

TANCET MOCK EXAM - 2024

Time: 2 hours

Maximum marks: 100

Name of the Candidate	
Registration Number	
Examination Centre	
Signature of the Candidate	

INSTRUCTIONS TO CANDIDATES

1. Do not open the Question Book until the Hall Superintendent gives the signal for the commencement of the examination. condition then ask for immediate replacement. No replacement will be made 5 minutes after the commencement of the examination.
2. Write your Name, your Registration Number and the Name of your Examination Centre (as found in the HALL TICKET) and sign in the space provided above. Other than these and what is mentioned in item 6 below, do not write or mark anything anywhere on the Question Book.
3. After the commencement of the examination, open the Question Book and take out the ANSWER SHEET. If the Question Book or the Answer Sheet is not in good
4. Write and shade your Registration Number and Question Book Number and write the Name of the Examination Centre and put your signature in the Answer Sheet in the spaces provided.
5. The Question Book contains 100 questions. Answer all the questions. They carry equal marks.
6. The last few pages of the Question Book are blank except for the words 'FOR ROUGH WORK'. You can make any relevant rough calculations on these pages.

7. **Each correct answer carries 1 mark. For every wrong answer $\frac{1}{3}$ mark will be deducted.**
8. Shade with black ball point pen one of the four options against each question number in the Answer Sheet which according to you corresponds to the correct answer.
9. **Answers with multiple shading will be considered as wrong answer.**
10. Use the Answer Sheet carefully. No spare Answer Sheet will be given.
11. At the end of the examination when the Hall Superintendent announces 'Stop Writing', you must **stop writing immediately** and handover the Answer sheet to Hall Superintendent
12. When you have completed answering, stand up and remain in your place. The Hall Superintendent will come to you and collect your Answer Sheet. Under no circumstances should be taken out of the Examination Hall. No candidate shall leave the Hall until the Answer Sheet is collected.
13. No candidate can leave the Hall during the first 30 minutes and the last 15 minutes of the examination.
14. No candidate can re-enter the Hall after leaving.
15. Calculator, tables or any other calculating devices and cell phone are strictly prohibited for this examination.

SECTION - I ANALYSIS OF BUSINESS SITUATIONS

Directions:

This section comprises two passages. After each passage questions consisting of items relating to the preceding passage are given. Evaluate each item separately in terms of the respective passage and choose your answer

PASSAGE – I (QUESTIONS 1 - 20)

FSL was a food manufacturing company established in 1945. Until 1995 its major products consisted of tomato specialties such as pickles and barbecue sauces. Its consumer products business accounted for 40% of sales; the balance consisted of sales to restaurants, hospitals and armed forces. The company has advertised for restaurant, hospital market but never for household consumers.

In 1995, the company introduced products meant for consumer market. The line was composed of a number of dishes. Each package contained all of the necessary ingredients (except meat) including seasoned tomato sauce, cheese and noodles. Jagdish, son of the company's president, had conceived the idea for the line of products. Jagdish's enthusiasm for the product was quickly picked up by other executives. The financial expert wanted expansion would enable the company to solve a number of financial problems associated with its inability to attract outside capital.

Many meetings were held through the summer. The original thinking of the committee was that the product line should be introduced at the beginning of the food merchandising season, which started on about October 1. This deadline however, subsequently proved to be unrealistic. Production of the first items in the line did not get underway until September 30 and packaging difficulties prohibited introducing product before mid-December.

In July the problems involved in the product introduction were not foremost in the planner's thoughts. Many hours were spent on discussing the name of the product. Finally, the name Vegetable Scotch was adopted but without enthusiasm from the president's son who believed that a name did not express the gourmet image that he thought the name should express. With the exception of the name this man directed most of the decisions related to the marketing program. From the beginning he argued that there were already plenty of middle class products on the grocer's shelves. What was needed, he believed, was a prestige-even a "gourmet"- line. The popularity of

expensive restaurants in cities convinced young manager of the opportunity to market these food specialties.

Early in the planning it was decided to limit distribution to the regional markets in which this company had previously established its reputation. National distribution would be undertaken from the beginning. It was planned that preparation would be marketed in all major food chain and headquarters would be made by food brokers handling such products rather than brokers used to handling goods.

For the first time in its experience, FSL planned to undertake an extensive consumer - advertising programme. A small advertising agency in Delhi with slight experience in handling food products was appointed. However by the time the agency has been selected and oriented to the marketing programme, the time remaining before the scheduled introduction did not allow for the preparation of advertisements or sponsored programmes on TV. In order to break into the consumer market at the time of product introduction on October 1st a consumer - advertising programme using newspaper, television commercials and radio was prepared. Except for the product introduction period, however, relatively little thought was given in planning sessions to the total amount money required to support the product with consumer advertising.

