SSC SELECTION POST
Model Set

NAME : .... ROLL NO : ....

TIME : 90 Minutes   FULL MARKS : 100

English Language

Direction : *Select the most appropriate meaning of the given idiom.*

1. put your best foot forward
   (1) walk very cautiously
   (2) check every step
   (3) take care to dress well
   (4) try as hard as one can

Direction : *Select the most appropriate word for the given group of words.*

2. The statistical study of the population
   (1) psychology
   (2) demography
   (3) anthropology
   (4) sociology

Direction : *Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order.*

3. A. Today, he is popular for creating scaled-down models of automobiles that are not just showpieces but are working toys.
   B. "I used to ride it during playtime in the evenings as a five-year old," recalls Arun Kumar.
   C. As a kid I used to pester my parents for toy cars but my carpenter father often couldn't afford them.
   D. Then, one day he got an old tricycle from the junkyard, made three wooden wheels and fitted them to the cycle.
   (1) CDBA
   (2) BCDA
   (3) CADB
   (4) ACDB

Direction : *Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select No improvement.*

4. If I does not pay my post-paid mobile bill by tomorrow I will probably have to pay a fine.
   (1) If I do not pay
   (2) No improvement
   (3) If I had not paid
   (4) If I has not paid

Directions (5–9) : *In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.*

The pattern of birds flocking to Pakhal lake has been observed over several years. So far, (5) _____ than 190 bird species (6) _____ been identified and this is one of the best (7) _____ in the state for bird-watchers to (8) _____ . In fact, we can spot (9) _____ 80 species of birds in a single day.

5. (1) many
   (2) more
   (3) much
   (4) most

6. (1) is
   (2) has
   (3) have
   (4) are

7. (1) lake
   (2) place
   (3) places
   (4) sanctuary

8. (1) visits
   (2) visited
   (3) visit
   (4) visiting

9. (1) any
   (2) around
   (3) near
   (4) between

Direction : *Select the correctly spelt word.*

10. (1) terbulence
    (2) turbulense
    (3) turbulance
    (4) turbulence

Direction : *Select the most appropriate synonym of the given word.*

11. RADIANCE
    (1) depth
    (2) redness
    (3) sparkle
    (4) dryness

Direction : *Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order.*

12. A. But now that his father had asked him to fetch some cheroots, he would have to pass by the high school to reach the shop.
    B. The teachers and students would all be there, and he was ashamed of being seen outdoors.
    C. Of late Krishna had confined himself to the four walls of the house.
    D. Wondering how to get past the school unnoticed, he slowly ventured out.
    (1) DACB
    (2) CBDA
    (3) ACBD
    (4) CABD

Direction : *Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order.*

13. A. As man's intelligence grew so did his power.
    B. This intelligence made him cleverer and stronger than enormous animals which would otherwise have destroyed him.
    C. The chief difference between man and the other animals was the intelligence of man.
    D. Combining intelligence with power, man developed weapons to fight his enemies.
    (1) CBAD
    (2) ACDB
    (3) DABC
    (4) BCDA

Direction : *Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select No improvement.*

14. If I have had money, I would have bought this car.
    (1) had
    (2) did have
    (3) had had
    (4) No improvement

Direction : *Select the most appropriate word to fill in the blank.*

15. The Board of Directors of the pharma company has approved the _____ of investment limits in its wholly-owned subsidiary.
    (1) enforcement
    (2) enhancement
    (3) entrenchment
    (4) enchantment

Direction : *Select the most appropriate word for the given group of words.*

16. A person who is skilled at writing beautifully
    (1) painter (2) cartoonist
    (3) artist (4) calligrapher

Direction : *Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select No improvement.*

17. Durga is now the Executive Vice-President of the company <u>with a responsibility to marketing</u> for the entire northern zone.
    (1) with the responsibility of marketing
    (2) with a responsibility by marketing
    (3) No improvement
    (4) with responsibility from marketing

Direction : *Select the correct indirect form of the given sentence.*

18. The doctor told his patient, "Continue the same course of medicines for the next week."
    (1) The doctor told his patient to continued the same course of medicines in the next week.
    (2) The doctor told his patient for continuing the same course of medicines for the next week.
    (3) The doctor told his patient that he may continue the same course of medicines in the following week.
    (4) The doctor told his patient to continue the same course of medicines for the following week.

