RAM	RAM (RECALL ALL MEMORY)	01

2023 THEORY

අධ්‍යයන පොදු සහතික පත්‍ර (උසස් පෙළ) විභාගය , 2023 අගෝස්තු
கல்விப் பொதுத் தராதரப் பத்திர(உயர் தர)ப் பரீட்சை, 2023 ஓகஸ்ற்
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භෞතික විද්‍යාව   I
பௌதிகவியல்   I
Physics   I

Advanced **L**evel Physics
Amith Pussella

PHT**5738** 2023Th 2021-06-06

Multiple Choice Questions

1. When subjecting G in $F = \dfrac{G M_1 M_2}{R^2}$

(1) $\sqrt{\dfrac{F R^2}{M_1 M_2}}$ (2) $\dfrac{F \sqrt{R}}{M_1 M_2}$ (3) $\dfrac{F M_1 M_2}{R^2}$

(4) $\dfrac{F R^2}{M_1 M_2}$ (5) $\dfrac{R^2 G}{M_1}$

1. When simplifying $\dfrac{0.01 \times 10^3 \times (10^{-2})^2}{(10^{-3})^2 \times 0.001}$ as a single power of ten the answer will be,

(1) 10^{-3} (2) 10^2 (3) 10^{-7} (4) 10^6 (5) 10^9

3. Value of P, in $P = 10 (1 + 10^{-4} \times 20)$ is,

(1) 10^{-2} (2) 10^2 (3) 10.002   (4) 10.02   (5) 10.012

4.
$20 - x = 6z$
$x - y = 4z$
$y - 5 = 5z$ The value of z obtained by solving the three equations is,

(1) 1   (2) 2   (3) - 1   (4) - 2   (5) - 3

5. Subject a, in $\dfrac{4}{3} \pi (a^3 - b^3) \times \rho = r^2 t - q$

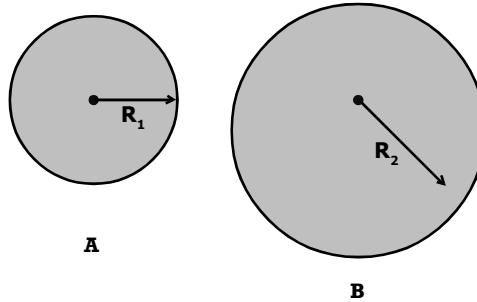(1) $a = \sqrt[3]{\dfrac{(r^2 t - q) \times 3}{4 \pi \rho}}$ (2) $a = \sqrt[3]{\dfrac{3 (r^2 t - q)}{4 \pi \rho} + b}$ (3) $a = \sqrt[3]{\dfrac{3 (r^2 t - q)}{4 \pi \rho} + b^3}$

(4) $a = \sqrt[3]{\dfrac{3 r^2 t - q}{4 \pi \rho} + b^3}$ (5) $a = \sqrt[3]{\dfrac{3 (r^2 t - q)}{4 \pi \rho} + b^3}$

6. The radius of disc A is R_1 & radius of disc B is R_2. The area of disc B is twice that of A

$\dfrac{R_1}{R_2}$ Equals to,

A

B

(1) $\dfrac{1}{2}$　　　　(2) $\dfrac{1}{4}$　　　　(3) $\dfrac{1}{\sqrt{2}}$　　　　(4) $\dfrac{1}{2\sqrt{2}}$　　　　(5) $\dfrac{1}{3}$

7. When the quantity B is doubled and D is halved in $A = \sqrt{\dfrac{BC}{D}}$ quantity A will,

(1) become doubled　　　　　　　　(2) become halved

(3) does not change　　　　　　　　(4) become four times the initial

(5) become eight times the initial

8. When solving the following 3 equations mentally and value of C is obtained , it would be equal to,
$[a + b = 0 , b = -1/2 , 2a - 2b + C = 1]$

(1) $\dfrac{-1}{2}$　　　　(2) $\dfrac{1}{2}$

(3) -1　　　　(4) 1

(5) -2

9. When Rs. 350 /= is divided among A and B to the ratio $\dfrac{1}{2} : \dfrac{1}{5}$ the amount received by A is,

(1) 250　　　　(2) 100　　　　(3) 50　　　　(4) 150　　　　(5) 175

10. Out of two wires of length 19 mm, one was cut into 19 equal parts and the other into 20 equal parts. The difference between two such parts is,

(1) 1 mm　　　　　　　　(2) 0.1 mm　　　　　　　　(3) 0.19 mm

(4) 0.95 mm　　　　　　　(5) 0.05 mm