

SSC MOCK TEST - 418 (SOLUTION)

1. (2) Cure is treatment of Disease in the same way Heal is referred as treatment of an Injury.

2. (3) As, $36 \times (3 + 6) + (36 \div 3) = 336$

And, $48 \times (4 + 8) + (48 \div 3) = 592$

Similarly, $24 \times (2 + 4) + (24 \div 3) = \mathbf{152}$

3. (4) (1) $\begin{array}{cc} 42 & \text{---} & 33 \\ \downarrow & & \downarrow \\ 4+2=6 & & 3+3=6 \end{array}$ (2) $\begin{array}{cc} 62 & \text{---} & 44 \\ \downarrow & & \downarrow \\ 6+2=8 & & 4+4=8 \end{array}$ (3) $\begin{array}{cc} 46 & \text{---} & 28 \\ \downarrow & & \downarrow \\ 4+6=10 & & 2+8=10 \end{array}$ (4) $\begin{array}{cc} 75 & \text{---} & 65 \\ \downarrow & & \downarrow \\ 7+5=12 & & 6+5=11 \end{array}$

4. (3) (1) $\begin{array}{cccccc} & S & & U & & N & & U & & X & & R \\ & | & & | & & | & & | & & | & & | \\ & \text{---} & & \text{---} & & \text{---} & & \text{---} & & \text{---} & & \text{---} \\ & & & & & +2 & & & & & & \\ & & & & & \text{---} & & \text{---} & & \text{---} & & \\ & & & & & +3 & & & & & & \\ & & & & & \text{---} & & \text{---} & & \text{---} & & \\ & & & & & +4 & & & & & & \end{array}$ (2) $\begin{array}{cccccc} & G & & O & & T & & I & & R & & X \\ & | & & | & & | & & | & & | & & | \\ & \text{---} & & \text{---} & & \text{---} & & \text{---} & & \text{---} & & \text{---} \\ & & & & & +2 & & & & & & \\ & & & & & \text{---} & & \text{---} & & \text{---} & & \\ & & & & & +3 & & & & & & \\ & & & & & \text{---} & & \text{---} & & \text{---} & & \\ & & & & & +4 & & & & & & \end{array}$

(3) $\begin{array}{cccccc} & L & & E & & T & & N & & H & & X \\ & | & & | & & | & & | & & | & & | \\ & \text{---} & & \text{---} & & \text{---} & & \text{---} & & \text{---} & & \text{---} \\ & & & & & +2 & & & & & & \\ & & & & & \text{---} & & \text{---} & & \text{---} & & \\ & & & & & +3 & & & & & & \\ & & & & & \text{---} & & \text{---} & & \text{---} & & \\ & & & & & +4 & & & & & & \end{array}$ (4) $\begin{array}{cccccc} & M & & A & & T & & O & & D & & X \\ & | & & | & & | & & | & & | & & | \\ & \text{---} & & \text{---} & & \text{---} & & \text{---} & & \text{---} & & \text{---} \\ & & & & & +2 & & & & & & \\ & & & & & \text{---} & & \text{---} & & \text{---} & & \\ & & & & & +3 & & & & & & \\ & & & & & \text{---} & & \text{---} & & \text{---} & & \\ & & & & & +4 & & & & & & \end{array}$

5. (2) 2 March 2022 = Wednesday

Odd days between 2 March 2022 to 2 March 2006 = $1 + 2 + 1 + 1 + 1 + 1 + 2 + 1 + 1 + 1 + 2 + 1 + 1 + 1 + 2 + 1 + 1 + 1 + 2 + 1 + 1 = 20$

$$\text{Odd Days} = \frac{20}{7} = 6$$

2 March 2006 = Wednesday - 6 = Thursday

\therefore 3 March 2006 was Friday.

