SRMJEEE English & Aptitude Sample Paper – 1

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.

> *The honey bee is a truly remarkable insect. A single hive may contain as many as sixty thousand bees, yet every bee has a clearly defined role. The queen lays the eggs, the workers gather nectar and guard the hive, and the drones mate with the queen. Without this strict division of labour, the colony simply could not survive.*

Q1. According to the passage, the main task of the worker bees is to:

(A) gather nectar and guard the hive

(B) lay the eggs

(C) mate with the queen

(D) rule the colony

Q2. The passage suggests that the survival of the bee colony depends mainly on:

(A) the large size of the hive

(B) the division of labour among the bees

(C) the number of drones present

(D) the strength of the queen

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

(A) scarce

(B) tiny

(C) plentiful

(D) hidden

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

(A) kind

(B) wealthy

(C) cheerful

(D) stingy

Q5. Identify the part of the sentence that contains a grammatical error:
"He do not (A) / like to play (B) / cricket (C) / in the summer. (D)"

(A) part (A)

(B) part (B)

(C) part (C)

(D) part (D)

Q6. Fill in the blank with the correct word:
"She has been living in this city _____ 2010."

(A) for

(B) from

(C) since

(D) by

Q7. Choose the word for the following: "A person who cannot read or write."

(A) illegible

(B) illiterate

(C) ignorant

(D) innocent

Q8. The idiom "to let the cat out of the bag" means:

(A) to buy a pet

(B) to lose something valuable

(C) to make a careless mistake

(D) to reveal a secret

Part B: Aptitude

Q9. Find the next number in the series: $2,\ 6,\ 12,\ 20,\ 30,\ ?$

(A) 42

(B) 40

(C) 36

(D) 44

Q10. If each letter is replaced by its position number in the English alphabet, so that "CAT" is coded as "3-1-20", then "DOG" will be coded as:

(A) 4-14-7

(B) 4-15-7

(C) 3-15-7

(D) 4-15-8

Q11. Pointing to a man, a woman said, "His mother is the only daughter of my mother." How is the woman related to the man?

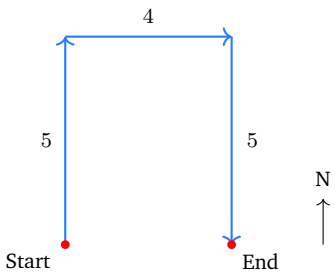
(A) sister

(B) aunt

(C) mother

(D) grandmother

Q12. A man starts from a point, walks 5 km towards the North, then turns right and walks 4 km, and finally turns right again and walks 5 km, as shown. How far and in which direction is he now from the starting point?



(A) 4 km towards the North

(B) 5 km towards the East

(C) 9 km towards the East

(D) 4 km towards the East

Q13. In a row of 20 students, Ravi is 7th from the left end. What is his position from the right end?

(A) 14th

(B) 13th

(C) 15th

(D) 7th

Q14. Choose the option that completes the analogy: **Doctor : Hospital :: Teacher : ?**

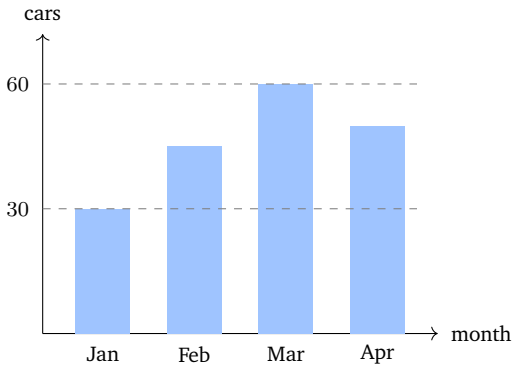
(A) student

(B) school

(C) book

(D) lesson

Q15. The bar chart shows the number of cars sold by a dealer in four successive months. In which month were the *maximum* cars sold?