A number of circumstances combined to prevent the introduction in October as originally planned. No one has taken personal responsibility for package design and production was held up for three weeks while the company waited for supplies of packaging materials. FSL was forced to move very rapidly to obtain a package, but the result was neither very well designed nor attractive from a promotional point of view. Time was short, however, and there was no choice but to use this package or abandon the project for the present season and possibly altogether, depending upon competitive conditions. A hastily put together advertising campaign was introduced in November.

However, advertising cost had been greatly under estimated, that the intensity of the campaign was much lower than the manager had anticipated, even with the limited budget. As a result, most of the budget was allocated to newspapers and radio. Moreover problem of writing of the script of the TV commercial delayed broadcasting until the beginning of December. Newspaper advertisements and Radio commercials did commence as planned.

The new product was finally launched in mid-December. However, by February, two major competitors began marketing similar products. Shortly thereafter the company to determine whether the product made a favourable impression sponsored a market research survey on housewives. The result of the survey was negative. Only twenty two percent of the housewives interviewed could recall the name and those only twelve

percent had tried the product. Consumer evaluation of the product was for the first time, only four percent stated that they would buy it again.

Another indication that worried the company's management was that few major food chains showed interest. By midyear product sales were so poor that management established a special committee to determine without delay what immediate steps might be taken to reverse the poor sales record.

Directions for question 1 to 30: The questions that follow relate to the preceding passage. Evaluate, in terms of the passage, each of the item given. Then select your answer from one of the following classifications:

- (a) A Major Objective in making the decision: one of the goals sought by the decision.
- (b) A Major Factor in making the decision: an aspect of the problem, specifically mentioned in the passage that fundamentally affects and / or determines the decision.
- (c) A Minor Factor in making the decision: a less important element bearing on or affecting a Major factor, rather than a Major objective directly.
- (d) A Major Assumption in making the decision: a projection or supposition arrived at by the decision maker before considering the factors and alternatives.
- (e) An Unimportant issue in making the decision: an item lacking significant impact on, or relationship to, the decision.

Questions:

1. Possibility of using existing production facilities in manufacturing new products.
2. Likelihood of achieving wide consumer acceptance of the new products.
3. Company's growth and expansion.
4. Age of FSL
5. The popularity of high priced restaurants in the country.
6. Depth of company's experience and expertise in the sale of consumer products.
7. Market survey results
8. Size of the advertising agency hired to promote the product.
9. National distribution of the product.
10. Company's inability to attract outside capital.
11. Difficulties with new package design.
12. Need for this new food line
13. Market entry of competitors.
14. Obtaining packaging materials.
15. Introducing the new product in October 1st.
16. Interest of major food chains in the product.

17. Scripting of T.V. commercials.
18. Introduction of new product line
19. Developing products as fast as possible.
20. Marketing ability of the company.

PASSAGE - II (QUESTIONS 21 - 30)

Coirfoam, a small company producing foam rubber mattresses, was in financial trouble, and its owners wanted to sell it. The company had been established some twenty years ago, but its market share had steadily declined over the last five years. Since Mr. Krishnan had no previous experience in the mattress business, he requested his friend to tell him what he could do about it.

His friend analysed the company's resources. Their best resource was its product and brand name. However, synthetics are much cheaper than foam rubber mattresses. Latex mattresses are known for their orthopedic and anti-allergic qualities, among others. The Coirfoam brand name had very nearly become a generic term for all types of rubber mattresses. Coirfoam however was the only latex mattress produced locally.

Apart from a superior product, the company had few resources. Its equipment, though satisfactory, was old. It operated in leased premises on a year to year basis, although the landlord was willing to conclude a long term agreement on favourable terms. On the other hand the company's labour force was experienced and dedicated and its production manager had more than ten year's experience in latex manufacturing. The Chairman of the company was seventy years old and wanted to retire. Apart from the sales manager, no one else shared responsibility for marketing or administration. He told Krishnan's friend that if the company was sold, he had no intentions of remaining in service, he had eighteen years of experience in mattress industry. If the sales manager left the company Krishnan might not find a suitable replacement. This was another issue that Krishnan's friend had to study.

Coirfoam's financial position was precarious. The company was heavily in debt and its line of credit fully extended. There was some question as to purchase enough latex to keep production going, but the manager assured, that the company had a bank letter of credit to purchase additional month's supply. In spite of the chairman's optimism, the fact was that his company had steadily lost market share once the dominant mattress manufacturers, with fifty percent of local market, its market share had declined to less than 10 per cent. The chairman attributed this decline to popularity gained by spring mattresses manufacturers, who had only begun production five years ago. Spring mattresses now accounted for seventy percent of the total market, another company ten

percent, with remaining twenty percent shared by a number of small plants producing synthetic rubber mattresses. Spring mattresses had some attributes similar to those of foam rubber, such as orthopaedic qualities. They were less costly to manufacture but sold to customers at about the same price as Coirfoam.

