

(48) XCS-501/500(B)

99. A sum of money invested at compound interest amounts to ₹ 1,600 in 3 years and to ₹ 1,760 in 4 years. The rate of interest per annum is :

- (a) 6%
- (b) 10%
- (c) 6.25%
- (d) 12%

100. A sum of money invested at simple interest amounts to ₹ 1,600 in 3 years and to ₹ 1,800 in 4 years. The rate of interest per annum is :

- (a) 16.66%
- (b) 20%
- (c) 25%
- (d) 33.33%

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1,060

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Roll No.

XCS-501/500(B)

B. TECH. (FIFTH SEMESTER)

END SEMESTER

EXAMINATION, Dec., 2023

(All Branches)

CAREER SKILLS

Time : Three Hours

Maximum Marks : 100

Instructions for students :

1. This question paper has 100 questions. Attempt all questions. Each question carries equal marks.
2. It is compulsory to write the SET on the OMR.
3. Use of a Calculator is not allowed.
4. There is no negative marking.

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Set-B

Directions (1-17) : Read the information and answer the question that gives the best logical solution :

1. **Sue :** Commercial flights currently contribute more carbon dioxide to the atmosphere in one year than does the whole of Africa. If we want to reduce global warming we need to restrict the number of flights we take.

Dave : Did you know that by taking one inter-continental flight you cause more pollution than you would in twelve months of car travel ?

Dave's response to Sue's comment serves to

- (a) reinforce Sue's contention that flights are a major contributor to increased carbon dioxide levels.
- (b) add more weight to her contention that we should reduce the number of flights we take.
- (c) mitigate the force of her argument by suggesting that there is an alternative approach.
- (d) suggest an alternative that will reduce the effect of pollution.

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2. It is not unusual to see the ball fall into a black slot on a roulette wheel four times in a row. But for it to fall five or six times in a row into the same color is very unusual. Therefore you can win money by waiting for a run of five of the same color and then betting against that color.

If the roulette wheel in question is a fair wheel, which of the following observations or facts, if it were true, would best reveal a fallacy in the logic ?

- (a) If there were a reliable way to win at roulette it would be well-known by now.
- (b) It is hard for a player to keep track of what went before for the time required.
- (c) The probability of getting a particular color decreases with the number of times the color has appeared.
- (d) The probability of getting a particular color is always the same no matter what has gone before.

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3. On the basis of the Big Bang theory scientists predicted levels of Helium-3 in the universe that are ten times greater than the levels actually observed. According to the original model, Helium-3 is produced when low-mass stars burn up hydrogen and become 'red giants', as well as being produced in the Big Bang itself. Researchers have now produced a new model in which the Helium-3 produced by a red giant is pushed to the star's interior and burnt up. Hence the Big Bang theory is no longer undermined by Helium-3 data.

The two portions in bold-face are related to each other in which of the following ways ?

- (a) The first highlights an observation that tends to undermine a particular theory. The second is that theory.
- (b) The first is a fact that undermines a theory. The second is context for accepting that theory.
- (c) The first points to an inconsistency in a particular model; the second is the author's main conclusion.
- (d) The first is a challenge to a classic theory; the second resolves that challenge.

4. The committee on sexual discrimination in the workplace has highlighted Supremo Company as a chief offender. Of the twenty senior executives in the firm, only one is a woman. And of the forty junior executives, only five are female.

Supreme could best defend itself against the charges by showing that

- (a) male and female executives at the same level have the same qualifications
 - (b) they pay the same salary to senior men and senior women
 - (c) ten times more men than women apply for jobs with the company
 - (d) all job applicants who were rejected had fewer qualifications than those accepted
5. Josh has twenty years of typing experience behind him; therefore, if you are looking for an efficient typist to enter your data into the new system, you need look no further.
- The speaker assumes that :**
- (a) Twenty years of practice ensures typing efficiency.

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- (b) The type of typing required for the new system is identical to what Josh has been doing.
 - (c) Josh's job profile is the best that the new employer is going to get.
 - (d) Josh is an outstandingly fast and accurate typist.
6. It has been suggested that long-term prisoners, on release from jail, be given a reasonable state pension to reduce the likelihood of their resorting to crime. Most people instinctively reject the suggestion as they feel it would be like rewarding criminal activity.