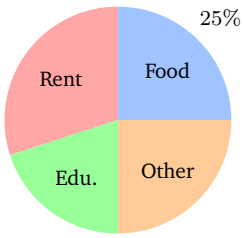
(A) January

(B) February

(C) March

(D) April

Q16. The pie chart shows how a family's monthly budget of **Rs. 36,000** is divided. The amount the family spends on *Food* is:



(A) Rs. 6,000

(B) Rs. 12,000

(C) Rs. 18,000

(D) Rs. 9,000

Q17. If 40% of a number is 80, then the number is:

(A) 200

(B) 160

(C) 320

(D) 120

Q18. A shopkeeper buys an article for Rs. 400 and sells it for Rs. 500. His profit percentage is:

(A) 20%

(B) 10%

(C) 25%

(D) 50%

Q19. The average (arithmetic mean) of the first five natural numbers $1, 2, 3, 4, 5$ is:

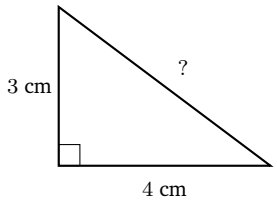
(A) 2.5

(B) 3

(C) 5

(D) 15

Q20. In the right-angled triangle shown, the two perpendicular sides measure 3 cm and 4 cm. The length of the hypotenuse is:



(A) 7 cm

(B) 6 cm

(C) 12 cm

(D) 5 cm

Detailed Solutions

Q1.

Solution

Concept — Reading for stated detail: A "detail" question is answered directly from the text; locate the sentence that names the relevant role.

Step 1 — Locate the line: The passage states, "the workers gather nectar and guard the hive."

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

Why other options are wrong:

- (B) Laying eggs is the queen's job, not the workers'.
- (C) Mating with the queen is the drones' role; (D) no bee "rules" the colony in the passage.

Final Answer: Workers gather nectar and guard the hive $\Rightarrow$ $\boxed{\text{A}}$

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, "Without this strict division of labour, the colony simply could not survive."

Step 2 — Interpret: The survival of the colony is tied directly to the division of labour among the bees — option (B).

Why other options are wrong:

- (A) The hive's size (60,000 bees) is mentioned only as a fact, not as the reason for survival.
- (C),(D) The drones and the queen are parts of the system, but it is the whole *division of labour* that the passage stresses.

Final Answer: Survival depends on the division of labour $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q2

Q3.

Solution

Concept — Synonyms: A synonym is a word with nearly the same meaning. "Abundant" means existing in large quantity, more than enough.

Step 1 — Recall the meaning: abundant = plentiful, ample, copious.

Step 2 — Match: The closest option is "plentiful" (C).

Why other options are wrong:

- (A) "scarce" is the opposite (an antonym).
- (B) "tiny" refers to size, not quantity; (D) "hidden" means concealed — unrelated.

Final Answer: abundant $\approx$ plentiful $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q3

Q4.

Solution

Concept — Antonyms: An antonym is a word of opposite meaning. "Generous" means willing to give freely and unselfishly.

Step 1 — Recall the meaning: generous = giving, liberal, big-hearted.

Step 2 — Find the opposite: The opposite of giving freely is "stingy" (mean, miserly) — option (D).

Why other options are wrong:

- (A) "kind" is a near-synonym, not an antonym.
- (B) "wealthy" and (C) "cheerful" describe other qualities, not the opposite of generous.

Final Answer: opposite of generous = stingy $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q4

Q5.

Solution

Concept — Subject–verb agreement: For a singular third-person subject (he/she/it) in the simple present, the negative auxiliary is "does not", not "do not".

Step 1 — Examine part (A): "He do not" is incorrect; the correct form is "He *does* not."

Step 2 — Check the rest: "like to play", "cricket" and "in the summer" are all grammatically correct, so the error is confined to part (A).

Why other options are wrong:

- (B),(C),(D) contain no grammatical error; only the auxiliary verb in (A) is wrong.

Final Answer: The error is in part (A) ("He do not") $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q5

Q6.

Solution

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

Step 1 — Identify the time word: "2010" is a point of time (a specific year).

Step 2 — Choose: The correct preposition is "since" — "since 2010" (C).

Why other options are wrong:

- (A) "for" needs a duration (e.g. "for ten years").
- (B) "from" needs a matching "to"; (D) "by" indicates a deadline, not a starting point.

