

RIMC MODEL PAPER — ANSWER KEY & SOLUTIONS

The Volume Education Academy, Dehradun

For Teacher / Student Reference Only

PART A — COMPLETE MCQ ANSWER KEY

Q.No	Section	Correct Ans	Q.No	Section	Correct Ans
1	Mathematics	(C)	36	English	(B)
2	Mathematics	(C)	37	English	(C)
3	Mathematics	(B)	38	English	(C)
4	Mathematics	(B)	39	English	(B)
5	Mathematics	(C)	40	English	(C)
6	Mathematics	(B)	41	Gen. Knowledge	(C)
7	Mathematics	(B)	42	Gen. Knowledge	(C)
8	Mathematics	(D)	43	Gen. Knowledge	(C)
9	Mathematics	(A)	44	Gen. Knowledge	(C)
10	Mathematics	(B)	45	Gen. Knowledge	(B)
11	Mathematics	(A)	46	Gen. Knowledge	(A)
12	Mathematics	(A)	47	Gen. Knowledge	(B)
13	Mathematics	(C)	48	Gen. Knowledge	(A)
14	Mathematics	(C)	49	Gen. Knowledge	(B)
15	Mathematics	(C)	50	Gen. Knowledge	(C)
16	Mathematics	(B)	51	Gen. Knowledge	(A)
17	Mathematics	(B)	52	Gen. Knowledge	(C)
18	Mathematics	(B)	53	Gen. Knowledge	(C)
19	Mathematics	(B)	54	Gen. Knowledge	(B)
20	Mathematics	(A)	55	Gen. Knowledge	(A)
21	English	(B)	56	Intelligence	(A)
22	English	(C)	57	Intelligence	(B)
23	English	(A)	58	Intelligence	(D)
24	English	(C)	59	Intelligence	(C)
25	English	(B)	60	Intelligence	(B)
26	English	(C)	61	Intelligence	(B)
27	English	(C)	62	Intelligence	(C)
28	English	(B)	63	Intelligence	(A)
29	English	(A)	64	Intelligence	(B)

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30	English	(C)	65	Intelligence	(A)
31	English	(C)	66	Intelligence	(B)
32	English	(C)	67	Intelligence	(A)
33	English	(B)	68	Intelligence	(C)
34	English	(C)	69	Intelligence	(B)
35	English	(B)	70	Intelligence	(C)

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MATHEMATICS — PART B SOLUTIONS

QM1. [4 Marks] Find the value of x : $2x + 5 = 3x - 7$

Answer: $x = 12$

QM2. [4 Marks] A cylinder has radius 7 cm and height 10 cm. Find its volume. ($\pi = 22/7$)

Answer: $V = \pi r^2 h = (22/7) \times 49 \times 10 = 1540 \text{ cm}^3$

QM3. [5 Marks] Find compound interest on Rs. 8000 at 10% p.a. for 2 years.

Answer: $A = 8000 \times (1.1)^2 = \text{Rs. } 9680$. CI = Rs. 1680

QM4. [4 Marks] Angles of a triangle are in ratio 2:3:4. Find each angle.

Answer: $2x+3x+4x=180^\circ$, $x=20^\circ$. Angles: 40° , 60° , 80°

QM5. [5 Marks] A boat goes 15 km upstream in 3 hrs and 15 km downstream in 1.5 hrs. Find speed of boat in still water.

Answer: Upstream=5 km/h, Downstream=10 km/h. Speed = $(5+10)/2 = 7.5 \text{ km/h}$

ENGLISH — PART B SOLUTIONS

QE1. [8 Marks] Write a paragraph (5-6 sentences) on: MY IDEAL SOLDIER

Answer: Model Answer: A soldier is the guardian of our nation. An ideal soldier is disciplined, courageous and selfless. He puts duty before personal comfort, is physically fit and mentally strong. He follows orders with dedication and sets an example for others. He is the true pride of India.

