

SRMJEEE English & Aptitude Sample Paper – 9

Duration: 24 Minutes

Maximum Marks: 20

Instructions

- This paper contains **20** Multiple Choice Questions (Single Correct Answer), modelled on the English & Aptitude section of **SRMJEEE** (SRM Joint Engineering Entrance Examination).
- It has two parts: **Part A – English** (Questions 1–8: comprehension, grammar and vocabulary) and **Part B – Aptitude** (Questions 9–20: reasoning and quantitative aptitude). Attempt all questions.
- Each correct answer carries **+1 mark**. There is **no negative marking**; an unattempted or wrong answer scores 0.
- Only **one** option is correct. Choose carefully.
- Personal calculators, mobile phones, log tables and other electronic gadgets are strictly prohibited.

Part A: English

Directions (Q1–Q2): Read the following passage carefully and answer the questions that follow.

Ants live in highly organised colonies in which every member has a fixed duty. A single colony is ruled by a queen, who lays all the eggs, while the workers search for food and care for the young, and the soldiers defend the nest against intruders. The ants keep in touch with one another by releasing chemical signals called pheromones, and it is by working together in this way that the tiny colony thrives.

Q1. According to the passage, ants keep in touch with one another by:

- (A) releasing chemical signals called pheromones
- (B) making loud sounds
- (C) changing the colour of their bodies
- (D) building separate nests

Q2. The passage mainly suggests that the ant colony succeeds because of:



- (A) the large size of the queen
- (B) cooperation and teamwork among its members
- (C) the speed of the soldier ants
- (D) the depth of the underground nest

Q3. Choose the word that is most nearly *similar* in meaning to the word **WEALTHY**:

- (A) needy
- (B) careless
- (C) rich
- (D) honest

Q4. Choose the word that is most nearly *opposite* in meaning to the word **OPTIMIST**:

- (A) dreamer
- (B) believer
- (C) leader
- (D) pessimist

Q5. Identify the part of the sentence that contains a grammatical error:

“He prefers (B1) / tea than coffee (B2) / in the morning. (B3) / No error (B4)”

- (A) part (B2)
- (B) part (B1)
- (C) part (B3)
- (D) No error

Q6. Fill in the blank with the correct word:

“He has been working here _____ three years.”

- (A) since



- (B) for
- (C) from
- (D) by

Q7. Choose the word for the following: “A government by the people.”

- (A) monarchy
- (B) aristocracy
- (C) democracy
- (D) anarchy

Q8. The idiom “to add fuel to the fire” means:

- (A) to light a lamp
- (B) to put out a quarrel
- (C) to waste money carelessly
- (D) to make a bad situation worse

Part B: Aptitude

Q9. Find the next number in the series: 7, 14, 28, 56, ?

- (A) 112
- (B) 84
- (C) 98
- (D) 108

Q10. If each letter is replaced by its position number in the English alphabet and the numbers are added, so that “DOG” = $4 + 15 + 7 = 26$, then “CAT” will be coded as:

- (A) 26
- (B) 24
- (C) 23



(D) 25

Q11. Pointing to a lady, a boy said, “She is the wife of the brother of my mother.” How is the lady related to the boy?

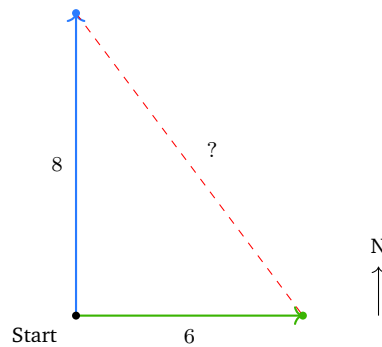
(A) mother

(B) sister

(C) aunt

(D) grandmother

Q12. Two friends start from the same point. One walks 8 km towards the North and the other walks 6 km towards the East, as shown. What is the straight-line distance between them now?



(A) 14 km

(B) 7 km

(C) 12 km

(D) 10 km

Q13. In a row, a boy is 7th from the left end and 10th from the right end. How many persons are there in the row?

(A) 16

(B) 17

(C) 15

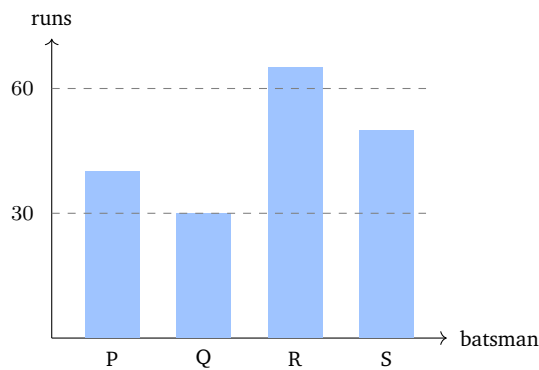
(D) 18



Q14. Choose the option that completes the analogy: **Country : Capital :: India : ?**

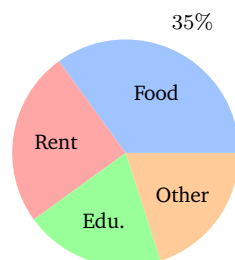
- (A) Mumbai
- (B) New Delhi
- (C) Asia
- (D) Rupee

Q15. The bar chart shows the runs scored by four batsmen in a match. Which batsman scored the *highest* number of runs?



