SRMJEEE English & Aptitude Sample Paper – 2

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.

Water is always on the move. The Sun's heat warms the oceans, lakes and rivers, and turns their water into an invisible vapour that rises into the sky. High above the ground this vapour cools and condenses into tiny droplets that gather as clouds. When the droplets grow heavy enough, they fall back to the Earth as rain. The water then flows into the rivers and seas once more, and the whole process begins again. In this way nature recycles the same water over and over.

Q1. According to the passage, what causes the water to rise into the sky as vapour?

(A) the wind blowing over the sea

(B) the cooling of the clouds

(C) the heat of the Sun

(D) the falling of the rain

Q2. The passage mainly suggests that:

(A) nature recycles the same water again and again

(B) rain falls only over the oceans

(C) clouds are made of dust particles

(D) water vapour never returns to the Earth

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

(A) fearful

(B) courageous

(C) lazy

(D) weak

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

(A) triumph

(B) success

(C) glory

(D) defeat

Q5. Identify the part of the sentence that contains a grammatical error:
"Each of the boys (A) / have (B) / a new bag (C) / today. (D)"

(A) part (A)

(B) part (B)

(C) part (C)

(D) part (D)

Q6. Fill in the blank with the correct word:
"He is good ____ mathematics."

(A) at

(B) in

(C) for

(D) of

Q7. Choose the word for the following: "One who studies the stars and the planets."

(A) geologist

(B) botanist

(C) astronomer

(D) zoologist

Q8. The idiom "a piece of cake" means:

(A) a tasty dessert

(B) a small reward

(C) a difficult task

(D) something very easy

Part B: Aptitude

Q9. Find the next number in the series: $1,\ 4,\ 9,\ 16,\ 25,\ ?$

(A) 36

(B) 30

(C) 35

(D) 49

Q10. In a certain code, each letter is shifted one place forward in the alphabet, so that "CAT" is written as "DBU". In the same code, "SUN" will be written as:

(A) RTM

(B) SVO

(C) TVO

(D) TWP

Q11. Pointing to a boy, Rohan said, "That boy is my father's sister's son." How is the boy related to Rohan?

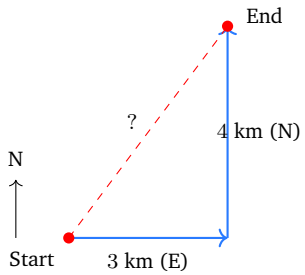
(A) brother

(B) cousin

(C) uncle

(D) nephew

Q12. A man starts from a point, walks 3 km towards the East, then turns left and walks 4 km towards the North, as shown. What is the shortest straight-line distance between his finishing point and his starting point?



(A) 1 km

(B) 7 km

(C) 6 km

(D) 5 km

Q13. In a row of 25 students, Sita is 10th from the right end. What is her position from the left end?

(A) 16th

(B) 15th

(C) 10th

(D) 14th

Q14. Choose the option that completes the analogy: **Cow : Calf :: Dog : ?**

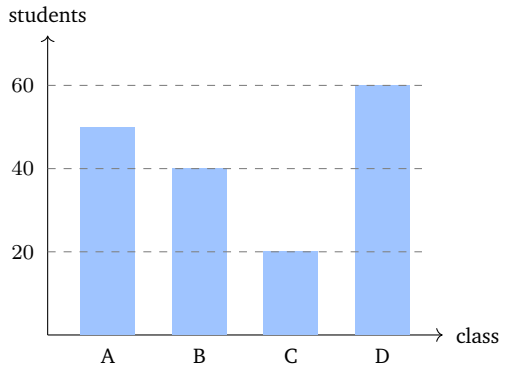
(A) kitten

(B) puppy

(C) cub

(D) foal

Q15. The bar chart shows the number of students in four classes A, B, C and D. Which class has the *fewest* students?