6. (4) As,

T	E	R	M	I	N	A	T	E
↑	↑	↑	↑	↑	↑	↑	↑	↑
20	5	18	13	9	14	1	20	5

$$\Rightarrow 20 + 5 + 18 + 13 + 9 + 14 + 1 + 20 + 5 = 105 \Rightarrow 105 + 9 = 114$$

Similarly,

P	L	A	T	I	N	U	M
↑	↑	↑	↑	↑	↑	↑	↑
16	12	1	20	9	14	21	13

$$\Rightarrow 16 + 12 + 1 + 20 + 9 + 14 + 21 + 13 = 106 \Rightarrow 106 + 8 = 114$$

7. (3) $2 \times 2 = 4$

$4 + 3 = 7$

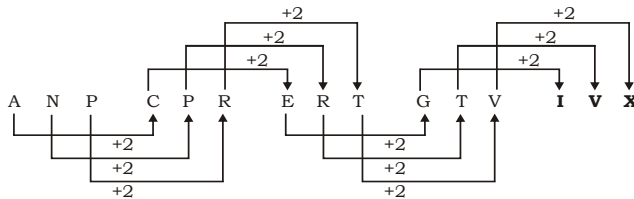
$7 \times 4 = 28$

$28 + 5 = 33$

$33 \times 6 = 198$

$198 + 7 = 205$

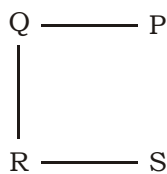
8. (3)



9. (4)

As, $325 \Rightarrow (3 + 2 + 5)^2 = 100$
 $100 \Rightarrow (1 + 0 + 0)^2 = 1$
 Similarly, $234 \Rightarrow (2 + 3 + 4)^2 = 81$
 $81 \Rightarrow (8 + 1)^2 = 81$

10. (1)



Hence, S is in the South-East of Q.

11. (2)

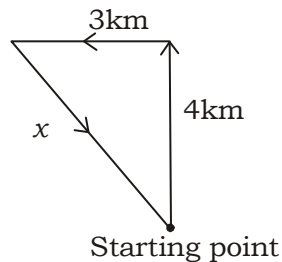
12. (3)

As,
 T D
 $20 + 4 = 24 \Rightarrow 24 \times 2 = 48$
 And,
 R M
 $18 + 13 = 31 \Rightarrow 31 \times 2 = 62$
 Similarly,
 I X
 $9 + 24 = 33 \Rightarrow 33 \times 2 = \mathbf{66}$

13. (2)

3. Brain \rightarrow 4. Thyroid gland \rightarrow 2. Heart \rightarrow 5. Liver \rightarrow 1. Stomach

14. (3)



$$x^2 = 4^2 + 3^2$$

$$x^2 = 16 + 9$$

$$x^2 = 25$$

$$x = 5$$

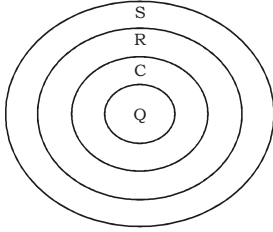
Total distance covered by her = $4 + 3 + 5 = 12$ km

15. (4)

$140 * 50 * 38 * 25 * 5 * 280$
 After changing the sign,
 $140 - 50 + 38 \times 25 \div 5 = 280$
 $140 - 50 + 38 \times 5 = 280$
 $140 - 50 + 190 = 280$
 $330 - 50 = 280$
 $280 = 280$

16. (2) ENCOUNTER

17. (2)



I. True II. False III. False IV. True

Hence, only conclusions I and IV follow.

18. (2)

19. (4) a a b c d d e/a a b c d d e/a a b c d d e

20. (4) As, $38 + (8 \times 3) = 62$

$$62 + (6 + 2) = 70$$

$$\text{Similarly, } 48 + (8 \times 4) = 80$$

$$80 + (8 + 0) = 88$$

21. (1)

22. (1)

23. (2)

24. (4)

$M > K > L$

And, $K > P$

And, Q's income is least

Hence, M has the maximum income.

25. (1)

26. (4) Graphite is a good conductor of heat of electricity.

28. (3) The age of a tree can be ascertained by its annual rings present. This method is known as Dendrochronology, counts ring to ascertain the age of tree.

29. (4) It is published by Ministry of Statistics and Programme Implementation Central Statistical Organization.

30. (1) Bubbles from a liquid formed when air enters inside the liquid and as a result bubble is formed. This process is called effervescence as effervescence is the escape of gas from an aqueous solution and the foaming or fizzing that results from that release.

31. (1) The terms "Socialist", "Secular", and "Integrity" were added to the Preamble of Indian Constitution in 1976 through the 42nd Constitutional Amendment.

32. (1) KyzylKum has the highest gold deposit.

33. (4) The Durand Line was established in 1893 as the international border between India and the Emirate of Afghanistan by Mortimer Durand, a British diplomat of the Indian Civil Service, and Abdur Rahman Khan, the Afghan Emir, to fix the limit of their respective spheres of influence and improve diplomatic relations.