Final Answer: "since 2010" $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q6

Q7.

Solution

Concept — One-word substitution: A single word that replaces a phrase. Here we need the word for someone who cannot read or write.

Step 1 — Recall the term: A person who cannot read or write is *illiterate*.

Why other options are wrong:

- (A) "illegible" describes handwriting that cannot be read, not a person.
- (C) "ignorant" means lacking knowledge in general; (D) "innocent" means free from guilt — neither fits.

Final Answer: cannot read or write = illiterate $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q7

Q8.

Solution

Concept — Idioms: An idiom carries a figurative meaning different from the literal words. "To let the cat out of the bag" is a fixed expression.

Step 1 — Recall the meaning: It means to disclose a secret carelessly or accidentally.

Step 2 — Match: This is option (D), "to reveal a secret".

Why other options are wrong:

- (A),(B),(C) take the words literally or guess; none matches the idiom's accepted meaning.

Final Answer: the idiom means to reveal a secret $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q8

Q9.

Solution

Concept — Number series (difference pattern): Look at the differences between consecutive terms; a regular pattern there predicts the next term.

Step 1 — Find the differences: $6-2=4$, $12-6=6$, $20-12=8$, $30-20=10$. The differences increase by 2 each time.

Step 2 — Extend: The next difference is 12, so the next term is $30+12=42$. (Equivalently, each term is $n(n+1)$: $1\cdot 2, 2\cdot 3, 3\cdot 4, \ldots, 6\cdot 7=42$.)

Why other options are wrong:

- (B) 40 and (C) 36 ignore the $+12$ difference; (D) 44 overshoots it.

Final Answer: next term $=42 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q9

Q10.

Solution

Concept — Letter–number coding: Replace each letter by its serial position in the alphabet (A$=1$, B$=2$, …, Z$=26$).

Step 1 — Encode each letter of DOG: D $=4$, O $=15$, G $=7$.

Step 2 — Write the code: 4-15-7, which is option (B).

Why other options are wrong:

- (A) uses 14 for O (O is the 15th letter, not the 14th).
- (C) uses 3 for D; (D) uses 8 for G — both miscount.

Final Answer: DOG $=$ 4-15-7 $\Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q10

Q11.

Solution

Concept — Blood relations: Work outward from the speaker. Decode the phrase "the only daughter of my mother" first.

Step 1 — Interpret the phrase: "The only daughter of my mother" is the speaker herself (the woman has no sister, so the only daughter is she).

Step 2 — Substitute: So "his mother is the woman" — i.e. the woman is the man's mother.

Why other options are wrong:

- (A) "sister" or (B) "aunt" would require a different relative as his mother.
- (D) "grandmother" would need an extra generation that the statement does not provide.

Final Answer: the woman is the man's mother $\Rightarrow$ C

Answer: (C) Go Back to Q11

Q12.

Solution

Concept — Direction sense: Track the position on a North–South / East–West grid, taking "turn right" relative to the current facing direction.

Step 1 — Trace the walk: North 5 km (now facing N). Turn right $\rightarrow$ faces East, walks 4 km East. Turn right $\rightarrow$ faces South, walks 5 km South.

Step 2 — Net displacement: The 5 km North and 5 km South cancel, leaving only 4 km East. So he is 4 km due East of the start.

Why other options are wrong:

- (A) the North/South parts cancel, so the answer is not North.
- (B) 5 km uses a wrong leg; (C) 9 km adds the legs instead of cancelling them.

Final Answer: 4 km towards the East $\Rightarrow$ D

Answer: (D) Go Back to Q12

Q13.

Solution

Concept — Position in a row: For a single row, (position from left) + (position from right) = (total) +1.

Step 1 — Apply the formula: position from right = total − position from left +1 = 20 − 7 + 1.

Step 2 — Compute: = 14. So Ravi is 14th from the right.

Why other options are wrong:

- (B) 13 forgets the "+1"; (C) 15 adds instead of subtracting correctly.
- (D) 7 just repeats the left-hand position.

