## O TATA Steel (Aspiring Engineers Program) Exam $\mathbf{O}$

Selection Process: (There Are 4 Round)

1) Online Exam (MCQ Based).
2) Interview.
3) Medical Test.
4) Physical Measure.

## Online Exam (MCQ Based).

a) Verbal Ability - ( $\mathbf{1 0 \%}$ Qsn From This Section)
b) Numeric Reasoning - (10\% Qsn From This Section)
c) Analytical Ability \& Problem-Solving - ( $\mathbf{1 0 \%}$ Qsn From This Section)
d) Technical Qsn From CS/IT). - (70\% Qsn From This Section)
$\checkmark$ Note: Total 65 Qsn MCQ Based, Duration 95Minutes \& 1/3 Negative Marking.

## Verbal Ability:

1) Reading comprehension and analysis
2) Vocabulary and grammar
3) Sentence correction and error detection
4) Paraphrasing and summarizing
5) Synonyms and antonyms
6) Analogies and word associations
7) Idioms and phrases
8) One-word substitutions and fill in the blanks
9) Sentence completion and arrangement
10) Comprehension and analysis of passages and paragraphs.

## Numeric Reasoning:

1) Basic arithmetic and numerical ability
2) Algebra and geometry
3) Mensuration and trigonometry
4) Ratio and proportion
5) Profit and loss, discount, and interest calculations
6) Time and work, time and distance
7) Averages, percentages, and probability
8) Data analysis and interpretation
9) Number series and pattern recognition
10) Quantitative analysis and research

## Analytical Ability \& Problem-Solving:

1) Data interpretation and analysis
2) Decision-making skills and techniques
3) Logical reasoning and critical thinking
4) Deductive and inductive reasoning
5) Problem-solving methodologies and techniques
6) Analytical thinking and problem-solving
7) Analyzing and interpreting charts, graphs, and tables
8) Data sufficiency and data adequacy
9) Quantitative analysis and research
10) Coding-decoding, pattern recognition, and analogies

## Technical Qsn From (CS/IT)

1) Programming languages
2) Algorithms and Data Structures
3) Database systems
4) Operating systems
5) Web development
6) Software engineering
7) Artificial Intelligence (AI) and Machine Learning (ML)
8) Big Data and Data Analytics
9) Cloud computing
10) Computer Graphics and Visualization
11) Computer networks
12) Computer organization and architecture
13) Computer Vision
14) Cybersecurity and cryptography
15) Digital Signal Processing (DSP)
16) Distributed Systems
17) Human-computer interaction
18) Internet of Things (IoT)
19) Mobile application development
20) Natural Language Processing (NLP)
1. If the following numbers are rewritten by interchanging the digits in ten $\square$ s place and hundred $\square$ s place and then arranging them in the descending order. What will be the second digit of the newly formed fifth number from your right ?
479, 736, 895, 978, 389, 675
(A) 3
(B) 4 (C) 5
(D) 6

Ans: (C)
2. $P$ is 60 m South-East of $Q$. $R$ is 60 m North-East of $Q$. Then $R$ is in which direction of $P$ ?
(A) North
(B) North-East
(C) South
(D) South-East

Ans: (A)

Directions $\square$ (Q. 3 $\square 5$ ) Read the following information for answering the questions that follow $\square$ On a playing ground $A, B, C, D$ and $E$ are standing as described below facing the North.
(i) $B$ is 50 metres to the right of $D$.
(ii) $A$ is 60 metres to the South of $B$
(iii) $C$ is 40 metres to the West of $D$.
(iv) E is 80 metres to the North of A .
3. If a boy walks from $C$, meets $D$ followed by $B, A$ and then $E$, how many metres has he walked if he has travelled the straight distance all through ?
(A) 120
(B) 150
(C) 170
(D) 230

Ans: (D)
4. What is the minimum distance (in metre approximately) between $C$ and $E$ ?
(A) 53
(B) 78
(C) 92
(D) 120

Ans: (C)
5. Who is to the South-East of the person who is to the left of $D$ ?
(A) A
(B) B
(C) C
(D) E

