SRMJEEE English & Aptitude Sample Paper – 10

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.

Solar energy is one of the cleanest sources of power available to us. Sunlight is a renewable resource that will never run out, and solar panels convert this sunlight directly into electricity. Because the process needs no burning of coal or oil, it releases almost no harmful gases. By relying more on the sun, we can cut pollution and reduce our dependence on fossil fuels.

Q1. According to the passage, solar panels produce electricity by:

(A) converting sunlight directly into electricity

(B) burning coal at a low temperature

(C) storing oil inside the panels

(D) releasing harmful gases into the air

Q2. The passage suggests that solar energy is:

(A) more polluting than fossil fuels

(B) a promising solution to energy and pollution problems

(C) a resource that will soon run out

(D) useful only on cloudy days

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

(A) noisy

(B) angry

(C) calm

(D) crowded

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

(A) rare

(B) limited

(C) costly

(D) abundant

Q5. Identify the part of the sentence that contains a grammatical error:
"The scenery (A) / of Kashmir (B) / are very beautiful. (C) / No error (D)"

(A) part (C)

(B) part (B)

(C) part (A)

(D) part (D)

Q6. Fill in the blank with the correct word:
"The teacher congratulated him ____ his success."

(A) for

(B) on

(C) with

(D) about

Q7. Choose the word for the following: "A person who never makes a mistake and cannot be wrong."

(A) invincible

(B) invisible

(C) infallible

(D) inevitable

Q8. The idiom "to make a mountain out of a molehill" means:

(A) to climb a difficult mountain

(B) to solve a hard problem quickly

(C) to build something large from small parts

(D) to exaggerate a small problem

Part B: Aptitude

Q9. Find the next number in the series: $2,\ 3,\ 5,\ 7,\ 11,\ ?$

(A) 13

(B) 12

(C) 14

(D) 15

Q10. If each letter of a word is shifted two places forward in the English alphabet (so A becomes C, B becomes D, and so on), then "BOOK" will be coded as:

(A) DPPM

(B) DQQM

(C) CQQM

(D) DQQN

Q11. A boy says, "She is the daughter of my grandfather's only son." How is the girl related to the boy?

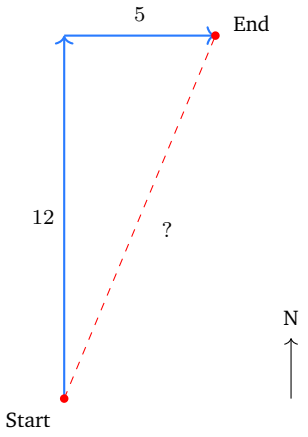
(A) his mother

(B) his aunt

(C) his sister

(D) his cousin

Q12. A man walks 12 km towards the North and then turns right and walks 5 km towards the East, as shown. What is his straight-line distance from the starting point?



(A) 7 km

(B) 17 km

(C) 11 km

(D) 13 km

Q13. In a row of 35 students, a boy is 16th from the left end. What is his position from the right end?

(A) 20th

(B) 19th

(C) 21st

(D) 16th

Q14. Choose the option that completes the analogy: **Thermometer : Temperature :: Barometer : ?**

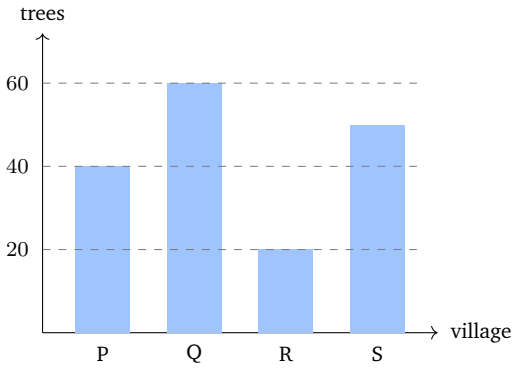
(A) height

(B) pressure

(C) rainfall

(D) humidity

Q15. The bar chart shows the number of trees planted in four villages. What is the *difference* between the highest and the lowest number of trees planted?



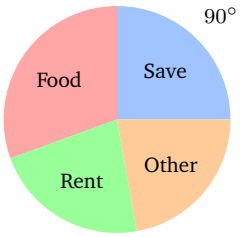
(A) 20

(B) 60

(C) 40

(D) 30

Q16. The pie chart shows how a monthly budget of **Rs. 16,000** is divided. The *Savings* sector measures 90° at the centre. How much money is allotted to Savings?



