

Sri Sarada College For Women

(An Autonomous Institution)
(Reaccredited with "A" grade by NAAC)
Institution included u/s 2(f) and 12(B) of UGC
Affiliated to Manonmaniam Sundaranar University
(A branch of Sri Ramakrishna Tapovanam, Tirupparaithurai)
Ariyakulam, Tirunelveli Thoothukudi –High Road, Maharaja Nagar Post,
TIRUNELVELI- 627 011.



SKILL DEVELOPMENT



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Ariyakulam, Thoothukudi NH, Maharaja Nagar Post,

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| Sri Sarada College for Women(Autonomous), Tirunelveli - 627011 Formative Examination - Model Exam . Subject Name : - Mathematics for Competitive I | Evam |
|---|---------|
| mukeshlavan75@gmail.com (not shared) Switch account * Required | |
| Name * Your answer | |
| Class with Major * Your answer | |
| Email ID * Your answer | |
| 1. An automobile financier claims to be lending money at simple interest, but he includes the interest every six months for calculating the principal. If he is charging an interest of 10%, the effective rate of interest becomes: * A) 10% B) 10.25% C) 10.5% | 1 point |

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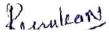
| C) 4500 | |
|---|---------|
| O D)2500 | |
| | |
| 3. Aman took a loan from a bank at the rate of 12% p.a. simple interest. After 3 years he had to pay Rs. 5400 interest only for the period. The principal amount borrowed by him was: | 1 point |
| A) Rs. 2000 | |
| B) Rs. 10,000 | |
| C) Rs. 15,000 | |
| O D) Rs. 20,000 | |
| | |
| 4. If Rs. 5000 amounts to Rs. 5832 in two years compounded annually, find | 1 point |
| the rate of interest per annum. * | |
| A) 6.8% | |
| O B) 7.1% | |
| ○ C) 8% | |
| O D) 9% | |
| | |
| 5. A sum of Rs. 12,500 amounts to Rs. 15,500 in 4 years at the rate of simple interest. What is the rate of interest? * | 1 point |
| ○ A) 3% | |
| ○ B) 4% | |
| ○ C) 5% | |
| ○ D) 6% | |
| | |

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| A sum of Rs. 1000 is to be divided among two brothers su interest being compounded annually is 5 % per annum, the the first brother after 4 years is equal to the money with the after 6 years. * | n the money with | 1 point |
|---|--------------------|---------|
| A) 425 and 498 | | |
| B) 400 and 489 | | |
| C) 500 and 575 | | |
| D) 524.38 and 475.62 | | |
| | | |
| 7. Aastha lent Rs. 5000 to Bahubali for 2 years and Rs. 3000 years on simple interest at the same rate of interest and recall from both of them as interest. The rate of interest per an | ceived Rs. 2200 in | 1 point |
| ○ A) 5% | | |
| ○ B) 7% | | |
| C) 7 1/8% | | |
| D) 10% | | |
| | | |
| 8.A sum of Rs. 1000 was lent to two people, one at the rate at the rate of 8 %. If the simple interest after one year is Rs. lent at each rate. * | | 1 point |
| A) 400, 600 | | |
| B) 800, 1200 | | |
| C) 300, 500 | | |
| O) 700, 900 | | |
| | | |

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| 9. Calculate the compound interest on Rs. 3000 at 5% for 2 years, compounded annually. * | 1 point |
|--|---------|
| A) 307.5 | |
| ○ B) 3307.5 | |
| O 3000.5 | |
| O D) 3100 | |
| 10.The rate of interest p.c.p.a is I. An amount doubles itself in 5 years on simple interest.II. Difference between the compound interest and the simple interest earned on a certain amount in 2 years is Rs. 400.III. Simple interest earned per annum is Rs. 2000 * | 1 point |
| A) I only | |
| B) II and III only | |
| C) All I, II and III | |
| D) I only or II and III only | |
| 11 A can do a bit of work in 10 days while B alone can do it in 15 days. They | 1 point |
| cooperate for 5 days and whatever remains of the work is finished by C in 2 days. On the off chance that they get Rs. 4500 for the entire work, they partition the cash is * | |
| A. Rs 1250, Rs 1200, Rs 550 | |
| B. Rs 2250, Rs 1500, Rs 750 | |
| C. Rs 1050, Rs 1000, Rs 500 | |
| D. Rs 650, Rs 700, Rs 500 | |
| | |