Ans: (A)
6. A man was walking in the evening just before the sun set. His wife said that, his shadow fell on his right. If the wife was walking in the opposite direction of the man, then which direction the wife was facing ?
(A) North
(B) West
(C) South
(D) East

Ans: (C)

Directions $\square$ (Q. 7 711 ) In each of the following questions choose the set of numbers from the four alternative sets that is similar to the given set.
7. Given set : $(4,9,18)$
(A) $(8,14,22)$
(B) $(10,15,25)$
(C) $(6,12,23)$
(D) $(12,17,26)$

Ans: (D)
8. Given set : $(10,14,17)$
(A) $(4,11,14)$
(B) $(9,12$,
(C) $(8,13,18)$
(D) $(6,9,12)$

Ans: (A)
9. Given set: $(7,27,55)$
(A) $(21,35,52)$
(B) $(18,42,65)$
(C) $(16,40,72)$
(D) $(13,30,58)$

Ans: (C)
10. Given set : $(39,28,19)$
(A) $(84,67,52)$
(B) $(52,25,17)$
(C) $(70,49,36)$
(D) $(65,45,21)$

Ans: (A)
11. Given set : $(246,257,358)$
(A) $(233,343,345)$
(B) $(273,365,367)$
(C) $(143,226,237)$
(D) $(145,235,325)$

Ans: (A)

Directions $\square$ (Q. 12 $\square 16$ ) Each question contains six or seven statements followed by four sets of combinations of three. Choose the set in which the statements are logically related.
12.
(1) All books are having pages.
(2) All kings are having pages.
(3) All kings are books.
(B) 4, 2, 6
(C) $1,5,3$
(D) $2,4,5$

Ans: (B)

Directions $\square(\mathrm{Q} .17 \square 21)$ Each of the questions below consists of a question and two statements numbered (I) and (II). You have to decide whether the data provided in the statements are sufficient to answer the question. Give answers $\square$
(A) If the data in statement (I) alone are sufficient to answer the question, while the data in statement (II) alone are not sufficient to answer the question;
(B) If the data in statement (II) alone are sufficient to answer the question, while the data in statement (I) alone are not sufficient to answer the questions;
(C) If the data even in both statements (I) and (II) together are not sufficient to answer the question;
(D) If the data in both statement (I) and (II) together are necessary to answer the question.
17. In which direction is Mahatmaji $\square$ s statue facing ?
I. The statue is towards the northern end of the city.
II. The statue $\square$ s shadow falls towards East at 5 O $\square$ clock in the evening.

Ans: (C)
18. What is the total number of pupils in the final year class ?
I. The number of boys in the final year class is twice as much as the number of girls in that class.
II. The sum of the ages of all the pupils in the class is 399 years and their average age is 19 years.
Ans: (B)
19. Who is the tallest among $A, B, C$ and $D$ ?
I. A is taller than C.
II. B is taller than C and D.

Ans: (C)
20. How many Sundays are there in a particular month of a particular year?
I. The month begins on Monday.
II. The month ends on Wednesday.

Ans: (D)
21. What is the total number of pages in this book ?
I. I counted 132 pages from the beginning of this book.
II. My wife counted 138 pages starting from the end of the same book.

Ans: (C)

Directions $\square$ (Q. 22 $\quad 26$ ) In each of the questions given below, there is a statement followed by three assumptions numbered I, II and III. An assumption is something supposed or taken for granted. You have to consider the statement and assumptions and then decide, which of the assumption(s) is/are implicit in the statement.
22. Statement : During pre-harvest kharif seasons, the government has decided to release vast quantity of foodgrains from FCl .
Assumptions :I. There may be a shortage of foodgrains in the market during this season.
II. The kharif crop may be able to replenish the stock of FCl .
III. There may be a demand from the farmers to procure kharif crop immediately after harvest.
(A) None is implicit
(B) Only I and II are implicit (C) Only II and III are implicit (D) All are implicit

Ans: (D)
23. Statement : To improve the employment situation in India, there is a need to recast the present educational system towards implementation of scientific discoveries in daily life.

