

Class 11 Mathematics
FBISE Paper 2018 Overseas
Solved MCQs

1. In a matrix $A = \begin{bmatrix} 1 & 4 & 7 \\ 2 & 5 & 8 \\ 3 & 6 & 9 \end{bmatrix}$ what is value of A_{12} ?
- A. 9 B. -9 **C.** 6 D. -6
2. If $r = n$ or $r = 0$ what is the value of ${}^n C_r$?
- A. 0 B. r **C.** 1 D. n
3. What is the value of $\frac{2}{1-i}$?
- A. $2(1+i)$ B. $2(1-i)$ **C.** $1+i$ D. $1-i$
4. If set A has 5 elements, then how many binary relations are in $A \times A$?
- A.** 2^{25} B. $2^{25} - 1$ C. 25 D. 2^5
5. If A is a matrix of order $m \times n$ and B is matrix of order $n \times l$, then what is order of matrix $A \times B$?
- A. $m \times n$ B. $l \times m$ C. $l \times n$ **D.** $m \times l$
6. What is the product of roots of quadratic equation $x^2 - 3x + 6 = 0$?
- A. 6 B. -6 **C.** 3 D. -3
7. What is the partial fraction of $\frac{7x+25}{(x+3)(x+4)}$?
- A. $\frac{4}{x+3} - \frac{3}{x+4}$ B. $\frac{4}{x+4} - \frac{3}{x+3}$
- C.** $\frac{4}{x+3} + \frac{3}{x+4}$ D. $\frac{4}{x+4} + \frac{3}{x+3}$
8. What is the sum of infinite G.P $2, \sqrt{2}, 1, \dots$?
- A. $4 - \sqrt{2}$ **B.** $4 + 2\sqrt{2}$ C. $2\sqrt{2}$ D. $2 + 2\sqrt{2}$
9. What is the value of $r!$ ${}^n C_r$?
- A. ${}^{n+1}P_r$ B. ${}^{n-1}C_r$ **C.** ${}^n P_r$ D. ${}^{n+1}C_r$
10. For what value of n the expression $3^n > n!$ is **UNTRUE** if $n \in \mathbb{Z}$?
- A. $n = 6$ **B.** $n = 7$ C. $n = 2$ D. $n = 3$

11. Which of the following angles are coterminal?

A. $\frac{\pi}{3}, \frac{4\pi}{3}$

B. $\frac{\pi}{3}, \frac{5\pi}{6}$

C. $\frac{\pi}{3}, \frac{13\pi}{3}$

D. $\frac{5\pi}{3}, \frac{\pi}{3}$

12. What is the value of $\tan 3\theta$?

A. $\frac{3\tan\theta + \tan^3\theta}{1 + 3\tan^2\theta}$

C. $\frac{3\tan\theta + \tan^3\theta}{1 - 3\tan\theta}$

B. $\frac{3\tan\theta - \tan^3\theta}{1 - 3\tan^2\theta}$

D. $\frac{3\tan\theta - \tan^3\theta}{1 + 3\tan\theta}$

13. What is the period of $3\cos\frac{x}{5}$?

A. 13π

B. 10π

C. $\frac{15\pi}{3}$

D. $\frac{13\pi}{5}$

14. What is the range of function $y = \cot x$?

A. $-1 < y < 1$

B. $-1 \leq x \leq 1$

C. $-\infty < x < \infty$

D. $-\infty < y < \infty$

15. What is the value of r_2 ?

A. $S \tan \frac{r}{2}$

B. $S \tan \beta$

C. $S \tan \frac{\alpha}{2}$

D. $S \tan \frac{\beta}{2}$

16. What is solution set of $1 + \cos x = 0$ for complete period?

A. $\{-\pi + n\pi\}$

B. $\{\pi + n\pi\}$

C. $\{-\pi + 2n\pi\}$

D. $\{\pi + 2n\pi\}$

17. What is the area of triangle in Square Units if $b = 21.6$ $c = 30.2$ $\alpha = 52^\circ 40'$?

A. 295.3

B. 952.3

C. 259.3

D. 529.3

18. A die is rolled, what is the probability that dots on top are greater than 4?

A. $\frac{1}{6}$

B. $\frac{1}{3}$

C. $\frac{1}{2}$

D. $\frac{1}{4}$

19. What is the multiplicative inverse of $1 + 2i$?

A. $\frac{1}{\sqrt{5}}(1 - 2i)$

B. $\frac{1}{5}(1 - 2i)$

C. $\frac{1}{5}(1 + 2i)$

D. $\frac{1}{4}(1 - 2i)$

20. What is the value of $\tan^{-1} x$?

A. $\frac{\pi}{2} + \cot^{-1} x$

B. $\frac{\pi}{2} + \tan^{-1} x$

C. $\frac{\pi}{2} - \cot^{-1} x$

D. $\frac{\pi}{2} - \tan^{-1} x$