finite automata accepting L has an infinite number of states.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q23.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is a context free language.

Reason: No regular grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q24.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is a context free language.

Reason: There exists a cfg generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q25.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^{\wedge n} \mid n \geq 1098765\}$ is a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q26.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^{\wedge n} \mid n \geq 1098765\}$ is a context free language.

Reason: There exists a dpda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q27.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^2 m \mid m \geq 1098\}$ is a context-sensitive language.

Reason: The language L is infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q28.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^{100m} \mid m \geq 0\}$ is a regular set language.

Reason: The language is not infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q29.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge^n)^\wedge n \mid n \geq 1098765\}$ is a recursive set.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

D. [a] is true but [r] is false

Q30.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is a regular set that is not finite.

Reason: The language satisfies the pumping lemma for regular sets..

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q31.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is not a context free language.

Reason: The language does not satisfy the pumping lemma for context free lanaguages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q32.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is not a context free language but a context-sensitive language.

Reason: The language does satisfies the pumping lemma for context-free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q33.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is a context sensitive language that is not regular.

Reason: There exists a pda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q34.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge^n)^n \mid n \geq 1098765\}$ is a context sensitive language.

Reason: L can be accepted by a Turing Machine.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q35.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \{(\wedge^n)^n \mid n \geq 1098765\}$ is a r.e. set that is also context free language.

Reason: A finite automata accepting L has an infinite number of states.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q36.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \{(\wedge^n)^n \mid n \geq 1098765\}$ is a recursive set that is not context free language.

Reason: No regular grammar can generate L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q37.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is a deterministic context free language that is not regular or finite.

Reason: There exists a cfg generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q38.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge n)^n \mid n \geq 1098765\}$ is a context sensitive language that is not a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q39.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{(\wedge^n)^n \mid n \geq 1098765\}$ is a context sensitive language.

Reason: There exists a dpda accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] i but [r] is false

Q40.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context-free language.

Reason: The language L is infinitse.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q41.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context free language.

Reason: The language is not infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q42.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q43.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context free language.

Reason: The language satisfies the pumping lemma for regular sets..

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q44.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww^R \mid w \in (a+b)^*\}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q45.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww^R \mid w \in (a+b)^*\}$ is a context free language.

Reason: The language does satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q46.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context free language.

Reason: There exists a pda accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q47.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context free language.

Reason: L can be accepted by a Turing Machine.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q48.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context free language.

Reason: A finite automata accepting L has an infinite number of states.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q49.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context free language.

Reason: No regular grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q50.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context free language.

Reason: There exists a cfg generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q51.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q52.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context free language.

Reason: There exists a dpda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q53.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context-sensitive language.

Reason: The language L is infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q54.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a regular set language.

Reason: The language is not infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q55.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww^R \mid w \in (a+b)^*\}$ is a recursive set.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q56.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww^R \mid w \in (a+b)^*\}$ is a regular set that is not finite.

Reason: The language satisfies the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q57.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww^R \mid w \in (a+b)^*\}$ is not a context free language.

Reason: The language does not satisfy the pumping lemma for context free lanaguages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q58.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is not a context free language but a context-sensitive language.

Reason: The language does satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q59.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context sensitive language that is not regular.

Reason: There exists a pda accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q60.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context sensitive language.

Reason: L can be accepted by a Turing Machine.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q61.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a r.e. set that is also context free language.

Reason: A finite automata accepting L has an infinite number of states.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q62.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a recursive set that is not context free language.

Reason: No regular grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q63.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a deterministic context free language that is not regular or finite.

Reason: There exists a cfg generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q64.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context sensitive language that is not a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q65.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{wwR \mid w \in (a+b)^*\}$ is a context sensitive language.

Reason: There exists a dpda accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q66.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context-free language.

Reason: The language L is infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q67.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context free language.

Reason: The language is not infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q68.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q69.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context free language.

Reason: The language satisfies the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q70.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for context free lanaguages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q71.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context free language.

Reason: The language does satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q72.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context free language.