34. (3) Energy received by the earth is known as incoming solar radiation which in short is termed insolation. The factor that determines the amount of insolation received is the angle of inclination of the rays. This depends on the latitude of a place.

35. (1) When common salt is mixed with ice, the freezing point is lowered. Salt increases the melting point of ice as well as delays the freezing of water than normal.

36. (3) Vishnu Deo Sai, a prominent tribal face of the Bharatiya Janata Party (BJP), sworn in as the next Chief Minister of Chhattisgarh.

37. (3) Odisha has won the UN-Habitat's World Habitat Awards 2023 for Jaga Mission initiative of the state. Jaga mission is the world's largest land titling and slum upgrading program which aims at empowering the lives of slum dwellers.

39. (2) Persons with the AB blood group are called universal recipients. This is due to the absence of antibodies, anti-A, and anti-B, in plasma.
41. (2) The UN agency, Food and Agricultural Organisation (FAO) has published its latest Food Price Index (FFPI) which tracks the monthly international prices of cereals, vegetable oil, dairy, meat and sugar.
44. (1) India's Union Ministry of Environment, Forests and Climate Change has launched the Indian Forest & Wood Certification Scheme.
45. (2) Translocation occurs within a series of cells known as the phloem transport system, which is the most important digestive tissue of plants. Nutrients move to phloem as solutes in a solution called phloem liquid.
46. (1) Heavy water is employed in nuclear reactors as a neutron moderator, slowing down neutron production and bringing stability to the fission reaction.
48. (3) Nasiruddin Mahmud was the last ruler of the Tughlaq dynasty who ruled from 1394 to 1412.
50. (2) As the spending increases, the demand also increases which leads to inflation. Hence, Economic growth is usually coupled with inflation.
51. (4) $8(4M + 6F) = 10(3M + 7F)$
 $32M + 48F = 30M + 70F$
 $2M = 22F$
 Now, $4M + 6F = 44F + 6F = 50F$
- \therefore Required time = $\frac{50 \times 8}{10} = 40$ days
52. (2) Let the principal be ₹100.
 Amount = ₹180
 $SI = 180 - 100 = ₹80$
- Rate = $\frac{80 \times 100}{100 \times 8} = 10\%$
- Now,
 Principal = ₹14000
 Time = 3 years
 Rate = 10%
 CI = ?
- $CI = P \left(1 + \frac{R}{100} \right)^T - P$
- $= 14000 \left(1 + \frac{10}{100} \right)^3 - 14000$
- $= \left[14000 \times \frac{11}{10} \times \frac{11}{10} \times \frac{11}{10} \right] - 14000$
- $= 18634 - 14000 = ₹4634$
53. (3) Let the cost price be ₹100.
- Selling price = $100 \times \frac{119}{100} = ₹119$
- Marked price = $\frac{119}{85} \times 100 = ₹140$
- \therefore Required% = $\left(\frac{140 - 100}{100} \times 100 \right) \% = 40\%$

54. (1) Speed = 15 km per hour = $15 \times \frac{5}{18} = \frac{25}{6}$ m / s.

Water flow out in one second = $0.2 \times 0.15 \times 25/6 \text{ m}^3$

Volume of tank = $150 \times 100 \times 3 \text{ m}^3$

\therefore Time taken = $\frac{150 \times 100 \times 3 \times 6}{.2 \times .15 \times 25} = 100$ hours

55. (3) Speed = $\frac{350 \times 60}{1000} = 21 \text{ km / hr}$

Total time taken = $\frac{84}{21} + 13 \times 6$

4 hours + 78 minutes = 5 hours 18 minutes

56. (4) $(1 + m^2)x^2 + 2mcx + c^2 - a^2 = 0$

$B = 2mc$

$A = (1 + m^2)$

$C = c^2 - a^2$

Roots are equal, so $D = 0$

$B^2 - 4AC = 0$

$(2mc)^2 - 4(1 + m^2)(c^2 - a^2) = 0$

$4m^2c^2 - 4c^2 + 4a^2 - 4m^2c^2 + 4m^2a^2 = 0$

$-c^2 + a^2 + a^2m^2 = 0$

$\therefore c^2 = a^2(1 + m^2)$

57. (2) $3x^2 + 2x + 1 = 0$

$\alpha + \beta = \frac{-2}{3}$

$\alpha\beta = \frac{1}{3}$

Product of roots = $\frac{1-\alpha}{1+\alpha} \times \frac{1-\beta}{1+\beta} = 3$

sum of roots = $\frac{1-\alpha}{1+\alpha} + \frac{1-\beta}{1+\beta} = 2$

\therefore Required equation = $x^2 - (\text{sum of the roots})x + \text{product of roots} = 0$