- (A) Batsman P
- (B) Batsman Q
- (C) Batsman R
- (D) Batsman S

Q16. The pie chart shows how a family's monthly budget of **Rs. 20,000** is divided. The amount the family spends on *Food* is:



- (A) Rs. 3,500



- (B) Rs. 10,500
- (C) Rs. 5,000
- (D) Rs. 7,000

Q17. The value of 75% of 400 is:

- (A) 300
- (B) 250
- (C) 325
- (D) 275

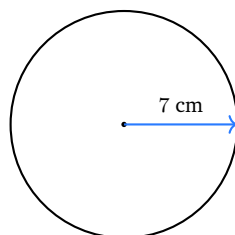
Q18. A trader makes a profit of 25% on an article whose cost price is Rs. 240. The profit amount is:

- (A) Rs. 48
- (B) Rs. 60
- (C) Rs. 72
- (D) Rs. 50

Q19. The smallest natural number that is divisible by both 2 and 3 is:

- (A) 2
- (B) 3
- (C) 6
- (D) 12

Q20. The circle shown has a radius of 7 cm. Taking $\pi = \frac{22}{7}$, the area of the circle is:



- (A) 44 cm^2
- (B) 49 cm^2
- (C) 22 cm^2
- (D) 154 cm^2



Detailed Solutions

Q1.

Solution

Concept — Reading for stated detail: A “detail” question is answered directly from the text; locate the exact sentence that states the relevant fact.

Step 1 — Locate the line: The passage states, “The ants keep in touch with one another by releasing chemical signals called pheromones.”

Step 2 — Match to the options: This is exactly option (A).

Why other options are wrong:

- (B) The passage never mentions ants making sounds to communicate.
- (C) Changing body colour and (D) building separate nests are not stated as ways of keeping in touch.

Final Answer: Ants communicate by releasing pheromones ⇒ **A**

Answer: (A) [Go Back to Q1](#)

Q2.

Solution

Concept — Reading for the main idea / inference: An “inference” question asks what the passage implies as a whole, not a single fact.

Step 1 — Find the key sentence: The passage ends, “it is by working together in this way that the tiny colony thrives.”

Step 2 — Interpret: The colony’s success is tied directly to cooperation and teamwork among its members — option (B).

Why other options are wrong:

- (A) The queen’s size is never discussed.
- (C) The soldiers’ speed and (D) the depth of the nest are not given as the reason the colony thrives.

Final Answer: Success comes from cooperation and teamwork ⇒ **B**

Answer: (B) [Go Back to Q2](#)



Q3.

Solution

Concept — Synonyms: A synonym is a word with nearly the same meaning. “Wealthy” means having a great deal of money or property.

Step 1 — Recall the meaning: wealthy = rich, affluent, prosperous.

Step 2 — Match: The closest option is “rich” (C).

Why other options are wrong:

- (A) “needy” is the opposite (an antonym).
- (B) “careless” and (D) “honest” describe character, not the possession of money.

Final Answer: wealthy \approx rich \Rightarrow

[Go Back to Q3](#)

Q4.

Solution

Concept — Antonyms: An antonym is a word of opposite meaning. An “optimist” is a person who expects the best and looks on the bright side.

Step 1 — Recall the meaning: optimist = a hopeful, positive person.

Step 2 — Find the opposite: The opposite is a “pessimist” — a person who expects the worst — option (D).

Why other options are wrong:

- (A) “dreamer” and (B) “believer” are not opposites of optimist.
- (C) “leader” describes a role, not an outlook on life.

Final Answer: opposite of optimist = pessimist \Rightarrow

[Go Back to Q4](#)



Q5.

Solution

Concept — Correct preposition with “prefer”: The verb “prefer” is followed by “to” when comparing two things, not by “than”. The correct form is “prefers tea to coffee”.

Step 1 — Examine part (B2): “tea than coffee” is wrong; it should be “tea to coffee”.

Step 2 — Check the rest: “He prefers”, “in the morning” are correct, so the error lies only in part (B2).

Why other options are wrong:

- (B) part (B1) “He prefers” is correct subject–verb agreement.
- (C) part (B3) “in the morning” is correct; (D) “No error” is false because a clear error exists.

Final Answer: The error is in part (B2) (“than coffee”) ⇒ **A**

Answer: (A) [Go Back to Q5](#)

Q6.