Direction : *Select the most appropriate antonym of the given word.*

19. SHALLOW
    (1) slight (2) crooked
    (3) narrow (4) deep

Direction : *Select the most appropriate word for the given group of words.*

20. A person or thing that has the same name as another
    (1) pseudonym (2) namesake
    (3) relative (4) successor

Direction : *Select the most appropriate meaning of the given idiom.*

21. late in the day
    (1) too delayed to be of any use
    (2) too ripe to eat
    (3) too dark to see anything
    (4) too old to work

Direction : *Select the correct indirect form of the given sentence.*

22. "Don't park here," the policeman said to them.
    (1) Don't park here he said to the policeman.
    (2) The policeman ordered them not to park here.
    (3) The policeman said to them not to park here.
    (4) The policeman ordered them not to park there.

Direction : *Select the most appropriate antonym of the given word.*

23. CHRONIC
    (1) infrequent (2) regular
    (3) routine (4) continuing

Direction : *Identify the segment in the sentence which contains the grammatical error.*

24. I (1)/ came to school (2)/ at the same usual time. (3)/ No error (4)

Direction : *Select the most appropriate synonym of the given word.*

25. RECAPITULATION
    (1) prominence (2) summary
    (3) movement (4) readiness

General Awareness

1. In which state is the famous Tawang Monastery located?
   (1) Arunachal Pradesh (2) Jammu and Kashmir
   (3) Himachal Pradesh (4) Sikkim

2. A uniform civil code mentioned in the Directive Principles of State Policy ensure
   (1) economic equality
   (2) national security
   (3) national integration
   (4) support of weaker sections of society

3. Which bank in India has launched the first of its kind credit card made from recycled PVC plastic?
   (1) IndusInd Bank (2) HSBC
   (3) DCB (4) Canara Bank

4. Which one among the following tissues can be used for the extraction of fibres?
   (1) Xylem and phloem
   (2) Xylem, phloem and sclerenchyma
   (3) Xylem, parenchyma and phloem
   (4) Xylem, phloem, epidermis and sclerenchyma

5. During the Indian Freedom Struggle 'The Deccan Educational Society' was founded by –
   (1) Vishnushastri Chiplunkar
   (2) Dadabhai Naoroji
   (3) GK Gokhale
   (4) Keshab Chandra Sen

6. Cellular totipotency means
   (1) synthesis of new cells
   (2) formation of new species
   (3) formation of new plants
   (4) capability of a plant cell to form complete plant

7. The Victoria Falls in Africa is located on which river?
   (1) Zaire (2) Orange (3) Zambezi (4) Niger

8. A man inside an artificial satellite feels weightlessness because the force of attraction due to earth is :
   (1) zero
   (2) is balanced by the force of attraction due to moon
   (3) equal to centrifugal force
   (4) non-effective due to particular design of the satellite

9. Who presides over the house (Lok Sabha) in the absence of the Speaker or the Deputy Speaker?
   (1) President (2) Vice-President
   (3) Any of (1) or (2) (4) None of the above

10. What is the name of India's first biometric-based digital processing system in Airports?
    (1) Digi Yatra (2) Digi Boarding
    (3) Techno Boarding (4) Tech Yatra

11. Nirbhay is a
    (1) Subsonic Cruise missile
    (2) Supersonic Cruise missile
    (3) Anti Tank missile
    (4) Inter Continental Ballistic missile

12. The first Indian Hindi scholar of the Mughal period was
    (1) Malik Muhammad Jayasi
    (2) Amir Khusrau
    (3) Mulla Wajhi
    (4) Chand Bardai

13. 'Athlete's foot' is a disease caused by –
    (1) bacteria (2) fungus (3) protozoan (4) nematode

14. What is 'Agent Orange'?
    (1) An insecticide (2) A herbicide
    (3) A fertilizer (4) A biofertilizer

15. The belt extending from Amritsar Gurdaspur to Ludhiana is famous for
    (1) Silk industry (2) Jute industry
    (3) Woollen industry (4) Cotton textile industry

16. Which state tourism launched the 'STREET' project to promote and take tourism deep into the interiors and rural hinterland?
    (1) Tamil Nadu (2) Kerala
    (3) Rajasthan (4) Andhra Pradesh

17. The last Pallava ruler who was defeated by Aditya Chola was :
    (1) Dantivarman (2) Aparajita
    (3) Nrupatunga (4) Nandivarman III

18. Line spectrum contains information about
    (1) the atoms of the prism
    (2) the molecules of the source
    (3) both (1) and (2)
    (4) none of the above