$x^2 - 2x + 3 = 0$

58. (2) Net discount given by A = $\left(5 + 25 - \frac{5 \times 25}{100}\right)\% = 28.75\%$

Net discount given by B = $\left(16 + 12 - \frac{16 \times 12}{100}\right)\% = 26.08\%$

A is giving more discount

It is more profitable to purchase the fan from A.

59. (1) $\left(x + \frac{1}{x}\right)^2 = 3$

$$x + \frac{1}{x} = \sqrt{3}$$

On cubing both sides.

$$x^3 + \frac{1}{x^3} + 3\left(x + \frac{1}{x}\right) = 3\sqrt{3}$$

$$x^3 + \frac{1}{x^3} = 3\sqrt{3} - 3\sqrt{3} = 0$$

$$x^6 + 1 = 0$$

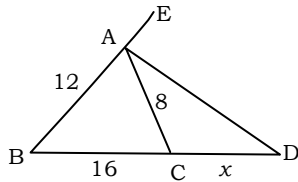
$$\begin{aligned} \therefore x^{206} + x^{200} + x^{90} + x^{84} + x^{18} + x^{12} + x^6 + 1 \\ = x^{200}(x^6 + 1) + x^{84}(x^6 + 1) + x^{12}(x^6 + 1) + (x^6 + 1) = 0 \end{aligned}$$

60. (1) Required ratio

$$\begin{array}{ccc} \frac{4}{7} & & \frac{2}{5} \\ & \searrow & \nearrow \\ & \frac{1}{2} & \\ & \nearrow & \searrow \\ \frac{1}{10} & & \frac{1}{14} \end{array}$$

$$\text{Required ratio} = 14 : 10 = 7 : 5$$

61. (2)



AD is an external bisector.

$$\frac{BD}{CD} = \frac{AB}{AC}$$

Let $CD = x$

$$\frac{16 + x}{x} = \frac{12}{8}$$

$$\frac{16 + x}{x} = \frac{3}{2}$$

$$32 + 2x = 3x$$

$$\therefore x = 32 \text{ cm}$$

62. (2) Length of the wire = $\pi d = \frac{22}{7} \times 112 = 352 \text{ cm}$

Semi perimeter of the rectangle = 176 cm

$$\therefore \text{Smaller side} = \frac{7}{16} \times 176 = 77 \text{ cm}$$

63. (1) $7\sin \alpha = 24\cos \alpha$

$$\tan \alpha = \frac{24}{7}$$

$$\cos \alpha = \frac{7}{25}, \sec \alpha = \frac{25}{7}$$

Now, $14\tan \alpha - 75\cos \alpha - 7\sec \alpha$

$$14 \times \frac{24}{7} - 75 \times \frac{7}{25} - 7 \times \frac{25}{7}$$

$$= 48 - 21 - 25 = 2$$

64. (4) For no Solution condition $\Rightarrow \frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$

$$= \frac{4}{k-1} = \frac{3}{k+7} \neq \frac{8}{3k+9}$$

$$4k + 28 = 3k - 3$$

$$4k - 3k = -31$$

$$\therefore k = -31$$

65. (3) Let the number of sides be x .

$$\text{Each exterior angle} = \frac{360}{x}$$

$$\text{Each Interior angle} = \frac{(x-2)180}{x}$$

ATQ,

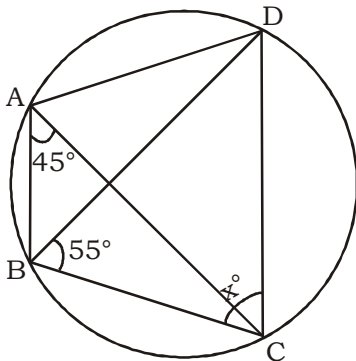
$$\frac{360}{x} = \frac{1}{5} \frac{(x-2)}{x} \times 180$$

$$10 = x - 2$$

$$x = 12$$

$$\therefore \text{Number of sides} = 12$$

66. (2)



$$\angle BAC = \angle BDC = 45^\circ \quad (\because \text{Angles in the same segment of a circle})$$