(A) Rs. 8,000

(B) Rs. 2,000

(C) Rs. 6,000

(D) Rs. 4,000

Q17. If 5% of a number is 25, then the number is:

(A) 500

(B) 125

(C) 250

(D) 50

Q18. A shopkeeper buys an article for Rs. 600 and sells it for Rs. 480. His loss percentage is:

(A) 25%

(B) 20%

(C) 12%

(D) 15%

Q19. The average (arithmetic mean) of the numbers $2,\ 4,\ 6$ and 8 is:

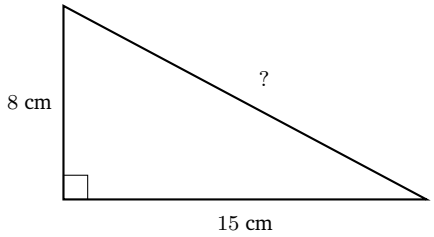
(A) 4

(B) 6

(C) 5

(D) 20

Q20. In the right-angled triangle shown, the two perpendicular sides measure 8 cm and 15 cm. The length of the hypotenuse is:



(A) 23 cm

(B) 19 cm

(C) 21 cm

(D) 17 cm

Detailed Solutions

Q1.

Solution

Concept — Reading for stated detail: A "detail" question is answered straight from the text; find the sentence that describes the actual process.

Step 1 — Locate the line: The passage states, "solar panels convert this sunlight directly into electricity."

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

Why other options are wrong:

- (B) The passage says the process needs *no* burning of coal or oil.
- (C) Panels do not store oil; (D) the passage states it releases almost *no* harmful gases.

Final Answer: Panels convert sunlight directly into electricity $\Rightarrow$ $\boxed{\text{A}}$

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 idea: The passage says solar energy is clean and renewable, and that by using the sun "we can cut pollution and reduce our dependence on fossil fuels."

Step 2 — Interpret: Taken together this presents solar energy as a promising solution to energy and pollution problems — option (B).

Why other options are wrong:

- (A) The passage calls solar energy one of the *cleanest* sources, not more polluting.
- (C) Sunlight is described as renewable and "will never run out"; (D) cloudy days are not mentioned at all.

Final Answer: Solar energy is a promising solution $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q2

Q3.

Solution

Concept — Synonyms: A synonym is a word with nearly the same meaning. "Tranquil" means free from disturbance, peaceful.

Step 1 — Recall the meaning: tranquil = calm, peaceful, serene, still.

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

Why other options are wrong:

- (A) "noisy" and (D) "crowded" describe disturbance, the opposite of tranquil.
- (B) "angry" refers to an emotion, not to calmness.

Final Answer: tranquil $\approx$ calm $\Rightarrow$ $\boxed{C}$

Answer: (C) Go Back to Q3

Q4.

Solution

Concept — Antonyms: An antonym is a word of opposite meaning. "Scarce" means available in very small quantity, hard to find.

Step 1 — Recall the meaning: scarce = rare, insufficient, in short supply.

Step 2 — Find the opposite: The opposite of being in short supply is "abundant" (plentiful) — option (D).

Why other options are wrong:

- (A) "rare" and (B) "limited" are near-synonyms of scarce, not opposites.
- (C) "costly" refers to price, not to quantity.

Final Answer: opposite of scarce = abundant $\Rightarrow$ $\boxed{D}$

Answer: (D) Go Back to Q4

Q5.

Solution

Concept — Subject–verb agreement (uncountable nouns): "Scenery" is an uncountable singular noun and takes a singular verb ("is"), not a plural verb ("are").

Step 1 — Examine part (C): "are very beautiful" is incorrect because the subject "scenery" is singular; it should read "*is* very beautiful."

Step 2 — Check the rest: "The scenery" and "of Kashmir" are correct, so the error lies only in part (C).

Why other options are wrong:

- (A),(B) contain no error; the noun and the prepositional phrase are fine.
- (D) "No error" is wrong because part (C) does contain a clear verb-agreement error.

Final Answer: The error is in part (C) ("are" should be "is") $\Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q5

Q6.

Solution

Concept — Prepositions with "congratulate": The verb "congratulate" is followed by the preposition *on* when naming the achievement (congratulate someone *on* something).