Reason: There exists a pda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q73.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context free language.

Reason: L can be accepted by a Turing Machine.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q74.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context free language.

Reason: A finite automata accepting L has an infinite number of states.

A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$

B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$

C. Both $[a]$ and $[r]$ are false

D. $[a]$ is true but $[r]$ is false

Q75.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context free language.

Reason: No regular grammar can generate L .

A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$

B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$

C. Both $[a]$ and $[r]$ are false

D. $[a]$ is true but $[r]$ is false

Q76.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context free language.

Reason: There exists a cfg generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q77.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q78.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$ \$ \$ \$wR \mid \text{win}(a+b)^*\}$ is a context free language.

Reason: There exists a dpda accepting L .

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$
- C. Both $[a]$ and $[r]$ are false
- D. $[a]$ is true but $[r]$ is false

Q79.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \{w\$ \$ \$wR\$ \$ \$ \$ \mid \text{win}(a+b)^*\}$ is a context-sensitivise language.

Reason: The language L is infinite.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$
- C. Both $[a]$ and $[r]$ are false
- D. $[a]$ is true but $[r]$ is false

Q80.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \{\$ \$w\$ \$ \$wR \mid \text{win}(a+b)^*\}$ is a regular set language.

Reason: The language is not infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q81.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$ \$ \$ \$ \$ \$wR \mid \text{win}(a+b)^*\}$ is a recursive set.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q82.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$ \$ \$wR \mid \text{win}(a+b)^*\}$ is a regular set that is not finite.

Reason: The language satisfies the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

D. [a] is true but [r] is false

Q83.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w^a w^b R \mid w \in (a+b)^*\}$ is not a context free language.

Reason: The language does not satisfy the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q84.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w^a w^b R \mid w \in (a+b)^*\}$ is not a context free language but a context-sensitive language.

Reason: The language does satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q85.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context sensitive language that is not regular.

Reason: There exists a pda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q86.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context sensitive language.

Reason: L can be accepted by a Turing Machine.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q87.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a r.e. set that is also context free language.

Reason: A finite automata accepting L has an infinite number of states.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q88.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w$$$wR \mid \text{win}(a+b)^*\}$ is a recursive set that is not context free language.

Reason: No regular grammar can generate L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q89.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w$$$%%$$wR \mid \text{win}(a+b)^*\}$ is a deterministic context free language that is not regular or finite.

Reason: There exists a cfg generating L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q90.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\% \% \% \% wR \mid w \in (a+b)^*\}$ is a context sensitive language that is not a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q91.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{w\$wR \mid w \in (a+b)^*\}$ is a context sensitive language.

Reason: There exists a dpda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q92.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^i b^j c^k \mid i \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \in (a+b)^*\}$ is a context-free language.

Reason: The language L is infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q93.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^i b^j c^k \mid i \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{ww^R \mid w \text{ in } (a+b)^*\}$ is a context free language.

Reason: The language is not infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q94.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^i b^j c^k \mid i \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{ww^R \mid w \text{ in } (a+b)^*\}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q95.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a context free language.

Reason: The language satisfies the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q96.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for context free lanaguages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q97.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a context free language.

Reason: The language does satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q98.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a context free language.

Reason: There exists a pda accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q99.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a context free language.

Reason: L can be accepted by a Turing Machine.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q100.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{ww^R \mid w \text{ in } (a+b)^*\}$ is a context free language.

Reason: A finite automata accepting L has an infinite number of states.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q101.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{ww^R \mid w \text{ in } (a+b)^*\}$ is a context free language.

Reason: No regular grammar can generate L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q102.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a context free language.

Reason: There exists a cfg generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q103.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q104.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a context free language.

Reason: There exists a dpda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q105.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{ww^R \mid w \text{ in } (a+b)^*\}$ is a context-sensitive language.

Reason: The language L is infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q106.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{ww^R \mid w \text{ in } (a+b)^*\}$ is a regular set language.

Reason: The language is not infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q107.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a recursive set.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q108.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a regular set that is not finite.

