## IBPS BANK PO PRELIMINARY EXAM 2021: QUESTION PAPER

| EXAMINATION STRUCTURE (ONLINE) |  |  |  |  |
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| Sr. <br> No. Name of Tests <br> (Objective) No. of <br> Questions Maximum <br> Marks Allotted Time <br> $\mathbf{1 .}$ English Language 30 30 20 minutes <br> $\mathbf{2 .}$ Reasoning Ability 35 35 20 minutes <br> $\mathbf{3 .}$ Quantitative Aptitude 35 35 20 minutes <br>   $\mathbf{1 0 0}$ $\mathbf{1 0 0}$ $\mathbf{6 0}$ minutes |  |  |  |  |

## INSTRUCTIONS

(1) All the sections are available in English only, and the time suggested above for each test is not for guidance, you have to follow the above mentioned time.
(2) Do not use calculators, or any electronic medium for calculations. You may take a clean sheet of paper for rough work and all calculations must be performed manually by the candidate.
(3) There will be penalty for wrong answer marked by you in the objective tests. There are five alternatives in every question of a test.
(4) For each question for which a wrong answer has been given by you, $1 / 4$ or 0.25 of the marks assigned to that question will be deducted as penalty. If a question is left blank, i.e. no answer is given by you, there will be no penalty for that question.
(5) There will be a cut off for each section and an overall cut off as well. Hence, your aim should be to answer maximum number of attempts in all three sections.

## TEST-I: ENGLISH LANGUAGE

Direction (Qs.1-8): Read the following passage and answer the following questions. Some words are highlighted to help you answer some of the questions.

Life has shown me that you don't see how reliant you are on being 'strong' until you acknowledge your discomfort in situations that call on you to express your need for support. Perhaps you keep a lot to yourself, not because you're deceptive, but to avoid being a 'burden'. Your discomfort may be disguised by thinking that you're just trying to figure things out on your own. Unfortunately, this means that when it comes to asking for, and receiving, support from loved ones, you're either avoiding it altogether or waiting until it's an emergency. Of course, if you only depend on others when you're at the equivalent of sirens blaring, support becomes something you utilise when you're in dire straits instead of part of the fabric of your life. This is destructive, not just to your sense of self, but also to your relationships.
Everything us humans do is about meeting our needs. These range from the practical survival ones like food, shelter, hydration and sleep, to security, intimacy, connection, attention and community, recognition, approval, status, power and validation. All humans need help and support, albeit to varying degrees depending on our character, personality, and circumstances. Our approach to these, including whether we allow ourselves to receive or we focus on always being The Giver, tend to be driven by the past. If we struggle to admit that we need support, it's generally because of earlier life experiences and messages that we've picked up about what these mean. On some level, asking is deemed as threatening to our wellbeing or something that will lead to disappointment.
Maybe we were the eldest or only child, and we're used to being over-responsible to feel worthy, safe and needed. Perhaps we're the way we are because we parented our parents or were their caretaker from a very young age, or being under supported taught us to be self-reliant. Maybe, despite having solid loved ones around us, we're still guarded due to past hurt. These lessons helped us to survive our childhood, but they're holding us back from who we really are in adulthood.
Don't ask, don't get. We don't always have to be the strong one -asking for help when it's needed builds intimacy and strengthens every relationship. Asking for help and support doesn't make us weak; it makes us human. Always being the giver, or seeing people as a means to an end, or feeling as if we have to earn support first, or pay it back, is a block to intimacy. What does always being The Strong One say for the vulnerability in our relationships? Who does everyone else have to be to facilitate our role? And, yes, it is ok to ask for support, especially if you're inclined to typically be The Strong One, because people might not know the extent of your struggle behind the mask. Your perpetual strength and busyness might obscure their view. Asking doesn't make you needy, but it also doesn't mean that they're a bad partner, friend or family member for not instinctively knowing. When you ask for, or show that you need, support, you humanise yourself, but you also let others in and express your boundaries and bandwidth. Instead of fearing dependence, you get to enjoy the mutual reliance of interdependence. As a result, you and your relationships will prosper.

1. According to the passage which of the following sentences regarding "help" is correct?
(1) Confidence comes from saying yes and deciding to figure out the strategy later
(2) To avoid being a burden an individual tries to avoid any help
(3) It is due to the mental illness developed from time to time
(4) You can't be confident unless you get some experience at whatever you want to be confident at
(5) None of these
2. What can weaken our relationships as mentioned in the first paragraph as 'destructive'?
(1) Ignoring the lessons that helped us to survive our childhood.
(2) Taking help from only the closed ones when a situation of 'Fire' happens at home.
(3) Depending on the help of others only at times of utmost emergency instead of it being something commonly used
(4) Asking for help makes an individual weaker.
(5) None of these
3. How has the idea of not taking help been inculcated in to humans as mentioned in the passage?
(1) It is due to the untrained brain which won't allow happening anything new
(2) It is due to disciplinary things taught in the childhood
(3) It is due to the negative perceptions attached to what help means, picked up by humans during the early years of development
(4) Many data processing operations are only possible with your express consent
(5) None of these
4. What kind of message was given by the author when someone asks for help or gives support to someone"?
(1) It makes a person self-reliant
(2) 'Give and take' not only makes us a better human but also strengthens the relationship
(3) Understanding different mindsets helps people make informed choices
(4) Helping others at time reminds one of its childhood
(5) None of these
5. Which of the following sentences is/are correct with respect to the passage?
(1) Being surrounded by loved ones helps us to forget all the hurt we have experienced in the past
(2) A kind of dependence comes when someone ask for help leading to deterioration of relationships
(3) Whatever humans do is all about meeting the personal needs
(4) Both (2) \& (3)
(5) All (1), (2) \& (3)

Direction (Qs. 6 \& 7): Choose the word which is most nearly the SIMILAR in meaning to the given word given in bold as used in the passage.
6. Albeit
(1) Though
(2) Unaware
(3) Agreeable
(4) Placid
(5) Pacifying
7. Disguised
(1) Agonizing
(2) Camouflage
(3) Provincial
(4) Cultured
(5) Worldly
8. Choose the word which is most nearly the OPPOSITE in meaning to the word 'Intimacy' given in bold as used in the passage.
(1) Agree
(2) Taunt
(3) Alienation
(4) Sneer
(5) Mind

Direction (Qs.9-13): Given below are six statements A, B, C, D, E and F, which when arranged in the correct order, form a coherent and meaningful paragraph. The sentence marked D is fixed and would fit in the fourth position. Rearrange the other statements in a proper sequence to form a meaningful paragraph, then answer the questions that follow.
(A) Secularism became the mantra of the Indian nation, a nation exhausted by partition and sectarian riots and above all the assassination of Gandhiji, did not want any more divisive talk.
(B) The leaders of the Indian National Congress; Gandhi, Maulana Abul Kalam Azad, Nehru and others were deeply committed to the ideal of secularism, though each expressed it in very different manners.
(C) And yet recent political and social events have questioned this declaration.
(D) During the freedom struggle, secularism was emerging as the most dominant principle.
(E) India has been declared a secular state by its written constitution and it is every Indians duty to stand by and believe in this declaration.
(F) Is India a secular country only on paper or does secularism actually exist in India; or is in the form of pseudo- secularism, a term the BJP and its allies seem to repeatedly harp on.
9. Which of the following will be the first statement after rearrangement?
(1) A
(2) B
(3) C
(4) E
(5) F
10. Which of the following will be the third statement after rearrangement?
(1) A
(2) B
(3) C
(4) E
(5) F
11. Which of the following will be the fifth statement after rearrangement?
(1) A
(2) B
(3) C CuIOD (4) E
(4) E : ANTVC
(5) F
12. Which of the following will be the last statement after rearrangement?
(1) A
(2) B
(3) C
(4) E
(5) F
13. Which of the following will be the second statement after rearrangement?
(1) A
(2) B
(3) C
(4) E
(5) F