Final Answer: 14th from the right ⇒ A

Answer: (A) Go Back to Q13

Q14.

Solution

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

Step 1 — Relationship: A doctor works in a hospital (person : place of work).

Step 2 — Apply: A teacher works in a school. So the missing word is "school" (B).

Why other options are wrong:

- (A) "student" is the person a teacher teaches, not the workplace.
- (C) "book" and (D) "lesson" are tools/content, not the place of work.

Final Answer: Teacher : School ⇒ B

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: Jan $= 30$, Feb $= 45$, Mar $= 60$, Apr $= 50$ cars.

Step 2 — Compare: The tallest bar (value 60) is March, so the maximum cars were sold in March.

Why other options are wrong:

- (A) January is the *lowest* (30).
- (B) February (45) and (D) April (50) are both below March's 60.

Final Answer: Maximum sales in March $\Rightarrow$ C

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 25% of the budget.

Step 2 — Compute the amount:

$$25\% \text{ of } 36000 = \frac{25}{100} \times 36000 = 9000.$$

So Rs. $9{,}000$ is spent on food.

Why other options are wrong:

- (A) Rs. 6000 would be $\approx 16.7\%$; (B) Rs. 12000 is 33.3%.
- (C) Rs. 18000 is 50% — none equals the 25% food share.

Final Answer: Food $=$ Rs. $9{,}000 \Rightarrow$ D

Answer: (D) Go Back to Q16

Q17.

Solution

Concept — Reverse percentage: If a known percentage of an unknown number equals a given value, divide to recover the number.

Step 1 — Set up: Let the number be x. Then 40% of $x = 80$, i.e. $\frac{40}{100}x = 80$.

Step 2 — Solve: $0.4x = 80 \Rightarrow x = \frac{80}{0.4} = 200$.

Step 3 — Check: 40% of $200 = 0.4 \times 200 = 80$ ✓.

Why other options are wrong:

- (B) 40% of $160 = 64$; (C) 40% of $320 = 128$; (D) 40% of $120 = 48$ — none gives 80.

Final Answer: the number is $200 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q17

Q18.

Solution

Concept — Profit percentage: Profit $\% = \frac{\text{Profit}}{\text{Cost Price}} \times 100$, where Profit $=$ SP $-$ CP.

Step 1 — Find the profit: Profit $= 500 - 400 = 100$ rupees.

Step 2 — Compute the percentage:

$$\text{Profit}\% = \frac{100}{400} \times 100 = 25\%.$$

Why other options are wrong:

- (A) 20% wrongly divides by the selling price $(100/500)$.
- (B) 10% and (D) 50% do not match $100/400$.

Final Answer: profit $= 25\% \Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q18

Q19.

Solution

Concept — Arithmetic mean: Average $= \dfrac{\text{sum of observations}}{\text{number of observations}}$.

Step 1 — Add the numbers: $1+2+3+4+5=15$.

Step 2 — Divide by the count: there are 5 numbers, so average $= \dfrac{15}{5} = 3$. (For the first n natural numbers the mean is $\frac{n+1}{2} = \frac{6}{2} = 3$.)

Why other options are wrong:

- (A) 2.5 is the mean of the first four; (C) 5 is the largest value, not the mean.
- (D) 15 is the sum, not the average.

Final Answer: average $= 3 \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q19

Q20.

Solution

Concept — Pythagoras' theorem: In a right-angled triangle, hypotenuse^2 = base^2 + height^2.

Step 1 — Substitute: $h^2 = 4^2 + 3^2 = 16 + 9 = 25$.

Step 2 — Take the square root: $h = \sqrt{25} = 5$ cm. (This is the well-known 3-4-5 right triangle.)

Why other options are wrong:

- (A) 7 adds the legs $(3+4)$ instead of using Pythagoras.
- (B) 6 and (C) 12 do not satisfy $h^2 = 25$.

Final Answer: hypotenuse $= 5$ cm $\Rightarrow \boxed{\text{D}}$

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	C	7	B	8	D	9	A	10	B
11	C	12	D	13	A	14	B	15	C
16	D	17	A	18	C	19	B	20	D