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| C | 2.Radhe does 70% of some work in 15 days. Later, with Shyam's help, she ompletes theremaining work in 4 days. In days can Shyam alone omplete the entire work. * | 1 point |
|----------|---|---------|
| | A. 35 days | |
| | B. 35.2 days | |
| | C. 35.3 days | |
| | D. 38.4 days | |
| 10 ar | B. A and B undertake a project worth Rs. 54000 . A alone can do the work in D days. Theywork together for 3 days. After 3 days, B works alone for 3 days and A completes theremaining work in 3 more days. The share of B in the arnings is * | 1 point |
| | A. Rs. 21600 | |
| | B. Rs. 33400 | |
| | C. Rs. 27800 | |
| | D. Rs. 35780 | |
| | 4. If the ratio of speed of doing work of three persons is 1: 3: 5. The ratio of metaken by these people to do the same amount of work is* | 1 point |
| |) A.15:5:7 | |
| |) B.3:15:5 | |
| | | |
| |) C.15:3:5 | |

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| 16. 12 students working for 5 hours a day can solve a certain number of problems in 8 days. If they work at 4 hours a day for 15 days, then boys are needed to solve five times the original number of problems. * A. 90 B. 45 C. 40 D. 100 | 1 point |
|--|---------|
| | |
| 17. A can fabricate a divider in 30 days , while B alone can assemble it in 40 days, If they construct it together and get an installment of RS. 7000, then B's offer is * | 1 point |
| A. 2000 | |
| B. 3000 | |
| C. 4000 | |
| O. 6500 | |
| | |
| 18. A, B and C completed a work together in 36 days and received a total payment of Rs. 54000. Person A took half of the total money, B took one third and Ctook remaining. In days, A and C would have finished the work if Bwas not working. * | 1 point |
| A. 72 days | |
| B. 54 days | |
| C. 96 days | |
| D. 64 days | |

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| | her labor for 5 days and afterward A leaves off. B can take to complete emaining work in days. * | |
|--------|--|--------|
| O A | A. 7 days | |
| O 8 | 3. 8 days | |
| 0 | C.9 days | |
| 0 [|). 11 days | |
| the sa | can complete a work in 12 days working 8 hours a day. Q can complete ame work in 8 days working 10 hours a day. If both p and Q work her working 8 hours a day, In days can they complete the work?* | 1 poir |
| O A | A. 60/11 | |
| O E | 3.61/11 | |
| 0 | 2.71/11 | |
| 0 [| 0.81/11 | |
| | car travelling at a speed of 40km/hour can complete a journeyin 9 s. To travel the same distance at 60km/hour is * | 1 poir |
| (a |) 6 hours | |
| O 6 |) 3 hours | |
| 0 |) 4 hours | |
| O d | I) 5 hours | |
| | boy goes to his school from his house at a speed of 3 km/hr and returns | |

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| a) 6 km |
|---|
| ○ b) 5 km |
| o) 5.5 km |
| (d) 6.5 km |
| 0 4,444 |
| |
| 23. A boy runs 20 km in 2.5 hours. He take to run 32km at double the previous 1 point speed is * |
| a) 2 hours |
| b) 21/2hours |
| c) 41/2hours |
| d) 5 hours |
| |
| |
| 24. A train is moving with the speedof 180 km/hr. Its speed (inmetres per 1 point second) is: * |
| (a) 5 |
| (b) 40 |
| o) 30 |
| (d) 50 |
| |
| |
| 25. A man riding his bicycle covers 150 metres in 25 seconds. His speed in km 1 point per hour is * |
| a) 25 |
| (b) 21.6 |
| (c) 23 |