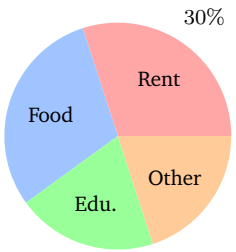
(A) class A

(B) class B

(C) class C

(D) class D

Q16. The pie chart shows how a family's monthly expenditure of **Rs. 24,000** is divided. The amount the family spends on *Rent* is:



(A) Rs. 7,200

(B) Rs. 6,000

(C) Rs. $8{,}400$

(D) Rs. $4{,}800$

Q17. The value of 25% of 240 is:

(A) 48

(B) 50

(C) 80

(D) 60

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

(A) 25%

(B) 20%

(C) 10%

(D) 40%

Q19. The average (arithmetic mean) of the first ten natural numbers $1, 2, 3, \ldots, 10$ is:

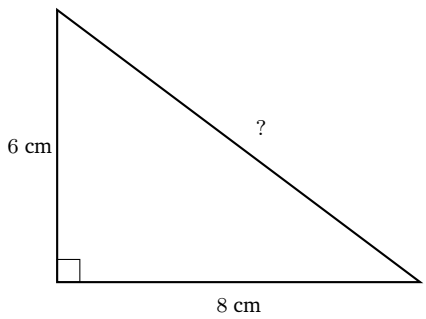
(A) 10

(B) 55

(C) 5.5

(D) 5

Q20. In the right-angled triangle shown, the two perpendicular sides measure 6 cm and 8 cm. The length of the hypotenuse is:



(A) 14 cm

(B) 12 cm

(C) 7 cm

(D) 10 cm

Detailed Solutions

Q1.

Solution

Concept — Reading for stated detail: A "detail" question is answered directly from the text; locate the sentence that gives the cause asked for.

Step 1 — Locate the line: The passage states, "The Sun's heat warms the oceans, lakes and rivers, and turns their water into an invisible vapour that rises into the sky."

Step 2 — Match to the options: The cause of the rising vapour is the heat of the Sun, which is option (C).

Why other options are wrong:

- (A) Wind is not mentioned in the passage at all.
- (B) Cooling causes the vapour to condense into clouds, not to rise; (D) rain is the falling stage, the opposite of rising.

Final Answer: The Sun's heat makes the water rise as vapour $\Rightarrow$ C

Answer: (C) 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 idea: The passage describes a loop — evaporation, condensation, rain, and back to the rivers and seas — and ends, "nature recycles the same water over and over."

Step 2 — Interpret: The central message is that the same water is used again and again, which is option (A).

Why other options are wrong:

- (B) The passage says rain falls back to the Earth in general, not only over oceans.
- (C) The passage never says clouds are made of dust; (D) directly contradicts the text, since vapour does return as rain.

Final Answer: Nature recycles the same water again and again $\Rightarrow$ A

Answer: (A) Go Back to Q2

Q3.

Solution

Concept — Synonyms: A synonym is a word with nearly the same meaning. "Brave" means showing courage in the face of danger.

Step 1 — Recall the meaning: brave = bold, fearless, courageous.

Step 2 — Match: The closest option is "courageous" (B).

Why other options are wrong:

- (A) "fearful" is the opposite (an antonym).
- (C) "lazy" and (D) "weak" describe other qualities, not boldness.

Final Answer: brave $\approx$ courageous $\Rightarrow \boxed{B}$

Answer: (B) Go Back to Q3

Q4.

Solution

Concept — Antonyms: An antonym is a word of opposite meaning. "Victory" means winning, success in a contest or battle.

Step 1 — Recall the meaning: victory = triumph, win, success.

Step 2 — Find the opposite: The opposite of winning is "defeat" (a loss) — option (D).

Why other options are wrong:

- (A) "triumph" and (B) "success" are near-synonyms of victory, not antonyms.
- (C) "glory" is the honour that comes with victory, again close in sense, not opposite.

Final Answer: opposite of victory = defeat $\Rightarrow \boxed{D}$

Answer: (D) Go Back to Q4

Q5.

Solution

Concept — Subject–verb agreement: The phrase "each of the . . . " always takes a *singular* verb, because the subject is "each", not "the boys".

Step 1 — Examine part (B): "Each of the boys have" is incorrect; with the singular subject "each", the verb must be "has".

Step 2 — Check the rest: "Each of the boys", "a new bag" and "today" are all correct, so the error is confined to part (B).

Why other options are wrong:

- (A) "Each of the boys" is a correct singular subject phrase.
- (C),(D) contain no grammatical error; only the verb in (B) is wrong.

Final Answer: The error is in part (B) ("have" should be "has") $\Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q5

Q6.