The supporters of the prisoners' pension scheme have criticized those who reject this possibility, by claiming that for the critics

Which of the following is the most logical completion of the sentence above ?

- (a) emotion is more important than justice.
- (b) punishment for criminals is more important than crime prevention.
- (c) crime prevention is not an important issue.
- (d) money has too high a value.

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7. The head of the NCAER was quoted as saying that the customer price index (CPI) will go down next month because of a recent drop in the price of petrol and steel.

Which of the following cannot be inferred from the statement ?

- (a) The cost of petrol and steel has gone down sharply.
 - (b) Consumption of petrol and steel has gone up.
 - (c) Petrol and steel are major items in the CPI.
 - (d) The changes in the cost of petrol is reflected quickly in the CPI.
8. "There has been a high incidence of traffic accident related deaths last year." Hence, the chairman of the CBOT suggested that excise taxes on cars and automobiles should not be reduced; planned by the government.

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Which of the statements weakens the argument above ?

- (a) Although there was a high incidence of traffic accident related deaths last year, it was not sig—
 - (b) Compulsory insurance covered most physical damage to automobiles and property.
 - (c) A Government of India report has shown that the demand for automobiles w is highly inelastic.
 - (d) It was found in a study that an inadequate road network account for 30% of the accidents last year.
9. Recent studies have highlighted the harmful effects of additives in food (colors, preservatives, flavor enhancers etc.). There are no synthetic substances in the foods we produce at Munchon Foods — we use only natural ingredients. Hence you can be sure you

are safeguarding your family's health when you buy our products.

Which of the following, if true, would most weaken the contention of Munchon Foods ?

- (a) Some synthetic substances are not harmful.
 - (b) Some natural substances found in foods can be harmful.
 - (c) Food without additives is unlikely to taste good.
 - (d) Munchon Foods produces only breakfast cereals.
10. A fruit known as amla in certain parts of Asia is an excellent source of Vitamin C. A small quantity of the fruit grated and added to salads provides almost all the daily requirement of this vitamin. However, the fruit is very sour. A new process designed to remove most of the sour taste will make the fruit acceptable to

American tastes. We are therefore starting to grow this fruit for sale in the United States.

The argument above assumes all of the following, except :

- (a) Americans generally won't eat very sour foods.
 - (b) The new process does not remove a significant part of the vitamin content.
 - (c) That a market exists for a new source of Vitamin C.
 - (d) The fruit can be used only in salads.
11. Most scientists agree that new lines of interdisciplinary research are the need of the hour. Even government committees on science have stressed the need for more interdisciplinary projects. Yet, of ten proposals for new interdisciplinary projects last year, only one was successfully funded. Some have suggested that this means that as yet researchers are not coming up with sufficiently persuasive projects, or that their proposals are

not of high enough quality, or even that the reputations of these researchers is not high enough. However, the real reason probably a lie in the way funding is organized. Funding is still allocated according to the old categories and there are no funds specifically for research that overlaps different subject areas.

The two parts in bold-face are related to each other in which of the following ways ?

- (a) The first is a finding that the author finds unacceptable; the second is the author's own position.
- (b) The first is a finding that the author attempts to account for; the second is a finding that contradicts the author's main conclusion.
- (c) The first is a fact that the author attempts to account for; the second is data that explicitly supports the author's main conclusion.
- (d) The first is a position that the author opposes; the second is the author's main position.

12. **Anton** : I sold my house on an internet site last year and was happy with the price. I got a speedy sale and the cost of advertising was insignificant. I would advise you to avoid real estate agents.

Barbie : It is in the interest of the real estate agent to get me the best price for my property because he gets a commission based on the selling price. Therefore, when selling my house I will certainly use an agent rather than trying to sell the house by word of mouth, or by advertising in newspapers or on the internet.

Barbie's could strengthen her position by pointing out all of the following, except :

- (a) Houses of comparable value often obtain a lower price when sold on the internet.
- (b) Very few houses are sold on the internet at the moment and so a valid comparison is difficult.

(c) The agent's service includes many add-on benefits in terms of legal fees, surveyor's reports and advice that are not available on internet sites.

(d) Some buyers pay the agent to find them a cheap house.