Solution

Concept — “Since” vs “for”: With the present perfect continuous, use *for* before a *period* of time (a duration) and *since* before a *point* of time (a date or event).

Step 1 — Identify the time word: “three years” is a duration (a length of time), not a point.

Step 2 — Choose: The correct preposition is “for” — “for three years” (B).

Why other options are wrong:

- (A) “since” needs a point of time (e.g. “since 2010”).
- (C) “from” needs a matching “to”; (D) “by” indicates a deadline, not a duration.

Final Answer: “for three years” ⇒ **B**

Answer: (B) [Go Back to Q6](#)



Q7.

Solution

Concept — One-word substitution: A single word that replaces a phrase. Here we need the word for a government by the people.

Step 1 — Recall the term: A government by the people (chosen through their elected representatives) is a *democracy*.

Why other options are wrong:

- (A) “monarchy” is rule by a king or queen.
- (B) “aristocracy” is rule by a privileged class; (D) “anarchy” is the absence of any government.

Final Answer: government by the people = democracy ⇒ **C**

Answer: (C) [Go Back to Q7](#)

Q8.

Solution

Concept — Idioms: An idiom carries a figurative meaning different from the literal words. “To add fuel to the fire” is a fixed expression.

Step 1 — Recall the meaning: It means to do or say something that makes an already bad or angry situation even worse.

Step 2 — Match: This is option (D), “to make a bad situation worse”.

Why other options are wrong:

- (A) “to light a lamp” takes the words literally.
- (B) “to put out a quarrel” is the opposite; (C) wasting money is unrelated to the idiom.

Final Answer: the idiom means to make a bad situation worse ⇒ **D**

Answer: (D) [Go Back to Q8](#)



Q9.

Solution

Concept — Number series (ratio pattern): Check the ratio between consecutive terms; a constant ratio means the series is geometric.

Step 1 — Find the ratio: $14 \div 7 = 2$, $28 \div 14 = 2$, $56 \div 28 = 2$. Each term is double the one before it.

Step 2 — Extend: The next term is $56 \times 2 = 112$.

Why other options are wrong:

- (B) 84 and (D) 108 do not follow the doubling rule.
- (C) 98 would need a ratio of 1.75, which breaks the pattern.

Final Answer: next term = 112 \Rightarrow **A**

Answer: (A) [Go Back to Q9](#)

Q10.

Solution

Concept — Letter-number coding (sum): Replace each letter by its serial position in the alphabet (A= 1, B= 2, ..., Z= 26) and add the values.

Step 1 — Encode each letter of CAT: C = 3, A = 1, T = 20.

Step 2 — Add: $3 + 1 + 20 = 24$, which is option (B).

Why other options are wrong:

- (A) 26 is the code for DOG, given as the example, not for CAT.
- (C) 23 and (D) 25 come from miscounting a letter's position.

Final Answer: CAT = $3 + 1 + 20 = 24 \Rightarrow$ **B**

Answer: (B) [Go Back to Q10](#)



Q11.

Solution

Concept — Blood relations: Work outward from the speaker, decoding the phrase one relation at a time.

Step 1 — Interpret the phrase: “the brother of my mother” is the boy’s maternal uncle.

Step 2 — One step more: “the wife of the brother of my mother” is therefore the wife of the boy’s uncle, who is his *aunt* — option (C).

Why other options are wrong:

- (A) “mother” and (B) “sister” are different, more direct relations.
- (D) “grandmother” would need an extra generation that the statement does not provide.

Final Answer: the lady is the boy’s aunt \Rightarrow

Answer: (C) [Go Back to Q11](#)

Q12.

Solution

Concept — Direction sense with Pythagoras: North and East are perpendicular directions, so the straight-line gap between the two friends is the hypotenuse of a right triangle.

Step 1 — Set up the triangle: One leg is 8 km (North), the other is 6 km (East), meeting at a right angle at the start.

Step 2 — Apply Pythagoras:

$$d^2 = 8^2 + 6^2 = 64 + 36 = 100 \Rightarrow d = \sqrt{100} = 10 \text{ km.}$$

(This is the 6-8-10 right triangle.)

Why other options are wrong:

- (A) 14 adds the legs (8 + 6) instead of using Pythagoras.
- (B) 7 and (C) 12 do not satisfy $d^2 = 100$.

Final Answer: distance = 10 km \Rightarrow

Answer: (D) [Go Back to Q12](#)



Q13.

Solution

Concept — Total from two ends: When a single person's positions from both ends are known, $\text{total} = (\text{position from left}) + (\text{position from right}) - 1$.

Step 1 — Substitute: $\text{total} = 7 + 10 - 1$.

Step 2 — Compute: = 16. So there are 16 persons in the row.

