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**Sreenidhi Institute of Science & Technology**

(An Autonomous Institution)

**Code No: 124MA71**

**MCA II – Year II – Semester Examinations, JULY, 2014 (REGULAR)**

**QUANTITATIVE APTITUDE**

**Time: 2 Hours Max. Marks : 50**

**Note : Answer Any 50 Questions.**

**Student can solve more than 50 questions, but maximum 50 marks will be awarded.**

**Calculator's are not allowed.**

1. The last digit in 22x23x24x ………x 29.

a) 0 b) 9 c) 7 d) 2

2. The time taken by a hose to fill up a cistern is less than the time taken by another hose used for the same purpose by 6 minutes. If 1st one is 5/2 times faster than the second, What is the time taken by 1st hose to fill up?

a)4mins b)10mins c)40mins d)25mins

3. Let N = 80pq2pq (7digit number). If N is exactly divisible by 120 then the sum of the digits in N is equal

to:

a)18 b)22 c)24 d)12

4. If 14p0p0p4 which is a 8 digit number and is divisible by 12 then the number of possible values of p is: a)3 b)5 c)4 d)2

5. A project is assigned to P, Q and R. They decided to work together and make some adjustment with them such that P can leave 3 weeks before the completion and R works only for 4 weeks. If P, Q and R can complete in 24, 36 and 48 weeks respectively then the project will complete in:

a)12 weeks b)24 weeks c)13 weeks d)18 weeks

6. There is a group of 5 members. If the average age of last 3 is 20% of the average age of the 1st person and the eldest of that three. The total age of the 2nd one and the youngest of that three is 39 years. If the age of first person is 26 years, what is the age of middle one of that three?

a)12 years b)10years c)none of these d)data inadequate

7. A chemical solution of 2430 ml is poured into 3 bottles namely P,Q and R such that 5 ml,10 ml and 15 ml are taken out and the remaining solution in P, Q and R will be in the ratio 3 : 4 : 5. Find the initial amount of solution in Q.

a)810 ml b)270 ml c)970 ml d)720 ml

8. The ratio of length of sides of a machine is 1/6:1/4:1/3 and the sum of length of sides is 104,. If we increase each side by 3 m then the length of largest side will be:

a)45 m b)46 m c)49 m d)50 m

9. Find the sum of the integers of three digits which are divisible by 17.

a)28832 b)21967 c)32842 d)39154

10. Two buses are travelling at 36kmph and are 120 km apart. There is a fly in one bus which starts to fly at 72kmph when the bus is started. It hits the second bus and starts flying between two buses until the buses meet each other. Find the distance travelled by the fly after hitting the second bus is.

a)120 km b)60 km c)40 km d)72 km

11. Mr.P, Mr.Q and Mr.S starts a business by investing for 1 1/6, 2/3 , 7/12 years respectively and shared profit in the ratio 5:7:8. Find the ratio of their investment period

a)12:13:14 b)11:8:23 c)62:46:23 d)20:49:64

12. Prakash and Nishit start a business by investing in the ratio 5:6. Rajesh joined them after 6 months. If Rs.4,90,000 annual profit was earned by them with Rajesh investing an amount equal to that of Nishit's, then the amount invested by Rajesh is:

a)Rs.2,10,000 b)Rs.3,20,000 c)Rs.2,80,000 d)Rs.3,80,000

13. Mr. A starts a bike at 11am and rides at 60kmph and Mr. B starts a car at 11.30 am and drives at 75kmph. Find at what time will Mr. B overtake Mr. A?

a)12.00 pm b)11.45 am c)1.30 pm d)1.00 pm

14. A car has to cover a distance of 60 km in 3/4 hour. If it covers 1/2 of the distance in 2/3 rd of the total time then what should be its speed to cover the remaining distance in the remaining time?

a)120 kmph b)100 kmph c)90kmph d)125 kmph

15. The time showed by an analog clock at a moment is 11 am then 1234567890 hours later it will show the time as:

a)11am b)11pm c)5am d)4pm

16. Find the sum of all integers between 60 and 600 which are divisible by 17. a)10608 b)26898 c)23608 d)90098

17. Two trains are travelling at 25 kmph, starting at the same time from city 1 and city 2 respectively which are 75 km apart. There is a bee, which can fly at 50 kmph starts from city1 at the same time the train starts and hits the second train. After hitting the train, takes rest till the trains meet each other. Find the time taken by the fly to rest?

a)15 minutes b)30 minutes c)45 minutes d)65 minutes

18. A milk bottle is filled with the mixture of water and milk in the ratio 3:5 respectively. How much of the mixture from the bottle must be drawn off and replaced with water so that the mixture has equal amount of water and milk?

a)1/2 b)1/3 c)1/4 d)1/5

19. If 729 kg of mixture contains two types of wheat in the ratio 7:2. How much more type2 is to be added to get a new mixture containing type1 and type2 in the ratio 7:3?