Because of Coirfoam's financial difficulties, it ceased advertising in Newspaper and on radio for over the past five years. As a result retailers were reluctant to handle the product. In contrast to it two spring manufacturers had advertised heavily in the mass media. One of these manufacturer's products was sold exclusively by the largest furniture chain. During his study of the mattress market, a number of retailers had expressed the opinion to Krishnan's friend that a whole generation of young people largely unaware of the Coirfoam product because of lack of advertising. One retailer was quoted saying, "It is true that older people remember Coirfoam, but these mattresses last for twenty years. The big market is not the replacement market, but sales generated by family formation. Thousands of young couples get married every year and ever marriage means another mattress sale. It is obviously easier for my salesman to sell a mattress which his customers have seen in countless advertisements that one which is relatively unknown".

Krishnan's friend was aware of the fact that if Coirfoam was ever to regain some of its lost market share, it would have to launch a major advertising programme to educate young adults about the important attributes found in its products. A major question that needed an immediate answer was: "To what extent are people aware of Coirfoam mattresses and their attributes?" Other questions involved the attitudes of people toward spring mattresses in general and how these attitudes compared to those towards spring mattresses. Krishnan's friend ordered a market research survey to obtain answers to his questions. In brief, the study of Coirfoam mattresses showed that customers over twenty five years of age who were aware of Coirfoam mattresses had favourable attitudes towards their attributes. About three quarters of these people expressed a preference for foam rubber mattresses for their children (by contrast with other mattresses for their own use). Awareness among younger segments of the population of the attributes of foam rubber mattresses in general and Coirfoam in particular; was very low. Few people expressed an intention to buy foam rubber mattresses.

On the basis of the preliminary research Krishnan was optimistic that he could turn the company around. In support of his brief, he sighted the recognition of the company among a significant portion of the population, and the fact that they would buy a Coirfoam for their children. He believed that once retailers became aware that new management had taken over the company, they would be willing to stock the product. Krishnan was aware that the research findings were not always in agreement with his conclusions.

However, the findings that young people were relatively unaware of coirfoam did not seem to worry him. He felt that well designed advertising programme would convince many people to buy a foam rubber mattresses, rather than any competing type. Moreover, the introduction of a new management team would instill confidence among Coirfoam bankers, credit lines would be increased thereby improving the company's financial position. However, before making a final decision as to whether to purchase Coirfoam, Mr. Krishnan waited for his friend's final report and recommendations.

Questions:

21. Public awareness of the high quality of Coirfoam mattresses.
22. The anti allergic qualities of Coirfoam mattresses.
23. Attitude of older consumer towards Coirfoam mattresses
24. Willingness of retailers to stock Coirfoam products in the future.
25. Need to import latex rubber
26. Coirfoam's present market share.
27. Krishnan's friend's recommendations.
28. Coirfoam leased its premises.
29. Plausibility of changing consumer attitudes through advertising.
30. The Chairman's explanation for loss of market share.

SECTION II READING COMPREHENSION

Direction: This section contains two reading passages. You have to read each carefully. Each passage is followed by questions based on its content. After reading each passage, choose the best answer to each question. The questions are based on what is stated or implied in each passage.

PASSAGE - I (QUESTIONS 31 - 40)

Virtually everything astronomers know about objects outside the solar system is based on the detection of photon quanta of electromagnetic radiation. Yet there is another form of radiation that permeates the universe; neutrinos. With (as its name implies) no electric charge and negligible mass, the neutrino interacts with other particles so really that a neutrino can cross the entire universe, even traversing substantial aggregations of matter, without being absorbed or even detected. Neutron can thus escape from regions of space where light and other kinds of electromagnetic radiation are blocked by matter. Furthermore neutrinos carry with them information about the site and circumstances of their production; therefore, the detection of cosmic neutrinos could provide new

information about the history of the universes carry with them information about the site and circumstances of their production; therefore, the detection of cosmic neutrinos could provide new information about the history of the universe.

But how can scientist deduct a particle that interacts so infrequently with the other matter? Twenty five years passed between Pauli's hypothesis that the neutrino existed and its actual detection; since then virtually all research with neutrinos has been with neutrinos created artificially in large particle accelerators and studies under neutrino microscopes. But a neutrino telescope, capable or detecting cosmic neutrinos, is difficult to construct. No apparatus can deduct neutrinos unless it is extremely massive, because great mass is synonymous with huge numbers of nucleons (neutrons and protons) and the more massive the detector, the greater the probability of one of its neutron's reacting with a neutrino in addition, the apparatus must be sufficiently shielded from the interfering effects of other particles.

Fortunately a group of astrophysicists has proposed a means of deducting cosmic neutrinos by harnessing the mass of ocean named Dumand, for deep underwater Muon and neutrino detector, the project calls for placing an array of light sensors at a depth of five kilometers under the ocean surface. The detecting medium is the sea water itself; when a neutrino interacts with a particle in an atom of sea water, the result is a cascade of electrically charged particles and a flash of light that can be deducted by the sensors. The five kilometer of seawater above the sensors will shield them from the interfacing effects of other high energy particles raining down through the atmosphere

The strongest motivation for the Dumand project is that it will exploit an important source of information about the universe. The extension of astronomy form visible light to radio waves to X-rays and gamma rays never failed to lead to the discovery of unusual objects such as radio galaxies, quasars and pulsars. Each of these discoveries came as a surprise; neutrino astronomy will doubtlessly bring its own share of surprise.