Direction (Qs.14-18): In the given question, a sentence is divided into five parts out of which the last part is correct. Out of the remaining four, there are errors in three parts. Choose the part which doesn't have an error. If all the four parts are correct, mark 5 i.e. All are correct as the answer.
14. It would be determined (A)/ the fate of the already shown (B)/ crop in the crucial (C)/ post-germination that (D)/ vegetative growth stages.
(1) A
(2) B
(3) C
(4) D
(5) All are correct
15. This negation of Kipling's (A)/ literary legacy as a by-product (B)/ of his political views can, (C)/ however, only be seen as (D)/ cultural grandstanding.
(1) A
(2) B
(3) C
(4) D
(5) All are correct
16. While the US has been the initiator (A)/ in both, the result (B)/ uncertainties and upwarded (C)/ pressure on oil prices have (D)/ primarily impacted EMEs.
(1) A
(2) B
(3) C
(4) D
(5) All are correct
17. An alternate could be to revive (A)/ the Delhi governments online system to (B)/ monitor private hospitals who $(C) /$ became defunct barely a $(\mathrm{D}) /$ year after it was introduced.
(1) A
(2) B
(3) C
(4) D
(5) All are correct
18. The major team are filled with world-class (A)/ players who play for the bigger clubs in the (B)/ world over different managers, with (C)/ different teammates and according to
(D)/ different formations and tactics.
(1) A
(2) B
(3) C
(4) D
(5) All are correct

Direction (Qs.19-23): In the following questions two columns are given containing three sentences/phrases each. In first column, sentences/phrases are $A, B$ and $C$ and in the second column the sentences/phrases are D, E and F. A sentence/phrase from the first column may or may not connect with another sentence/phrase from the second column to make a grammatically and contextually correct sentence. Each question has five options, four of which display the sequence(s) in which the sentences/phrases can be joined to form a grammatically and contextually correct sentence. If none of the options given forms a correct sentence after combination, choose (5), i.e. "None of these" as your answer.
19.

| Column (1) | Column (2) |
| :--- | :--- |
| (A) I hope this shared story helps others | (D) to treat this incurable disease |
| (B) This type of search holds out hope of a <br> cure, | (E) to making sense of the need to quit <br> smoking |
| (C) we hope to find new routes of <br> intervention | (F) rather than simply extending life |

(1) (A)-(F) and (B)-(D)
(2) (B)-(E) and (C)-(F)
(3) (B)-(F) and (C)-(D)
(4) (A)-(D) and (C)-(E)
(5) None of these
20.

| Column (1) | Column (2) |
| :--- | :--- |
| (A) Do it someplace away from the office, <br> where | (D) you're having a relaxed conversation |
| (B) The office declined to comment further <br> on, | (E) has led to all kinds of difficulties |
| (C) The box office demand to increase <br> capacity | (F) the incident when contacted on phone |

(1) (A)-(F) and (B)-(D)
(2) (B)-(E) and (C)-(F)
(3) (B)-(F) and (C)-(D)
(4) (A)-(D) and (C)-(F)
(5) None of these
21.

| Column (1) | Column (2) |
| :--- | :--- |
| (A) He was freed on $\$ 10,000$ bond and <br> allowed | (D) return home without entering a plea |
| (B) In the past, just about anybody could <br> get a fee, | (E) to prepare a federal tax return |
| (C) They give us the money, and they <br> never know | (F) what they're going to get in return |

(1) (A)-(F) and (B)-(D)
(2) (B)-(E) and (C)-(F)
(3) (B)-(F) and (C)-(D)
(4) (A)-(D) and (C)-(E)
(5) None of these
22.

| Column (1) | Column (2) |
| :--- | :--- |
| (A) Of the two, extraction is probably less <br> costly | (D) and may prevent further problems. |
| (B) We have worked hard as a teams | (E) on the number of hits they stop. |
| (C) Goalkeepers will rate their own <br> performance | (F) for two years to prevent this moment. |

(1) (A)-(F) and (B)-(D)
(2) (B)-(E) and (C)-(F)
(3) (B)-(F) and (C)-(D)
(4) (A)-(D) and (C)-(E)
(5) None of these
23.

| Column (1) | Column (2) |
| :--- | :--- |
| (A) A log cabin trading post was built in <br> 1909 | (D) and purchased as a private residence. |
| (B) The log out button will be reinstated | (E) as part of the next phase of the <br> relaunch. |
| (C) When researchers log on via a library <br> website, | (F) the information is free available. |

(1) (A)-(F) and (B)-(D)
(2) (B)-(E) and (C)-(F)
(3) (B)-(F) and (C)-(D)
(4) (A)-(D) and (B)-(E)
(5) None of these

Direction (Qs.24-28): Given below the sentences each of which has been divided into four parts. Each of the questions is then followed by the five options which give the sequence of the rearranged parts. You must choose the option which gives the correct sequence of the parts. If the sentence is already arranged in the correct sequence or the correct sequence doesn't match with any of the given sequences, mark option (5) .i.e., "(5) No rearrangement required" as your answer.
24. Mexico had faced challenges in executing the hedge $(A) /$ this year as oil prices have been (B)/ set to come into effect in 2020 have roiled fuel oil markets (C)/ volatile and new International Maritime Organization (IMO) standards (D).
(1) DCBA
(2) ABDC
(3) DBAC
(4) BACD
(5) No rearrangement required
25. Anxiety about the impact of the (A)/ against the dollar in 2-1/2 years (B)/ coronavirus on the European economy (C)/ this week helped send the euro to its lowest levels (D).
(1) DCBA
(2) ACDB
(3) DBAC
(4) $B A C D$
(5) No rearrangement required
26. in China had sparked fears of a pandemic (A)/ cover up to the end of last year, before the epidemic (B)/ due to be released on Friday will (C)/Gross domestic product data (D).
(1) DCBA
(2) CABD
(4) BACD
(5) No rearrangement required
(3) DBAC
27. imposed various restrictions, for accounts held (A)/ insurance grew stronger after the RBI (B)/ with the PMC Bank due to financial irregularities (C)/ the demand for increase in deposit (D)
(1) DCBA
(2) DABC
(3) DBAC
(4) BACD
(5) No rearrangement required
28. which was once the sole telecom (A)/ after making losses for 14 years, ITI, (B)/ equipment provider for the (C)/ country, made a profit of Rs. 27 crores in 2017-18 (D)
(1) DCBA
(2) DABC
(3) DBAC
(4) BACD
(5) None of these