In $\triangle BCD$,

$$\angle BCD + \angle BDC + \angle CBD = 180^\circ$$

$$\angle BCD + 45^\circ + 55^\circ = 180^\circ$$

$$\therefore \angle BCD = 180^\circ - 100^\circ = 80^\circ$$

$$67. (1) \quad \text{Area of rectangular field} = \frac{1000}{\frac{1}{4}} \text{ m}^2 = 4000 \text{ m}^2$$

$$\text{Breadth} = 50 \text{ m}$$

$$\text{Length} = \frac{4000}{50} = 80 \text{ m}$$

$$\text{New length of field} = (80 + 20) \text{ m} = 100 \text{ m}$$

$$\text{New area} = 100 \times 50 = 5000 \text{ sq. m}$$

$$\therefore \text{Required expenditure} = ₹ \left(5000 \times \frac{1}{4} \right) = ₹1250$$

$$68. (3) \quad \text{Age of the captain} = (11 \times 30) - \{(5 \times 29) + (5 \times 27)\}$$

$$= (330 - 280) \text{ years} = 50 \text{ years}$$

$$69. (2) \quad (2m + 4b) \times 10 = (4m + 5b) \times 6$$

$$20m + 40b = 24m + 30b$$

$$4m = 10b$$

$$2m = 5b$$

$$\text{So, } 5b = 2 \times 40$$

$$b = \frac{2 \times 40}{5} = 16$$

$$\therefore \text{Required ratio} = 40 : 16 = 5 : 2$$

$$70. (4) \quad \text{Let the income be ₹100.}$$

$$\text{Expenditure} = 100 \times \frac{75}{100} = ₹75$$

$$\text{Saving} = 100 - 75 = ₹25$$

Now,

$$\text{New income} = 100 \times \frac{120}{100} = ₹120$$

$$\text{New expenditure} = 75 \times \frac{110}{100} = ₹82.5$$

$$\text{New saving} = 120 - 82.75 = ₹37.25$$

$$\therefore \text{Required\%} = \left(\frac{37.25 - 25}{25} \times 100 \right) \% = 50\%$$

$$71. (1) \quad \text{Let the speed of second train be } x \text{ km/h.}$$

$$\text{Speed of first train relative to second train} = (120 - x) \text{ km/h}$$

$$= \left[(120 - x) \times \frac{5}{18} \right] \text{ m/sec}$$

$$= \left(\frac{600 - 5x}{18} \right)$$

$$\text{Distance covered} = 100 + 200 = 300 \text{ m}$$

Now,

$$\frac{300}{\left(\frac{600-5x}{18}\right)} = 120$$

$$300 = \frac{120(600-5x)}{18}$$

$$10 \times 9 = 2(600-5x)$$

$$90 = 1200 - 10x$$

$$10x = 1200 - 90$$

$$x = \frac{1110}{10} = 111$$

Hence, the speed of second train is 111 km/h.

72. (1) Number of employees working in legal department = $48 + 54 + 36 + 30 + 53 = 221$

Number of employees working in H.R. department = $1050 + 1015 + 976 + 888 + 1004 = 4933$

$$\text{Required \%} = \frac{221 \times 100}{4933} = 4\% \text{ (Approx)}$$

73. (4) Number of male Physics teachers = $3600 \times \frac{20}{100} \times \frac{1}{6} = 120$

$$= \frac{120 \times 100}{\frac{30}{100} \times 3600} = 11.11\% \approx 11\%$$

74. (4) Total salary = $25000 \times 54 + 25000 \times \frac{110}{100} \times 48$

$$= 1350000 + 1320000 = ₹2670000$$

75. (3) Required total = $42000 \times \frac{35}{100} \times \frac{3}{5} + 34000 \times \frac{21}{100} \times \frac{4}{7}$