13. Early data on seat-belt use showed that seat-belt wearers were less likely to be killed in road accidents. Hence, it was initially believed that wearing a seat-belt increased survival chances in an accident. But what the early analysts had failed to see was that cautious drivers were more likely to wear the belts and were also less likely to cause 'big accidents', while reckless drivers were more likely to be involved in 'big' accidents and were less likely to wear the belts.

Which of the following, if true, could an opponent of the view presented above best cite as a reason for recommending continued use of seat-belts ?

- (a) Careful drivers who are involved in accidents caused by reckless drivers, would be more likely to survive if wearing a belt.

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- (b) All drivers should be required by law to wear a belt.
- (c) The ratio of 'big' to 'small' road accidents is very small.
- (d) In fatal accidents seat-belt wearers in the front seat are less likely to survive than those wearing seat belts in the back seat.

14. French cuisine is highly regarded all over the world. Yet in Paris there are more American restaurants selling burgers and fries (which many people now class as 'junk food') than there are in any other European capital city. Obviously the French are very fond of 'junk food', and are not too proud to eat it.

Which of the following, if true, would most weaken the author's contention ?

- (a) There are also a larger number of Lebanese restaurants in Paris than there are in other European capital cities.

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- (b) French Cordon Bleu cuisine is very expensive.
- (c) The number of French tourists eating in New York burger restaurants is very low.
- (d) There are an unusually large number of American tourists in Paris who eat at burger joints.

15. A marriage counselor noted that couples who have occasional violent arguments are less likely to divorce within the next six months than those who have frequent but less violent arguments. He concluded that frequent arguing is a major factor in the causation of severe marital disharmony.

The counselor's conclusion is most weakened by which of the following observations ?

- (a) Couples who have already come to the point of divorce argue continuously over small matters.

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- (b) People who have recently divorced are more likely to argue violently when they meet.
 - (c) Many people in happy marriages have occasional violent arguments.
 - (d) Recently divorced people rarely cite frequent arguments as a cause of marital disharmony.
16. The Dean claimed that, as a result of continued cutbacks in the budget for pure science research, fewer students are choosing a career in Physics, and therefore the number of postgraduate students studying Physics is likely to decline.

Which of the following, if true, casts most doubt on the Dean's conclusion ?

- (a) The number of students majoring in Physics at the undergraduate level has been increasing steadily over the years, a trend that is expected to continue.

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- (b) The number of students studying Chemistry declined even before cutbacks in research funding were noted.
 - (c) Most postgraduate students of Physics move to careers in Computer Science and Engineering.
 - (d) The Dean's own university has recently increased the number of staff members teaching Physics.
17. A nature conservancy expert found little support for his campaign to protect toads. He suggested that, even though the campaign highlighted the vital role the toads played in the ecology of the region, people were unenthusiastic about saving toads as these animals are perceived as unpleasant creatures, and people seldom feel passionate about animals with which they have no positive feelings.

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The expert's opinion would be most strengthened by which of the following observations ?

- (a) Ecological conservation is an increasingly important concern in the region.
- (b) A recent campaign to save bats achieved a measure of success only after a cartoon bat was adopted as the mascot of the local football team.
- (c) Snakes and lizards also need protection in this region as a result of human activity.
- (d) The campaign to protect toads has been in existence for over five years and yet the toad population continues to decline.

Directions (18-27) : Choose the option which represents the best way of writing the sentence :

18. (a) Neither of our school's students nominated for the national spelling bee were able to win the competition.

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- (b) Neither of our school's students nominated for the national spelling bee was able to win the competition.
- (c) Neither of the students from our school nominated for the national spelling bee were able to win the competition.
- (d) Neither of the students nominated for the national spelling bee from our school were able to win the competition.

19. (a) His family members, as well as a few others, plays the guitar during the leisure time.
- (b) This teacher, along with a few others, play the guitar during the leisure time.
 - (c) His family, as well as a few others, plays the guitar during the leisure time.
 - (d) This teacher, along with a few others, were playing the guitar during the leisure time.