Direction (Qs. 29 \& 30): In each of the given questions, a pair of words has been given which is then followed by three statements. Find the statements where both the words grammatically and contextually fit in the given statements.
29. ARDUOUS: DIFFICULT
(A) It is becoming clear that a lack of affordable and efficient transportation has a substantial $\qquad$ impact on personal finances and of life.
(B) We are in a/an $\qquad$ process of learning how to live together, and togetherness is our only $\qquad$ option.
(C) The sheer harshness of the desert environment made onward movement a/an $\qquad$ task.
(1) Only (A)
(2) Only (B)
(3) Both (A) \& (B)
(4) Both (B) \& (C)
(5) All of the above

## 30. ADDRESS: TACKLE

(A) $\qquad$ the concurrent labour and social movements and the issues leaders attempted to
$\qquad$ describe the climate at the time.
(B) He said he had been so shaken by his first rugby $\qquad$ that he could not face any more.
(C) Each house has an official name, usually based on the family name of the first housemaster, $\qquad$ which is used mainly as a postal $\qquad$ .
(1) Only (A)
(2) Only (B)
(4) Both (B) \& (C)
(5) All of the above

## TEST-II: REASONING ABILITY

Direction (Qs.1-3): Study the following information carefully and answer the given questions.
I start to walk in South Direction from my house and cover a distance of 3 km and reached my friend's house, from there I took a left turn and walk 4 km and then take a right turn and again walk 4 km and finally reached point $P$. My sister starts to walk in West direction and after walking 3 km she take a right turn, walks 2 km then take a left turn and walks 5 km to reach at point $P$.

1. Find the total distance which I covered in order to reach point $P$ and Point $P$ is in which direction with respect to my house?
(1) 7 km , North-West
(2) 11 km , North-West
(3) 8 km , South-East
(4) 11 km , South-East
(5) None of these
2. What is the shortest distance between my house and my sister's initial position?
(1) 15 km
(2) 13 km
(3) 21 km
(4) $17 \sqrt{2} \mathrm{~km}$
(5) $13 \sqrt{2} \mathrm{~km}$
3. If point O is at 4 km towards east of my house then what is the distance between point P and point O ?
(1) 16 km
(2) 11 km
(3) 12 km
(4) 8 km
(5) 7 km

Direction (Qs.4-6): In each of the questions below are given some statements followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts. THE CHENA SCH00L OF BATMNG
Give answer (1): If only conclusion I follows
Give answer (2): If only conclusion II follows
Give answer (3): If either conclusion I or II follows
Give answer (4): If neither conclusion I nor II follows
Give answer (5): If both conclusions I and II follow
4. Statements: Only a few purses are bags

Only a few bags are boxes
Conclusions: I. Some purse can be boxes
II. No bag is a purse
5. Statements: All beds are woods

Only a few woods are irons
Only a few irons are steels
Conclusions: I. Some beds are irons
II. Some woods can be steels
6. Statements: All news are fake

Only a few fake are true Only a few news are media

Conclusions: I. Few news can be true
II. Some media are true

Direction (Qs.7-9): In each of the following questions, relationship between different elements is shown in the statements followed by two conclusions. Find the conclusion which is definitely true.
7. Statements: $\mathrm{K}<\mathrm{P} \geq \mathrm{S}=\mathrm{T}>\mathrm{J} ; \mathrm{N}=\mathrm{P} \geq \mathrm{V}<\mathrm{A} \geq \mathrm{R} ; \mathrm{J}>\mathrm{L} \geq \mathrm{B}$

Conclusions: I. B $<$ N II. $\mathrm{K}<\mathrm{A}$ III. $\mathrm{P}>\mathrm{B}$
(1) Only I follows
(2) Only III follows
(3) Either I or II follows
(4) Only I and III follow
(5) All I, II and III follow
8. Statements: $\mathrm{P}=\mathrm{S}>\mathrm{R}=\mathrm{K} \leq \mathrm{T} ; \mathrm{B}<\mathrm{H}=\mathrm{D}>\mathrm{G} ; \mathrm{G}=\mathrm{K} \geq \mathrm{M}$

Conclusions: I. $\mathrm{S}>\mathrm{D}$
II. $\mathrm{H} \geq \mathrm{P}$
III. R < H
(1) Only II follows
(2) Only I and III follow
(3) None follows
(4) Only III follows
(5) Only I and II follow
9. Statements: $\mathrm{M} \geq \mathrm{J}=\mathrm{R} \leq \mathrm{L}=\mathrm{S} \geq \mathrm{N} ; \mathrm{Y} \geq \mathrm{T} \leq \mathrm{L} \leq \mathrm{W}<\mathrm{A}$

Conclusions: I. J < A
(1) Only I and III follow
(2) Either II or III and I follow
(3) Only I follows
(4) Only II and III follow CTENMI SCHOOL OF BANININC
(5) None follows
II. $\mathrm{Y} \geq \mathrm{N}$
III. $\mathrm{M} \geq \mathrm{Y}$
$L=S \geq N ; Y \geq T \leq L \leq W<$
13. Who among the following sits immediate left with the one who likes Pink color?
(1) S
(2) The one who likes Red
(3) V
(4) The one from Japan
(5) The one who likes Yellow
14. Which of the following colors $U$ likes?
(1) Red
(2) Black
(3) Brown
(4) White
(5) None of these
15. Who sits third to the left of $V$ ?
(1) P
(2) R
(3) S
(4) T
(5) $Q$

Direction (Qs.16-20): Study the following information carefully and answer the given questions.
Certain number of persons sit in the linear line all are facing North directions. Some persons sit between $D$ and $K$ are less than one person between $A$ and $L$. $C$ sits $4^{\text {th }}$ to the right of $D$ who sits $4^{\text {th }}$ to the right of I. L sits at one extreme end. Both I and C do not sit at any extreme end. Three persons sit between $C$ and $Q$. $K$ and $A$ sit immediate to $Q$ who sits left of $G$. G sits $4^{\text {th }}$ to the left of L. Some persons sit between $K$ and $G$ are more than one person between $C$ and $A$ which is right of C. Some persons sit between C and I is same as between A and L. Less than 24 people are sitting in a row.
16. Who sits $4^{\text {th }}$ to the right of A ?
(1) Q
(2) K
(3) G
(4) D
(5) None of these
17. Who sits $4^{\text {th }}$ to the left of Q ?
(1) I
(2) L
(3) C
(4) Can't say
(5) None of these
18. How many seats are between $K$ and $L$ ? 50 .
(1) 8
(2) 5
(3) 9
(4) 7
(5) None of these
19. How many seats are in the line?
(1) 20
(2) 18
(3) 27
(4) 23
(5) None of these
20. Who sits immediate right of $I$ ?
(1) D
(2) C
(3) K
(4) $Q$
(5) None of these