Assumptions :I. The students after completing such education may be able to earn their livelihood.
II. This may bring meaning of education in the minds of the youth.
III. The state may earn more revenue as more and more people will engage themselves in self employment.
(A) Only I and II are implicit
(B) Only III is implicit
(C) Only I and III are implicit
(D) None is implicit

Ans: (A)
24. Statement : To increase profit, the oil exporting countries decided to reduce the production of crude by 5 million barrels per day. Assumptions :l. The price of crude may increase due to less production. II. The demand of crude may remain same in future.
III. Other countries may continue buying crude from these countries. (A) All are implicit
(B) Only II and III are implicit (C) Only I and II are implicit (D) None is implicit

Ans: (C)
25. Statement : $\square$ We do not want you to see our product on newspaper, visit our shop to get a full view. $\square \square$ an advertisement.
Assumptions :I. People generally decide to purchase any product after seeing the name in the advertisement.
II. Uncommon appeal may attract the customers. III. People may come to see the product.
(A) All are implicit
(B) None is implicit
(C) Only II and III are implicit
(D) Only I and II are implicit

Ans: (A)
26. Statement : The Reserve Bank of India has directed the banks to refuse fresh loans to major defaulters.
Assumptions :I. The banks may still give loans to the defaulters.
II. The defaulters may repay the earlier loan to get fresh loan.
III. The banks may recover the bad loans through such harsh measures.
(A) All are implicit
(B) None is implicit
(C) Both II and III are implicit
(D) Both I and II are implicit

Ans: (C)

Directions $\square(\mathrm{Q} .27 \square 31)$ In questions given below, statements 1 and 2 are followed by conclusions I and II. Taking the statements to be right although they may seem at variance with commonly accepted facts, mark your answers as under $\square$
(A) If only conclusion I follows.
(B) If only conclusion II follows.
(C) If both I and II follows.
(D) Neither I nor II follows.
27. Statements :

1. All hands are machines.
2. All machines are wheels.

Conclusions :I. All wheels are hands.
II. All hands are wheels.

Ans: (B)
28. Statements :

1. Some buds are leaves.
2. Some leaves are red. Conclusions:
I. Some buds are red.
II. Some leaves are not buds.

Ans: (B)
29. Statements :

1. Some stones are shells.
2. All shells are pearls.

Conclusions:
I. Some stones are pearls.
II. All pearls are shells.

Ans: (A)
30. Statements:

1. Brown is red and blue is green.
2. Green is pink and yellow is red. Conclusions:
I. Yellow is brown.
II. Pink is blue.

Ans: (C)

Directions for questions 1 to 5: Read the following passage below and solve the questions based on it.
There are seven professors A, B, C, D, E, F and G teaching seven subjects History, Geography, Physics, Chemistry, Maths, Biology and English from Monday to Friday at Gaya College. Each professor teaches a different subject and not more than two subjects are taught on any one of the days.
(i) Chemistry is taught by professor B on Tuesday.
(ii) Professor D teaches on Friday but neither Geography nor Physics.
(iii) Professor F teaches History but neither on Thursday nor on Friday.
(iv) Professor A teaches English on the day on which History is taught.
(v) Professor C teaches Maths on Monday.
(vi) Geography and Chemistry are taught on the same day.
(vii) Professor G teaches on Thursday.

1. On which of the following days is English taught?
(a) Wednesday
(b) Monday
(c) Tuesday
(d) Cannot be determined
2. Which of the following subjects is taught by professor G?
(a) Biology
(b) Geography
(c) Physics
(d) Chemistry
3. On which of the following days is Geography taught?
(a) Monday
(b) Tuesday
(c) Wednesday
(d) Thursday
4. Which subject is taught on Friday?
(a) Physics
(b) History
(c) Geography
(d) Biology
5. Which of the following pairs of professors teaches on Tuesday?
(a) B and D
(b) A and B
(c) B and F
(d) None of these