Reason: The language satisfies the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q109.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is not a context free language.

Reason: The language does not satisfy the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q110.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is not a context free language but a context-sensitive language.

Reason: The language does satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q111.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a context sensitive language that is not regular.

Reason: There exists a pda accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q112.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a context sensitive language.

Reason: L can be accepted by a Turing Machine.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q113.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a r.e. set that is also context free language.

Reason: A finite automata accepting L has an infinite number of states.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q114.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a recursive set that is not context free language.

Reason: No regular grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q115.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a deterministic context free language that is not regular or finite.

Reason: There exists a cfg generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q116.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a context sensitive language that is not a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q117.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^j c^k \mid I \text{ not equal to } j, \text{ or } j \text{ not equal to } k\} \cup \{wwR \mid w \text{ in } (a+b)^*\}$ is a context sensitive language.

Reason: There exists a dpda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q118.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context-free language.

Reason: The language L is infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q119.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context free language.

Reason: The language is not infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q120.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for regular sets..

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q121.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context free language.

Reason: The language satisfies the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q122.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for context free lanaguages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q123.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context free language.

Reason: The language does satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

124.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context free language.

Reason: There exists a pda accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q125.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context free language.

Reason: L can be accepted by a Turing Machine.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q126.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context free language.

Reason: A finite automata accepting L has an infinite number of states.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q127.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context free language.

Reason: No regular grammar can generate L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q128.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context free language.

Reason: There exists a cfg generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q129.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q130.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context free language.

Reason: There exists a dpda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q131.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a context-sensitive language.

Reason: The language L is infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q132.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a regular set language.

Reason: The language is not infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q133.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a recursive set.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q134.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^m b^n \mid m > n\}$ is a regular set that is not finite.

Reason: The language satisfies the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q135.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a context-free language.

Reason: The language L is infinite.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q136.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a context free language.

Reason: The language is not infinite.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q137.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q138.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a context free language.

Reason: The language satisfies the pumping lemma for regular sets..

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q139.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q140.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a context free language.

Reason: The language does satisfies the pumping lemma for context-free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q141.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a context free language.

Reason: There exists a pda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q142.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a context free language.

Reason: L can be accepted by a Turing Machine.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q143.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language L =set of all balanced parenthesis is a context free language.

Reason: A finite automata accepting L has an infinite number of states.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q144.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language L =set of all balanced parenthesis is a context free language.

Reason: No regular grammar can generate L .

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q145.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a context free language.

Reason: There exists a cfg generating L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q146.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a context free language.

Reason: $L \cup (a+b)^*$ is regular.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q147.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a context free language.

Reason: There exists a dpda accepting L .

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q148.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a context-sensitive language.

Reason: The language L is infinite.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q149.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a regular set language.

Reason: The language is not infinite.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q150.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a recursive set.

Reason: The language does not satisfy the pumping lemma for regular sets..

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q151.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all balanced parenthesis}$ is a regular set that is not finite.

Reason: The language satisfies the pumping lemma for regular sets..

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

Q152.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context-free language.

Reason: The language L is infinite.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q153.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context free language.

Reason: The language is not infinite.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q154.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q155.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context free language.

Reason: The language satisfies the pumping lemma for regular sets..

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q156.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for context free lanaguages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q157.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context free language.

Reason: The language does satisfies the pumping lemma for context-free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q158.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context free language.

Reason: There exists a pda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q159.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context free language.

Reason: L can be accepted by a Turing Machine.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q160.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context free language.

Reason: A finite automata accepting L has an infinite number of states.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q161.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context free language.

Reason: No regular grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

D. [a] is true but [r] is false

Q162.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context free language.

Reason: There exists a cfg generating L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q163.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context free language.

Reason: $L \cup (a+b)^*$ is regular.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q164.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context free language.

Reason: There exists a dpda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q165.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context-sensitive language.

Reason: The language L is infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q166.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a regular set language.

Reason: The language is not infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

D. [a] is true but [r] is false

Q167.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a recursive set.

Reason: The language does not satisfy the pumping lemma for regular sets..