Direction (Qs.21-25): Study the following information carefully and answer the given questions.
Seven students A, B, C, D, E, F and G are attending the exams on different subjects in a same week starting from Monday to Sunday. They all attend the exams on the subjects namely Physics, Chemistry, Maths, Botany, Zoology, Computer and Economics but not necessary to be in the same order. Only one person attends the exam on one subject in one day.
Two persons attend the exam between the one who attends the Botany exam and A, who attends one of the days before Thursday but not on the Monday. Three persons attend the exam between the one who attends the Chemistry exam and the one who attends the Economics exam. G attends the exam immediately before the one who attends the Economics exam. A does not attend either Chemistry or Computer exam. Only one person attends the exam between F and the one who attends the Computer exam, who attends after F. As many persons attend the exams before the one who attends the Physics exam is same as after F. As many persons attend the exam between $C$ and the one who attends the Maths is same as between $D$ and the one who attends the Maths exam. $C$ attends the exam before $D$ and does not attend the Zoology exam. E does not attend the Botany exam.
21. G attends which of the following exams?
(1) Zoology
(2) Maths
(3) Chemistry
(4) Computer
(5) Physics
22. How many persons attend the exam between $B$ and the one who attends the Zoology exam?
(1) One
(2) Two
(3) Three
(4) None
(5) More than three
23. If $A$ is related to Chemistry and $D$ is related to Economics in a certain way. Then, $B$ is related to which of the following?
(1) Maths
(2) Botany
(3) Computer
(4) Zoology
(5) Physics
24. Who among the following attends the exam on Saturday?
(1) G
(2) F
(3) C
(4) B
(5) E
25. Which of the following statements is true?
(1) F attends one of the days before E
(2) A attends the Zoology exam
(3) Only one person attends the exam between D and G
(4) None is true
(5) $G$ attends the exam on Thursday

Direction (Qs.26-30): Study the following information carefully and answer the questions given below.

There are eight people S, T, U, V, W, X, Y and Z, they all were born on different years via 1947, 1953, 1958, 1967, 1974, 1983, 1994 and 2003 but not necessarily in same order. But the date and month of birth of all these persons are same. Calculation is done with respect to the year 2020 and assuming months and date to be same. The difference between the age of $S$ and $U$ is perfect cube. V's age is not exactly half of S's age but V is not the oldest person. The difference of age between $V$ and $S$ is one less than the age of $V$. $T$ is second youngest among all of them. Difference of age between T and Z is perfect square. W 's age is same as the birth year (Last two digit) of Y .
26. What is the age of $W$ ?
(1) 67
(2) 26
(3) 46
(4) 73
(5) None of these
27. How many persons are younger than $U$ ?
(1) Four
(2) More than four
(4) One
(5) Two
(3) Three
28. Who among the following is the oldest?
(1) Z
(2) U
(3) V
(4) W
(5) S
29. U was born in which of the following years?
(1) 1953
(2) 1974
(3) 1994
(4) 1958
(5) None of these
30. What is the age of Z ?
(1) 67 year
(2) 62 year
(3) 46 year
(4) 26 year
(5) None of these

Direction (Qs.31-35): Study the following information carefully and answer the questions given below.

Twelve persons A, B, C, D, E, F, G, H, I, J, K, L live in different flats of different floors. There are four floors in a building as ground floor is numbered as 1 and above it is 2 and so on upto top floor numbered as 4 . Each of the floor consists of 3 flats as flat-1, flat-2 and flat-3. flat-1 of floor-2 is immediately above flat-1 of floor-1 and immediately below flat-1 of floor-3 and so on. In the same way flat- 2 of floor- 2 is immediately above flat- 2 of floor- 1 and immediately below flat- 2 of floor-3 and so on. Flat-2 is in east of flat-1 and flat-3 is in east of flat-2.

Two persons live between J and K. J lives above K but both are living in the same flat number. A is to the east of I but none of them lives on same flat and same floor number on which J and K live. No one lives in the west of J. Only one person lives between C and G who lives below C. L lives to the east of G. F lives immediately above B and in the same flat number. D is to the west of H. L lives below E and H does not live on the top floor. E does not live in flat-2. C and G lives in the same flat number.
31. Who among the following lives to the west of H ?
(1) A
(2) E
(3) F
(4) D
(5) None of these
32. Who among the following lives immediately above $G$ in the same flat number?
(1) A
(2) D
(3) H
(4) F
(5) None of these
33. Four of the following are alike in a certain way so form a group, which of the following does not belong to that group?
(1) B
(2) F
(3) K
(4) $\mathrm{G}:$ ATMNC
(5) J
34. Who among the following lives on $4^{\text {th }}$ floors Flat-1?
(1) C
(2) I
(3) J
(4) A
(5) None of these
35. I lives in which of the following flat number?
(1) Flat-1
(2) Flat-2
(3) Flat-3
(4) Either (2) or (3)
(5) Can't say

## TEST-III: QUNTITATIVE APTITUDE

Direction (Qs.1-5): What approximate value should come in place of the question mark (?) in the following equation (Note: You are not expected to calculate the exact value)?

1. $1.2345+12.345+123.45+1234.5+12345=$ ?
(1) 13525
(2) 14485
(3) 13715
(4) 14245
(5) 13955
2. $\frac{320.35 \times 469.765 \times 229.9112}{800.23}+\frac{\sqrt{2810} \times 95.87}{212}=$ ?
(1) 42350
(2) 43264
(3) 48654
(4) 52345
(5) 56456
3. $\sqrt{960.87} \times \sqrt{1850}+60.09 \%$ of $2535.112+831.94 \div 13-34^{2}=x$
(1) 1621
(2) 1501
(3) 1762
(4) 1273
(5) 1417
4. $\sqrt{x}+36.09 \%$ of $350-16.009 \times 22.897=-(14)^{2}$
(1) 406
(2) 806
(3) 1606
(4) 4006
(5) 2116
5. $\sqrt{x}+\sqrt[3]{126}=\frac{692}{23}+\frac{780}{28}+\frac{2040}{25}$
(1) 18225
(2) 15625
(3) 24650
(4) 16750
(5) 81520

Direction (Qs.6-10): Study the following information carefully and answer the questions.
The below graph shows the profit percent earned by two companies $A$ and $B$ over the given years

1. Profit $\%=\frac{\text { (Income }- \text { Expenditure) }}{\text { Expenditure }} \times 100$
$\square$ Company A $\square$ Company B

2. If the income of two companies A and B is 2006 were in the ratio $2: 5$ respectively. What is the respective ratio of their expenditure in 2006?
(1) $12: 29$
(2) $29: 13$
(3) $5: 2$
(4) $5: 7$
(5) None of these
3. If the expenditure of company A and B in 2008 were equal and the total income of two companies in 2008 was Rs. 630 Crore, then what was the total profit of the two companies together in 2008?
(1) Rs. 120 Cr
(2) Rs. 140 Cr
(3) Rs. 180 Cr
(4) Rs. 230 Cr
(5) None of these
4. If the income of two companies were equal in 2007, then what was the ratio of expenditure of company A to that of company B in 2007 ?
(1) $16: 17$
(2) $11: 6$
(3) $15: 16$
(4) $6: 13$
(5) None of these
5. If the expenditure of company B in 2006 was Rs. 170 Crore, then what was its income in 2006?
(1) Rs. 240 Cr
(2) Rs. 255 Cr
(3) Rs. 295 Cr
(4) Rs. 250 Cr
(5) None of these
6. The expenditure of company $A$ in the year 2009 was Rs. 140 Crore and the income of company A in 2009 was the same as its expenditure in 2005. What was the income of company A in 2005?
(1) Rs. 200 Crore
(2) Rs.264.6 Crore
(3) Rs.273.9 Crore
(4) Rs. 290 Crore
(5) None of these