31. Which of the following titles best summarizes the passage as a whole?
- (a) At the threshold of Neutrino Astronomy
 - (b) Neutrinos and the history of universe
 - (c) The creations and the study of Neutrinos
 - (d) The Dumand system and how it works
 - (e) The properties of Neutrino

32. Which of the following statements regarding neutrino astronomy would the author is most likely to agree?
- (a) Neutrino astronomy will supersede all present forms of astronomy
 - (b) Neutrino astronomy will be abandoned if the Dumand project fails.
 - (c) Neutrino astronomy can be expected to lead to major breakthrough in astronomy
 - (d) Neutrino astronomy will disclose phenomena that will be more surprising than past discoveries
 - (e) Neutrino astronomy will always be characterized by a large time lag between hypotheses and experimental configuration.
33. In the last paragraph the author describes the development of astronomy in order to
- (a) Suggest that the potential findings of neutrino astronomy can be seen as part of a series of astronomical success
 - (b) Illustrate the role of surprise in scientific discovery
 - (c) Demonstrate the effectiveness of the Dumand apparatus in detecting neutrinos.
 - (d) Name some cosmic phenomena that neutrino astronomy will illuminate
 - (e) Contrast the motivation of earlier astronomers with that of the strophysicists working on the Dumand project.
34. The passage states that interactions between neutrinos and other matters are
- (a) Rare
 - (b) Artificial
 - (c) Unpredictable
 - (d) Undetectable
 - (e) Hazardous
35. According to the passage, one advantage that neutrinos have for studies in astronomy is that key
- (a) Have been detected for the last twenty five years
 - (b) Possess a variable electric charge
 - (c) Are usually extremely massive
 - (d) Carry information about their history with them
 - (e) Are very similar to other electromagnetic particles

36. According to the passage, the primary use of the apparatus mentioned would be to
- (a) Increase the mass of a neutrino
 - (b) Interpret information neutrinos carry with them
 - (c) Study the internal structure of a neutrino
 - (d) See neutrinos in distant regions of space
 - (e) Detect the presence of cosmic neutrinos
37. The passage mentions which of the following as a reason that neutrinos are hard to detect?
- (a) Their pervasiveness in the universe
 - (b) Their ability to escape from different regions of space
 - (c) The inability to penetrate dense matter
 - (d) The similarity of their structure to that of nucleons
 - (e) The infrequency of their interaction with other matter
38. According to the passage, the interaction of a neutrino with other can produce
- (a) Particles that are neutral and massive
 - (b) A form of radiation that permeates the universe
 - (c) In accurate information about the site and circumstances of neutrino's production.
 - (d) Charged particles and light
 - (e) A situation in which light and other forms of electromagnetic radiations are blocked
39. According to the passage, one of the methods used to establish the properties of neutrinos was
- (a) Detection of photons
 - (b) Observation of interaction of neutrinos with gamma rays
 - (c) Observation of neutrinos that were artificially created
 - (d) Measurement of neutrinos that interacted with particles of sea water
 - (e) Experiments with electromagnetic radiation.
40. The strongest motivation for the Dumand project is
- (a) That it will detect the presence of cosmic neutrinos
 - (b) That it will exploit an important source of information about the universe
 - (c) That measurement of neutrinos is possible
 - (d) That it will suggest the potential of neutrino astronomy
 - (e) That will doubtlessly bring its own share of surprises

PASSAGE –II (QUESTIONS 41 - 45)

It is not easy to write a familiar style. Many people mistake familiar for a vulgar style, and suppose that to write without affection is to write at random. On the contrary there is nothing that requires more precision and, if I may so say purity of expression than the style I am speaking of. It utterly rejects not only all unmanly pomp, but all new, cant phrases and loose, unconnected slipshod allusion. It is not to take first word that offers, but the best in common use; it is not to throw words together in any combinations we please, but to follow and avail ourselves of the idiom of the language. To write a genuine, familiar or truly English style to write as anyone would speak in common conversation who had a thorough command over choice of words, or who discourses with ease, force and perspicuity, setting aside all pedantic and oratorical flourishes. Or, to give another illustration, to write naturally is the easy thing to give the true accent and inflection to the words you utter, because you do not attempt to rise above the level of ordinary life and colloquial speech. You do not assume, indeed, the solemnity of the pulpit or tone of stage declamation, neither or you at liberty to gabble on at a venture, without emphasis or discretion, or to resort to vulgar dialect or clownish pronunciation. You must steer a middle course. You are tied down to a given appropriate articulation, which you can do only by entering into the author's meaning, as you must find the proper words and style to express yourself by fixing your thoughts on the subject you have to write about any one may write a passage with a propriety and simplicity is more difficult task. Thus it is easy to affect a pompous style, to use so word twice for the thing you want to express; it is not so easy to pitch upon that very word that exactly fits in. Out of eight or ten words common, equally intelligible, with nearly equal pretensions, it is a matter of some nicety and discrimination to pick out the one the preferableness of which is scarcely perceptible, but decisive.