Directions for questions 6 to 10: Read the information given below and solve the questions based on it.
$\mathrm{K}, \mathrm{L}, \mathrm{M}, \mathrm{N}, \mathrm{P}, \mathrm{Q}, \mathrm{R}, \mathrm{S}, \mathrm{U}$ and W are the only ten members in a department. There is a proposal to form a team from within the members of the department, subject to the following conditions:

- A team must include exactly one among P, R, and S.
- A team must include either M or Q , but not both.
- If a team includes $K$, then it must also include $L$, and vice versa.
- If a team includes one among $\mathrm{S}, \mathrm{U}$, and W , then it must also include the other two.
- L and N cannot be members of the same team.
- L and $U$ cannot be members of the same team.
- The size of a team is defined as the number of members in the team.

6. Who cannot be a member of a team of size 3 ?
(a) L
(b) M
(c) N
(d) P
(e) Q
7. Who can be a member of a team of size 5?
(a) K
(b) L
(c) M
(d) P
(e) R
8. What would be the size of the largest possible team?
(a) 8 (b)
7
(c) 6 (d)
5
(e) cannot be determined
9. What could be the size of a team that includes K ?
(a) 2 or 3
(b) 2 or 4
(c) 3 or 4
(d) Only 2
(e) Only 4
10. In how many ways a team can be constituted so that the team includes N ?
(a) 2
(b) 3
(c) 4
(d) 5
(e) 6
11. If $X$ is the brother of the son of $Y$ 's son, how is $X$ related to Y ?
a) Grandson
b) Son
c) Cousin
d)Cannot be determined
12. Amit introduces Rahul as the son of the only brother of his father's wife. How is Rahul related to Amit?
(a) Cousin
(b) Son
(c) Uncle
(d) Son-in-law
13. $A+B$ means $A$ is the mother of $B$
$\mathrm{A}-\mathrm{B}$ means A is the brother B
$A @ B$ means $A$ is the father of $B$ and
$A \times B$ means $A$ is the sister of $B$,
Which of the following shows that P is the maternal uncle of Q ?
(a) $\mathrm{Q}-\mathrm{N}+\mathrm{M} \times \mathrm{P}$
(b) $\mathrm{P}+\mathrm{S} \times \mathrm{N}-\mathrm{Q}$
(c) $\mathrm{P}-\mathrm{M}+\mathrm{N} \times \mathrm{Q}$
(d) $\mathrm{Q}-\mathrm{S} @ \mathrm{P}$
14. $A+B$ means $A$ is the sister of $B$
$A-B$ means $A$ is the brother of $B$
$\mathrm{A} \times \mathrm{B}$ means A is the daughter of B .
Which of the following options show that E is the maternal uncle of D ?
(a) $\mathrm{D}+\mathrm{F}-\mathrm{E}$
(b) $\mathrm{D}-\mathrm{F} \times \mathrm{E}$
(c) $\mathrm{D} \times \mathrm{F}+\mathrm{E}$
(d) None of these
15. Introducing a boy, a girl said, "He is the son of the daughter of the father of my uncle." How is the boy related to the girl?
(a) Cousin
(b) Nephew
(c) Uncle
(d) Son-in-law
16. Neha Kavi moved a distance of 75 metres towards the north. She then turned to her left and walked for 25 metres, turned left again and walked 80 metres. Finally, she turned to the right at an angle of $45^{\circ}$. In which direction was she moving finally?
(a) North-east
(b) North-west
(c) South
(d) South-west
17. One day, Dileep left his home and walked 10 km southwards, turned right and walked 5 km , turned right and walked 10 km , walked left and then walked 10 km . How many kilometres will he have to walk to reach his home straight?
(a) 10 km
(b) 15 km
(c) 20 km
(d) 25 km
18. Tanay is standing facing north. Turning to his right, he walks 25 metres. He then turns to his left and walks 30 metres. He, further, walks 25 metres to his right. He then walks to his right again and walks 55 metres. Finally, he turns to the right and walks 40 metres. In which direction is he now from his starting point?
(a) South-west
(b) South
(c) North-west
(d) South-east
19. Kaveri walks 10 km towards North. From there she walks 6 km towards South. Then, she walks 3 km towards East. How far and in which direction is she with reference to her starting point?
(a) 10km Northwest
(b) 6km Southwest
(c) 5 km Southwest
(d) 5 km Northeast
20. Gyan Prakash left for his college in his car. He drove 15 km towards north and then 10 km towards west. He then turned to the south and covered 5 km . Further, he turned to the east and moved 8 km . Finally, he turned right and drove 10 km . how far and in which direction is he from his starting point?
(a) 2 km West
(b) 5 km East
(c) 3 km North
(d) 6 km South

Directions for questions 21 to 25: Read the following passage and solve the questions based on it.