Direction (Qs.11-15): In each of the following questions, one number is missing in the series. You have to understand the pattern of the series and then find, what should come in place of the question mark (?) in the number series?
11. $1724 \quad 1326 \quad 994 \quad 722 \quad 504$ ?
(1) 346
(2) 348
(3) 352
(4) 334
(5) 337
12. $2 \begin{array}{lllllll}13 & 64 & 257 & 770 & ? & 1540\end{array}$
(1) 1541
(2) 1342
(3) 1145
(4) 1256
(5) 1538
13. $20 \quad 74 \quad 112 \quad 136 \quad 148 \quad ?$
(1) 150
(2) 156
(3) 162
(4) 168
(5) 164
14. $25 \quad$ ? $174304 \quad 471 \quad 675$
(1) 125
(2) 101
(3) 65
(4) 76
(5) 81
15. $12 \begin{array}{llllll} & 19 & 29 & 46 & 72\end{array}$
(1) 16
(2) 13
(3) 14
(4) 17
(5) 15

Direction (Qs.16-20): In the following questions two equations numbered I and II are given. You have to solve both the equations and choose the correct option.
16. I. $x^{2}-20 \sqrt{7} x+525=0$
II. $y^{2}-8 \sqrt{11} y-1155=0$
(1) $x>y$
(2) $x<y$
(3) $x \geq y$
(4) $x \leq y$
(5) $x=y$ or no relation can be established
17. I. $17 x^{2}+48 x=9$
II. $13 y^{2}=32 y-12$
(1) $x<y$
(2) $x>y$
(3) $x \leq y$
(4) $x \geq y$
(5) $x=y$ or no relation can be established
18. I. $5 x^{2}+15 x+\frac{50}{4}=\frac{5}{4}$
II. $12 y^{2}+18 y-0$
(1) $x>y$
(2) $x \geq y$
(3) $y>x$
(4) $y \geq x$
(5) $x=y$ or the relationship cannot be established
19. I. $x^{2}+35 x+294=0$
II. $y^{2}+23 y+132=0$
(1) $x>y$
(2) $x<y$
(3) $x \geq y$
(4) $x \leq y$
(5) $x=y$ or no relation can be established
20. I. $2 x^{2}-(14+3 \sqrt{7}) x+21 \sqrt{7}=0$
II. $3 y^{2}+(9 \sqrt{7}-2 \sqrt{11}) y-6 \sqrt{77}=0$
(1) $x>y$
(2) $x<y$
(3) $x \geq y$
(4) $x \leq y$
(5) $x=y$ or no relation can be established

Direction (Qs.21-25): Study the following information carefully and answer the questions given below.

The given table shows the number of students in four different colleges in four different
departments.

| College | CSE | EEE | ECE | ME | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | -- | 440 | -- | 680 | -- |
| B | 580 | - | 280 | -- | 1700 |
| C | -- | 540 | 440 | - | 2000 |
| D | 360 | 560 | -- | 460 | -- |
| Total | 2000 | -- | -- | 2000 | -- |

21. Total number of EEE students from all the colleges together is 1900, then what is the number of ME students from $B$ ?
(1) 420
(2) 460
(3) 440
(4) 480
(5) None of these
22. If the ratio of the number of ME students from $B$ to $C$ is $24: 19$, what is the number of CSE students from C ?
(1) 580
(2) 600
(3) 620
(4) 660
(5) None of these
23. If the total number of students from $A$ is equal to the total number of ME students from all the colleges together. The number of ECE students from $C$ is approximately, what percent of the total number of students from A all the departments together?
(1) $18 \%$
(2) $20 \%$
(3) $22 \%$
(4) $24 \%$
(5) None of these
24. If the average number of ECE students from all the colleges together is 430 and the number of ECE students from D is equal to the number of ME students from A . What is the ratio of the number of ECE students from A to the number of CSE students from $D$ ?
(1) $7: 8$
(2) $8: 9$
(3) $5: 6$
(4) $4: 3$
(5) None of these
25. What is the difference between the number of EEE and ME students from $B$ together and the number of CSE and ME students from C together?
(1) 180
(2) 200
(3) 220
(4) 140
(5) 160
26. Sum of amount invested by $A$ and $B$ is Rs.30000. A invested $20 \%$ more than $C$ who invested Rs. 15000 and joined A and B after 6 months. After 12 months from the beginning of partnership, B left. If the total profit earned by A, B and C is Rs.9400, what is the average share of A and C in the profit after 2 year?
(1) Rs. 3250
(2) Rs. 3900
(3) Rs. 2250
(4) Rs. 3500
(5) Rs. 2645
27. If speed of a car increased by $10 \mathrm{~km} / \mathrm{hr}$, then time taken by it to cover the same distance decreases by $20 \%$. If speed is decreased by $10 \mathrm{~km} / \mathrm{hr}$, then what will be the percentage increase in time to cover same distance?
(1) $20 \%$
(2) $33.33 \%$
(3) $20.33 \%$
(4) $66.66 \%$
(5) Other than above
28. In an election between three candidates $\mathrm{A}, \mathrm{B}$ and $\mathrm{C}, 8 \%$ of total voters didn't cast their votes. Candidate A received $45 \%$ votes out of total votes and candidate B received $20 \%$ votes out of total casted votes. If candidate A is declared winner and received 2460 votes more than C , then what is the total number of votes received by candidate B ?
(1) 2240
(2) 2460
(3) 2820
(4) 2760
(5) None of these
29. Profit earned on selling an item after giving $25 \%$ discount on its marked price is Rs. 60 and cost price of the item is $60 \%$ of its marked price. What is the marked price of item?
(1) Rs. 445
(2) Rs. 400
(3) Rs. 500
(4) Rs. 295
(5) Rs. 356
30. Two different amounts of money are invested at the same rate of simple interest for time periods in the ratio $3: 4$, so that the interest earned is in the ratio $4: 5$. What is the ratio of principles deposited?
(1) $16: 9$
(2) $25: 16$
(3) $5: 3$
(4) $16: 15$
(5) $36: 25$

Direction (Qs.31-35): Study the following information carefully and answer the related questions.

Monthly income of three employees $A, B$ and $C$ are in the ratio 10:9:8 respectively. E's monthly income is $20 \%$ more than D's monthly income and A's monthly income is $5 / 6$ th of E's monthly income. The sum of monthly income of A, B, C, D and E is Rs. 98000 . A spends $60 \%$ of his income and B spends Rs. 2000 less than A. C spends $50 \%$ of his monthly income which is Rs. 500 less than expenditure of $D$. The ratio of expenditure of $C$ and $E$ are $4: 7$ respectively.
31. Monthly expenditure of $B$ is how much greater/less than expenditure of $D$ ?
(1) Rs. 1250
(2) Rs. 1300
(3) Rs. 1500
(4) Rs. 2100
(5) None of these
32. Find the sum of savings of $\mathrm{A}, \mathrm{B}$ and E together?
(1) Rs. 20000
(2) Rs. 26000
(3) Rs. 29500
(4) Rs. 30000
(5) None of these
33. If savings of $B, C$ and $D$ is increased by $10 \%, 20 \%$ and $25 \%$ respectively, then find the sum of new income of $B, C$ and $D$ for same expenditure.
(1) Rs. 59275
(2) Rs. 61350
(3) Rs. 62250
(4) Rs. 53565
(5) Rs. 55000
34. If income of A and B are decreased by $20 \%$, and both save $40 \%$ of their income, what will be their total expenditure?
(1) Rs. 15674
(2) Rs. 16450
(3) Rs. 17855
(4) Rs. 18240
(5) None of these
35. What is the ratio of savings of $B$ and expenditure of $C$ ?
(1) $1: 2$
(2) $2: 3$
(3) $1: 1$
(4) $3: 2$
(5) $4: 5$

