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| 19TPS05 – Question Bank – Practice questions | |
| 1 | At what time between 7 PM and 8 PM would the two hands of the clock be together?  Soln: Θ = 30H ~ 11/2 M  Θ = 00, H = 7 find M=?  0 = 30(7) ~ 11/2 \* M ; 0 = 210 ~ 11/2 M ; -210 = - 11/2 M ;  M = 420/11 minutes |
| 2 | The angle between the minute hand and the hour hand of a clock when the time is 8.30, is:  Explanation:  30\*0.5+2\*30=60+15=75. Ans: (b)75 |
| 3 | At what time between 6 PM and 7 PM would the two hands of the clock be together?  Soln: Θ = 30H ~ 11/2 M  Θ = 00, H = 6 find M=?  0 = 30(6) ~ 11/2 \* M ; 0 = 180 ~ 11/2 M ; -180 = - 11/2 M ; M = 360/11 minutes |
| 4 | At what time between 5 and 6 o’clock, do the minute and hour hands make an angle of 84 degree with each other  Soln: Θ = 30H ~ 11/2 M  Θ = 840, H = 5 find M=?  84 = 30(5) ~ 11/2 M ; 84-150 = - 11/2M ; - 66 = - 11/2 M ; M = 132/11 = 12 |
| 5 | How many times in a day, are the hands of a clock in straight line but opposite in direction?  Explanation:  The hands of a clock point in opposite directions (in the same straight line) 11 times in every 12 hours. (Because between 5 and 7 they point in opposite directions at 6 o'clock only).  The hands point in the opposite directions 22 times |
| 6 | The reflex angle between the hands of a clock at 7:40 is:  Soln: Θ = 30H ~ 11/2 M = 30(7) ~ 11/2 \* 40 = 210 ~ 220 = 100  Reflex angle → 3600 – Θ = 3600 - 100 Ans:3500 |
| 7 | At what time between 7 and 8 o'clock will the hands of a watch point in opposite directions?  Soln:  Θ = 30H ~ 11/2 M ; 1800= 30(7) ~ 11/2 \* M  180= 210-11/2M ; 180 - 210 = -11/2M  30\*2/11 = M ; M = 60/11 = 5 5/11 ; Ans: 5 5/11 |
| 8 | Find the angle between hour and minute hand at 5:20?  Explanation:  30+(0.5\*20)=30+10=40. |
| 9 | The angle between the minute hand and the hour hand of a clock when the time is 8.30, is  Solution:  Θ = 30H ~ 11/2 M  Θ = 30(8) – 11/2 (30)  Θ = 240 – 165 = 750 |
| 10 | Which of the following is not a leap year?  Explanation:  The century divisible by 400 is a leap year. |
| 11 | The difference between the simple interest and compound interest on an amount of Rs.15,000 for 2 years is Rs.96. What is the rate of interest per annum?  Explanation:  2\*1200=2400  1\*96=96  R=8%. |
| 12 | Find the SI on rupees 10000 deposited for 3 years at 5% per annum.  Explanation:  P = Rupees 10,000  R = 5% per annum  T = 3 years  SI = (P×R×T/100)  SI = (10000×5×3)/100 = 1500. |
| 13 | Statements: Some ants are parrots. All the parrots are apples.  Conclusions:   1. I. All the apples are parrots. II. Some ants are apples. |
| 14 | At what time between 4 and 5 o'clock will the hands of a watch point in opposite directions?  Explanation:  At 4 o'clock, the hands of the watch are 20 min. spaces apart.  To be in opposite directions, they must be 30 min. spaces apart.Minute hand will have to gain 50 min. spaces.  60/55 \* 50=54 6/11 past 4. Ans: (a)54(6/11) past 4 |
| 15 | Pick the odd one out of the series:  36, 20, 12, 8, 6, 5.5, 4.5  Soln:  -16, -8, -4, -2, -1 have to come, but here is -0.5  So 5.5 is the odd one. Ans: 5.5 |
| 16 | At what percent of simple interest, sum of money will double itself in 7 years?  Explanation:  SI=A-P=2x-x=x.  R=SI\*100/P\*T  =x\*100/x\*7  =14.28%. |
| 17 | Determine the reflex angle of 10.40.  Explanation:  2\*30+0.5\*40=60+20=80.  Reflex=360-80=280. |