Solution

Concept — Prepositions with adjectives: Certain adjectives take a fixed preposition. The adjective "good" is followed by "at" when it refers to skill or ability in something.

Step 1 — Identify the sense: The sentence describes ability in a subject (mathematics).

Step 2 — Choose: The correct collocation is "good at mathematics" (A).

Why other options are wrong:

- (B) "good in" is non-standard for a skill in a subject.
- (C) "good for" means beneficial; (D) "good of" means kind of someone — neither fits ability.

Final Answer: "good at mathematics" $\Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q6

Q7.

Solution

Concept — One-word substitution: A single word that replaces a phrase. Here we need the word for one who studies the stars and the planets.

Step 1 — Recall the term: A person who studies the stars and planets is an *astronomer*.

Why other options are wrong:

- (A) a "geologist" studies rocks and the Earth's structure.
- (B) a "botanist" studies plants; (D) a "zoologist" studies animals — none deals with the stars.

Final Answer: one who studies stars and planets = astronomer $\Rightarrow \boxed{C}$

Answer: (C) Go Back to Q7

Q8.

Solution

Concept — Idioms: An idiom carries a figurative meaning different from the literal words. "A piece of cake" is a fixed expression.

Step 1 — Recall the meaning: It means a task that is very easy to do.

Step 2 — Match: This is option (D), "something very easy".

Why other options are wrong:

- (A) takes the words literally as a dessert; (B) "a small reward" is a guess.
- (C) "a difficult task" is the exact opposite of the idiom's meaning.

Final Answer: the idiom means something very easy $\Rightarrow \boxed{D}$

Answer: (D) Go Back to Q8

Q9.

Solution

Concept — Number series (perfect squares): Check whether the terms are squares of consecutive whole numbers.

Step 1 — Recognise the pattern: $1 = 1^2$, $4 = 2^2$, $9 = 3^2$, $16 = 4^2$, $25 = 5^2$. Each term is the square of its position.

Step 2 — Extend: The next term is 6^2:

$$6^2 = 36.$$

Why other options are wrong:

- (B) 30 and (C) 35 are not perfect squares.
- (D) $49 = 7^2$ skips ahead to the seventh square instead of the sixth.

Final Answer: next term $= 36 \Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q9

Q10.

Solution

Concept — Shift coding: Each letter of the word is replaced by the letter that comes one place after it in the alphabet ($+1$ shift).

Step 1 — Verify the rule: C$\rightarrow$D, A$\rightarrow$B, T$\rightarrow$U, so "CAT" becomes "DBU". The rule is $+1$.

Step 2 — Apply to SUN: S$\rightarrow$T, U$\rightarrow$V, N$\rightarrow$O, giving "TVO", which is option (C).

Why other options are wrong:

- (A) "RTM" shifts each letter one place backward, the wrong direction.
- (B) "SVO" leaves S unchanged; (D) "TWP" shifts the last two letters by $+2$.

Final Answer: SUN $\rightarrow$ TVO $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q10

Q11.

Solution

Concept — Blood relations: Decode the phrase step by step, working outward from the speaker (Rohan).

Step 1 — Interpret the phrase: "My father's sister" is Rohan's aunt. Her son is therefore Rohan's cousin.

Step 2 — Conclude: The boy is the son of Rohan's aunt, i.e. Rohan's cousin — option (B).

Why other options are wrong:

- (A) a "brother" would be his own father's son, not his aunt's son.
- (C) "uncle" and (D) "nephew" belong to different generations than a cousin.

Final Answer: the boy is Rohan's cousin $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q11

Q12.

Solution

Concept — Direction sense with Pythagoras: When the two legs of the path are at right angles (East then North), the straight-line distance is the hypotenuse of a right triangle.

Step 1 — Set up the right triangle: The man goes 3 km East and then 4 km North; these two legs are perpendicular.

Step 2 — Apply Pythagoras:

$$d = \sqrt{3^2 + 4^2} = \sqrt{9 + 16} = \sqrt{25} = 5 \text{ km}.$$

So the shortest distance is 5 km (the classic 3-4-5 triangle).

Why other options are wrong:

- (A) 1 km wrongly subtracts the legs $(4 - 3)$.
- (B) 7 km adds the legs $(3 + 4)$ instead of using the straight line; (C) 6 km does not satisfy $d^2 = 25$.