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20. (a) Rahul is the only one of those students who has lived up to the potential described in the yearbook.
- (b) Rahul is the only one of those students who have lived up to the potential described in the yearbook.
- (c) Rahul is the only one of those students whom have lived up to the potential described in the yearbook.
- (d) Rahul is the only one of those students who are living up to the potential described in the yearbook.
21. (a) Not only the students but also their instructor have been called to the principal's office.
- (b) Not only the students but also their instructor has been called to the principals office.

- (c) Not only the students but also their instructor are called to the principal's office.
- (d) Not only the students but also their instructor have been called to the principal's office.
22. (a) A number of aspirants chosen for the prestigious internship has more than doubled in the past fifteen years.
- (b) The number of aspirants chosen for the prestigious internship have been more than doubling in the past fifteen years.
- (c) The number of aspirants chosen for the prestigious internship were more than doubled in the past fifteen years.
- (d) A number of aspirants chosen for the prestigious internship have doubled in the past fifteen years.
23. (a) This teacher, along with a few others, play the guitar during the leisure time.
- (b) This teacher, along with a few others, plays the guitar during the leisure time.

- (c) This teacher, along with a few others, are playing the guitar during the leisure time.
 - (d) This teacher, along with a few others, were playing the guitar during the leisure time.
24. (a) Careful analysis of pictures of the Moon reveal that parts of the Moon's surface are markedly similar to parts of the Earth's surface.
- (b) Careful analysis of pictures of the Moon reveals that parts of the Moon's surface are markedly similar to parts of the Earth's surface.
 - (c) Careful analysis of pictures of the Moon revealing that parts of the Moon's surface are markedly similar to parts of the Earth's surface.
 - (d) Careful analysis of pictures of the Moon are reveal that parts of the Moon's surface are markedly similar to parts of the Earth's surface.

25. (a) The jury was divided in their opinions for the final verdict.
- (b) The jury is divided in their opinions for the final verdict.
 - (c) The jury were divided in their opinions for the final verdict.
 - (d) The jury appears to be divided in their opinions for the final verdict.
26. (a) Salman and Kajol don't want to see that movie again due to the cast.
- (b) Salman and Kajol doesn't want to see that movie again due to the cast.
 - (c) Salman and Kajol do not want to see that movie again due to the cast.
 - (d) Salman and Kajol will not want to see that movie again due to the cast.
27. (a) Each boy and each girl agrees to what I said in the last meeting.

- (b) Each boy and each girls agree to what I said in the last meeting.
- (c) Each boy and each girl will agree to what I said in the last meeting.
- (d) Each boy and each girl were agreed to what I said in the last meeting.

Directions (28-32) : Identify the part which contains an error. Mark that part as your answer :

28. Many a man have come (a) / to India from Bangladesh (b) / to live here permanently. (c) / No error (d)
29. Every pale tomato slice, (a) / wilted pickle, and brown lettuce leaf cost (b)/ an extra 25 cents at Bernie's Burger Emporium. (c)/ No error (d)
30. Each man, woman, and child (a)/need to write General Foods (b)/a letter supporting the company's decision to produce a chocolate-broccoli breakfast cereal. No error (d)

31. The actress said in an interview (a)/that she find it difficult to meet everyone's expectations (b)/so she has decided to choose roles completely by herself. (c)/ No error (d)
32. Either Ram (a)/or his family members (b)/agrees to work on the same grounds. (c)/ No error (d)

Directions (33-40) : Choose the option which represents the best way of writing the sentence or choose the best sentence improvement :

33. The teacher sought new ways of teaching, believing her students would get more from lessons **featuring playing, acting, and creativity.**
- (a) featuring the , playing, acting, and creativity.
- (b) featuring play, act, and creativity.
- (c) featuring playing, acting, and creating
- (d) featuring playing, acting, and creative things.

34. Rahul ate all the cheese, all the biscuits, and every last of the tacos.
- (a) every last of the tacos
 - (b) it ate all the tacos, too !
 - (c) all the tacos
 - (d) almost the tacos
35. The pirates searched the town, looted the treasury, and steal all the goods.
- (a) Steal all the goods
 - (b) Had Stolen all the goods
 - (c) Will stole all the goods
 - (d) Stole all the goods
36. Either you will become rich or poor depends on your hard work.
- (a) Either you will become rich or poor depends on your hard work.
 - (b) You will either become rich or poor depends on your hard work.
 - (c) Either you will become rich nor poor depends on your hard work.
 - (d) Either you will never become rich or poor depends on your hard work.