41. According to the passage
- (a) One should be permitted to speak in any way he wishes to
 - (b) Getting on stilts' should aid one in speaking more effectively
 - (c) It is easier to write pompously than simply
 - (d) The preacher is a model of good speech
 - (e) A grammatical background is not necessary for good writing.
42. When the writer says "you must steer a middle course", he means that
- (a) You should speak neither too loudly nor too softly.
 - (b) You should speak neither too formally nor too colloquially
 - (c) You should write as well as speak
 - (d) You should not come to any definite conclusion about what is proper or not proper in speech.
 - (e) You should speak neither too fast nor too softly.



43. "Cant Phrases" means
- (a) A type of language which is peculiar to a particular class
 - (b) A sing-song type of speech
 - (c) Expressions which consistently indicate refusal to do another's bidding
 - (d) Obscene language
 - (e) Obsolete expressions
44. The author mentions all of the following important to good speech, except
- (a) A good command of English vocabulary
 - (b) The careful selection of words used
 - (c) The use of allusions and metaphors
 - (d) Straight forward and precise delivery
 - (e) The placing of emphasis on important words and phrases.
45. The author
- (a) Is critical of the person who converses in a manner which is easy to understand.
 - (b) Implies that foreigners do not speak well.
 - (c) Feels that there is relationship between the sound of a word and its meaning.
 - (d) Criticises pomposity of style more so than vulgarity style.
 - (e) Urges us to speak like an actor or the preacher.

SECTION III PROBLEM SOLVING (QUESTIONS 46 - 70)

Directions: For each of the following questions, select the choice which best answers the questions or completes the statement

46. The ratio of x to y is $1/2$. If the ratio of $x + 2$ to $Y + 1$ is $2/3$, then what is the value of x ?
- (a) 6 (b) 4 (c) 3 (d) 2 (e) 1
47. If the width of a rectangle is increased by 25% while the length remains constant, the resulting area is what percent of the original. area?
- (a) 25% (b) 75% (c) 125% (d) 225% (e) 250%
48. If n is an integer between 0 and 100, then any of the following could be $3n + 3$ EXCEPT
- (a) 300 (b) 297 (c) 208 (d) 63 (e) 6



49. Ravi is standing 180 meters due north of point P. Latha is standing 240 meters due west of point P. What is the shortest distance between Ravi and Latha?
(a) 60 meters (b) 300 meters (c) 420 meters (d) 900 meters
(e) 9000 meters
50. Roopa can stuff advertising circulars into envelopes at the rate of 45 envelopes per minute and Anusha requires a minute and a half to stuff the same number of envelopes. Working together, how long will it take Roopa and Anusha to stuff 300 envelopes?
(a) 15 minutes (b) 2 minutes (c) 3 minutes 30 seconds
(d) 3 minutes 20 seconds (e) 4 minutes
51. $(4 + \sqrt{5})(4 - \sqrt{5})$ is equal to
(a) -1 (b) 0 (c) 11 (d) 21 (e) $11 + 8\sqrt{5}$
52. If interest on a savings account is paid monthly at an annual rate of 6.25 % and if the interest is not reinvested, then in how many years will the total amount of interest earned equal the amount of money saved in the account?
(a) 36 (b) 24 (c) 18 (d) 16 (e) 12
53. If hose A can fill up a tank in 20 minutes and hose B can fill up the same tank in 15 minutes, how long will it take for the hoses together to fill up the tank?
(a) 5 minutes (b) $15/2$ minutes (c) $60/7$ minutes (d) $65/7$ minutes
(e) 12 minutes
54. A store sells five different kinds of nuts. If it is possible to buy x grams of the most expensive nuts for Rs. 3.20 and x grams of the cheapest nuts for Rs. 1.40 then which of the following could be the cost of purchasing a mixture containing x grams of each type of nut?
(a) Rs. 1.76 (b) Rs. 2.84 (c) Rs. 3.54 (d) Rs. 13.60 (e) Rs. 16
55. A boy receives grades of 91, 88, 86 and 78 in four of his major subjects. What must he receive in his fifth major subject in order to average 85?
(a) 86 (b) 85 (c) 84 (d) 83 (e) 82