Final Answer: shortest distance $= 5$ km $\Rightarrow$ $\boxed{\text{D}}$

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 left = total − position from right +1 = 25 − 10 + 1.

Step 2 — Compute: = 16. So Sita is 16th from the left.

Why other options are wrong:

- (B) 15 forgets the "+1"; (D) 14 miscounts the subtraction.
- (C) 10 just repeats the right-hand position.

Final Answer: 16th from the left ⇒ A

Answer: (A) Go Back to Q13

Q14.

Solution

Concept — Analogy (animal : young one): Identify the relationship in the first pair and apply the same relationship to the second.

Step 1 — Relationship: A calf is the young one of a cow (animal : its offspring).

Step 2 — Apply: The young one of a dog is a puppy. So the missing word is "puppy" (B).

Why other options are wrong:

- (A) a "kitten" is the young of a cat, not a dog.
- (C) a "cub" is the young of a lion or bear; (D) a "foal" is the young of a horse.

Final Answer: Dog : Puppy ⇒ B

Answer: (B) Go Back to Q14

Q15.

Solution

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

Step 1 — Read the bars: A $= 50$, B $= 40$, C $= 20$, D $= 60$ students.

Step 2 — Compare: The shortest bar (value 20) is class C, so class C has the fewest students.

Why other options are wrong:

- (A) class A (50) and (B) class B (40) are both taller than C.
- (D) class D (60) is the tallest, the maximum, not the minimum.

Final Answer: fewest students in class C $\Rightarrow$ $\boxed{\text{C}}$

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: "Rent" occupies 30% of the budget.

Step 2 — Compute the amount:

$$30\% \text{ of } 24000 = \frac{30}{100} \times 24000 = 7200.$$

So Rs. $7{,}200$ is spent on rent.

Why other options are wrong:

- (B) Rs. 6000 would be 25%; (D) Rs. 4800 would be 20%.
- (C) Rs. 8400 is 35% — none equals the 30% rent share.

Final Answer: Rent $=$ Rs. $7{,}200$ $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q16

Q17.

Solution

Concept — Percentage of a number: "$p\%$ of N" means $\dfrac{p}{100} \times N$.

Step 1 — Set up: We need 25% of 240, i.e. $\dfrac{25}{100} \times 240$.

Step 2 — Compute:

$$25\% \text{ of } 240 = \frac{1}{4} \times 240 = 60.$$

(Since $25\% = \frac{1}{4}$, divide 240 by 4.)

Why other options are wrong:

- (A) 48 is 20% of 240; (B) 50 does not match any clean share.
- (C) 80 is 33.3% of 240, not 25%.

Final Answer: 25% of $240 = 60 \Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q17

Q18.

Solution

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

Step 1 — Find the loss: Loss $= 500 - 400 = 100$ rupees.

Step 2 — Compute the percentage:

$$\text{Loss}\% = \frac{100}{500} \times 100 = 20\%.$$

Why other options are wrong:

- (A) 25% wrongly divides by the selling price $(100/400)$.
- (C) 10% and (D) 40% do not match $100/500$.

Final Answer: loss $= 20\% \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q18

Q19.

Solution

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

Step 1 — Add the numbers: $1+2+3+\cdots+10 = \dfrac{10\times 11}{2} = 55$.

Step 2 — Divide by the count: there are 10 numbers, so

$$\text{average} = \frac{55}{10} = 5.5.$$

(For the first n natural numbers the mean is $\frac{n+1}{2} = \frac{11}{2} = 5.5$.)

Why other options are wrong:

- (A) 10 is the largest value, not the mean; (B) 55 is the sum, not the average.
- (D) 5 forgets the half (the mean of 1 to 10 lies between 5 and 6).

Final Answer: average $= 5.5 \Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q19

Q20.

Solution

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

Step 1 — Substitute: $h^2 = 8^2 + 6^2 = 64 + 36 = 100$.

Step 2 — Take the square root: $h = \sqrt{100} = 10$ cm. (This is the 6-8-10 right triangle, a multiple of 3-4-5.)

Why other options are wrong:

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

Final Answer: hypotenuse $= 10$ cm $\Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q20

Answer Key

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