NMAT QS 2023 Question Paper with Solutions

Time Allowed : 2 Hours	**Maximum Marks :** 108

General Instructions

NMAT Exam Instructions

1. The NMAT exam is 2 hours long and consists of 108 questions.
2. The exam is divided into three sections:
   - **Quantitative Skills:** 36 questions, 52 minutes
   - **Logical Reasoning:** 36 questions, 40 minutes
   - **Language Skills:** 32 questions, 28 minutes
3. You can answer questions in any order across the sections.
4. There is no break in between sections.
5. Review and edit questions only within the given time for each section.
6. The system will automatically submit your answers when time is up.

1. If $ab = 16$ and $\log_2 a - \log_2 b = 2$, find the value of $\log_2 a^2b^3$.

(A) 8
(B) 9
(C) 10
(D) 11
(E) 12

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2. What is the probability that in three throws of a dice, one gets exactly two 6s?

(A) $\frac{1}{18}$
(B) $\frac{5}{72}$
(C) $\frac{1}{12}$
(D) $\frac{7}{72}$
(E) $\frac{1}{24}$

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3. Aman, Bharat, Chitra, and Deepa are four siblings. Their mother gave them some candies. Aman took $\frac{1}{3}$ of the candies and returned 4. Then Bharat took $\frac{1}{4}$ of the remaining candies and returned 3. Chitra took $\frac{1}{2}$ of the remaining candies and returned 2. Finally, Deepa took the remaining 17 candies. How many candies did Bharat and Chitra take altogether?

(A) 25
(B) 23
(C) 19
(D) 17
(E) 22

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4. Find the sum of 10 terms of the series: 2, -8, 32, -128, 512, ...

(A) -413490
(B) -419340
(C) -414930
(D) -419430
(E) -413940

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5. 3 men, 5 women, and 7 children can complete a work in 40 days. 6 men, 10 women, and 18 children can complete the work in 18 days. 9 men, 15 women, and 5 children can complete the work in?

(A) 17 17/18 days
(B) 18 18/19 days
(C) 19 18/19 days
(D) 18 17/18 days
(E) 18 days

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6. Anuj, Bheem, and Charles started a business by putting amounts in the ratio of 2:4:5. After six months, Anuj withdrew $\frac{1}{4}$ of his capital. Bheem withdrew $\frac{1}{4}$ of his initial capital after every quarter. Charles added $\frac{2}{5}$ of his initial capital after every quarter. If the annual profit was Rs. 98000, what was the share of Bheem?

(A) Rs. 14000
(B) Rs. 18000
(C) Rs. 20000
(D) Rs. 21000
(E) Rs. 24000

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7. Find the sum of all the possible values of p such that $p^4 - p^3$ has the unit's digit as 2, where $20 \leq p \leq 30$.

(A) 46
(B) 49
(C) 53
(D) 56
(E) 50

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8. There are 20 students in a class. If one of the students of 18 years is replaced by another student, the average age of the class is reduced by 2 months. What is the age of the new student?

(A) 14 years
(B) 14 years 4 months
(C) 14 years 6 months
(D) 14 years 8 months
(E) 15 years

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9. A person invested a certain money in a scheme offering simple interest of 16% per annum and received Rs 736 as interest. Had he invested the amount for 8 more years, he would have got an interest of Rs 3680. What is the amount

obtained if the same sum is invested at 9% per annum for 2 years, interest compounded annually?

(A) Rs. 2714
(B) Rs. 2720.75
(C) Rs. 2732.63
(D) Rs. 2845.26
(E) Rs. 2987.43

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10. Pushkin, Qutub, and Ravinder together can complete a piece of work in 4 days. Ravinder and Samrat can complete the same work in 6 days. If Qutub and Ravinder take 20 and 10 days respectively to finish the work on their own, in how many days can Pushkin and Samrat complete the same work?

(A) 4
(B) 5
(C) 6
(D) 8
(E) 9