37. Salman's values are much more dignified than his brother.
- (a) Salman's values are much more dignified than his brother.
 - (b) Salman's values are much more dignified than his brother value.
 - (c) Salman values are much more dignified than his brother's value.
 - (d) Salman's values are much more dignified than his brother's.
38. The players of India love to dance, to act, and performing.
- (a) The players of India love to dance, to act, and performing.
 - (b) The players of India loves to dance, to acting, and performing.
 - (c) The players of India love to dance, to act, and to perform.
 - (d) The players of India love dancing, to act, and performing.

39. The university has ample space for a new library but not a computer lab.

- (a) The university has ample space for a new library but not a computer lab.
- (b) The university have ample space for a new library but not a computer lab.
- (c) The university has ample space for a new library but not for a computer lab.
- (d) The university has ample space for a new library but for not a computer lab.

40. Kareena loves going to the church, to the temple and to the mosque.

- (a) Kareena loves going to the church, to the temple and to the mosque.
- (b) Kareena loves to go to the church, to the temple and to the mosque.
- (c) Kareena loves going to the church, to the temple and mosque.
- (d) Kareena loves to go to the church, temple and to the mosque.

Directions (41-50) : Fill in the blanks with the appropriate option :

41. If they had created the picture, they suffered to this extent.

- (a) wouldn't have
- (b) did not
- (c) would not
- (d) will not have

42. If I to such high level, I wouldn't do such a blunder.

- (a) rise
- (b) had been rise
- (c) rose
- (d) risen

43. Joe a flat, if he had taken the job.

- (a) would have bought
- (b) would had bought
- (c) have buy
- (d) had bought

44. If they more money, they would have agreed to the deal.
- (a) had
 - (b) have
 - (c) had had
 - (d) have had
45. Humans would have saved the earth from the collapse, if they the population.
- (a) had control
 - (b) had been controlled
 - (c) had controlled
 - (d) have controlled
46. If Neeraj the match, he will buy a new phone.
- (a) will win
 - (b) wins
 - (c) won
 - (d) would win

47. Would he go to the Church, if I him a lift.
- (a) .give
 - (b) gave
 - (c) had given
 - (d) would gave
48. If you eat your food properly, you ill.
- (a) will never
 - (b) would never be
 - (c) will never be
 - (d) would be
49. If Abdul had faced a problem, he suffered to this extent.
- (a) would not
 - (b) did not
 - (c) wouldn't have
 - (d) will not have
50. If Salman the director of Hum Apke Hein Kaun, he wouldn't commit such a mistake.
- (a) was
 - (b) had been
 - (c) were
 - (d) will be

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51. Depreciation applicable to an equipment is 25%. The value of the equipment after 2 years from now will be less by (in percentage) ?
- (a) 38.36%
 - (b) 42.63%
 - (c) 43.75%
 - (d) 48.66%
52. A number is mistakenly subtracted by 5 instead of being added by 5. What is the percentage of error in the result ?
- (a) 8.33%
 - (b) 9.52%
 - (c) 10.52%
 - (d) Cannot be determined
53. In a class, 40% of the students are female and thus the no. of boys exceed the no. of girls by 45. Find the total no. of students :
- (a) 190
 - (b) 150
 - (c) 200
 - (d) 225

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54. Some grapes weighing 20 kg contains 96% of water by weight. They are put in sun for some time and some water evaporates so that now it contains only 95% of water by weight. The new weight of grapes would be :
- (a) 16 kg
 - (b) 15 kg
 - (c) 19.5 kg
 - (d) 19.20 kg
55. If the price of rice is reduced by 2%, how many kilograms of wheat a person can buy with the same money which was earlier sufficient to buy 49 kg of rice ?
- (a) 51 kg
 - (b) 52 kg
 - (c) 50 kg
 - (d) 53 kg

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56. The difference between simple and compound interests compounded annually on a certain sum of money for 2 years at 8% p.a. is ₹ 2. The sum is :