56. If the following numbers are arranged in order from the smallest to the largest, what will be their correct order?
I. $9/13$ II. $13/9$ III. 70% IV. $1/70$
(a) II, I, III, IV (b) III, II, I, IV (c) III, IV, I, II (d) II, IV, III, I
(e) I, III, IV, II
57. A square is inscribed in a circle of area 18π . Find a side of the square
(a) 3 (b) 6 (c) $3\sqrt{2}$ (d) $6\sqrt{2}$
(e) It cannot be determined from the information given
58. A line segment is drawn from the point (3, 5) to the point (9, 13). What are the coordinates of the mid point of this line segment?
(a) (3, 4) (b) (12, 18) (c) (6, 8) (d) (9, 6) (e) (6, 9)
59. Every letter in the alphabet has number value which is equal to its place in the alphabet; the letter A has a value of 1 and C a value of 3. The number value of a word is obtained by adding up the values of the letters in the word and then multiplying that sum by the length of the word. The word 'DFGH' would have a number value of
(a) 25 (b) 44 (c) 66 (d) 100 (e) 108
60. If $ab > 0$ and $a < 0$, which of the following is negative?
(a) b (b) $-b$ (c) $-a$ (d) $(a - b)$ (e) $-(a + b)$
61. John rents a car for d days. He pays m Rs. per day for each of the first 7 days, and half that rate for each additional day. Find the total charge if $d > 7$.
(a) $m + 2m(d - 7)$ (b) $m + m/2(d - 7)$ (c) $7m + m/2(d - 7)$ (d) $7m + md/2$ (e) $7m + 2md$
(e) None of these
62. The net price of a certain article is Rs. 306 after successive discounts of 15% and 10% off the marked price. What is the marked price?
(a) Rs. 234.09 (b) Rs. 400 (c) Rs. 382.50 (d) Rs. 408 (e) None of these
63. A school has enough bread to feed 30 children for 4 days. If 10 more children are added, how many days will the bread last?
(a) $16/3$ (b) $4/3$ (c) $8/3$ (d) 12 (e) 3



64. The ice compartment of a refrigerator is 8 inches long, 4 inches wide and 5 inches high. How many ice cubes will it hold if each cube is 2 inches on an edge?
- (a) 8 (c) 12 (e) 20
(b) 10 (d) 16
65. A train 100 metres long running at a speed of 50 km/hr crosses a 120 m. long train coming from the opposite direction in 6 seconds. What is the speed of the other train?
- (a) 82 km/hr (c) 85 km/hr (e) 65 km/hr
(b) 70 km/hr (d) 72 km/hr
66. Simplify $(2m + 1.32m - n.5m + n + 2.6n) / (6m.10n + 1.15m)$
- (a) 5 (c) 2 (e) 3^{-n}
(b) 3 (d) 5^m
67. The numbers 34041 and 32506 when divided by a certain number of three digits, leave the same remainder. What is the number?
- (a) 535 (c) 357 (e) 275
(b) 405 (d) 307
68. My watch is slow by 7 minutes at 3 P.M. Wednesday and it was 8 minutes too fast at 9.00 A.M. on Friday. At what time it gave the right time by the watch?
- (a) 7 A.M. Thursday (d) 9 A.M. Thursday
(b) 9 P.M. Thursday (e) 5 P.M. Thursday
(c) 5 A.M. Thursday
69. A cistern has a leak which would empty it in 8 hours. A tap is turn on which admits 6 litres a minute into the cistern, and it is now emptied in 12 hours. How many litres does the cistern hold?
- (a) 5670 litres (b) 8640 litres (d) 4320 litres
(c) 5760 litres (e) 2880 litres
70. A certain basket ball team that has played $\frac{2}{3}$ of its games has a record of 17 wins and 3 losses. What is the greatest number of the remaining games that the team can lose and still win at least $\frac{3}{4}$ of the total games played?
- (a) 3 (c) 5 (e) 7
(b) 4 (d) 6



71. If A \$ B means A is the brother of B; B * C means B is the son of C; C @ D means C is the wife of D and A # D means A is the son of D, how C is related to A?
a) Aunt
b) Mother
c) Maternal grandmother
d) Maternal aunt
e) Paternal grandmother
72. A cuboidal water tank is 6 m long, 5 m wide and 4.5 m deep. How many litres of water can it hold?
a) 115000 litres b) 132000 litres c) 125000 litres d) 130000 litres
e) 135000 litres
73. A man sold an article for Rs.247.50, thereby gaining $12\frac{1}{2}\%$. The cost of the article was?
a)Rs260 b)Rs280 c)Rs220 d)Rs240 e) Rs. 210
74. If $\% x \wedge = 20$; $\wedge x \& = 32$; $\% x \& = 40$; $* x \& = 72$. Then what is the value of * ?
(a) 9 (c) 8 (e) 5
(b) 7 (d) 6
75. A bank offers 5% compound interest calculated on half-yearly basis. A customer deposits Rs. 1600 each on 1st January and 1st July of a year. At the end of the year, the amount he would have gained by way of interest is:
a)Rs120 b)Rs123 c)Rs122 d)Rs121 e) 124

SECTION - IV DATA SUFFICIENCY (QUESTIONS 76 - 85)

Directions for question 76 to 85: Each question below is followed by two statements numbered as (a) and (b). You have to determine whether the data given in the statements is sufficient for answering the question. Use the data given, plus your knowledge of mathematics and every day facts, to mark your answer as

- (a) If statement (a) alone is sufficient to answer the question, but statement (b) alone is not sufficient.
(b) If statement (b) alone is sufficient to answer the question, but statement (a) alone is not sufficient.
(c) If both statements together are needed to answer the questions, but neither statement alone is sufficient
(d) If either statement (a) or (b) by itself is sufficient to answer the question.
(e) If not enough facts are given to answer the question.