| 18 | Today is Monday. After 161 days, it will be:  Solution:  Each day of the week is repeated after 7 days.  So, after 161 days → 161%7 → R(0)  0 → Monday, When Remainder is “0”  After 161 days, it will be Monday. Ans: Monday |
| 19 | Rs.2400 becomes Rs.3000 in 3 years at a certain rate of compound interest. What will be the sum after 6 years?  Explanation:  Required amount=AT2/T1 / PT2/T1 – 1  =36006/3/24006/3 -1  =3600\*3600/2400=5\*750  =3750. |
| 20 | Statement: Due to increasing pollution, the government has announced that it will ban the use of all single-use plastic products from next month Courses of Action:  I. The government should introduce an awareness campaign to encourage people to use eco-friendly products.  II. The government should provide subsidies to companies that manufacture eco-friendly products. |
| 21 | Today is Monday. After 102 days, it will be:  Explanation:  102/7=4 odd days.  4=Thursday. After Thursday, Friday. |
| 22 | At what time between 4 and 5 o'clock will the hands of a watch point in opposite directions?  Soln:  Θ = 30H ~ 11/2 M  1800= 30(4) ~ 11/2 \* M  180= 11/2M - 120  180 + 120 = 11/2M  300\*2/11 = M  M = 600/11 = 54 6/11 Ans: 54 6/11 |
| 23 | Statements:  All dogs are asses.  All asses are bulls.  Conclusions:  1.Some dogs are not bulls.  2.Some bulls are dogs.  3.All bulls are dogs.  4.All dogs are bulls. |
| 24 | What will be the compound interest on a sum of Rs.25,000 after 3 years at 10% per annum?  Explanation:  3\*2500=7500  3\*250=750  1\*25=25  CI=8275. |
| 25 | A sum at the simple interest at 25% per annum amounts to Rs. 2000 after 4 years. Find the sum?  Soln:  A = P+SI  SI = PNR/100  2000 = P+ (P\*4\*25/100)  2000 = P(1+1)  P = 2000/2 => Rs. 1000 Ans: Rs.1000 |
| 26 | Study the following information to answer the given questions:  i. Five topics, A, B, C, D, E are to be discussed one topic on each day, from Monday to Saturday.  ii. Topic A will be discussed before E and topic B will be discussed before D.  iii. Topics B and D will not be discussed on the first day.  iv. There will be one rest day denoted by F.  v. There will be a gap of two days between the days on which topics D and B will be discussed.  vi. Topic C will be discussed immediately before the rest day. The rest day will not be the second or the fourth day. |
| 27 | Choose the odd man out.  3, 5, 7, 12, 17, 19  Explanation:  Each of the numbers is a prime number except 12. |
| 28 | A clock is started at noon. By 10 minutes past 5, the hour hand has turned through:  Solution:  Angle traced by hour hand in 12 hrs = 360°.  1 hour → 300 & 1 minute → 1/20  Angle traced by hour hand in 5 hrs 10 min:  5 hours → 5\*300 = 1500  10 minutes → 10\*1/20 = 50  TOTAL :5hours minutes → 1550  Ans: 1550 |
| 29 | On 8th Feb, 2005 it was Tuesday. What was the day of the week on 8th Feb, 2004?  Explanation:  The year 2004 is a leap year. It has 2 odd days.  The day on 8th Feb, 2004 is 2 days before the day on 8th Feb, 2005.  Hence, this day is Sunday. |
| 30 | Calculate the simple interest of Rs.6000 for 2years with 11%p.a.  Explanation:  2\*660=1320. |
| 31 | Choose the odd man out.  2, 5, 10, 17, 26, 37, 50, 64  Explanation:  (1\*1)+1 , (2\*2)+1 , (3\*3)+1 , (4\*4)+1 , (5\*5)+1 , (6\*6)+1 , (7\*7)+1 , (8\*8)+1  But, 64 is out of pattern. |
