

THE UNIVERSITY OF BAMENDA HIGHER INSTITUTE OF
COMMERCE AND MANAGEMENT Competitive Entrance Examination

Academic Year 2013/2014

PART TWO: MATHEMATICS (/30)

MULTIPLE CHOICE QUESTIONS

1. Simplify $\frac{2-\frac{1}{4}}{3-\frac{1}{5}}$, giving your answer in lowest terms
A) $\frac{7}{5}$ B) $\frac{5}{8}$ C) $\frac{8}{5}$ D) $\frac{45}{64}$ E) None of these
2. Simplify $\sqrt{10^2 + 6^2}$
A) 8 B) $\sqrt{136}$ C) 64 D) 2 E) None of these
3. The value of $-3(4)^2$ is:
A) -14 B) -54 C) -48 D) 144 E) None of these
4. $4 \div 2[6 - (-5)3] =$
A) -14 B) -54 C) 126 D) 46 E) None of these
5. $\frac{10^2}{10^{-2}} =$
A) 10 B) 0.96 C) 10^{-4} D) 10^{-5} E) None of these
6. How many fifths are there in 4.8?
A) 24 B) 096 C) 1.04 D) 9.6 E) None of these
7. $22r - 15s - 3r + 3s =$
A) 24 B) 0.96 C) 7rs D) $19r - 12s$ E) None of these
8. $\frac{\alpha^2}{\alpha^{-2}} =$
A) α^2 B) α^3 C) α^{28} D) α^{-8} E) None of these
9. $(3XY^2)^3 =$

A) $3x^2$ B) xy C) $27x^3y$ D) $9x^2y$ E) None of these

10. $\frac{1}{\frac{1}{a} + \frac{1}{b}}$

A) $\frac{a+b}{ab}$ B) $\frac{ab}{a+b}$ C) $a^2 + b^2$ D) $a^2 - b^2$ E) None of these

11. $\frac{a}{a+a^2} =$

A) $\frac{a}{a^2}$ B) $\frac{a^1}{a^2}$ C) $\frac{1}{2a}$ D) $\frac{1}{1+a}$ E) None of these

12. Find the value of $y-6y^6$, when $y = \frac{1}{3}$

A) $-\frac{2}{3}$ B) $-\frac{1}{3}$ C) 1 D) $-4\frac{2}{3}$ E) None of these

13. When $M = -2$ and $P = 4$, find the value of $\frac{3P-M}{3MP}$ E) None of these

A) $19 + 9Y$ B) $-7y - 29$ C) $-\frac{5}{12}$ D) $-\frac{3}{4}$ E) None of these

14. Express $y - 4[y - 3(y - 2)]$ in simplest form

A) $19 + 9y$ B) $-7y - 29$ C) $2y^2 + 14Y - 29$ D) $9y - 29$ E) None of these

15. The expanded form of $(3r - 4)^2$ is:

A) $9r^2 - 12r + 16$ B) $9r - 24r - 16$ C) $9r^2 + 16$ D) $9r^2 - 16$ E) None of these