$$= 8820 + 4080 = 12900$$

MEANINGS IN ALPHABETICAL ORDER

Autonomy	the right or condition of self-government	स्वशासन
Breed	a stock of animals or plants within a species having a distinctive appearance	नस्ल
Broach	raise (a sensitive or difficult subject) for discussion	एक संवेदनशील विषय पर चर्चा छेड़ देना
Broad	having an ample distance from side to side; wide	विस्तृत
Constituent	a component part of something	घटक
Confer	grant or bestow (a title, degree, benefit, or right)	उपाधि प्रदान करना
Confide	tell someone about a secret or private matter	गुप्त बात कहना
Confined	limited to a certain extent	सीमित
Concede	admit that something is true or valid	स्वीकार करना
Desultory	lacking a plan, purpose, or enthusiasm	असंगत
Dung	the excrement of animals	गोबर
Eliminate	completely remove or get rid of something	उन्मूलन करना
Exemplary	serving as a desirable model	अनुकरणीय
Faecal	relating to the solid waste passed out of the body of a human or animal through the bowels	मल-मूत्र संबंधी
Feign	pretend to be affected by (a feeling, state, or injury)	बहाना करना
Hazard	a danger or risk	खतरा
Immaculate	perfectly clean, neat, or tidy	बेदाग
Magnitude	the great size or extent of something	परिमाण, मात्रा
Parity	the state or condition of being equal	समता
Parasites	an organism that lives in or on another organism (its host) and benefits by deriving nutrients at the host's expense.	परजीवी
Pathogens	a bacterium, virus, or other microorganism that can cause disease	एक जीवाणु, वायरस या अन्य सूक्ष्मजीव जिनसे बीमारी फैलती है
Privy	informed of something secret or private	किसी गूढ़ बात से परिचित
Sprout	a shoot of a plant	अंकुर
Sterilised	something made free from bacteria or other living microorganisms	कीटाणुरहित
Valour	great courage in the face of danger	साहस
Venerable	accorded a great deal of respect	आदरणीय
Visceral	of or relating to the viscera	आंत संबंधी

KD

Campus

K D Campus Pvt. Ltd

1997, GROUND FLOOR OPPOSITE MUKHERJEE NAGAR POLICE STATION, OUTRAM LINES, GTB NAGAR, NEW DELHI – 09

SSC MOCK TEST - 418 (ANSWER KEY)

- | | | | |
|---------|---------|---------|----------|
| 1. (2) | 26. (4) | 51. (4) | 76. (2) |
| 2. (3) | 27. (4) | 52. (2) | 77. (4) |
| 3. (4) | 28. (3) | 53. (3) | 78. (3) |
| 4. (3) | 29. (4) | 54. (1) | 79. (2) |
| 5. (2) | 30. (1) | 55. (3) | 80. (4) |
| 6. (4) | 31. (1) | 56. (4) | 81. (1) |
| 7. (3) | 32. (1) | 57. (2) | 82. (1) |
| 8. (3) | 33. (4) | 58. (2) | 83. (1) |
| 9. (4) | 34. (3) | 59. (1) | 84. (2) |
| 10. (1) | 35. (1) | 60. (1) | 85. (2) |
| 11. (2) | 36. (3) | 61. (2) | 86. (1) |
| 12. (3) | 37. (3) | 62. (2) | 87. (4) |
| 13. (2) | 38. (1) | 63. (1) | 88. (2) |
| 14. (3) | 39. (2) | 64. (4) | 89. (4) |
| 15. (4) | 40. (4) | 65. (3) | 90. (3) |
| 16. (2) | 41. (2) | 66. (2) | 91. (1) |
| 17. (2) | 42. (1) | 67. (1) | 92. (3) |
| 18. (2) | 43. (3) | 68. (3) | 93. (4) |
| 19. (4) | 44. (1) | 69. (2) | 94. (3) |
| 20. (4) | 45. (2) | 70. (4) | 95. (4) |
| 21. (1) | 46. (1) | 71. (1) | 96. (1) |
| 22. (1) | 47. (2) | 72. (1) | 97. (1) |
| 23. (2) | 48. (3) | 73. (4) | 98. (2) |
| 24. (4) | 49. (4) | 74. (4) | 99. (3) |
| 25. (1) | 50. (2) | 75. (3) | 100. (1) |

76. (2) Replace 'his' by 'their' as it comes for its antecedent 'those players'.
77. (4) No error
79. (2) 'Brood over' means 'to worry anxiously or be despondent about something or someone'.
86. (1) Change 'the riches' into 'the rich'. 'Riches' means 'money'.
87. (4) No improvement
90. (2) The correct spelling of 'Beleive' is 'Believe'.
91. (2) The correct spelling of 'Anearobic' is 'Anaerobic'.