Amit, Bharat, Chandan, Dinesh, Eeshwar and Ferguson are cousins. None of them are of the same age, but all of them have birthdays on the same date. The youngest of them is 17 years old and Eeshwar, who is the eldest, is 22 years old. Ferguson is somewhere between Bharat and Dinesh in age. Amit is elder to Bharat and Chandan is older than Dinesh.
21. Which of the following is not possible?
(a) Dinesh is 20 years old
(b) Ferguson is 18 years old
(c) Ferguson is 19 years old
(d) Ferguson is 20 years old
22. If Bharat is 17 years old, then which of the following could be the ages of Dinesh and Chandan respectively?
(a) 18 and 19
(b) 19 and 21
(c) 18 and 20
(d) 18 and 21
23. If two of the cousins are between Chandan and Ferguson in age, then which of the following must be true?
(a) Amit is between Ferguson and Dinesh in age
(b) Bharat is 17 years old
(c) Bharat is younger than Dinesh
(d) Ferguson is 18 years old
24. If Amit is one year elder to Chandan, the number of logically possible orders of all six cousins by increasing age is
(a) 2
(b) 3
(c) 4
(d) 5
25. If Chandan is 19 years old, which of the following must be true?
(a) Amit is 20 years old and Dinesh is 21 years old
(b) Bharat is 18 years old and Amit is 20 years old
(c) Bharat is 20 years old and Amit is 21 years old
(d) Dinesh is 17 years old and Bharat is 21 years old

Directions for questions 26 to 29: Read the following passage and solve the questions based on it.
The Hotel Leela in Goa has two wings, the East wing and the West wing. Some East wing rooms, but not all, have an ocean view. All the West wing rooms have a harbor view. The charges for all the rooms are the same, except:
(i) There is an extra charge for all harbour view rooms on or above the third floor.
(ii) There is an extra charge for all ocean view rooms, except those without a balcony.
(iii) Some harbour view rooms on the first two floors and some East wing rooms without an ocean view have kitchen facilities, for which there is an extra charge.
(iv) Only the ocean view and the harbour view rooms have balconies.
26. A guest can avoid an extra charge by requesting:
(a) a West wing room on one of the first two floors
(b) a West wing room on the fourth floor without a balcony
(c) an East wing room without an ocean view
(d) an East wing room without a balcony
27. Which of the following must be true if all the conditions are as stated?
(a) all rooms above the third floor involve an extra charge
(b) no room without an ocean or a harbour view or kitchen facilities involves an extra charge.
(c) there is no extra charge for any East wing room without an ocean view
(d) there is no extra charge for any room without kitchen facilities.
28. Which of the following must be false if all the conditions are applied?
(a) some ocean view rooms do not involve an extra charge
(b) all rooms with kitchen facilities involve an extra charge
(c) some West wing rooms above the second floor do not involve an extra charge
(d) some harbour view rooms do not involve an extra charge
29. Which of the following cannot be determined on the basis of the information given?
I. whether there are any rooms without a balcony for which an extra charge is imposed
II. whether any room without a kitchen or a view involves an extra charge
III. whether two extra charges are imposed for any room
(a) I only
(b) II only
(c) I and III only
(d) II and III only
30. The CEO of a company must appoint a committee of 5 persons from different fields to serve as committee members. He must select two MBAs from A, B and C and three Engineers from F, G and H .
(i) Both B and H , cannot be appointed in the committee.
(ii) Both G and F, cannot be appointed in the committee.
(iii) Both E and H , cannot be appointed in the committee.