## ANSWERS

## TEST-I: ENGLISH LANGUAGE

## 1. Ans (2): To avoid being a burden an individual tries to avoid any help

Referring to the lines of the first passage, it is clear that option (2) holds true. This can be inferred from the lines "Life has shown me that you don't see how reliant you are on being 'strong' until you acknowledge your discomfort in situations that call on you to express your need for support. Perhaps you keep a lot to yourself, not because you're deceptive, but to avoid being a 'burden'. Your discomfort may be disguised by thinking that you're just trying to figure things out on your own."
2. Ans (3): Depending on the help of others only at times of utmost emergency instead of it being something commonly used
Referring to the passage, it is clear that option (3) holds true which can be inferred from the overall passage where the author always enforces to take help from the people around them. This can be inferred from the passage, 'Of course, if you only depend on others when you're at the equivalent of sirens blaring, support becomes something you utilize when you're in dire straits instead of part of the fabric of your life. This is destructive, not just to your sense of self, but also to your relationships.'
3. Ans (3): It is due to the negative perceptions attached to what help means, picked up by humans during the early years of development
Referring to the lines of the second passage, it is clear that option (3) holds true. This can be inferred from the passage, "Our approach to these, including whether we allow ourselves to receive or we focus on always being The Giver, tend to be driven by the past. If we struggle to admit that we need support, it's generally because of earlier life experiences and messages that we've picked up about what these mean. On some level, asking is deemed as threatening to our wellbeing or something that will lead to disappointment".
4. Ans (2): 'Give and take' not only makes us a better human but also strengthens the relationship
Don't ask, don't get. We don't always have to be the strong one -asking for help when it's needed builds intimacy and strengthens every relationship Asking for help and support doesn't make us weak; it makes us human. Always being the giver, or seeing people as a means to an end, or feeling as if we have to earn support first, or pay it back, is a block to intimacy.
5. Ans (3): Whatever humans do is all about meeting the personal needs

While going through the sentences of the whole passage, it is clear that only option (3) seems to be correct. Apart from that no other answer choice is in line with the passage.
6. Ans (1): Though

Albeit means -Though. Oblivious-not aware of or concerned about what is happening around one. Placid-not easily upset or excited.
7. Ans (2): Camouflage

Disguise means -give (someone or oneself) a different appearance in order to conceal one's identity which means the same as 'Camouflage'. Agonizing-causing great physical or mental pain. Provincial means -'of or concerning a province of a country or empire'.
8. Ans (3): Alienation

Intimacy - Close familiarity or friendship.
9. Ans (4): E
10. Ans (5): F
11. Ans (2): B
12. Ans (1): $A$
13. Ans (3): $C$
14. Ans (3): $C$
15. Ans (5): All are correct
16. Ans (1): A
17. Ans (4): D
18. Ans (4): D
19. Ans (3): (B)-(F) and (C)-(D)

Out of all the given options, combinations of sentences (B) and (F) together as well as combination of sentences (C) and (D) together makes a grammatically and contextually sentence.
20. Ans (5): None of these

Out of all the given options, combination of sentences $(A)$ and (D) together, combination of sentences (B) and (F) together and combination of sentences (C) and (E) together make grammatically and contextually correct sentences. Hence, option (5) is the correct answer.
21. Ans (2): (B)-(E) and (C)-(F)

Out of all the given options, combination of sentences $(B)$ and (E) together as well as combination of sentences (C) and (F) together makes a grammatically and contextually correct sentence.
22. Ans (4): (A)-(D) and (C)-(E)

Out of all the given options, combination of sentences $(A)$ and (D) together as well as combination of sentences (C) and (E) together makes a grammatically and contextually correct sentence. In part (B), usage of the plural noun 'teams' after the article 'a' is incorrect.
23. Ans (4): (A)-(D) and (B)-(E)

Out of all the given options, combination of sentences (A) and (D) together as well as combination of sentences (B) and (E) together makes a grammatically and contextually correct sentence while (C) and (F) fail to form a grammatically correct sentence (the adverb 'freely' should be used to qualify the adjective 'available') Hence, option (4) is the correct answer.
24. Ans (2): ABDC
25. Ans (2): ACDB
26. Ans (1): DCBA
27. Ans (3): DBAC
28. Ans (4): BACD
29. Ans (4): Both (B) \& (C)
30. Ans (1): Only (A)

## For (Qs.1-3):



1. Ans (4): 11 km , South-East

Total distance covered to reach at point $\mathrm{P}=3+4+4=11 \mathrm{~km}$ Point $P$ is in South East direct from my house.
2. Ans (1): $\mathbf{1 5} \mathrm{km}$

Shortest distance between my house to sister's initial position $=\sqrt{9^{2}+12^{2}}=\sqrt{81+144}=\sqrt{225}=15 \mathrm{~km}$
3. Ans (5): 7 km

Distance between P and $\mathrm{O}=4+3=7 \mathrm{~km}$
4. Ans (1): Only conclusion I follows


Conclusions: I. Some purse can be boxes ( $\checkmark$ )
II. No bag is a purse ( x )
5. Ans (2): Only conclusion II follows


Conclusions: I. Some beds are irons ( x )
II. Some woods can be steels $(\checkmark)$
6. Ans (1): Only conclusion I follows


Conclusions: I. Few news can be true ( $\checkmark$ )
II. Some media are true ( x )
7. Ans (4): Only I and III follow

Statements: $\mathrm{K}<\mathrm{P} \geq \mathrm{S}=\mathrm{T}>\mathrm{J}>\mathrm{L} \geq \mathrm{B}$

$$
\mathrm{N}=\mathrm{P} \geq \mathrm{V}<\mathrm{A} \geq \mathrm{R}
$$

Conclusions: $\quad$ I. $\mathrm{B}<\mathrm{N}(\checkmark) \Rightarrow \mathrm{N}=\mathrm{P} \geq \mathrm{S}=\mathrm{T}>\mathrm{J}>\mathrm{L} \geq \mathrm{B}$
II. $\mathrm{K}<\mathrm{A}(\mathrm{x}) \Rightarrow \mathrm{K}<\mathrm{P} \geq \mathrm{V}<\mathrm{A}$
III. $\mathrm{P}>\mathrm{B}(\checkmark) \Rightarrow \mathrm{P} \geq \mathrm{S}=\mathrm{T}>\mathrm{J}>\mathrm{L} \geq \mathrm{B}$
8. Ans (4): Only III follows


Conclusions: $\quad$ I. $S>D(x) \Rightarrow S>R=K=G<D$
II. $\mathrm{H} \geq \mathrm{P}(\mathrm{x}) \Rightarrow \mathrm{P}=\mathrm{S}>\mathrm{R}=\mathrm{K}=\mathrm{G}<\mathrm{D}=\mathrm{H}$
III. $\mathrm{R}<\mathrm{H}(\checkmark) \Rightarrow \mathrm{R}=\mathrm{K}=\mathrm{G}<\mathrm{D}=\mathrm{H}$
9. Ans (3): Only I follows

