SRMJEEE English & Aptitude Sample Paper – 3

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.

> *Trees and forests are among the greatest gifts of nature. They give out the oxygen that every living creature needs to breathe, and their roots hold the soil firmly in place, preventing erosion when heavy rains fall. Forests also provide a home for countless birds and animals and supply us with timber, fruit and medicine. Because so much depends on them, we must protect and conserve our forests for the generations to come.*

Q1. According to the passage, the roots of trees help us by:

(A) holding the soil in place and preventing erosion

(B) giving out oxygen for us to breathe

(C) supplying timber and fruit

(D) providing a home for birds

Q2. The passage mainly suggests that we should:

(A) cut down forests for timber

(B) protect and conserve our forests

(C) keep all animals as pets

(D) stop the rains from falling

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

(A) slow

(B) steady

(C) swift

(D) gentle

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

(A) fake

(B) man-made

(C) synthetic

(D) natural

Q5. Identify the part of the sentence that contains a grammatical error:
"She is more cleverer (A) / than (B) / her sister (C) / in studies. (D)"

(A) part (A)

(B) part (B)

(C) part (C)

(D) part (D)

Q6. Fill in the blank with the correct word:
"She is married _____ a doctor."

(A) with

(B) to

(C) for

(D) at

Q7. Choose the word for the following: "A place where books are kept for reading."

(A) museum

(B) gallery

(C) library

(D) laboratory

Q8. The idiom "once in a blue moon" means:

(A) very often

(B) at night only

(C) during a full moon

(D) very rarely

Part B: Aptitude

Q9. Find the next number in the series: $3,\ 6,\ 12,\ 24,\ ?$

(A) 48

(B) 36

(C) 30

(D) 40

Q10. If each letter is replaced by its opposite letter in the alphabet (so that A↔Z, B↔Y, C↔X, and so on), then "CAB" is coded as:

(A) XYZ

(B) XZY

(C) YZX

(D) ZXY

Q11. Pointing to a lady, a boy says, "She is my mother's brother's wife." How is the lady related to the boy?

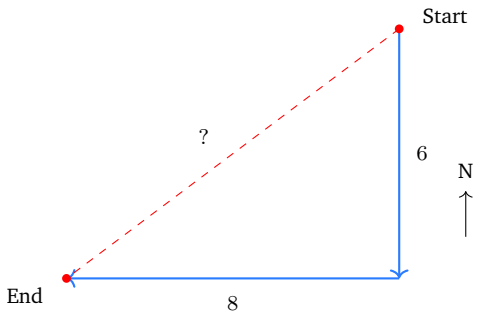
(A) mother

(B) grandmother

(C) aunt

(D) sister

Q12. A man starts from a point, walks 6 km towards the South, then turns and walks 8 km towards the West, as shown. What is his straight-line distance from the starting point?



(A) 14 km

(B) 2 km

(C) 48 km

(D) 10 km

Q13. In a class of 40 students, a boy ranks 12th from the top. What is his rank from the bottom?

(A) 29th

(B) 28th

(C) 12th

(D) 30th

Q14. Choose the option that completes the analogy: **Pen : Write :: Knife : ?**

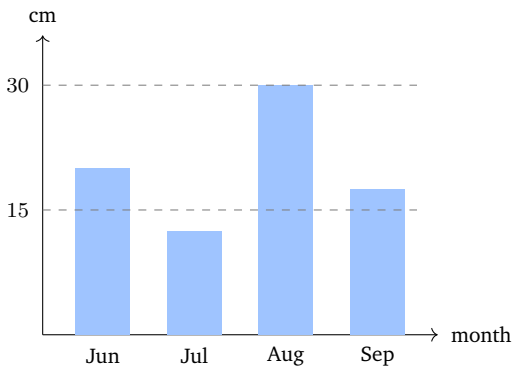
(A) sharp

(B) cut

(C) kitchen

(D) metal

Q15. The bar chart shows the rainfall (in cm) recorded in four months. In which month was the rainfall the *highest*?



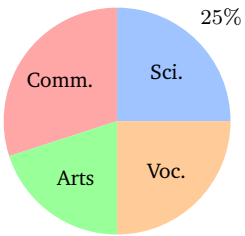
(A) June

(B) July

(C) August

(D) September

Q16. The pie chart shows how **360** students are grouped by their chosen stream. How many students chose the *Science* stream?