76. Salim invested a total of Rs. 10,000 for a period of one year. Part of the money he put into an investment that earned 6 percent simple interest, and the rest of the money into an investment that earned 8 percent simple interest. How much money did he put into the investment that earned 6 percent?
- The total interest earned on the Rs. 10,000 for the year was Rs. 640
 - The rupee value of the investment that earned 6 percent was only one-fourth the dollar value of the investment that earned 8 percent.
- (a) If statement (a) alone is sufficient to answer the question, but statement (b) alone is not sufficient
- (b) If statement (b) alone is sufficient to answer the question, but statement (a) alone is not sufficient.
- (c) If both statements together are needed to answer the questions, but neither statement alone is sufficient
- (d) If either statement (a) or (b) by itself is sufficient to answer the question.
- (e) If not enough facts are given to answer the question.
77. If a car is driven 150 miles, the fuel tank is filled to what percent of capacity at the end of the trip?
- The car averaged 15 miles per gallon for the trip
 - The tank is filled to 75 percent of capacity at the start of the trip
- (a) If statement (a) alone is sufficient to answer the question, but statement (b) alone is not sufficient
- (b) If statement (b) alone is sufficient to answer the question, but statement (a) alone is not sufficient.
- (c) If both statements together are needed to answer the questions, but neither statement alone is sufficient
- (d) If either statement (a) or (b) by itself is sufficient to answer the question.
- (e) If not enough facts are given to answer the question.
78. What is the 999th term of the series S?
- The first four terms of S are $(1 + 1)^2$, $(2 + 1)^2$, $(3 + 1)^2$, and $(4 + 1)^2$
 - For every x , the x th term of S is $(x + 1)^2$
- (a) If statement (a) alone is sufficient to answer the question, but statement (b) alone is not sufficient
- (b) If statement (b) alone is sufficient to answer the question, but statement (a) alone is not sufficient.
- (c) If both statements together are needed to answer the questions, but neither statement alone is sufficient
- (d) If either statement (a) or (b) by itself is sufficient to answer the question.
- (e) If not enough facts are given to answer the question.

79. When one piece of fruit is taken at random from a fruit bowl, what is the chance that it is an apple?
- There are half as many apples as oranges in the fruit bowl
 - A third of the fruit in the fruit bowl are orange.
 - If statement (a) alone is sufficient to answer the question, but statement (b) alone is not sufficient
 - If statement (b) alone is sufficient to answer the question, but statement (a) alone is not sufficient.
 - If both statements together are needed to answer the questions, but neither statement alone is sufficient
 - If either statement (a) or (b) by itself is sufficient to answer the question.
 - If not enough facts are given to answer the question.
80. A swimming pool is supplied water by two pipes, P and Q. If pipe P operating alone can fill the pool?
- Operating together, pipes P and Q can fill the pool in 4 hours.
 - Pipe P supplies water at the rate of 520 litres per hour, and 6240 gallons are required to fill the pool
 - If statement (a) alone is sufficient to answer the question, but statement (b) alone is not sufficient
 - If statement (b) alone is sufficient to answer the question, but statement (a) alone is not sufficient.
 - If both statements together are needed to answer the questions, but neither statement alone is sufficient
 - If either statement (a) or (b) by itself is sufficient to answer the question.
 - If not enough facts are given to answer the question.
81. Is x divisible by 70?
- x is divisible by 2 and 5
 - x is divisible by 2 and 7.
 - If statement (a) alone is sufficient to answer the question, but statement (b) alone is not sufficient
 - If statement (b) alone is sufficient to answer the question, but statement (a) alone is not sufficient.
 - If both statements together are needed to answer the questions, but neither statement alone is sufficient
 - If either statement (a) or (b) by itself is sufficient to answer the question.
 - If not enough facts are given to answer the question.