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q168.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a regular set that is not finite.

Reason: The language satisfies the pumping lemma for regular sets..

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q169.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is not a context free language.

Reason: The language does not satisfy the pumping lemma for context free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q170.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is not a context free language but a context-sensitive language.

Reason: The language does satisfies the pumping lemma for context-free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q171.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context sensitive language that is not regular.

Reason: There exists a pda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q172.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context sensitive language.

Reason: L can be accepted by a Turing Machine.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q173.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a r.e. set that is also context free language.

Reason: A finite automata accepting L has an infinite number of states.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

D. [a] is true but [r] is false

Q174.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a recursive set that is not context free language.

Reason: No regular grammar can generate L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q175.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a deterministic context free language that is not regular or finite.

Reason: There exists a cfg generating L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q176.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s}$ is a context sensitive language that is not a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q177.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s}$ is a context sensitive language.

Reason: There exists a dpda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

Q178.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context-free language.

Reason: The language L is infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q179.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context free language.

Reason: The language is not infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q180.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for regular sets..

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q181.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context free language.

Reason: The language satisfies the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q182.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context free language.

Reason: The language does not satisfy the pumping lemma for context free lanaguages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q183.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context free language.

Reason: The language does satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q184.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context free language.

Reason: There exists a pda accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q185.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context free language.

Reason: L can be accepted by a Turing Machine.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q186.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context free language.

Reason: A finite automata accepting L has an infinite number of states.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q187.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context free language.

Reason: No regular grammar can generate L .

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q188.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context free language.

Reason: There exists a cfg generating L .

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q189.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q190.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \text{set of all strings with an equal number of } a\text{'s and } b\text{'s or twice as many } a\text{'s as } b\text{'s}$ is a context free language.

Reason: There exists a dpda accepting L .

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q191.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context-sensitive language.

Reason: The language L is infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q192.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a regular set language.

Reason: The language is not infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q193.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language L =set of all strings with an equal number of a's and b's or twice as many a's as b's is a recursive set.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q194.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language L =set of all strings with an equal number of a's and b's or twice as many a's as b's is a regular set that is not finite.

Reason: The language satisfies the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q195.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language L =set of all strings with an equal number of a's and b's or twice as many a's as b's is not a context free language.

Reason: The language does not satisfy the pumping lemma for context free lanaguages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q196.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is not a context free language but a context-sensitive language.

Reason: The language does satisfies the pumping lemma for context-free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q197.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context sensitive language that is not regular.

Reason: There exists a pda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

D. [a] is true but [r] is false

Q198.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context sensitive language.

Reason: L can be accepted by a Turing Machine.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q199.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a r.e. set that is also context free language.

Reason: A finite automata accepting L has an infinite number of states.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q200.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language L =set of all strings with an equal number of a's and b's or twice as many a's as b's is a recursive set that is not context free language.

Reason: No regular grammar can generate L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q201.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language L =set of all strings with an equal number of a's and b's or twice as many a's as b's is a deterministic context free language that is not regular or finite.

Reason: There exists a cfg generating L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q202.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language L =set of all strings with an equal number of a's and b's or twice as many a's as b's is a context sensitive language that is not a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q203.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings with an equal number of a's and b's or twice as many a's as b's}$ is a context sensitive language.

Reason: There exists a dpda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q204.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context-free language.

Reason: The language L is infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q205.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context free language.

Reason: The language is not infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q206.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context free language.

Reason: The language does not satisfy the pumping lemma for regular sets.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q206.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context free language.

Reason: The language satisfies the pumping lemma for regular sets.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q207.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context free language.

Reason: The language does not satisfy the pumping lemma for context free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q208.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context free language.

Reason: The language does satisfies the pumping lemma for context-free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q209.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context free language.

Reason: There exists a pda accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q210.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context free language.

Reason: L can be accepted by a Turing Machine.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q211.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context free language.

Reason: A finite automata accepting L has an infinite number of states.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q212.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context free language.

Reason: No regular grammar can generate L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q213.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context free language.