(A) 120

(B) 180

(C) 60

(D) 90

Q17. What percentage of 60 is 15?

(A) 25%

(B) 40%

(C) 15%

(D) 20%

Q18. An article is bought for Rs. 200 and sold at a profit of 20%. What is its selling price?

(A) Rs. 220

(B) Rs. 240

(C) Rs. 260

(D) Rs. 200

Q19. The highest common factor (HCF) of 12 and 18 is:

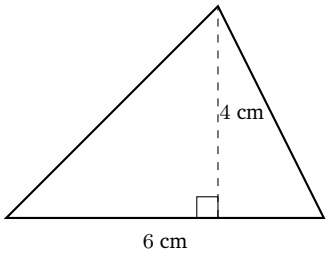
(A) 3

(B) 2

(C) 6

(D) 36

Q20. In the triangle shown, the base measures 6 cm and the height measures 4 cm. The area of the triangle is:



(A) 24 cm^2

(B) 10 cm^2

(C) 48 cm^2

(D) 12 cm^2

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 function.

Step 1 — Locate the line: The passage states, "their roots hold the soil firmly in place, preventing erosion when heavy rains fall."

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

Why other options are wrong:

- (B) Giving out oxygen is what the trees (leaves) do, not specifically the roots.
- (C) Timber and fruit are products of the forest, not a function of the roots.
- (D) Providing a home for birds is a role of the forest as a whole, not of the roots.

Final Answer: Roots hold the soil and prevent erosion $\Rightarrow \boxed{\text{A}}$

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, "we must protect and conserve our forests for the generations to come."

Step 2 — Interpret: The overall message is that forests are valuable and should be protected and conserved — option (B).

Why other options are wrong:

- (A) Cutting down forests for timber is the opposite of the passage's message.
- (C) Keeping animals as pets is never suggested; the passage speaks of habitat in the wild.
- (D) Stopping the rain is impossible and is not implied anywhere.

Final Answer: We should protect and conserve our forests $\Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q2

Q3.

Solution

Concept — Synonyms: A synonym is a word with nearly the same meaning. "Rapid" means moving or happening with great speed.

Step 1 — Recall the meaning: rapid = fast, quick, swift.

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

Why other options are wrong:

- (A) "slow" is the exact opposite (an antonym).
- (B) "steady" means even and unchanging, not necessarily fast.
- (D) "gentle" refers to a mild manner, not to speed.

Final Answer: rapid $\approx$ swift $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q3

Q4.

Solution

Concept — Antonyms: An antonym is a word of opposite meaning. "Artificial" means made by human beings rather than occurring in nature.

Step 1 — Recall the meaning: artificial = man-made, synthetic, not real.

Step 2 — Find the opposite: The opposite of man-made is "natural" (occurring in nature) — option (D).

Why other options are wrong:

- (A) "fake", (B) "man-made" and (C) "synthetic" are all near-synonyms of artificial, not opposites.

Final Answer: opposite of artificial = natural $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q4

Q5.

Solution

Concept — Degrees of comparison: The comparative degree is formed either by adding "-er" to a short adjective *or* by placing "more" before a long adjective — never both at once.

Step 1 — Examine part (A): "more cleverer" is a double comparative. "Cleverer" already carries the comparative meaning, so adding "more" is wrong.

Step 2 — Correct it: The phrase should read "She is *cleverer* than her sister."

Why other options are wrong:

- (B) "than" is the correct word to follow a comparative.
- (C) "her sister" and (D) "in studies" are both grammatically sound.

Final Answer: The error is in part (A) ("more cleverer") $\Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q5

Q6.

Solution

Concept — Prepositions with fixed phrases: Some words always take a particular preposition. The verb "marry" in the structure "to be married ... someone" takes the preposition "to".

Step 1 — Recall the fixed phrase: The correct collocation is "married *to* (a person)".

Step 2 — Fill in: "She is married *to* a doctor." — option (B).

Why other options are wrong:

- (A) "married with" is a common error and is not standard English.
- (C) "for" and (D) "at" do not fit this collocation at all.

Final Answer: "married to a doctor" $\Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q6

Q7.