| 32 | Pick the odd one out of the series:  1, 3, 9, 31, 129, 652, 3913  Soln:  SERIES IS \*1+2, \*2+3, \*3+4, …..  1\*1+2 = 3  3\*2+3 = 9  9\*3+4 = 31  31\*4+5 = 129  129\*5+6 = 651, but in series 652 is given.  So, 652 is the odd one. Ans: 652 |
| 33 | Rahul, Anurag and Vivek started a business together. In what proportion would the annual profit be distributed among them?  I. Rahul got one – fourth of the profit.  II. Rahul and Vivek contributed 75% of the total investment. |
| 34 | A sum of Rs. 1000 amounts to Rs. 1200 in 4 years at simple interest. If the interest rate is increased by 3%, it would amount to how much?  Soln:  P=Rs. 1000 P+I=Rs.1200  I=Rs.200 for 4 years  For 1 year SI = Rs. 50  %r = 50/1000 \* 100 = 5%  +3% → 5+3% = 8%  SI = PNR/100 = 1000\*4\*8/100 = 10\*4\*8 = Rs. 320  A = P+SI = 1000+320 = Rs. 1320 Ans: Rs. 1320 |
| 35 | Pick the odd one out of the series:  17, 23, 35, 59, 108, 203, 395  Soln:  The series is +6, +12, +24, +48  17  17+6 = 23  23+12 = 35  35+24 = 59  59+48 = 107 But instead 108 is given in series. Ans: 108 |
| 36 | Ajay took a loan of Rs.1400 as simple interest, for as many years as the rate of interest. If he paid Rs.686 as the interest at the end of the loan period, what was the rate of interest?  Explanation:  686=1400\*x\*x/100  x=7. |
| 37 | Find the compound interest on Rs. 5000 in 2 years at 3% per annum, the interest being compounded annually.  Soln:  P = Rs. 5000 N=2 years R=3%p.a  According to Pascal’s triangle  2\*5000\*3/100 = 2\*50\*3 = 300  1\*150\*3/100=1\*1.5\*3 = 4.5  ---------------------------------  300+4.5 = 304.5 Ans: Rs. 304.5 |
| 38 | Statements: All cups are books. All books are shirts.  Conclusions:   1. I. Some cups are not shirts. 2. II. Some shirts are cups. |
| 39 | What is Ravi’s present age?  I. The present age of Ravi is half of that of his father.  II. After 5 years, the ratio of Ravi’s age to that of his father’s age will be 6:11  III. Ravi is 5 years younger than his brother. |
| 40 | The last day of century cannot be;  Explanation:  100 yrs=5 odd days  Last day of 1st century=Friday  200 yrs=3 odd days  Last day of 2nd century=Wednesday  300 yrs=1 odd days  Last day of 3rd century=Monday  400 yrs=0 odd days  Last day of 4th century=Sunday |
| 41 | A sum of Rs. 800 amounts to Rs. 920 in 3 years at simple interest. If the interest rate is increased by 3%, it would amount to how much?  Soln:  P=Rs. 800 P+I=Rs.920  I=Rs.120 for 3 years  For 1 year SI = Rs. 40  %r = 40/800 \* 100 = 5%  +3% → 5+3% = 8%  SI = PNR/100 = 800\*3\*8/100 = 64\*3 = Rs. 192  A = P+SI = 800+192 = Rs. 992 Ans: Rs. 992 |
| 42 | A sum of Rs. 800 amounts to Rs. 920 in 3 years at simple interest. If the interest rate is increased by 3%, it would amount to how much?  Soln:  P=Rs. 800 P+I=Rs.920  I=Rs.120 for 3 years  For 1 year SI = Rs. 40  %r = 40/800 \* 100 = 5%  +3% → 5+3% = 8%  SI = PNR/100 = 800\*3\*8/100 = 64\*3 = Rs. 192  A = P+SI = 800+192 = Rs. 992 Ans: Rs. 992 |
| 43 | At what rate percent per annum will a sum of money double in 16 years?  Soln :  P ------------🡪 2P  (P+P)  SI = P  Formula for SI = PNR/100  P = P\*16\*R/100 ; R = 100/16 = 6.25% ; Ans: 6.25% |
| 44 | At what rate percent per annum will a sum of money double in 15 years?  Soln :  P ------------🡪 2P  (P+P)  SI = P  Formula for SI = PNR/100  P = P\*15\*R/100 ; R = 100/15 = 6.66% ; Ans: 6.66% |