Reason: There exists a cfg generating L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q214.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q215.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context free language.

Reason: There exists a dpda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q216.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context-sensitive language.

Reason: The language L is infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q217.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a regular set language.

Reason: The language is not infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q218.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a recursive set.

Reason: The language does not satisfy the pumping lemma for regular sets.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q219.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a regular set that is not finite.

Reason: The language satisfies the pumping lemma for regular sets..

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q220.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is not a context free language.

Reason: The language does not satisfy the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q221.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is not a context free language but a context-sensitive language.

Reason: The language does satisfies the pumping lemma for context-free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q222.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context sensitive language that is not regular.

Reason: There exists a pda accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q223.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context sensitive language.

Reason: L can be accepted by a Turing Machine.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q224.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a r.e. set that is also context free language.

Reason: A finite automata accepting L has an infinite number of states.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q225.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a recursive set that is not context free language.

Reason: No regular grammar can generate L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q226.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a deterministic context free language that is not regular or finite.

Reason: There exists a cfg generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q227.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context sensitive language that is not a context free language.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

D. [a] is true but [r] is false

Q228.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings not of the form } ww, w \text{ in } (a+b)^*$ is a context sensitive language.

Reason: There exists a dpda accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q229.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: The language L is infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q230.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: The language is not infinite.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q231.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q232.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: The language satisfies the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q233.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

is a context free language that is not regular.

Reason: The language does not satisfy the pumping lemma for context free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q234.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: The language does satisfies the pumping lemma for context-free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q235.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: There exists a pda accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q236.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: L can be accepted by a Turing Machine.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q237.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: A finite automata accepting L has an infinite number of states.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q238.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: No regular grammar can generate L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q239.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: There exists a cfg generating L .

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$
- C. Both $[a]$ and $[r]$ are false
- D. $[a]$ is true but $[r]$ is false

Q240.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$
- C. Both $[a]$ and $[r]$ are false
- D. $[a]$ is true but $[r]$ is false

Q241.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: There exists a dpda accepting L .

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q242.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: The language L is infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q243.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: The language is not infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q244.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: The language does not satisfy the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q245.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: The language satisfies the pumping lemma for regular sets..

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q246.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: The language does not satisfy the pumping lemma for context free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q247.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: The language does satisfies the pumping lemma for context-free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q248.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: There exists a pda accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q249.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: L can be accepted by a Turing Machine.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q250.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: A finite automata accepting L has an infinite number of states.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

D. [a] is true but [r] is false

Q251.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: No regular grammar can generate L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q252.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: There exists a cfg generating L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q253.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: $L \cup (a+b)^*$ is regular.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q254.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{set of all strings over } \{a, b, +, \cdot, *, (,), \epsilon, \phi\}$ that are well formed regular expressions over $\{a, b\}$ is a context free language that is not regular.

Reason: There exists a dpda accepting L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q255.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for regular sets.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q256.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for context free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q257.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: No regular grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q258.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: The language cannot be accepted by any finite automata.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q259.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a 2DFA accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q260.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a context sensitive grammar generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q261.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a Turing Machine accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q262.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a linear bounded automata accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q263.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: No push down automata can accept L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q264.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: No context free grammar can generate L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q265.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for regular sets.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q266.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for context free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q267.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: No deterministic pushdown automata can accept L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q268.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a halting turing machine with two tapes accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q269.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a nondeterministic two pushdown tape machine that accepts L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

D. [a] is true but [r] is false

Q270.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a multitape, multiheaded, multidimensional turing machine that accepts L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q271.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for regular sets.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q272.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for context free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q273.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: No regular grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q274.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: The language cannot be accepted by any finite automata.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q275.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a 2DFA accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q276.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a context sensitive grammar generating L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q277.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a Turing Machine accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q278.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a linear bounded automata accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q279.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: No push down automata can accept L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q280.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: No context free grammar can generate L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q281.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for regular sets.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q282.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for context free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q283.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: No deterministic pushdown automata can accept L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q284.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a halting turing machine with two tapes accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q285.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a nondeterministic two pushdown tape machine that accepts L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q286.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a multitape, multiheaded, multidimensional turing machine that accepts L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