Solution

Concept — One-word substitution: A single word that replaces a whole phrase. Here we need the word for a place where books are kept for reading.

Step 1 — Recall the term: A place where books are kept for reading and borrowing is a *library*.

Step 2 — Match: This is option (C).

Why other options are wrong:

- (A) a "museum" keeps objects of historical interest, not books for reading.
- (B) a "gallery" displays works of art.
- (D) a "laboratory" is a place for scientific experiments.

Final Answer: a place where books are kept = library $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q7

Q8.

Solution

Concept — Idioms: An idiom carries a figurative meaning different from the literal words. "Once in a blue moon" is a fixed expression.

Step 1 — Recall the meaning: A "blue moon" (a second full moon in a calendar month) is a rare event, so the idiom means something that happens very rarely.

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

Why other options are wrong:

- (A) "very often" is the opposite of the idiom's meaning.
- (B) "at night only" and (C) "during a full moon" take the words literally rather than figuratively.

Final Answer: the idiom means very rarely $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q8

Q9.

Solution

Concept — Number series (ratio pattern): When each term is a fixed multiple of the previous one, the series is geometric; find the common ratio.

Step 1 — Find the ratio: $6 \div 3 = 2$, $12 \div 6 = 2$, $24 \div 12 = 2$. Each term is double the one before it.

Step 2 — Extend: The next term is $24 \times 2 = 48$.

Why other options are wrong:

- (B) 36 adds 12 instead of doubling.
- (C) 30 and (D) 40 follow no consistent rule with the given terms.

Final Answer: next term $= 48 \Rightarrow$ A

Answer: (A) Go Back to Q9

Q10.

Solution

Concept — Opposite-letter (reverse) coding: Each letter is paired with the letter the same distance from the *other* end of the alphabet. A useful rule: the position of a letter plus the position of its opposite is always 27.

Step 1 — Encode each letter of CAB:

$$\text{C}(3) \to 27 - 3 = 24 = \text{X}, \quad \text{A}(1) \to 27 - 1 = 26 = \text{Z}, \quad \text{B}(2) \to 27 - 2 = 25 = \text{Y}.$$

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

Why other options are wrong:

- (A) XYZ keeps the letters in alphabetical order instead of mapping each one.
- (C) YZX and (D) ZXY scramble the mapping of the individual letters.

Final Answer: CAB $\to XZY \Rightarrow$ B

Answer: (B) Go Back to Q10

Q11.

Solution

Concept — Blood relations: Decode the phrase step by step, starting from the boy (the speaker).

Step 1 — Take the inner relation: "my mother's brother" is the boy's maternal uncle.

Step 2 — Take the outer relation: "my mother's brother's wife" is therefore the wife of the maternal uncle, which makes the lady the boy's aunt.

Why other options are wrong:

- (A) "mother" is a different relation; the lady is related through marriage to the uncle.
- (B) "grandmother" would need an extra generation not stated.
- (D) "sister" is wrong because the lady belongs to the parents' generation.

Final Answer: the lady is the boy's aunt $\Rightarrow$ C

Answer: (C) Go Back to Q11

Q12.

Solution

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

Step 1 — Identify the legs: He walks 6 km South and then 8 km West; these two directions are perpendicular.

Step 2 — Apply Pythagoras:

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

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

Why other options are wrong:

- (A) 14 km wrongly adds the two legs $(6 + 8)$.
- (B) 2 km wrongly subtracts them.
- (C) 48 km multiplies them, which is not how distance works.

Final Answer: straight-line distance $= 10$ km $\Rightarrow$ D

Answer: (D) Go Back to Q12

Q13.

Solution

Concept — Rank in a class: For a single ordering, (rank from top) + (rank from bottom) = (total) +1.

Step 1 — Apply the formula: rank from bottom = total − rank from top +1 = $40 - 12 + 1$.

Step 2 — Compute: $= 29$. So the boy is 29th from the bottom.

Why other options are wrong:

- (B) 28 forgets to add the "+1".
- (C) 12 just repeats the rank from the top.
- (D) 30 adds 1 too many.

Final Answer: 29th from the bottom ⇒ A

Answer: (A) Go Back to Q13

Q14.

Solution

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

Step 1 — Relationship: A pen is the tool used to write (object : its main use).