Why other options are wrong:

- (B) 17 forgets to subtract 1 for the person counted twice.
- (C) 15 subtracts 2; (D) 18 overcounts.

Final Answer: total = 16 persons \Rightarrow

Answer: (A) [Go Back to Q13](#)

Q14.

Solution

Concept — Analogy (country : capital): Identify the relationship in the first pair and apply the same relationship to the second.

Step 1 — Relationship: A country is paired with its capital city.

Step 2 — Apply: The capital of India is New Delhi. So the missing word is "New Delhi" (B).

Why other options are wrong:

- (A) "Mumbai" is a city but not the capital of India.
- (C) "Asia" is the continent; (D) "Rupee" is the currency — neither is a capital.

Final Answer: India : New Delhi \Rightarrow

Answer: (B) [Go Back to Q14](#)



Q15.

Solution

Concept — Reading a bar chart: The height of each bar gives the value; the tallest bar is the maximum.

Step 1 — Read the bars: P = 40, Q = 30, R = 65, S = 50 runs.

Step 2 — Compare: The tallest bar (value 65) belongs to batsman R, so R scored the highest.

Why other options are wrong:

- (B) Batsman Q is the *lowest* (30).
- (A) P (40) and (D) S (50) are both below R's 65.

Final Answer: Batsman R scored the highest \Rightarrow

Answer: (C) [Go Back to Q15](#)

Q16.

Solution

Concept — Reading a pie chart: Each sector's percentage of the whole is multiplied by the total to get the actual amount.

Step 1 — Identify the share: "Food" occupies 35% of the budget.

Step 2 — Compute the amount:

$$35\% \text{ of } 20000 = \frac{35}{100} \times 20000 = 7000.$$

So Rs. 7,000 is spent on food.

Why other options are wrong:

- (A) Rs. 3,500 is only 17.5%; (B) Rs. 10,500 is 52.5%.
- (C) Rs. 5,000 is 25% — none equals the 35% food share.

Final Answer: Food = Rs. 7,000 \Rightarrow

Answer: (D) [Go Back to Q16](#)



Q17.

Solution

Concept — Finding a percentage of a number: $p\%$ of $N = \frac{p}{100} \times N$.

Step 1 — Set up: 75% of $400 = \frac{75}{100} \times 400$.

Step 2 — Compute: $= \frac{3}{4} \times 400 = 300$.

Step 3 — Check: 300 is three-quarters of 400 ✓.

Why other options are wrong:

- (B) 250 is 62.5% of 400; (C) 325 is 81.25%.
- (D) 275 is 68.75% — none equals 75%.

Final Answer: 75% of $400 = 300 \Rightarrow$ **A**

Answer: (A) [Go Back to Q17](#)

Q18.

Solution

Concept — Profit amount: Profit = Profit% \times Cost Price (with the percentage written as a fraction).

Step 1 — Write the formula: Profit = $\frac{25}{100} \times 240$.

Step 2 — Compute: $= \frac{1}{4} \times 240 = 60$ rupees.

Why other options are wrong:

- (A) Rs. 48 would be 20% of 240.
- (C) Rs. 72 is 30%; (D) Rs. 50 does not match 25% of 240.

Final Answer: profit = Rs. 60 \Rightarrow **B**

Answer: (B) [Go Back to Q18](#)



Q19.

Solution

Concept — Common multiple (LCM): A number divisible by both 2 and 3 must be a multiple of their least common multiple, which is $2 \times 3 = 6$.

Step 1 — Find the LCM: $\text{LCM}(2, 3) = 6$.

Step 2 — Smallest natural number: The smallest natural number that is a multiple of 6 is 6 itself.

Why other options are wrong:

- (A) 2 is not divisible by 3; (B) 3 is not divisible by 2.
- (D) 12 is divisible by both but is larger than 6, so not the smallest.

Final Answer: smallest such number = 6 \Rightarrow **C**

Answer: (C) [Go Back to Q19](#)

Q20.

Solution

Concept — Area of a circle: $\text{Area} = \pi r^2$, where r is the radius.

Step 1 — Substitute: with $r = 7$ cm and $\pi = \frac{22}{7}$,

$$\text{Area} = \frac{22}{7} \times 7 \times 7.$$

Step 2 — Simplify: $= \frac{22}{7} \times 49 = 22 \times 7 = 154 \text{ cm}^2$.

Why other options are wrong:

- (A) 44 cm^2 is the *circumference* ($2\pi r$), not the area.
- (B) 49 uses r^2 without π ; (C) 22 multiplies π by r only.

Final Answer: area = $154 \text{ cm}^2 \Rightarrow$ **D**

Answer: (D) [Go Back to Q20](#)



Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	A	2	B	3	C	4	D	5	A
6	B	7	C	8	D	9	A	10	B
11	C	12	D	13	A	14	B	15	C
16	D	17	A	18	B	19	C	20	D