a)81kg b)121k g c)98kg d)102kg

20. If 96 is 80% of a number then 96% of that number will be:

a)115.2 b)125.5 c)112.5 d)112.2

21. If 85% of a number is 612 then what percentage of 612 is that number?

a)118 3/17 % b)117 11/17 % c)98 17/11 % d)89 11/17%

22. If the digit in the ten's place of a two digit number is 3 less than the digit unit’s place and if the ratio of the sum of the digits of that number to that of the number is 1:4 then the number is:

a) 32 b) 34 c) 36 d) 38

23. The average of four numbers is 62.5. If none of them is less than 50 then the greatest possible value of summation of two of them is:

a) 150 b) 64 c) 130 d) 125

24. If 2A = 3B = 4C then A:B:C = ?

(a) 1:4:3 (b) 6:4:3 (c) 1:2:3 (d) 2:3:4

25. If a:b = 4:3 then 5a +2b / 5a-2b = ?

(a) 13/7 (b) 12/6 (c) 14/2 (d) 12/1

26. Find C1 on Rs . 7500 at 4 % p.a. for 2 yrs, compound annually

(a) Rs. 215 (b) Rs.612 (c) Rs. 512 (d) Rs.212

27. Find compound int on Rs.8000 at 15% p.a for 2 yrs 4 months compound annually

(a) Rs.3109 (b) Rs.2105 (c) Rs. 2204 (d) 2105

28. Find HCF of 2.4,0.36 & 7.2

(a) 0.12 (b) 0.13 (c) 0.18 (d) 0.19

**(29-33)**The following table gives the percentage of marks obtained by seven students in six different subjects in an examination. Study the table and answer the questions based on it. The numbers in the brackets give the maximum marks

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Subjects (Max. Marks)** | **Maths (150)** | **Chemistry (130)** | **Physics (120)** | **Geography (100)** | **History (60)** | **Computer Science (40)** |
| **Student** |
| Ayush | 90 | 50 | 90 | 60 | 70 | 80 |
| Aman | 100 | 80 | 80 | 40 | 80 | 70 |
| Sajal | 90 | 60 | 70 | 70 | 90 | 70 |
| Rohit | 80 | 65 | 80 | 95 | 50 | 90 |
| Muskan | 80 | 65 | 85 | 95 | 50 | 90 |
| Tanvi | 70 | 75 | 65 | 85 | 40 | 60 |
| Tarun | 65 | 35 | 50 | 77 | 80 | 80 |

29. What was the aggregate of marks obtained by Sajal in all the six subjects? 409 (b) 419 (c) 429 (d) 439 (e) 449

30. What is the overall percentage of Tarun?

1. 52.5% (b)55% (c) 60% (d) 63% (e) 64.5%

31. What are the average marks obtained by all the seven students in Physics? (rounded off two digits after decimal)

1. 77.26 (b) 89.14 (c) 91.37 (d) 96.11 (e) 103.21

32. The number of students who obtained 60% and above marks in all the subjects is

1. 1 (b) 2 (c) 3 (d) None

33. In which subject is the overall percentage the best? History (b) Maths (c) Physics (d) Chemistry (e) Geography

34. 3 boys working 8 hours a day can complete a work in 2 days. How many hours a day must 4 boys work to complete the work in 1 day? a)12 b)20 c)40 d)24

35. If 18 men can build 18 pillars in 18 days, then how many days will 3 men will require to build 8 pillars?

a) 8/3 b)3/8 c)54 d)48

36. If the average of 4 consecutive odd numbers is 92, then the least number of those numbers is:

a) 89 b) 71 c) 81 d) 91

37. A person travels from P to Q at a speed of 40 kmph and returns by increasing his speed by 50 %.

What is his average speed for both the trips?

1. 36 kmph (b) 45 kmph (c) 48 kmph (d) 50 kmph

38. Three persons are walking from a place A to another place B. Their speeds are in the ratio 4:3:5.

The time ratio to reach B by these persons will be :

1. 4:3:5 (b) 5:3:4 (c) 15:9:20 (d) 15:20:12

39. A does a work in 10 days and B does the same work in 15 days. In how many days they together

will do the same work?

1. 5 days (b) 6 days (c) 8 days (d) 9 days

40. A.B and C can complete a piece of work in 24, 6 and 12 days respectively. Working together,

they will complete the same work in:

1.  (b)  (c)  (d) 4 days

41. A takes twice as much time as B or thrice as much time to finish a piece of work. Working

together, they can furnish the work in 2 days. B can do the work alone in:

1. 4 days (b) 6 days (c) 8 days (d) 12 days

42. P can complete a work in 12 days working 8 hours a day . Q can complete the same work in 8

days working 10 hours a day. If both P and Q work together, working 8 hours a day, in how many

days can they complete the work ?