Statements: $\mathrm{M} \geq \mathrm{J}=\mathrm{R} \leq \mathrm{L}=\mathrm{S} \geq \mathrm{N}$

$$
\mathrm{Y} \geq \mathrm{T} \leq \mathrm{L} \leq \mathrm{W}<\mathrm{A}
$$

Conclusions:

$$
\text { I. } \mathrm{J}<\mathrm{A}(\checkmark) \Rightarrow \mathrm{J}=\mathrm{R} \leq \mathrm{L} \leq \mathrm{W}<\mathrm{A}
$$

$$
\text { II. } \mathrm{Y} \geq \mathrm{N}(x) \Rightarrow \mathrm{Y} \geq \mathrm{T} \leq \mathrm{L}=\mathrm{S} \geq \mathrm{N}
$$

$$
\text { III. } M \geq Y(x) \Rightarrow M \geq J=R \leq L \geq T \leq Y
$$

10. Ans (3): 4


There are four such pairs: $(P \rightarrow S),(E \rightarrow L),(A \rightarrow B),(R \leftarrow N)$
Note: (This $\rightarrow$ indicates forward direction) and (This $\leftarrow$ indicates backward direction)
For (Qs.11-15):

11. Ans (3): R

R likes Red Colour.
12. Ans (1): $P$
$P$ is from Japan.
13. Ans (5): The one who likes Yellow
14. Ans (3): Brown

U likes brown colour.
15. Ans (5): $Q$

Q sits third to the left of V .
For (Qs.16-20):

16. Ans (3): $G$

G sits fourth to the right of A .
17. Ans (3): C

C sits fourth to the left of Q .
18. Ans (3): 9

Nine seats are there between $K$ and $L$.
19. Ans (4): 23

23 seats are in the line.

## 20. Ans (5): None of these

No one sits immediate right of ENTAN SCHOOL OF BANINTIC
For (Qs.21-25):

| Day | Person | Subject |
| :---: | :---: | :---: |
| Monday | C | Chemistry |
| Tuesday | E | Zoology |
| Wednesday | A | Physics |
| Thursday | G | Maths |
| Friday | F | Economics |
| Saturday | B | Botany |
| Sunday | D | Computer |

21. Ans (2): Maths
22. Ans (3): Three
23. Ans (1): Maths
24. Ans (4): B
25. Ans (5): G attends the exam on Thursday

For (Qs.26-30):

| Year | Age | Person |
| :---: | :---: | :---: |
| 1947 | 73 | S |
| 1953 | 67 | W |
| 1958 | 62 | Z |
| 1967 | 53 | Y |
| 1974 | 46 | U |
| 1983 | 37 | V |
| 1994 | 26 | T |
| 2003 | 17 | X |

26. Ans (1): 67

The age of $W$ is 67
27. Ans (3): Three

Three persons are younger than $U$
28. Ans (5): S
$S$ is the oldest person
29. Ans (2): 1974

U was born in 1974
30. Ans (2): 62 year
$\frac{\text { Ans (2): } 62 \text { year }}{\text { The age of } \mathrm{Z} \text { is } 62 \text { year }} 5$
For (Qs.31-35):

| Floors | Flat-1 | Flat-2 | Flat-3 |
| :---: | :---: | :---: | :---: |
| 4 | J | C | E |
| 3 | F | I | A |
| 2 | B | G | L |
| 1 | K | D | H |

31. Ans (4): D
32. Ans (5): None of these
33. Ans (4): G
34. Ans (3): J
35. Ans (2): Flat-2

## TEST-III: QUNTITATIVE APTITUDE

1. Ans (3): $\mathbf{1 3 7 1 5}$
? $=1+12+123+1234+12345 \Rightarrow$ ? $=13715$
2. Ans (2): $\mathbf{4 3 2 6 4}$
$\frac{320 \times 470 \times 230}{800}+\frac{\sqrt{2809} \times 96}{212}$
$40 \times 47 \times 23+\frac{53 \times 96}{212} \Rightarrow 43240+24=43264$
3. Ans (3): $\mathbf{1 7 6 2}$
$\sqrt{961} \times \sqrt{1849}+60 \%$ of $2535+832 \div 13-34^{2}=x$
$\Rightarrow x=31 \times 43+1521+64-1156 \Rightarrow x=1333+429=1762$
4. Ans (5): 2116
$\sqrt{x}=-196+368-126 \Rightarrow \sqrt{x}=46 \Rightarrow x=2116$
5. Ans (1): 18225
$\sqrt{x}+5=30+28+82 \Rightarrow \sqrt{x}=140-5=135 \Rightarrow x=135^{2}=18225$
6. Ans (1): 12:29
$\frac{\left(145 \% \text { of } \mathrm{E}_{1}\right)}{\left(150 \% \text { of } \mathrm{E}_{2}\right)}=\frac{2}{5} \Rightarrow \frac{\mathrm{E}_{1}}{\mathrm{E}_{2}}=\frac{12}{29}=12: 29$
7. Ans (4): Rs. 230 Crore

Let the expenditure of A and B in 2008 be 100 Crore
Total Income $=100+55+100+60=315$
Required profit $=\frac{630}{315} \times(60+55)=230$ Crore
8. Ans (3): $15: 16$

Expenditures denoted by A and B.
Let $160 \% \mathrm{~A}=150 \%$ B be the incomes in 2007.
A = Expenditure of company A in 2007, B = Expenditure of company B in 2007
$\frac{\mathrm{A}}{\mathrm{B}}=\frac{150}{160}=15: 16$
9. Ans (2): Rs. 255 Crore

Income $=100+50=150$
$\therefore$ Income $=\frac{150}{100} \times 170=$ Rs. 255 crore
10. Ans (2): Rs.264.6 Crore

Expenditure of company A in $2009=$ Rs. 140 Crore
Income of company A in $2009=140+40 \%$ of $140=$ Rs. 196 Crore
Expenditure of company A in $2005=$ Rs. 196 Crore
Required income of company A in $2005=196+35 \%$ of $196=$ Rs. 264.6 Crore
11. Ans (4): 334

12. Ans (1): 1541

13. Ans (1): 150

14. Ans (5): 81

15. Ans (3): 14

16. Ans (5): $x=y$ or no relation can be established
I. $\mathrm{SR}=20 \sqrt{7}, \mathrm{PR}=525 \Rightarrow x=15 \sqrt{7}, 5 \sqrt{7}=39.67,13.225$
II. $\mathrm{SR}=8 \sqrt{11}, \mathrm{PR}=-1155 \Rightarrow y=15 \sqrt{11},-7 \sqrt{11}=49.74,-23.212$
17. Ans (1): $x<y$
I. $\mathrm{SR}=-48, \mathrm{PR}=-153 \Rightarrow x=\frac{-51}{17}, \frac{3}{17}=-3, \frac{3}{17}$
II. $\mathrm{SR}=32, \mathrm{PR}=156 \Rightarrow y=\frac{26}{13}, \frac{6}{13}=2, \frac{6}{13}$
18. Ans (4): $y \geq x$
I. $\mathrm{SR}=-12, \mathrm{PR}=36 \Rightarrow x=\frac{-6}{4}, \frac{-6}{4} \Rightarrow x=-1.5,-1.5$
II. $6 y(2 y+3)=0 \Rightarrow y=0, y=-1.5$
19. Ans (2): $x<y$
I. $\mathrm{SR}=-35, \mathrm{PR}=294 \Rightarrow x=-21,-14$;
II. SR $=-23, \mathrm{PR}=132 \Rightarrow y=-11,-12$
20. Ans (1): $x>y$
I. $\mathrm{SR}=14+3 \sqrt{7}, \mathrm{PR}=42 \sqrt{7} \Rightarrow x=\frac{14}{2}, \frac{3 \sqrt{7}}{2}=7,3.97$
I. $\mathrm{SR}=-9 \sqrt{7}+2 \sqrt{11}, \mathrm{PR}=-18 \sqrt{77} \Rightarrow y=\frac{-9 \sqrt{7}}{3}, \frac{2 \sqrt{11}}{3}=-4.935,2.21$