- (a) 325.5
- (b) 400
- (c) 312.5
- (d) 400

57. In how many years will a sum of ₹ 800 at 10% p.a. compounded semi-annually become ₹ 926.10 ?

- (a) 2
- (b) 3.5
- (c) 1.5
- (d) 3

58. Find the compound interest on ₹ 18,000 for 6 months at 2 p.a. compounded quarterly :

- (a) ₹ 1,845
- (b) ₹ 1,800
- (c) ₹ 1,850
- (d) ₹ 2,000

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59. The effective annual rate of interest corresponding to the nominal rate of 4% per annum payable half yearly is :

- (a) 4%
- (b) 4.5%
- (c) 4.04%
- (d) 4.2%

60. The CI on ₹ 7,000 for 3 years at 5% for first year, 5% for second year, 10% for the third year will be (approx.) :

- (a) ₹ 1,800
- (b) ₹ 1,530
- (c) ₹ 1,651
- (d) ₹ 2,050

61. The average of six number is 52, if one number is excluded the average become 49. The excluded number is :

- (a) 75
- (b) 62
- (c) 73
- (d) 67

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62. 3 years ago, the average age of a family of 5 members was 18 years. A baby having been born, the average age of the family is same today. The present age of the baby :

- (a) 1
- (b) 3
- (c) 2
- (d) 4

63. The average height of 15 students is calculated as 75. But later it was found that the height of 1 student was wrongly entered as 63 instead of 48. The correct average is :

- (a) 72
- (b) 74
- (c) 75
- (d) 76

64. The average of 7 consecutive numbers is 62. Find the smallest number :

- (a) 59
- (b) 56
- (c) 57
- (d) 68

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65. Find the average of 13, 26, 39,....., 273.

- (a) 136
- (b) 143
- (c) 158
- (d) 162

66. A discount of 25% on one toy is same as a discount of 50% on another toy. The costs of two article can be :

- (a) ₹ 40, ₹ 30
- (b) ₹ 50, ₹ 30
- (c) ₹ 80, ₹ 40
- (d) ₹ 20, ₹ 40

67. A shopkeeper sells sugar at 10% profit. If he sells it at 20% profit, he gets ₹120 more. Find the C,P, :

- (a) 1100
- (b) 1120
- (c) 1150
- (d) 1200

68. The difference between the cost price and the selling price of an article is ₹ 500 if the profit is 25%. The selling price is :

- (a) ₹ 750
- (b) ₹ 1,500
- (c) ₹ 2,000
- (d) ₹ 2,500

69. A dealer sold a cycle at a loss of 2.5%. Had he sold it for ₹ 200 more, he would have gained 7.5%. To gain 12.5% he should sell it for :

- (a) ₹ 2,000
- (b) ₹ 2,100
- (c) ₹ 2,200
- (d) ₹ 2,225

70. The cash difference between the selling price of an article at a profit of 8% and 4% is ₹ 43 the ratio of the two selling prices is :

- (a) 25 : 23
- (b) 27 : 26
- (c) 31 : 30
- (d) 57 : 55

71. The H. C. F. of two numbers is 11 and their L.C.M. is 7700. If one of the numbers is 275, then the other is :

- (a) 269
- (b) 275
- (c) 308
- (d) 310

72. If $a679b$ is a five-digit number that is divisible by 72, then what is the value of $a + b$?

- (a) 3
- (b) 5
- (c) 7
- (d) 9

73. How many trailing zeros are in $(10^{12} \times 2^{13} \times 5^{15} \times 5^{12})$?

- (a) 20
- (b) 15
- (c) 29
- (d) 26

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74. Find out the unit digit in $4^{39} \times 9^{78}$:

- (a) 1
- (b) 2
- (c) 3
- (d) 4

75. What is the remainder when $1! + 2! + 3! \dots 100!$ is divided by 15 ?

- (a) 11
- (b) 3
- (c) 13
- (d) 17

76. What is the remainder of $1421 \times 1423 \times 1425$ when divided by 12 ?

- (a) 1
- (b) 2
- (c) 3
- (d) 4

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77. The traffic lights at three different road crossings change after every 40 sec, 72 sec and 108 sec respectively. If they all change simultaneously at 7 : 10 : 00 hours, then find the time at which they will change simultaneously :

- (a) 7 : 18 : 00 hrs
- (b) 7 : 30 : 00 hrs
- (c) 7 : 28 : 00 hrs
- (d) 7 : 40 : 00 hrs