If C is not selected in the committee then any of the following could be in the committee except
(a) D
(b) H
(c) E
(d) G

Directions for questions 31 to 32: Read the following passage and solve the questions based on it.
(i) Seven friends P, Q, R, S, T, U and W have gathered at the Patna airport. However, only five of them are scheduled to go to five different places Delhi, Chennai, Lucknow, Bangalore and Kolkata.
(ii) Five of them are executives with specializations in Administrative (Admn), Human Resource Management (HRM), Marketing, Systems and Finance.
(iii) T is an executive and he is going to Chennai and his specialization is neither Finance nor Marketing.
(iv) W is a system specialist and is going to Delhi. U is an executive but is not going anywhere.
(v) Q is an executive with specialization in HRM but has come at the airport to see his friends only.
(vi) P is an executive but not from Marketing and is going to one of the destinations but not to Bangalore or Kolkata.
31. Who among the following specializes in Marketing?
(a) S
(b) P
(c) U
(d) Cannot be determined
32. What is the specialization of $R$ ?
(a) Finance
(b) Marketing
(c) Either Marketing or Finance
(d) None of these

Directions for questions 33 to 34: Read the following passage and solve the questions based on it.
(i) Six men B, D, C, M, J and K are split in two groups of three each and are made to stand in two rows, such that a man in one row is exactly facing a man in the other row.
(ii) M is not at the ends of any row and is to the right of J , who is facing $\mathrm{C} . \mathrm{K}$ is to the left of D , who is facing M .
33. Which of the following groups of men are in the same row?
(a) BMD
(b) MJK
(c) BDC
(d) None of these
34. Who is to the immediate left of $B$ ?
(a) M
(b) D
(c) J
(d) Data inadequate

Directions for questions 35 to 37: Read the following passage and solve the questions based on it.

A, B, C, D, E, F and G are seven persons who travel to office everyday by a particular train which stops at five stations 1 , 2, 3, 4 and 5 respectively after leaving its base station.
(i) Three among them get on the train at the base station.
(ii) D gets down at the next station at which F gets down.
(iii) B does not get down either with A or F .
(iv) G alone gets on at station 3 and gets down with C after having passed one station.
(v) A travels between only two stations and gets down at station 5.
(vi) None of them gets on at station 2.
(vii) C gets on with F but does not get on with either B or D .
(viii) E gets on with two others and gets down alone after D .
(ix) B and D work in the same office and they get down together at station 3.
(x) None of them get down at station 1.
35. At which station does E get down?
(a) 2
(b) 3
(c) 4
(d) Cannot be determined
36. At which station do both C and F get on?
(a) 1
(b) 2
(c) 4
(d) None of these
37. At which of the following stations do $B$ and $D$ get on?
(a) 1
(b) 2
(c) 3
(d) Cannot be determined

Directions for questions 38 to 40: Read the following passage and solve the questions based on it.
A business school publishes three issues of their research Journal in a year. The editor decided that the upcoming three issues April, August and December would carry articles written by seven of the most reputed professors of the school. Each of the seven authors (T, U, V, W, X, Y and Z) will have at least one article published but some may have more than one article published. The following restrictions apply to the publication of the articles:
(i) Each of the issues being prepared must contain at least two articles.
(ii) Only these seven professors' articles can appear in the upcoming April, August and December issues.
(iii) No author may publish in each of the two consecutively published issues or twice in the same issue.
(iv) If an article written by T appears in an issue, then an article written by $U$ must also appear in that issue.
(v) If an article written by W appears in an issue, then an article written by Y must appear in the immediately preceding issue.
(vi) An article written by Y cannot be published in an issue that contains an article written by Z .
38. If the April issue consists exclusively of articles written by T and U , then the August issue can consist exclusively of
articles written by which of the following group of authors?
(a) V and X
(b) V and Y
(c) W and Z
(d) V, Y and Z
39. If the April issue consists exclusively of articles written by $\mathrm{U}, \mathrm{V}$ and Z , then the August issue must contain an article written by which of the following authors?
(a) W
(b) X
(c) Y
(d) Z
40. If the December issue consists exclusively of articles written by $\mathrm{U}, \mathrm{V}$ and W , then the August issue must have consisted of articles written by which of the following groups of authors?
(a) T and Z
(b) U and Y
(c) X and Y
(d) X and Z