D. [a] is true but [r] is false

Q287.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for regular sets.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q288.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q289.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: No regular grammar can generate L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q290.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: The language cannot be accepted by any finite automata.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q291.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a 2DFA accepting L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q292.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a context sensitive grammar generating L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q293.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a Turing Machine accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q294.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a linear bounded automata accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q295.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: No push down automata can accept L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q296.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: No context free grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q297.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for regular sets.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q298.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q299.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: No deterministic pushdown automata can accept L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q300.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a halting turing machine with two tapes accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q301.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a nondeterministic two pushdown tape machine that accepts L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q302.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a multitape, multiheaded, multidimensional turing machine that accepts L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q303.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for regular sets.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q304.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q305.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: No regular grammar can generate L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q306.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: The language cannot be accepted by any finite automata.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q307.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a 2DFA accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]
- C. Both [a] and [r] are false
- D. [a] is true but [r] is false

Q308.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a context sensitive grammar generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q309.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a Turing Machine accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q310.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a linear bounded automata accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q311.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: No push down automata can accept L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q312.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: No context free grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q313.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for regular sets.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q314.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q315.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: No deterministic pushdown automata can accept L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q316.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a halting turing machine with two tapes accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q317.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a nondeterministic two pushdown tape machine that accepts L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q318.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a multitape, multiheaded, multidimensional turing machine that accepts L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q319.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for regular sets.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q320.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q321.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: No regular grammar can generate L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q322.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: The language cannot be accepted by any finite automata.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q323.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a 2DFA accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q324.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a context sensitive grammar generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q325.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a Turing Machine accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q326.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a linear bounded automata accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q327.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: No push down automata can accept L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q328.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: No context free grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q329.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for regular sets.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q330.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for context free languages.

A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$

B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$

C. Both $[a]$ and $[r]$ are false

D. $[a]$ is true but $[r]$ is false

Q331.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $\{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: No deterministic pushdown automata can accept L .

A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$

B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$

C. Both $[a]$ and $[r]$ are false

D. $[a]$ is true but $[r]$ is false

Q332.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $\{ww \mid w \in (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a halting turing machine with two tapes accepting L .

A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$

B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q333.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a nondeterministic two pushdown tape machine that accepts L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q334.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $\{ww \mid w \text{ in } (a+b)^+\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a multitape, multiheaded, multidimensional turing machine that accepts L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q335.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for regular sets.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q336.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for context free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q337.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: No regular grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q338.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: The language cannot be accepted by any finite automata.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q339.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a 2DFA accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

D. [a] is true but [r] is false

Q340.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a context sensitive grammar generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q341.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a Turing Machine accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q342.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a linear bounded automata accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q343.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: No push down automata can accept L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q344.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: No context free grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q345.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for regular sets.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q346.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q347.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: No deterministic pushdown automata can accept L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q348.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a halting turing machine with two tapes accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q349.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a nondeterministic two pushdown tape machine that accepts L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q350.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n b^n c^n \mid n \geq 1\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a multitape, multiheaded, multidimensional turing machine that accepts L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q351.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language L = the squares in unary is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for regular sets.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

D. [a] is true but [r] is false

Q352.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q353.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: No regular grammar can generate L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q354.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: The language cannot be accepted by any finite automata.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q355.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a 2DFA accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q356.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a context sensitive grammar generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q357.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a Turing Machine accepting L .

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q358.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a linear bounded automata accepting L .

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q359.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: No push down automata can accept L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q360.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: No context free grammar can generate L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q361.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for regular sets.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q362.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q363.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: No deterministic pushdown automata can accept L .

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q364.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a halting turing machine with two tapes accepting L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q365.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a nondeterministic two pushdown tape machine that accepts L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q366.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^n \mid n \text{ is a square}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a multitape, multiheaded, multidimensional turing machine that accepts L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q367.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for regular sets.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q368.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{\text{primes in binary}\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q369.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{\text{primes in binary}\}$ is a context sensitive language that is not context free or regular.