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| O d) 20 | |
|---|---------|
| 26. A and B travel the same distanceat speed of 9 km/hr and 10 km/ hr respectively. A takes 36minutes more than B, the distancetravelled by each is * | 1 point |
| a) 48 km | |
| (b) 54 km | |
| o) 60 km | |
| O d) 66 km | |
| | |
| 27. A person started his journey in the morning. At 11 a.m. he covered 3/8 of the journey and on the same day at 4.30 p.m. hecovered 5/6 of the journey. Hestarted his journey at * | 1 point |
| a) 6.00 a.m. | |
| (b) 3.30 a.m. | |
| o) 7.00 a.m. | |
| (d) 6.30 a.m. | |
| | |
| 28. The speed of a bus is 72km/hr. The distance covered by the bus in 5 seconds is * | 1 point |
| a) 100 m | |
| ○ b) 60 m | |
| O c) 50 m | |
| O d) 74.5 m | |

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| 29. Two men start together to walk acertain distance, one at4 km/h and another at 3 km/h. The former arrives half an hour before the latter. The distance is * | 1 point |
|---|---------|
| (a) 8 km | |
| ○ b) 7 km | |
| © c) 6 km | |
| (d) 9 km | |
| | |
| 30. A train starts from a place A at 6a.m. and arrives at another place B at 4.30 p.m. on the same day. If the speed of the train is 40 km per hour, the distance travelled by the train is * | 1 point |
| a) 420 km | |
| (b) 230 km | |
| c) 320 km | |
| (d) 400 km | |
| | |
| 31. A Boy runs 1 Km in 10 minutes. How long will he take to ran 600 m? * | 1 point |
| a) 2 minutes | |
| b) 3 minutes | |
| C) 4 minutes | |
| d) 6 minutes | |
| | |
| 32. 3 Knives cost Rs. 63. What will 17 Knives cost?* | 1 point |
| a) Rs. 357 | |

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| a) Rs. 357 | |
|---|---------|
| O b) Rs. 375 | |
| o) Rs. 537 | |
| (d) Rs. 573 | |
| | |
| 33. If 3 quintals of coal cost Rs. 6000, What is the cost of 120 kg?* | 1 point |
| a) Rs. 1200 | |
| (b) Rs. 2400 | |
| O Rs. 3600 | |
| (d) Rs. 4800 | |
| | |
| 34. Amala types 200 words in half an hour. How many words will she type in 12 minutes?* | 1 point |
| a) 80 | |
| O b) 50 | |
| O c) 100 | |
| (d) 60 | |
| | |
| 35. If 'x' and 'y' are in a direct proportion then which of the following is correct?* | 1 point |
| a) x + y = constant | |
| b) x − y = constant | |
| o) x y = constant | |
| d) x/y = constant | |

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| 36. 6 pipes are required to fill a tank in 1 hour. How long will it take if only 5 pipes of the same type are used? * | 1 point |
|--|---------|
| a) 75 minutes | |
| O b) 72 minutes | |
| o) 80 minutes | |
| (d) 90 minutes | |
| 37. If x = 20 and y = 40, then x and y are: * | |
| 37. II X = 20 and y = 40, then xand y are . | 1 point |
| a) Directly proportional | |
| b) Inversely proportional | |
| c) Neither directly nor indirectly proportional | |
| d) Cannot be determined | |
| | |
| 38. If x∞y and x_1=5, y_1=210 and x_2=2, then find y_2 ?* | 1 point |
| (a) 200 | |
| O b) 84 | |
| O c) 99 | |
| O d) 70 | |
| | |
| 39. The scale of a map is given as 1:300. Two cities are 4 km apart on the map. The actual distance between them is: * | 1 point |
| a) 1000 km | |
| ○ b) 1100 km | |
| (c) 1200 km | |