## ANSWERS

| $\mathbf{1 .}$ | (a) | $\mathbf{2 .}$ | (c) | $\mathbf{3 .}$ | (b) | $\mathbf{4 .}$ | (d) | $\mathbf{5 .}$ | (d) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{6 .}$ | (a) | $\mathbf{7 .}$ | (c) | $\mathbf{8 .}$ | (d) | $\mathbf{9 .}$ | (e) | $\mathbf{1 0 .}$ | (e) |
| $\mathbf{1 1}$ | (a) | $\mathbf{1 2 .}$ | (a) | $\mathbf{1 3 .}$ | (c) | $\mathbf{1 4 .}$ | (d) | $\mathbf{1 5}$ | (a) |
| $\mathbf{1 6 .}$ | (d) | $\mathbf{1 7 .}$ | (b) | $\mathbf{1 8 .}$ | (d) | $\mathbf{1 9 .}$ | (d) | $\mathbf{2 0 .}$ | (a) |
| $\mathbf{2 1 .}$ | (d) | $\mathbf{2 2 .}$ | (b) | $\mathbf{2 3 .}$ | (d) | $\mathbf{2 4 .}$ | (a) | $\mathbf{2 5 .}$ | (c) |
| $\mathbf{2 6 .}$ | (d) | $\mathbf{2 7 .}$ | (b) | $\mathbf{2 8 .}$ | (c) | $\mathbf{2 9 .}$ | (a) | $\mathbf{3 0 .}$ | (b) |
| 31. | (c) | $\mathbf{3 2 .}$ | (d) | $\mathbf{3 3 .}$ | (d) | $\mathbf{3 4 .}$ | (a) | 35. | (c) |
| $\mathbf{3 6 .}$ | (d) | $\mathbf{3 7 .}$ | (d) | $\mathbf{3 8 .}$ | (b) | $\mathbf{3 9 .}$ | (c) | $\mathbf{4 0 .}$ | (c) |

Directions: Read the given passage and answer the questions that follow.

## Passage

On clear moonless evenings when it is completely dark, you can sometimes see a faint glow from the horizon. It is called the zodiacal light as it runs along the zodiac, the constellation through which the planets appear to travel. This glow is sunlight, reflected off dust particles in the solar system it is brightest near the sun, so it is best visible after sunset or before dawn, when the sun is just far enough below the horizon to leave the sky completely dark.

1. According to this passage the zodiac is a $\qquad$
a. Collection of sun signs
b. Constellation
c. Star
d. Planet
2. The zodiacal light can be seen only on $\qquad$
a. Moonless nights
b. Starry Nights
c. Moonless evenings
d. Alternate days

## Directions: Choose the best word from the given options to complete_ the sentence.

1. Passing gravy through a $\qquad$ removes lumps.
a. Mixture
b. Sieve
c. Tap
d. Cap
2. The politician's poor behaviour was overlooked because of his
$\qquad$ .
a. Selfishness
b. Reluctance
c. Resistance
d. Charisma
3. The latest novel in the series opened with a $\qquad$ of the previous books.
a. Syntax
b. Signage
c. Symphony
d. Synopsis
4. Salt is a $\qquad$ ingredient in the preparation of any type of food.
a. Indicative
b. Cheerful
c. Outstanding
d. Vital

Directions: Each of the questions below is followed by two statements, labeled (1) and (2), in which certain data are given. In these questions you do not actually have to compute an answer, but rather you have to decide. whether the data given in the statements are sufficient for answering the. questions. Using the data given in the statements plus your knowledge of mathematics and everyday facts (such as the number of days in a month)__ you are to blacken the box on the answer sheet under:
A. If statements (1) ALONE is sufficient but Statement (2) alone is not sufficient to answer the question asked.
B. If statement (2) ALONE is sufficient but statement (1) alone is not sufficient to answer the question asked.
C. If BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NIETHER statement ALONE is sufficient.
D. If EACH statement is sufficient by itself to answer the question asked.
E. If statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked and additional data specific to the problem are needed.