1.  (b)  (c)  (d) 

43. A and B can do a work in 8 days, B and C can do the same work in 12 days, A,B and C together can finish it in 6 days. A and C together will do it in :

(a) 4 days (b) 6 days (c) 8 days (d) 12 days

44. A can furnish a work in 18 days and B can do the same work in 15 days. B worked for 10 days and left the job. In how many days, A alone can finish the remaining work?

(a) 5 (b)  (c) 6 (d) 8

45. X and Y can do a piece of work in 20 days and 12 days respectively. X started the work alone

and then after 4 days Y joined him till the completion of the work. How long did the work last?

(a)6 days (b) 10 days (c) 15 days (d) 20 days

46. If 96 is 80% of a number then 96% of that number will be:

a)115.2 b)125.5 c)112.5 d)112.2

47. If 85% of a number is 612 then what percentage of 612 is that number?

a)118 3/17% b)117 11/17% c)98 17/11% d)89 11/17%

48. If 1/7 of 3/4 of 1/3 of a number is 3. Then what is 65% of that number?

a)50.5 b)65.6 c)54.6 d)52.3

49. What percentage of 15% of 582 is 17.46?

a)20% b)25% c)30% d)35%

50. A bag contains blue and red balls in the ratio3:4.If 20 green ball is added then the numberof balls is 55. Then what is the ratio of red balls to that of green?

a)1:2 b)1:3 c)1:1 d)2:1

51. The ratio of ages of Meera and Sheela is 1:2. If the age of Veena who is 9 years old is added then the ratio becomes 2:4:3. Then what is the age of Sheela ?

a)12 b)10 c)6 d)9

52. Find X when X - Y = 3 and X2 + Y2 = 89 where X and Y are integers.

a)10 b)-5 c)-10 d)-3

53. From the total income, A man spent Rs.30,000 as his family's expenditure, half of the remaining as his office expenditure and had Rs.4000 left. What was his total income?  
 a)Rs.36,000 b)Rs.34,000 c)Rs.42,000 d)Rs.38 ,000

54. Given m is inversely proportional to cube of n with m = 4 4/9 when n = 3 then find m when n = 8.

a)2 2/9 b)5/16 c)15/64 d)1 1/8

55. If the digit in the ten's place of a two digit number is 3 less than the digit unit’s place and if the ratio of the sum of the digits of that number to that of the number is 1:4 then the number is:  
 a)32 b)34 c)36 d)38

56. The average of four numbers is 62.5. If none of them is less than 50 then the greatest possible value of summation of two of them is:

a)150 b)64 c)130 d)125

57. A metallic cylinder of height 6 cm and diameter 6 cm have been melted and recast into certain number of same size spheres. Find the radius of the sphere.

a)1.5 cm b)3.2 cm c)5.4 cm d)2cm

58. On dividing (28 + 3019 + 90828) by 29 the remainder will be \_\_ .

a)1 b)2 c)28 d)0

59. 3 boys working 8 hours a day can complete a work in 2 days. How many hours a day must 4 boys work to complete the work in 1 day?

a)12 b)20 c)40 d)24

60. If 18 men can build 18 pillars in 18 days, then how many days will 3 men will require to build 8 pillars?

a)8/3 b)3/8 c)54 d)48

61. If the sum of five consecutive even numbers is 1580, then find the average of the next five consecutive even numbers

a) 326 b) 312 c) 325 d) 318

62. There are 4 cups of tea. The average temperature of first 3 cups is 84 degree Celsius and that of last three cups is 80 degree. The temperature of last one is 5/7 th of the first one. Then the temperature of the last one is

a) 30 b) 29 c) 30.5 d) 32

63. If n is an odd integer, then which of the options will be even.  
 a)(n2)/2 + n b)nn + n + 1 c)(n2 + 3)2 d)none of these

64. The least no.by which 825 must be multiplied in order to produce a multiple of 715 is

(a) 12 (b) 13 (c) 14 (d) 15

65. The Least number which is a perfect square square and is divisible by each of the no’s 16,20 & 24 is (a) 3400 (b) 3500 (c) 3600 (d) 3700

66. Find the simple interest on Rs. 68000 at 16 2/3 % p.a for 9 months

(a) Rs.6500 (b) Rs.8500 (c) Rs.6200 (d) Rs.2500

67. A sum at simple interest at 13 ½ % p.a amounts to Rs. 2502.50 after 4 yrs. Find the sum

(a) Rs. 1625 (b) Rs. 2500 (c) Rs.8500 (d) Rs. 1700

68. A certain sum of money amounts to Rs 1008 in 2 yrs and to Rs. 1164 in 3 ½ years. Find the sum and the rate of interest.

(a) 15 % (b) 13 % (c) 14% (d) 18 %

69. The Units digits in 7 71 X 6 59 X 3 65

(a) 4 (b) 5 (c) 6 (d) 7

70. Product of two co- prime numbers is 117. Then LCM is

(a) 112 (b) 116 (c) 117 (d) 118

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