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| O d) 1300 km | |
|---|---------|
| 40. Rs. 160 maintain a family of 8 persons for 80 days, for how long will Rs. 210 maintain a family of 12 persons?* | 1 point |
| (a) 70 days | |
| (b) 50 days | |
| o) 100 days | |
| Od) 7 days | |
| | |
| 41. A cistern has two taps attached to it. Tap B can empty the cistern in 45 minutes. But Tap A can fill the cistern in just 30 minutes. Rohit started both taps unknowingly but realized his mistake after 30 minutes. He immediately closed Tap B. Now after this, time will the cistern be filled. * | 1 point |
| a. 30 minutes | |
| O b. 45 minutes | |
| C. 15 minutes | |
| d. 20 minutes | |
| | |
| 42. Pipe R can empty a full tank in 30 hours. But two pipes P and Q can fill a tank in 15 hours and 10 hours respectively. Ram unknowingly opened all three taps. After 2 hours Shyam realized it and closed Pipe R. Due to this mistake time more would it take to fill the tank. * | 1 point |
| a. 18 minutes | |
| b. 24 minutes | |
| C. 1 hour 20 minutes | |
| Od. 2 hours 15 minutes | |

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| 43. A cistern is filled by Pipe A and Pipe B together in 2.4 hours. Pipe A alone can fill the cistern at the rate of 100 litres per hour. Pipe B alone can fill the cistern in 4 hours is the capacity of the cistern.* | 1 point |
|---|---------|
| a. 1200 litres | |
| O b. 600 litres | |
| C. 1000 litres | |
| Od. 500 litres | |
| | |
| 44. There is a leak at the bottom of a cistern. Due to this it takes 8 hours to fill the cistern. Had there not been a leak, it would take one hour less to fill the cistern time does it take for the leak to completely empty the cistern. * | 1 point |
| a. 48 hours | |
| O b. 55(1/3) hours | |
| O c. 56 hours | |
| d. 15 hours | |
| | |
| 45. Tap P alone fills a cistern in 2 hours; while tap Q alone fills the same cistern in 3 hours. A new tap R is attached to the bottom of the cistern which can empty the completely filled cistern in 6 hours. Sunny started all three taps together at 9am will the tank be full. * | 1 point |
| a. 10.30 am | |
| O b. 11.15 am | |
| O c. 12 pm | |
| Od. 9.45 am | |
| | |

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| then ciste | ern can be filled in 6 hours by taps P and Q. If tap R also joins them, ern is filled in 5 hours. Tap P can fill the cistern at twice the rate oftime tap Q and R fill the cistern. * | 1 point |
|------------|--|---------|
| a. 9.7 | '5 hours | |
| O b. 10. | 90 hours | |
| O c. 11. | 25 hours | |
| O d. 12. | .90 hours | |
| | ern is normally filled with water in 10 hours but takes 5 hours longer ause of a leak in its bottom. If the cistern is full, the leak will empty on in * | 1 point |
| a. 20 | hours | |
| O b. 40 | hours | |
| O c. 50 | hours | |
| O d. 30 | hours | |
| hours, res | k has three taps P, Q and R. Taps P and Q can fill the tank in 1.5 and 2 spectively. Tap R can empty the completely filled tank in just half P is opened at 8 am, tap Q is opened at 9am and tap R is opened atexact time will the tank be empty * | 1 point |
| a. 12 | pm | |
| O b. 1.2 | :5 pm | |
| O c 12 | 12 pm | |
| 0 | 28 pm | |
|) d. 12. | | |
| _ | | |

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| 49. A pipe can fill a tank in 6 hours. Another pipe can empty the tank in 12 hours. If both pipes are opened simultaneously, the part of tank filled by bopipes in 1 hour is? * | 1 point oth |
|---|----------------|
| a. 1/9 th part | |
| ○ b. 1/6 th part | |
| o. 1/12 th part | |
| ○ d. 1/3 rd part | |
| | |
| 50. A tap having diameter 'd' can empty a tank in 84 min. Another tap havin diameter '2d' take to empty the same tank * | ng 1 point |
| a. 21 minutes | |
| O b. 42 minutes | |
| c. 168 minutes | |
| O d. 28 minutes | |
| | |
| Submit | Clear fo |
| | |

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