1. How much did Seema weigh before she started dieting?
2. She now weighs 63 kilos
3. Seema lost 9 kilos
4. If $x$ and $y$ are numbers, which weighs more: $x$ blue marbles or $y$ red marbles?
5. $x=5 y$
6. Red marbles weigh 1 gram each
7. Are there more than 200 pages in the book?
8. John reads at 7 pages an hour
9. There are 500 pictures in the book with at least one picture per page

## Directions: read the problem statements give below and choose the answer that best fits as a solution.

1) $A \& B$ invested RS 2000 \& RS 5000. So if there is a profit of RS 28000 what is A's share if they share the profits in the ratio 2:5?
a) 4000
b) 5000
c) 8000
d) 7000
2) If apples are bought at 11 for RS 10 \& sold at 10 for RS 11, how much will be the gain \%?
a) $5 \%$
b) $4 \%$
c) $3 \%$
d) $2 \%$
3) Viral can do a piece of work in 10 days \& Raja in 15days. If both of them work together how long will it take to finish the work?
a) 6days
b) 5days
c) 7days
d) 8days

## Directions: Refer to the data give in the table below and answer_ the questions that follow.

|  | Performance |  |  | Excellent |
| :--- | :--- | :--- | :--- | :--- |
|  | Average | Good | Total |  |
| Male | 16 | 22 | 10 | 48 |
| Female | 24 | 8 | 0 | 32 |
| Total | 40 | 30 | 10 | 80 |

1. What proportion of good students are male?
a. $2 \%$
b. $3 \%$
c. $4 \%$
d. $5 \%$
2. Among average students, what is the ratio of male to female?
a. $2: 3$
b. $3: 2$
c. $2: 5$
d. 3:4
3. Among which group (male/ female) is the number of good students exactly one third of the number of average students?
a. Male
b. Female
c. Neither
d. Both

Directions: There are a series of symbols below that represent a certain action. Each question consists of two or more figures in a column. Work down the column. starting with the top figure and applying the action as represented by the symbol. against it. You must then choose from the five possible answers the column that results from carrying out the actions as required on the figures.

| $\rightarrow$ | Turn the figure from left to right |
| :--- | :--- |
|  |  |
| $\downarrow$ | Turn the figure upside down |
|  |  |
|  | Delete the figure in the box |
|  |  |
|  | Exchange this figure with the immediately previous figure |
|  |  |

1. 



a

b


2.


3.


e

Directions: Choose from the five diagrams marked $a, b, c, d$ and $e$ the_ one that best illustrates the relationship among three given classes_ in each of the questions. Each class is depicted as a circle in the_ figures below.

(a)

(b)

(c)

(d)

(e)

1. Vanilla, Chocolate, Ice cream
2. Lotus, flowers, orange
3. Doctors, Teachers, Painters
4. Dentists, Veterinarians, Doctors

## Directions: Consider the information given and answer the questions that follow.

Suresh is heavier than Anil, but not as heavy as Raju. Anil is heavier than Jayesh. Krishnan is heavier than Suresh, but lighter than Raju.

Who among them is the heaviest?
a. Anil
b. Krishnan
c. Suresh
d. Raju
e. Jayesh

Who among them is the lightest?
a. Anil
b. Krishnan
c. Suresh
d. Raju
e. Jayesh

## Answer Key

Reading comprehension

1. $b$
2. c

Sentence completion

1. $b$
2. d
3. d
4. d

Numerical: Sufficiency

1. C
2. e
3. b

Numerical: arithmetic

1. c
2. a
3. a

Numerical: Data Interpretation

1. $b$
2. a
3. $b$

Logical: Diagrammatic

1. a
2. c
3. d

Logical: Venn diagrams

1. $b$
2. c
3. d
4. b

Logical: working with data

1. d
2. e