Reason: No regular grammar can generate L .

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q370.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{\text{primes in binary}\}$ is a context sensitive language that is not context free or regular.

Reason: The language cannot be accepted by any finite automata.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q371.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{\text{primes in binary}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a 2DFA accepting L .

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q372.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \{\text{primes in binary}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a context sensitive grammar generating L .

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q373.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \{\text{primes in binary}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a Turing Machine accepting L .

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q374.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{the primes in binary}$ is a context sensitive language that is not context free or regular.

Reason: There exists a linear bounded automata accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q375.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \text{the primes in binary}$ is a context sensitive language that is not context free or regular.

Reason: No push down automata can accept L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q376.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{2^p \mid p \text{ is prime}\}$ is a context sensitive language that is not context free or regular.

Reason: No context free grammar can generate L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q377.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{2^p \mid p \text{ is prime}\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for regular sets.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q378.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{2^p \mid p \text{ is prime}\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for context free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q379.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{\text{primes in binary}\}$ is a context sensitive language that is not context free or regular.

Reason: No deterministic pushdown automata can accept L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q380.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{\text{primes in binary}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a halting turing machine with two tapes accepting L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q381.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{\text{primes in binary}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a nondeterministic two pushdown tape machine that accepts L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q382.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{\text{primes in binary}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a multitape, multiheaded, multidimensional turing machine that accepts L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q383.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{3^n \mid n \geq 0\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for regular sets.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q384.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for context free languages.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q385.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The powers of three in unary is a context sensitive language that is not context free or regular.

Reason: No regular grammar can generate L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q386.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: The language cannot be accepted by any finite automata.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q387.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The powers of three in unary is a context sensitive language that is not context free or regular.

Reason: There exists a 2DFA accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q388.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a context sensitive grammar generating L .

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q389.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language The powers of three in unary is a context sensitive language that is not context free or regular.

Reason: There exists a Turing Machine accepting L .

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**
- C. Both $[a]$ and $[r]$ are false**
- D. $[a]$ is true but $[r]$ is false**

Q390.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a linear bounded automata accepting L .

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$**
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$**

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q391.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The powers of three in unary is a context sensitive language that is not context free or regular.

Reason: No push down automata can accept L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q392.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: No context free grammar can generate L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q393.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The powers of three in unary is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for regular sets.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q394.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for context free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q395.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: No deterministic pushdown automata can accept L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q396.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a halting turing machine with two tapes accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q397.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a nondeterministic two pushdown tape machine that accepts L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q398.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a multitape, multiheaded, multidimensional turing machine that accepts L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q399.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for regular sets.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q400.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The powers of three in unary is a context sensitive language that is not context free or regular.

Reason: The language does not satisfy the pumping lemma for context free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q401.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: No regular grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q402.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: The language cannot be accepted by any finite automata.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q403.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a 2DFA accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q404.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The powers of three in unary is a context sensitive language that is not context free or regular.

Reason: There exists a context sensitive grammar generating L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q405.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a Turing Machine accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q406.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a linear bounded automata accepting L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q407.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: No push down automata can accept L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q408.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The powers of three in unary is a context sensitive language that is not context free or regular.

Reason: No context free grammar can generate L.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q409.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for regular sets.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q410.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: L is infinite and satisfies the pumping lemma for context free languages.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q411.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: No deterministic pushdown automata can accept L .

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q412.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language The powers of three in unary is a context sensitive language that is not context free or regular.

Reason: There exists a halting turing machine with two tapes accepting L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q413.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a nondeterministic two pushdown tape machine that accepts L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q414.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L = \{a^I b^J c^K \mid I, J, K \text{ all unequal}\}$ is a context sensitive language that is not context free or regular.

Reason: There exists a multitape, multiheaded, multidimensional turing machine that accepts L.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q415.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The class of formal languages, L in $(0+1)^*$ is not countable infinite.