For (Qs.21-25):

| College | CSE | EEE | ECE | ME | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | -- | 440 | -- | 680 | -- |
| B | 580 | -- | 280 | -- | 1700 |
| C | -- | 540 | 440 | $--(380)$ | 2000 |
| D | 360 | 560 | -- | 460 | -- |
| Total | 2000 | -- | -- | 2000 | -- |

21. Ans (4): 480

Number of EEE students from $B=1900-440-540-560=360$
Number of ME students from $B=1700-580-360-280=480$
22. Ans (5): None of these

Number of ME students from B $+C=2000-(680+460)=860$
Number of ME students from $C=19 / 43 \times 860=380$
Number of CSE students from $C=2000-(540+440+380)=640$
23. Ans (3): 22\%

Required percentage $=\frac{440}{2000} \times 100=22 \%$
24. Ans (2): $8: 9$

Total number of ECE students $=430 \times 4=1720$
Number of ECE students from $\mathrm{D}=680$
Number of ECE students from $A=1720-(280+440+680)=320$
$\therefore$ Required ratio $=320: 360=8: 9$
25. Ans (1): 180

Number of EEE and ME students from B $=1700-(580+280)=840$
Number of CSE and ME students from C $=2000-(540+440)=1020$
$\therefore$ Difference $=1020-840=180$
26. Ans (2): Rs. 3900

C's investment $=$ Rs. 15000
A's investment $=120 \%$ of $15000=$ Rs. 18000
$\mathrm{B}^{\prime}$ 's investment $=30000-18000=$ Rs. 12000
Profit ratio A : B : C $=18000 \times 24: 12000 \times 12: 15000 \times 18=24: 8: 15$
A's and C's total profit $=\frac{39}{47} \times 9400=39 \times 200$
$\therefore$ Average salary of A \& C $=\frac{39}{2} \times 200=$ Rs 3900
27. Ans (2): 33.33\%

Time ratio $=$ Actual $:$ New $=100: 80=5: 4$
$\therefore$ Speed ratio $=4: 5$
$\therefore$ Original speed $=4 \times 10=40 \mathrm{kmph}$
Now, new speed $=30 \mathrm{kmph}$
$\therefore$ Speed ratio $=$ Actual $:$ New $=4: 3$
Time ratio $=3: 4$
Percentage increase $=\frac{1}{3} \times 100=33.33 \%$
28. Ans (4): 2760

Total voters $=100$
Total casted votes $=92 \%$ of $100=92$
Total votes received by candidate $A=45 \%$ of $100=45$
Total votes received by candidate $\mathrm{B}=20 \%$ of $92=18.4$
Total votes received by candidate $C=92-(45+18.4)=28.6$
Since, A is declared winner by 2460 votes
$\therefore \mathrm{B}=\frac{18.4}{(45-28.6)} \times 2460=2760$
29. Ans (2): Rs. 400

Let the MP $=100$
$\mathrm{SP}=0.75 \times 100=75$
$\mathrm{CP}=60 \%$ of $\mathrm{MP}=60$
Profit $=75-60 \Rightarrow 60$

30. Ans (4): $16: 15$

Let the principles invested by Rs.' $x$ ' and Rs.' $y^{\prime}$ and the rate of interest be $\mathrm{r} \%$ per annum. Let the time period of investments be 3 t and 4 t years respectively.
Ratio of interest earned $=4: 5$

$$
\frac{(x \times \mathrm{r} \times 3 \mathrm{t})}{100} \div \frac{(y \times \mathrm{r} \times 4 \mathrm{t})}{100}=\frac{4}{5} \Rightarrow x: y=16: 15
$$

For (Qs.31-35):
Income ratio: A : B : C $=10: 9: 8$
$A=\frac{5}{6} E \Rightarrow 10=\frac{5}{6} \times E \Rightarrow \mathrm{E}=12$
$\mathrm{E}=\frac{120}{100} \times \mathrm{D} \Rightarrow 12=\frac{6}{5} \times \mathrm{D} \Rightarrow \mathrm{D}=10$
$\therefore \mathrm{A}: \mathrm{B}: \mathrm{C}: \mathrm{D}: \mathrm{E}=10: 9: 8: 10: 12$
Total $\rightarrow 49$
$\therefore$ Minimum ratio $=\frac{1}{49} \times 98000=$ Rs. 2000

## Expenditure:

$A=\frac{60}{100} \times 10 x \Rightarrow 6 x$
$B=6 x-2000$
$C=\frac{8}{2} x \Rightarrow 4 x$
$\mathrm{D}=4 x+500$
$\mathrm{E}=7 x$
31. Ans (3): Rs. 1500

B's expenditure $=6 \times 2000-2000=$ Rs. 10000
D's expenditure $=4 \times 2000+500=$ Rs. 8500
Required Difference $=10000-8500=$ Rs. 1500
32. Ans (2): Rs. 26000

Savings of $A=(10-6) \times 2000=$ Rs. 8000
Savings of $B=(9-5) \times 2000=$ Rs. 8000
Savings of $E=(12-7) \times 2000=$ Rs. 10000
Required Sum $=8000+8000+10000=$ Rs. 26000
33. Ans (1): Rs. 59275

Savings of $B=\left(\frac{110}{100}\right) \times 8000=$ Rs. 8800
Savings of $C=4 \times 2000 \times \frac{120}{100} \Rightarrow$ Rs. 9600
Savings of $D=[(10-4) \times 2000-500] \times \frac{125}{100}=11500 \times \frac{5}{4}=$ Rs. 14375
New income of B, C and D together $=(8800+10000)+(9600+8000)+(14375+8500)=$ Rs. 59275
34. Ans (4): Rs. 18240

New income of $\mathrm{A}=\left(\frac{80}{100}\right) \times 20000=16000$
New income of $B=\left(\frac{80}{100}\right) \times 18000=14400$
New expenditure of $A$ and $B=60 \%$ of $16000+60 \%$ of $14400=$ Rs. 18240
35. Ans (3): $\mathbf{1 : 1}$

Savings of $B=8000$
Expenditure of $\mathrm{C}=8000$
Ratio $=8000: 8000=1: 1$


# பயிற்சி எடுக்கத் தயங்குபவர்கள் வெற்றியை நோக்கி அடியெடுத்து வைக்கத் தயங்குபவர்கள். 

Those who are reluctant to train are those who are reluctant to step towards success