Step 2 — Apply: A knife is the tool used to cut. So the missing word is "cut" (B).

Why other options are wrong:

- (A) "sharp" describes a property of a knife, not its function.
- (C) "kitchen" is a place where a knife is used, not its function.
- (D) "metal" is the material of a knife, not its use.

Final Answer: Knife : Cut ⇒ 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 highest.

Step 1 — Read the bars: Jun $= 20$, Jul $= 12.5$, Aug $= 30$, Sep $= 17.5$ cm of rainfall.

Step 2 — Compare: The tallest bar (value 30) is August, so the rainfall was highest in August.

Why other options are wrong:

- (A) June (20) and (D) September (17.5) are both shorter than August.
- (B) July (12.5) is in fact the *lowest*, not the highest.

Final Answer: Highest rainfall in August $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q15

Q16.

Solution

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

Step 1 — Identify the share: "Science" occupies 25% of the circle.

Step 2 — Compute the count:

$$25\% \text{ of } 360 = \frac{25}{100} \times 360 = 90.$$

So 90 students chose Science.

Why other options are wrong:

- (A) 120 would be one-third (33.3%) of 360.
- (B) 180 is exactly half (50%).
- (C) 60 is one-sixth ($\approx 16.7\%$) — none matches the 25% share.

Final Answer: Science $= 90$ students $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q16

Q17.

Solution

Concept — Finding a percentage: "What percentage of A is B" is computed as $\frac{B}{A} \times 100$.

Step 1 — Set up: We need $\frac{15}{60} \times 100$.

Step 2 — Compute:

$$\frac{15}{60} \times 100 = \frac{1}{4} \times 100 = 25\%.$$

Step 3 — Check: 25% of $60 = 0.25 \times 60 = 15$ ✓.

Why other options are wrong:

- (B) 40% of $60 = 24$; (C) 15% of $60 = 9$; (D) 20% of $60 = 12$ — none equals 15.

Final Answer: 15 is 25% of $60 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q17

Q18.

Solution

Concept — Selling price from profit %: $\text{SP} = \text{CP} \times \left(1 + \frac{\text{Profit}\%}{100}\right)$, or add the profit to the cost price.

Step 1 — Find the profit: 20% of Rs. $200 = \frac{20}{100} \times 200 = 40$ rupees.

Step 2 — Add to the cost price:

$$\text{SP} = 200 + 40 = 240.$$

So the selling price is Rs. 240.

Why other options are wrong:

- (A) Rs. 220 uses a 10% profit, not 20%.
- (C) Rs. 260 uses a 30% profit.
- (D) Rs. 200 is the cost price with no profit added.

Final Answer: selling price $=$ Rs. $240 \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q18

Q19.

Solution

Concept — Highest Common Factor (HCF): The HCF of two numbers is the largest number that divides both exactly. One way is to list the common factors.

Step 1 — List the factors: factors of 12 are $1, 2, 3, 4, 6, 12$; factors of 18 are $1, 2, 3, 6, 9, 18$.

Step 2 — Pick the greatest common one: the common factors are $1, 2, 3, 6$; the largest is 6. (By prime factors, $12 = 2^2 \times 3$ and $18 = 2 \times 3^2$, so HCF $= 2 \times 3 = 6$.)

Why other options are wrong:

- (A) 3 and (B) 2 are common factors but not the *highest*.
- (D) 36 is the LCM (lowest common multiple), not the HCF.

Final Answer: HCF of 12 and $18 = 6 \Rightarrow \boxed{C}$

Answer: (C) Go Back to Q19

Q20.

Solution

Concept — Area of a triangle: Area $= \frac{1}{2} \times$ base $\times$ height.

Step 1 — Substitute: base $= 6$ cm, height $= 4$ cm, so

$$\text{Area} = \frac{1}{2} \times 6 \times 4.$$

Step 2 — Compute: $\frac{1}{2} \times 24 = 12$ cm^2.

Why other options are wrong:

- (A) 24 cm^2 forgets the factor of $\frac{1}{2}$ (that is base $\times$ height).
- (B) 10 cm^2 adds the base and height instead of multiplying.
- (C) 48 cm^2 multiplies base by height and then doubles it.

Final Answer: area $= 12$ cm$^2 \Rightarrow \boxed{D}$

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