Step 1 — Identify the structure: "congratulated him ___ his success" needs the preposition that links the person to the achievement.

Step 2 — Choose: The fixed collocation is "congratulated him *on* his success" — option (B).

Why other options are wrong:

- (A) "for" is used with some verbs (e.g. praise for) but not with congratulate in standard usage.
- (C) "with" and (D) "about" are not the accepted prepositions after congratulate.

Final Answer: "congratulated him on his success" $\Rightarrow \boxed{\text{B}}$

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 someone who never makes a mistake.

Step 1 — Recall the term: A person who never errs and cannot be wrong is *infallible*.

Step 2 — Confirm: "Infallible" literally means "incapable of failing or making mistakes" — option (C).

Why other options are wrong:

- (A) "invincible" means impossible to defeat, not free from error.
- (B) "invisible" means unable to be seen; (D) "inevitable" means certain to happen — neither fits.

Final Answer: never makes a mistake = infallible $\Rightarrow \boxed{C}$

Answer: (C) Go Back to Q7

Q8.

Solution

Concept — Idioms: An idiom carries a figurative meaning different from the literal words. "To make a mountain out of a molehill" is a fixed expression.

Step 1 — Recall the meaning: It means to treat a very small matter as if it were a huge problem — that is, to exaggerate.

Step 2 — Match: This is option (D), "to exaggerate a small problem".

Why other options are wrong:

- (A),(B),(C) take the words literally (climbing, solving, building) and miss the figurative sense of exaggeration.

Final Answer: the idiom means to exaggerate a small problem $\Rightarrow \boxed{D}$

Answer: (D) Go Back to Q8

Q9.

Solution

Concept — Number series (prime numbers): When the usual difference pattern does not fit, check whether the terms form a known sequence such as the primes.

Step 1 — Recognise the pattern: $2, 3, 5, 7, 11$ are the first five prime numbers (numbers divisible only by 1 and themselves).

Step 2 — Extend: The next prime after 11 is 13 (12 is divisible by 2, so it is skipped).

Why other options are wrong:

- (B) 12 is divisible by $2, 3, 4, 6$, so it is not prime.
- (C) 14 is even, hence not prime; (D) $15 = 3 \times 5$ is also not prime.

Final Answer: next prime $= 13 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q9

Q10.

Solution

Concept — Shift coding: Each letter moves a fixed number of places forward in the alphabet. Here the shift is $+2$.

Step 1 — Shift each letter of BOOK by $+2$: B$\to$D, O$\to$Q, O$\to$Q, K$\to$M.

Step 2 — Write the code: The result is "DQQM", which is option (B).

Why other options are wrong:

- (A) "DPPM" shifts O by only $+1$ (to P) instead of $+2$.
- (C) "CQQM" shifts B by only $+1$; (D) "DQQN" shifts K by $+3$ instead of $+2$.

Final Answer: BOOK $\to$ DQQM $\Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q10

Q11.

Solution

Concept — Blood relations: Decode the phrase from the inside out, starting with the grandfather.

Step 1 — Interpret "my grandfather's only son": The boy's grandfather has only one son, and that son must be the boy's own father.

Step 2 — Interpret "the daughter of" that son: The daughter of the boy's father is the boy's sister. So the girl is the boy's sister.

Why other options are wrong:

- (A) "mother" would be the wife of the father, not his daughter.
- (B) "aunt" would be the grandfather's daughter, but the phrase names the son's daughter; (D) "cousin" would need a different uncle, yet the son is the only son.

Final Answer: the girl is the boy's sister $\Rightarrow$ C

Answer: (C) Go Back to Q11

Q12.

Solution

Concept — Direction sense with Pythagoras: When the path turns at a right angle, the straight-line distance is the hypotenuse of a right triangle whose legs are the two stretches walked.

Step 1 — Set up the legs: North 12 km and East 5 km are perpendicular, so they form the two legs of a right triangle.

Step 2 — Apply Pythagoras:

$$d = \sqrt{12^2 + 5^2} = \sqrt{144 + 25} = \sqrt{169} = 13 \text{ km}.$$

(This is the well-known 5-12-13 right triangle.)

Why other options are wrong:

- (A) 7 km is the difference $12 - 5$, not the hypotenuse.
- (B) 17 km adds the legs $12 + 5$; (C) 11 km does not satisfy $d^2 = 169$.