Reason: The language denoted by $(0+1)^*$ is not countably infinite.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q416.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The class of formal languages over the alphabet $\{0,1\}$ is not countably infinite.

Reason: $\{0,1\}^*$ is not a countably infinite set.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q417.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The class of formal languages over the alphabet $\{0,1\}$ is not countably infinite.

Reason: The power set of $\{0,1\}^*$ is not a countably infinite set.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q418.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L =$ set of all strings over $\{0,1\}$ ending in 00 can be accepted by a finite automata of 2 or more states.

Reason: The minimal dfa for the language L has 3 states.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q419.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L =$ set of all strings over $\{0,1\}$ containing three consecutive 0's can be accepted by a finite automata of 3 or more states.

Reason: $\{0,1\}^*$ is not a countably infinite set.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q420.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L =$ set of all strings over $\{0,1\}$ containing three consecutive 0's can be accepted by a finite automata of 2 or more states.

Reason: The minimal dfa for L requires 4 states.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q421.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L =$ set of all strings over $\{0,1\}$ starting with a 1 that interpreted as the binary representation of an integer are congruent to 0 modulo 5 requires a fa of 5 or more states.

Reason: The minimal dfa accepting L requires 7 states.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**

D. [a] is true but [r] is false

Q422.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L =$ set of all strings over $\{0,1\}$ not containing three consecutive 0's can be accepted by a finite automata of 3 or more states.

Reason: The minimal dfa for L requires 4 states.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q423.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L =$ set of all strings over $\{0,1\}$ where the 10th symbol from the right end is a 1 requires a dfa of more than 1000 states.

Reason: The minimal dfa for L requires 1024 states.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q424.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: The language $L =$ set of all strings over $\{0,1\}$ where every pair of consecutive 0's occurs before any pair of adjacent 1's requires a dfa of 5 or more states to accept it.

Reason: The minimal dfa accepting L has 5 states.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$
- C. Both $[a]$ and $[r]$ are false
- D. $[a]$ is true but $[r]$ is false

Q425.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: A semiextended regular expression which also has the intersection operator yields at times a more compact regular expression than without the intersection operator.

Reason: Intersection can shorten the length of a regular expression by an exponential amount.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$
- B. Both $[a]$ and $[r]$ are true but $[r]$ is not the correct reason for $[a]$
- C. Both $[a]$ and $[r]$ are false
- D. $[a]$ is true but $[r]$ is false

Q426.

Determine the correctness or otherwise of the following Assertion $[a]$ and the Reason $[r]$

Assertion: There exist cfls that are not regular.

Reason: The cfls are not closed under intersection whereas the regular sets are and every cfl is trivially a pda.

- A. Both $[a]$ and $[r]$ are true and $[r]$ is the correct reason for $[a]$

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q427.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: There exists a cfl that is not regular.

Reason: $L = \{0^n 1^n \mid n > 1\} \cup \{0^n 1^{2n} \mid n > 1\}$ is a cfl that is not regular.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q428.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: There exist cfls that are not regular.

Reason: $\{0,1\}^*$ is not a countably infinite set and hence is not regular.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false

Q429.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: There exist cfls that are not regular.

Reason: The cfls are not closed under complement whereas the regular sets are and every regular grammar is trivially a context-free grammar.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q430.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: There exist csfs that are not cfls.

Reason: The csfs are closed under intersection whereas the cfls are not and the Boolean closure of the cfls is in the class of csfs.

- A. Both [a] and [r] are true and [r] is the correct reason for [a]**
- B. Both [a] and [r] are true but [r] is not the correct reason for [a]**
- C. Both [a] and [r] are false**
- D. [a] is true but [r] is false**

Q431.

Determine the correctness or otherwise of the following Assertion [a] and the Reason [r]

Assertion: There exist r.e sets that are not recursive.

Reason: The recursive sets are closed under intersection whereas the r.e. sets are not.

A. Both [a] and [r] are true and [r] is the correct reason for [a]

B. Both [a] and [r] are true but [r] is not the correct reason for [a]

C. Both [a] and [r] are false

D. [a] is true but [r] is false