| 45 | What is the present worth of Rs. 132 due in 2 years at 5% simple interest per annum?  Soln:  P+SI = Rs. 132 N=2 years r=5%  SI = 132-P  132-P = P\*2\*5/100 ; 132-P=P/10 ; 1320-10P=P ; 1320=11P  P=1320/11 = 120 Ans: Rs.120 |
| 46 | What is the present worth of Rs. 264 due in 3 years at 10% simple interest per annum?  Soln:  P+SI = Rs. 264 N=3 years r=10%  SI = 264-P  264-P = P\*3\*10/100 ; 264-P=3P/10 ; 2640-10P=3P ; 2640=13P  P=2640/13 = 203 Ans: Rs.203 |
| 47 | The simple interest on Rs. 10 for 4 months at the rate of 3 paise per rupee per month is:  Soln:  P = Rs. 10 N=4 months r=3  SI = PNR/100  SI = 10\*4\*3/100 = 12/10 = 1.2 Ans: Rs. 1.2 |
| 48 | It was Monday on Jan 15, 2005. What was the day of the week Jan 15, 2006?  Solution:  15th Jan 2005 → Monday  15th Jan 2006 → Tuesday Ans: Tuesday |
| 49 | Pick the odd one out of the series:  2,3,10,40,172,885,5346  Soln:  The series is \*1+12, \*2+22, \*3+32, \*4+42  2  2\*1+12 = 3  3\*2+22= 6+4 = 10  10\*3+32 = 30+9 = 39 But 40 is given in series. Ans: 40 |
| 50 | Find the compound interest on Rs. 10,000 at 20% per annum for 6 months. Compounded quarterly.  Soln:  CI = ?  P = Rs. 10,000 R% p.a = 20% p.a N=6 months  Compounded quarterly:  P = Rs. 10,000 R% p.a = 5% p.a N=6 months (i.e) every 3 months  t=2 times  A = Rs. 10,000 (105/100 \* 105/100)  = Rs. 10,000 (21/20 \* 21/20)  = 4410000/400 = Rs. 11025  CI = A-P = Rs. 11025 – Rs. 10000 = Rs. 1025 Ans: Rs. 1025 |
| 51 | What replaces the question mark in the given series  1250, 1201, 1165, 1140, 1124,? , 1111  Soln:  The series is -72,-62,-52,-42,……  1250  1250-72 = 1250-49 = 1201  1201-62 = 1201-36 = 1165  1165-52 = 1165-25 = 1140  1140-42 = 1140-16 = 1124  1124-32 = 1124-9 = 1115 |
| 52 | What is the two digit number?  I. The sum of the two digits is 8. The ratio of the two digits is 1:3  II. The product of the two digits of a number is 12. The quotient of two digits is 3 |
| 53 | Pick the odd one out of the series:  2, 3, 6, 15, 45, 156.5, 630  Soln:  The series is \*1.5, \*2, \*2.5, \*3, \*3.5, \*4  2  2\*1.5 = 3  3\*2 = 6  6\*2.5 = 15  15\*3 = 45  45\*3.5 = 157.5 but 156.5 is given in series. Ans: 156.5 |
| 54 | The calendar for the year 2007 will be the same for the year;  Explanation:  Number of odd days in 2007=1  Number of odd days in 2008=1  Number of odd days in 2009=2  Number of odd days in 2010=1  Number of odd days in 2011=1  Number of odd days in 2012=1  --------------------------------------------------- Total = 7 So ans is 2013  Number of odd days in 2013  Hence, calendar for the year 2013 will be the same for the year 2007. |
| 55 | The difference between the compound interest and simple interest on certain sum at 10% per annum for 2 years is Rs. 175. Find the sum.  Soln:  CI-SI = P\*(R/100)2 ; 175 = P(1/10)2  175 = P(1/100) ; P = Rs. 17500 Ans: Rs. 17500 |
| 56 | The difference between the compound interest and simple interest accrued on an amount of Rs. 18,000 in 2 years was Rs. 720. What was the rate of interest p.c.p.a?  Soln:  CI-SI = P\*(R/100)2  720 = 18000\*(R/100)2 ; 720 = 18000(R\*R/10000) ;  R\*R = 400 ; R = 20 Ans: R = 20% |
| 57 | The difference between the compound interest and simple interest on certain sum at 10% per annum for 2 years is Rs. 175. Find the sum.  Soln:  CI-SI = P\*(R/100)2  175 = P(1/10)2  175 = P(1/100) ; P = Rs. 17500 Ans: Rs. 17500 |