LIC AAO SECTION WISE QUANTITATIVE MOCK SOLUTIONS

NUMERICAL ABILITY

31. (B) Let the breadth of rectangle = x
Length of rectangle = 120% of x
= 1.2x
Area of rectangle = l×b
= x×1.2x
= 1.2 x^2
Area of square = x^2
Ratio = $\frac{1.2x^2}{x^2} = \frac{12}{10} = \frac{6}{5}$

32. (D) Amount after 1st year = $20{,}000(1+\frac{10}{100})^2$
= 24,200
Amount after 2nd year = $24200(1+\frac{20}{100})^1$
= 29040
C.I. = 29040−20,000 = 9040

33. (D) Total 12 balls, 2 balls should be green so for this no of ways = $4c_2$
Third ball can be any color except green,
Except Green 8 balls are there, so no. of ways = $8c_1$
Probability = $\frac{^4C_2 \times ^8C_1}{^{12}C_3} = \frac{12}{55}$

34. (D) Side of square = 28
Radius of circular garden = $\frac{28}{2} = 14$
Area of space left out = area of square− area of circle
= $28\times 28 - \frac{22}{7} \times 14 \times 14$
= 784−616
= 168

35. (B) Investment ratio is 3 : 4 : 5
Let their times are a month, b month, c month respectively
Then the ratio of profits should be 3a : 4b : 5c
And this ratio is given to be 4 : 5 : 6
So 3a : 4b : 5c = 4 : 5 : 6
a : b : c = $\frac{4}{3} : \frac{5}{4} : \frac{6}{5}$
= 80 : 75 : 72

36. (C) 4 days earlier the work is to be completed, this means
In (40-4) = 36 days.
After 24 days, the number of days left = 36−24 = 12 days
Remaining work = $1-\frac{1}{3} = \frac{2}{3}$
Let x extra men are to be employed. So,
$\frac{25\times 24\times 2}{3} = (x+25)\times 12 \times \frac{1}{3}$
X = 75

37. (C) Let the speed of stream = x
$\frac{56}{36-x} = 1\frac{3}{4}$
$\frac{56}{36-x} = \frac{7}{4}$
32=36−x
x=4
Time (downstream) = $\frac{56}{36+4} = \frac{56}{40} = \frac{14}{10} = \frac{7}{5} = 1\frac{2}{5}$
= 1 hr 24 min

38. (C) (30-20)% = 5+20

10% = 25
Max marks = 100% = 250
Passing marks = 20% of 250+5
= 50+5=55
% passing = $\frac{55}{250} \times 100 = 22\%$

39. (B) Let CP of one horse = x, then of other = 19500−x
One at loss of 20%, other at 15% gain.
SP is same
80% of x = 115% of (19500−x)
$\frac{80}{100}x = \frac{115}{100}(19500-x)$
X = 11500
C.P. of other = 19500−11500
= 8000

40. (B) Interval radius = $\frac{11.2}{2} = 5.6$ cm=r
So outer radius = 5.6+0.4=6 am = R
Volume of metal = $\pi R^2h - \pi r^2h$
= $\pi h(R^2-r^2)$
= $\frac{22}{7} \times 21 \times (6^2 - 5.6^2)$
= $\frac{22}{7} \times 21 \times 11.6 \times 0.4$
= 306.24

41. (4); The series is ×2 + 1, × 1 + 2 alternately

42. (1); the series is ÷ 3 -7, ÷ 3 -6, ÷3 - 5, ...

43. (5); the series is × 1.5, × 2, ×2.5 ,× 3, ...

44. (2); The series is – 23, + 19, -15, + 11, -7, + 3, ...

45. (3); The series is $\times 1^2 + 4, \times 2^2 - 8, \times 3^2 + 12, \times 4 - 16, ...$

46. (2); 27% of 12.5% of 8000 = 270

47. (3); Total graduate = $\frac{8000}{100 \times 100}(27 \times 12.5 + 45 \times 16 + 32.5 \times 22 + 55 \times \times 18.5 + 35 \times 14 + 47.5 \times 17)$
= 3270
Total non-graduate = 8000 – 3270 = 4730

48. (3); $\frac{35\% \ of \ 14\% of \ 8000}{8000} \times 100 = 4.9\%$

49. (2) Graduate = 55%, non =graduate = 45%
Req.% = $\frac{(55-45)}{45} \times 100 = 22.22 = 22\%$ (approx)

50. (2); Average = $\frac{Total}{6} = \frac{3270}{6} = 545$

51. (3) x= 9,3; y = -12,7 ; No relation

52. (1)x= 10,-6; y = 15,11 ; x < y

53. (5) x= ±68, y = 68 ; x ≤ y

54. (3)x=5/4,7/8; y = 5/4,1/2; no relation

55. (3) x= 7/3, 2/3; y = 5, 2/3; no relation

56. (3); 26+27+16+33+27.6+42.5=172.1

57. (2); $\frac{332.7}{6} = 55.45$

58. (5); $\frac{34}{20} \times 100 = 170$

59. (4); $\frac{40-24}{40} \times 100 = 40\%$

60. (1);