45) If $P(A)=0$ then A is called _____ event.
a- Sure ✓b- Impossible c- Fair d- Equally Likely

46) If $P(E)=1$ then E is called _____ event.
✓a- Sure b- Impossible c- Fair d- Equally Likely.

47) If A and B are _____ then $P(A \cap B) = P(A) \cdot P(B)$
a- Dependent ✓b- Independent c- Sure d- Impossible

48) $\frac{n!}{(n-2)!}$ = _____ a- n b- n-1 ✓c- n(n-1) d- None

49) $\frac{(n+1)!}{(n-1)!}$ = _____ a- n b- n+1 c- n(n-1) ✓d. n(n+1)

50) Probability of occuring 6 when dot is rolled is _____.
a- 0 b✓ $\frac{1}{6}$ c- $\frac{1}{3}$ d- 1

Chapter: 8

1) $3+6+9+\cdots+3n =$ _____.
a- 9n b- $\frac{n(n+1)}{2}$ ✓c- $\frac{3n(n+1)}{2}$ d- $\frac{3n+1}{3}$

2) _____ is an integer $\forall\, n \in N$.
a- $\frac{n^2+2n}{2}$ ✓b- $\frac{n^3+2n}{3}$ c- $\frac{2n+1}{2}$ d- $\frac{n+1}{3}$

3) There is no integer for which _____ is even.
a- 2^n ✓b- 3^n c- 4^n d- 6^n

4) $4^n > 3^n+4$ is true for _____.
a- $n<1$ ✓b- $n \geq 2$ c- $n \geq 1$ d- $n \leq 1$

5) n^2+n is divisible by _____.
a✓- 2 b- 3 c- 5 d- 7

6) 5^n-2^n is divisible by _____
a- 2 ✓b- 3 c- 4 d- 6

7) $n! > 2^n-1$ for _____.
a- $n \geq 3$ b- $n \geq 2$ c- $n<4$ ✓d. $n \geq 4$

8) $n! > n^2$ for _____.
a- $n \geq 2$ b- $n \geq 3$ c- $n<3$ ✓d. $n \geq 4$

9) $3^n < n!$ for _____.
a- $n>1$ b- $n>3$ c- $n \geq 5$ ✓d- $n \geq 6$

10) Index of $(a+b)^n$ is _____.
a✓- n b- n+1 c- a d- b

11) ${}^nC_0, {}^nC_1, {}^nC_2, \ldots, {}^nC_n$ in $(a+b)^n$ are called _____.
a- Indices b- Terms c- Variables. ✓d Binomial Coefficients

12) Sum of all binomial Coefficients in $(a+b)^n$ is _____.
a- 2 b- 2^{n-1} ✓c- 2^n d. 2^{n+1}

13) Number of terms in $(a+b)^n$ is _____.
a- n b- $n-1$ ✓c- $n+1$ d- $2n$

14) The general term of $(a+x)^n$ is _____ term.
a- rth b- $(r-1)$ th ✓c- $(r+1)$ th d- nth.

15) The 2nd term in the expansion of $(a+b)^7$ is _____
a- a^7 b- $7ab^6$ ✓c- $7a^6b$ d- b^7

16) $(r+1)$th term of $(a+x)^n$ is called _____ term.
a- Leading b- Initial c- Final ✓d- General

17) Sum of exponents in $(a+x)^n$ of a and x is equal to _____.
✓a- Index (n) b- Exponent of a c- Exponent of b d- None.

18) Middle term of $(a+x)^n$ is _____ where n is even.
a- $\frac{n+1}{2}$ ✓b- $\frac{n+2}{2}$ c- $\frac{n+3}{2}$ d- a and c both

19) Middle term of $(a+x)^n$ where n is odd is _____.
a- $\frac{n+1}{2}$ b- $\frac{n+2}{2}$ c- $\frac{n+3}{2}$ ✓d- a, c both

20) Middle term of $(a+x)^4$ is _____ term.
a- 2nd ✓b- 3rd c- 4th d- 2nd and 4th.