QE2. [6 Marks] Make meaningful sentences using: (a) Courage (b) Discipline (c) Honour

Answer: (a) Courage: A soldier needs great courage to face the enemy on the battlefield. (b) Discipline: Discipline is the backbone of every military force. (c) Honour: It is a great honour to serve and protect one's nation.

QE3. [4 Marks] Rewrite in reported speech: Ram said, 'I am going to school.'

Answer: Ram said that he was going to school.

QE4. [2 Marks] Write degrees of comparison: BRAVE → Comparative → Superlative

Answer: Brave → Braver → Bravest

QE5. [2 Marks] Correct the sentence: 'He have completed his homework yesterday.'

Answer: He completed his homework yesterday. (OR: He had completed his homework yesterday.)

GENERAL KNOWLEDGE — PART B SOLUTIONS

QG1. [6 Marks] Name any THREE recipients of the Param Vir Chakra.

Answer: Major Somnath Sharma, Lance Naik Albert Ekka, Captain Vikram Batra, 2nd Lt Arun Khetarpal (any 3 valid)

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QG2. [4 Marks] What does DRDO stand for? Name ONE product developed by DRDO.

Answer: DRDO = Defence Research and Development Organisation. Products: Agni missile / Tejas aircraft / Arjun tank (any one)

QG3. [6 Marks] Name the three services of Indian Armed Forces and their chiefs' designations.

Answer: Army – Chief of Army Staff; Navy – Chief of Naval Staff; Air Force – Chief of Air Staff

QG4. [4 Marks] Why is 16 December celebrated as Vijay Diwas?

Answer: On 16 December 1971, India won the Bangladesh Liberation War. The Pakistani Army surrendered, leading to creation of Bangladesh.

QG5. [2 Marks] Name India's first indigenously built aircraft carrier.

Answer: INS Vikrant (commissioned in September 2022)

INTELLIGENCE TEST — PART B SOLUTIONS

QI1. [5 Marks] A tank is $\frac{1}{3}$ full. After adding 80 litres it becomes $\frac{3}{4}$ full. Find the total capacity of the tank.

Answer: $\frac{3}{4} - \frac{1}{3} = \frac{5}{12}$ of tank = 80 L. Total capacity = $80 \times \frac{12}{5} = 192$ litres

QI2. [4 Marks] In a row of soldiers, Rajan is 15th from the left and 10th from the right. How many soldiers are there in the row?

Answer: Total = $15 + 10 - 1 = 24$ soldiers

QI3. [4 Marks] A watch gains 5 minutes every hour. If correctly set at 9 AM, what time will it show at 1 PM?

Answer: 4 hours pass, gain = $4 \times 5 = 20$ minutes. Watch shows 1:20 PM

QI4. [4 Marks] Find the missing number: Row 1: 2 4 8 Row 2: 3 9 27 Row 3: 4 16 ____

Answer: Pattern: n, n^2, n^3 . Row 3: 4, 16, 64. Missing number = 64

QI5. [5 Marks] A man is facing North. He turns 90° clockwise, then 180° anticlockwise. Which direction is he now facing?

Answer: North $\rightarrow$ East (90° CW) $\rightarrow$ West (180° ACW). He is now facing WEST.

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RIMC PREPARATION TIPS — The Volume Education Academy

Mathematics: Master arithmetic (% , ratios, SI/CI, profit-loss), algebra, geometry (area, volume, perimeter) and time-speed-distance. Practice mental calculations daily.

English: Revise grammar (tenses, voices, articles, punctuation), vocabulary (synonyms, antonyms, one-word substitutes) and write short paragraphs daily.

General Knowledge: Read about Indian military history, gallantry awards, geography, national symbols, defence forces structure, and current affairs related to defence.

Intelligence Test: Practice series completion, coding-decoding, blood relations, mirror images, clock/direction problems, and logical reasoning every day.

Physical Fitness: RIMC selection includes physical tests. Practice 1.6 km run, push-ups, sit-ups, pull-ups and flexibility exercises regularly.

Interview Preparation: Be confident, well-spoken and aware of current affairs. Know about RIMC, Indian Army history and national heroes.