82. A company's profit was Rs. 800,000 in 1990. What was its profit in 1991?
- (a) There was a 20% increase in income in 1991
 - (b) There was a 25% increase in costs in 1991.
 - (a) If statement (a) alone is sufficient to answer the question, but statement (b) alone is not sufficient
 - (b) If statement (b) alone is sufficient to answer the question, but statement (a) alone is not sufficient.
 - (c) If both statements together are needed to answer the questions, but neither statement alone is sufficient
 - (d) If either statement (a) or (b) by itself is sufficient to answer the question.
 - (e) If not enough facts are given to answer the question.
83. What is the value of $1/x + 1/y + 1/z$?
- (a) $(xy + xz + yz)/xyz = 4$
 - (b) $x + y = 3$
 - (a) If statement (a) alone is sufficient to answer the question, but statement (b) alone is not sufficient (b) If statement (b) alone is sufficient to answer the question, but statement (a) alone is not sufficient.
 - (c) If both statements together are needed to answer the questions, but neither statement alone is sufficient
 - (d) If either statement (a) or (b) by itself is sufficient to answer the question.
 - (e) If not enough facts are given to answer the question.
84. How many of the 60 applicants for a job passed neither the physical nor the written exam?
- a. Of the 60 applicants, exactly 10% passed both the physical and the written exams.
 - b. Of the 60 applicants, exactly 50% passed the physical exam, and exactly 20% passed the written exam.
 - (a) If statement (a) alone is sufficient to answer the question, but statement (b) alone is not sufficient
 - (b) If statement (b) alone is sufficient to answer the question, but statement (a) alone is not sufficient.
 - (c) If both statements together are needed to answer the questions, but neither statement alone is sufficient
 - (d) If either statement (a) or (b) by itself is sufficient to answer the question.
 - (e) If not enough facts are given to answer the question.



85. If the number of square units in the area of a circle is A and the number of linear units in the circumference is C, what is the radius of the circle?
- a) $A > C + 3$
b) $A/C = 3/2$
- (a) If statement (a) alone is sufficient to answer the question, but statement (b) alone is not sufficient
(b) If statement (b) alone is sufficient to answer the question, but statement (a) alone is not sufficient.
(c) If both statements together are needed to answer the questions, but neither statement alone is sufficient
(d) If either statement (a) or (b) by itself is sufficient to answer the question.
(e) If not enough facts are given to answer the question.

SECTION - V ENGLISH USAGE (QUESTIONS 86 - 100)

Directions for questions 86 to 90: In each of the sentences below, four words or phrases have been underlined. Select the underlined part which contains an error in usage or grammar or punctuation. If there is no error, indicate (e) as the answer

86. The teacher asked the student if every one of them were ready to attend practical class. everyday.
- a) Asked
b) The student
c) If every one of them were ready to attend practical class.
d) Everyday.
e) No error
87. The daughter parted with her mother with tears but the journey to Delhi amused her.
- a) Parted
b) With her mother
c) With tears but the journey
d) Delhi amused her.
e) No error
88. He has been trying to search the lost book since Monday
- a) Been
b) Trying to
c) Search the lost book.
d) Since Monday.
e) No error
89. The company not only manufactures leather good but also plastic ware.
- a) Not only
b) Leather good
c) But also
d) plastic ware
e) No error

- 93.
- a. If you've seen a little line of text on websites that says something like "customers who bought this also enjoyed that" you have experienced this collaborative filtering firsthand.
 - b. The problem with these algorithms is that they don't take into account a host of nuances and circumstances that might interfere with their accuracy.
 - c. If you just bought a gardening book for your cousin, you might get a flurry of links to books about gardening, recommended just for you! – the algorithm has no way of knowing you hate gardening and only bought the book as a gift.
 - d. Collaborative filtering is a mathematical algorithm by which correlations and concurrences of behaviors are tracked and then used to make recommendations.
 - a) dabc
 - b) dcab
 - c) abcd
 - d) bcad
- 94.
- a. Self-management is thus defined as the 'individual's ability to manage the symptoms, treatment, physical and psychosocial consequences and lifestyle changes inherent in living with a chronic condition'.
 - b. Most people with progressive diseases like dementia prefer to have control over their own lives and health-care for as long as possible.
 - c. Having control means, among other things, that patients themselves perform self-management activities.
 - d. Supporting people in decisions and actions that promote self-management is called self-management support requiring a cooperative relationship between the patient, the family, and the professionals.
 - a) bcda
 - b) cabc
 - c) cdba
 - d) bcad
95. The study of human face is called as
- a) Aesthetics
 - b) Geriatrics
 - c) Ethnology
 - d) Physiognomy
 - e) Pathology
96. Synonym of Copious
- a) Little
 - b) Few
 - c) Meagre
 - d) Bountiful
 - e) Sparse
97. Antonym of Frivolous
- a) Perky
 - b) Significant
 - c) Dizzy
 - d) Playful
 - e) Lighthearted



Directions for questions 98 to 100: Fill in the blanks with suitable words:

One day my son called me after his exams. I could make out from his voice that he was ___(98) __. "The exam did not go so well. It was not that know but I made a careless mistake." I tried to ___(99)___ him saying, "Don't worry, you will do better next time." He was not pleased to hear my words. "You don't realise how competitive it is here and how difficult It is to ___(100)___ anything."

- | | | | | | |
|------|-------------|------------|------------|---------------|--------------|
| 98. | a. distress | b. bother | c. sad | d. confused | e. perplexed |
| 99. | a. pity | b. console | c. forgive | d. sympathise | e. teach |
| 100. | a. strive | b. triumph | c. succeed | d. achieve | e. pass |