21) $\binom{n}{r} = (\quad)$ for $r \leq n$ in $(a+x)^n$.
a- $\binom{n}{r+1}$ b- $\binom{n}{r-1}$ c- $\binom{n}{n+r}$ ✓d- $\binom{n}{n-r}$

22) Binomial Expression Contains _____ terms.
a- One ✓b- Two c- Three d- Infinite

23) No. of terms in the expansion of $(3x+y)^7$ is _____.
a- 7 b- 6 c- 5 ✓d- 8

24) Sum of all binomial Coefficients of $(a+x)^5$ are _____.
a- 5 ✓b- 32 c- 16 d- 64

25) In expansion of $(a+x)^n$, exponent of a decreases from _____ to n.
✓a- Zero b- One c- Two d- n

26) The middle term of $(a+x)^{12}$ is _____ term.
a- 12th b- 13th ✓c- 7th d- 6th

27) Coefficient of last term in $(a-b)^5$ is _____
a- 5 b- -5 c- 1 ✓d -1

TAHIR MEHMOOD ✡ M.Sc. Math ✡ 0345-6510779

28) Binomial theorem is proved by using _____.
a- A.P. b- G.P. c- H.P. ✓d- Induction

29) 2nd term in the expansion of $(1-2x)^{1/3}$ is _____.
a- $\frac{2x}{3}$ ✓b- $\frac{-2x}{3}$ c- $-2x$ d- $\frac{-3x}{2}$

30) $1+nx+\frac{n(n-1)}{12}x^2+\cdots$ is called _____ Series.
✓a- Binomial b- Geometric c- Asithematic d- Harmonic

31) $(1+x)^n$ Converges (valids) if $|x|$ _____
a- ✓<1 b- >1 c- $<1/2$ d- $>1/2$

32) _____ $= 1+2x+3x^2+4x^3+\cdots$ for $|x|<1$
a- $(1+x)^{-2}$ b- $(1-x)^2$ c- ✓$(1-x)^{-2}$ d- $(1+x)^2$

33) $(1-2x)^{1/3}$ valids if _____
a- $|x|<1$ b- $|x|<2$ ✓c- $|x|<1/2$ d- $|x|<3/2$

34) $(8-5x)^{-2/3}$ valids if _____.
a- $|x|<8$ b- $|x|<1/5$ c- $|x|<5/8$ ✓d- $|x|<8/5$

35) $(4-3x)^{1/2}$ valids if _____.
a- $|x|<$ b- $|x|<4/3$ c- $|x|<3$ ✓d- $|x|<3/4$

36) $\binom{n}{1}+2\binom{n}{2}+3\binom{n}{3}+\cdots+n\binom{n}{n}=$ _____
a- 2^{n-1} b- 2^n c- $n2^n$ ✓d- $n2^{n-1}$

37) $(8-2x)^{-1}$ valid for _____.
a- $|x|<2$ b- $|x|<1$ ✓c- $|x|<4$ d- $|x|<1/4$

CHAPTER: 9

1) Vertex of an angle in Standard position is at _____.
a- $(1,0)$ b- $(0,1)$ c- $(1,1)$ ✓d- $(0,0)$

2) The System in which angle is measured in radian is called ___ System
a- English b- Sexagesimal ✓c- Circular d- Gradient.

3) $\frac{1}{4}$ rotation (Anti Clockwise) = _____
a- $45°$ ✓b- $90°$ c- $180°$ d- $360°$

4) Straight Angle = _____ a- $90°$ ✓b- $180°$ c- $270°$ d- $360°$

5) $\frac{1}{2}$ rotation (Anticlockwise) = _____ a- $45°$ b- $90°$ ✓c- $180°$ d- $360°$

6) $\ell = r\theta$ in a Sector where θ is in _____ measure:
a- English b- Sexagesimal c- ✓Circular (Radian) d- Gradient