78. A number is divided by 221, the remainder is 64. If the number be divided by 17, then remainder will be :

- (a) 13
- (b) 11
- (c) 15
- (d) 7

79. The digit in unit's place of the product $71 \times 72 \dots\dots\dots 79$ is.

- (a) 1
- (b) 9
- (c) 3
- (d) 0

P. T. O.

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80. Find the number of factors of 273 :
- (a) 3
 - (b) 6
 - (c) 8
 - (d) 15
81. Which of the following is correct ?
- (a) All even numbers are natural numbers.
 - (b) All even numbers are integers.
 - (c) All even numbers are prime .
 - (d) None of these
82. What is the remainder when 2^{202} is divided by 9 ?
- (a) 0
 - (b) 5
 - (c) 7
 - (d) 6
83. Which of the following integers has the maximum number of divisors ?
- (a) 101
 - (b) 99
 - (c) 182
 - (d) 176

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84. What is the greatest possible length that can be used to measure exactly the lengths 8 m, 4 m 20 cm, and 12 m 20 cm ?
- (a) 10 cm
 - (b) 30 cm
 - (c) 25 cm
 - (d) 20 cm
85. What is the smallest number which when diminished by 12, is divisible 8, 12, 22 and 24 ?
- (a) 276
 - (b) 264
 - (c) 272
 - (d) 268
86. Find the remainder when $2^{37}/9$:
- (a) 2
 - (b) 3
 - (c) 6
 - (d) 5

P. T. O.

87. What is the number of factors of $2^7 \times 3^4 \times 5^3$ which are perfect squares ?
- (a) 12
 - (B) 24
 - (c) 15
 - (d) 10
88. The price of a bike is decreased by 20%. As a result of which the sale increased by 40%. What will be the effect on the total revenue of the shop ?
- (a) 12% Loss
 - (b) 12% Profit
 - (c) 20% Profit
 - (d) 20% Loss
89. Amit saves 10%, after 2 years when his income is increased by 10%, he could save the same money, then how much his expenditure increased ?
- (a) 8%
 - (b) 11.11%
 - (c) 16.66%
 - (d) 15%

90. Out of 500 students of a school 35% students play only football, 25% play only cricket and 20% neither play football nor cricket. How many students play football and cricket ?
- (a) 100
 - (b) 80
 - (c) 150
 - (d) 94
91. What profit or loss percentage did Deepak earn if he purchased an item ₹ 3,787 and sold it at $\frac{3}{4}$ of its cost price ?
- (a) 20% Loss
 - (b) 22% Loss
 - (c) 25% Loss
 - (d) 20% Profit
92. The percent profit when an article is sold for ₹ 630 is twice that when the same article is sold for 470. The cost price of the article is :
- (a) 550
 - (b) 310
 - (c) 380
 - (d) 390

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93. A discount of 20% on an article M is the same as a discount of 15% on another article N. The cost of the 2 articles can be :

- (a) 3 : 4
- (b) 5 : 6
- (c) 4 : 5
- (d) 4 : 3

94. The CP of 20 articles is equal to SP 18 articles. Find the gain percent :

- (a) 10%
- (b) 11.11%
- (c) 21.2%
- (d) 15%

95. ₹ 6,000 becomes ₹ 7,200 in 3 years at a certain rate of compound interest. What will be the amount received after 9 years ?

- (a) ₹ 11,498
- (b) ₹ 10,352
- (c) ₹ 9,368
- (d) ₹ 10,368

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96. The simple interest on a certain sum for 2 years at 10% per annum is ₹ 90. The corresponding compound interest is :

- (a) ₹ 99
- (b) ₹ 90
- (c) ₹ 94.50
- (d) ₹ 92

97. The simple interest on a certain sum of money for 4 years at 15 percent per annum is ₹ 600. Find the compound interest in the same sum at 10 percent interest for 2 years :

- (a) ₹ 210
- (b) ₹ 200
- (c) ₹ 250
- (d) ₹ 160

98. The difference between simple interest and compound interest on a certain sum for 2 years at 15% Interest is ₹ 180. Find the Principal :

- (a) ₹ 6,500
- (b) ₹ 7,000
- (c) ₹ 7,500
- (d) ₹ 8,000

P. T. O.