Final Answer: straight-line distance $= 13$ km $\Rightarrow$ 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 = 35 − 16 + 1.

Step 2 — Compute: = 20. So the boy is 20th from the right.

Why other options are wrong:

- (B) 19 forgets the "+1" in the formula.
- (C) 21 adds the "+1" twice; (D) 16 simply repeats the left-hand position.

Final Answer: 20th from the right ⇒ A

Answer: (A) Go Back to Q13

Q14.

Solution

Concept — Analogy (instrument : quantity measured): Identify the relationship in the first pair and apply the same relationship to the second.

Step 1 — Relationship: A thermometer measures temperature (instrument : the quantity it measures).

Step 2 — Apply: A barometer measures atmospheric pressure. So the missing word is "pressure" (B).

Why other options are wrong:

- (A) "height" is measured by an altimeter, not a barometer.
- (C) "rainfall" is measured by a rain gauge; (D) "humidity" is measured by a hygrometer.

Final Answer: Barometer : Pressure ⇒ B

Answer: (B) Go Back to Q14

Q15.

Solution

Concept — Reading a bar chart: The height of each bar gives the value. Find the highest and lowest, then subtract.

Step 1 — Read the bars: P $= 40$, Q $= 60$, R $= 20$, S $= 50$ trees.

Step 2 — Find highest and lowest: Highest is Q $= 60$, lowest is R $= 20$.

Step 3 — Subtract: Difference $= 60 - 20 = 40$.

Why other options are wrong:

- (A) 20 is the lowest value itself, not the difference.
- (B) 60 is the highest value; (D) 30 uses wrong bars.

Final Answer: difference $= 40 \Rightarrow$ C

Answer: (C) Go Back to Q15

Q16.

Solution

Concept — Pie chart with angles: A full circle is $360°$. A sector's share of the total equals its angle divided by $360°$.

Step 1 — Find the fraction: The Savings sector is $90°$, so its share is $\frac{90}{360} = \frac{1}{4} = 25\%$.

Step 2 — Compute the amount:

$$\frac{90}{360} \times 16000 = \frac{1}{4} \times 16000 = 4000.$$

So Rs. $4{,}000$ is allotted to Savings.

Why other options are wrong:

- (A) Rs. 8000 would be $180°$ (50%); (B) Rs. 2000 would be $45°$.
- (C) Rs. 6000 would be $135°$ — none equals the $90°$ sector.

Final Answer: Savings $=$ Rs. $4{,}000 \Rightarrow$ 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 5% of $x = 25$, i.e. $\dfrac{5}{100}x = 25$.

Step 2 — Solve: $0.05x = 25 \Rightarrow x = \dfrac{25}{0.05} = 500$.

Step 3 — Check: 5% of $500 = 0.05 \times 500 = 25$ ✓.

Why other options are wrong:

- (B) 5% of $125 = 6.25$; (C) 5% of $250 = 12.5$.
- (D) 5% of $50 = 2.5$ — none gives 25.

Final Answer: the number is $500 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q17

Q18.

Solution

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

Step 1 — Find the loss: $\text{Loss} = 600 - 480 = 120$ rupees.

Step 2 — Compute the percentage:

$$\text{Loss}\% = \frac{120}{600} \times 100 = 20\%.$$

Why other options are wrong:

- (A) 25% would wrongly divide by the selling price $(120/480)$.
- (C) 12% and (D) 15% do not match $120/600$.

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: $2 + 4 + 6 + 8 = 20$.

Step 2 — Divide by the count: there are 4 numbers, so average $= \dfrac{20}{4} = 5$.

Why other options are wrong:

- (A) 4 and (B) 6 are individual terms, not the mean.
- (D) 20 is the sum, not the average.

Final Answer: average $= 5 \Rightarrow \boxed{\text{C}}$

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: $h^2 = 15^2 + 8^2 = 225 + 64 = 289$.

Step 2 — Take the square root: $h = \sqrt{289} = 17$ cm. (This is the well-known 8-15-17 right triangle.)

Why other options are wrong:

- (A) 23 adds the legs $(8 + 15)$ instead of using Pythagoras.
- (B) 19 and (C) 21 do not satisfy $h^2 = 289$.

Final Answer: hypotenuse $= 17$ 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	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