19. Which one of the following states was the first to implement the Pradhan Mantri Adarsh Gram Yojana for the first time in India?
    (1) Uttar Pradesh (2) Rajasthan
    (3) Bihar (4) Odisha

20. Who is the first Indian footballer to receive prestigious Dhyan Chand Award for lifetime achievement in sports?
    (1) Sunil Chhetri (2) Bhaichung Bhutia
    (3) Shabbir Ali (4) PK Banerjee

21. Who has been awarded the Woman of the Year by World Athletics?
    (1) Dutee Chand (2) PT Usha
    (3) Hima Das (4) Anju Bobby George

22. Amorphous materials are in fact considered as
    (1) supercooled liquids (2) supercooled solids
    (3) covalent network (4) molecular crystals

23. The United Nations Environment Programme (UNEP) was launched in
    (1) 1972 at Nairobi (2) 1978 at Bali
    (3) 1993 at Copenhagen (4) 1997 at Stockholm

24. India participated in a joint military exercise EKUVERIN with which of the following countries?
    (1) The Maldives (2) England
    (3) New Zealand (4) Sri Lanka

25. Whose among the following birth anniversary has been observed as 'National Mathematics Day' in India?
    (1) Satyendra Nath Bose (2) PC Mahalanobis
   (3) Srinivasa Ramanujan (4) Chandrashekhar

Quantitative Aptitude

1. When simplified, the product
$$\left(2-\frac{1}{3}\right)\left(2-\frac{3}{5}\right)\left(2-\frac{5}{7}\right)\cdots\left(2-\frac{997}{999}\right)$$ is equal to
    (1) $\frac{5}{999}$ (2) $\frac{1001}{999}$
    (3) $\frac{1001}{3}$ (4) None of these

2. The difference between a 2-digit number and the number after interchanging the position of two digits is 36. What is the difference between the two digits of the number?
    (1) 4 (2) 6
    (3) 3 (4) None of these

3. The greatest number, which divides 2011 and 2623 leaving remainders 9 and 5 respectively is
    (1) 225 (2) 296 (3) 154 (4) 182

4. What will be the least number which when doubled will be exactly divisible by 12, 18, 21 and 30?
    (1) 196 (2) 630 (3) 1260 (4) 2520

5. In a certain office, $\frac{1}{3}$ workers are women, $\frac{1}{2}$ of the women are married and $\frac{1}{3}$ of the married women have children. If $\frac{3}{4}$ of the men are married and $\frac{2}{3}$ of the married men have children, what part of workers are without children?
    (1) $\frac{5}{18}$ (2) $\frac{4}{9}$ (3) $\frac{11}{18}$ (4) $\frac{17}{36}$

6. $\left(999\frac{1}{7}+999\frac{2}{7}+999\frac{3}{7}+999\frac{4}{7}+999\frac{5}{7}+999\frac{6}{7}\right)$ is simplified to
    (1) 2997 (2) 5979 (3) 5994 (4) 5997

7. Standard gold contains 22 parts of pure gold to 2 parts of alloy. The percentags of alloy in a sovereign which is made of standard gold is :
    (1) 11% (2) 12% (3) $8\frac{1}{3}\%$ (4) $11\frac{1}{3}\%$

8. 300 grams of sugar solution has 40% sugar in it. How much sugar should be added to make it 50% in the solution?
    (1) 10 gm (2) 40 gm (3) 60 gm (4) 80 gm

9. When any number is divided by 12, then dividend becomes $\frac{1}{4}$th of the other number. By how much percent first number is greater than the second number?
   (1) 150 (2) 200
   (3) 300 (4) Data inadequate

10. The average of 50 numbers is 38. If two numbers, namely 45 and 55 are discarded, the average of the remaining numbers is
    (1) 36.5 (2) 37 (3) 37.52 (4) 37.5

11. A cricketer has a certain average of 10 innings. In the eleventh innings, he scored 108 runs, thereby increasing his average by 6 runs. His new average is
    (1) 48 runs (2) 52 runs (3) 55 runs (4) 60 runs

12. Ratio of earnings of A and B is 8 : 9 respectively. If the earnings of A increase by 50% and the earnings of B decrease by 25%, the new ratio of their earnings becomes 16 : 9 respectively. What are A's earnings?
    (1) 37,000 (2) 28,500
    (3) 22,000 (4) Can not be determined

13. Pankaj bought a bag with 20% discount on the original price. He got a profit of ₹ 50, by selling it at a price 150% of the price at which he bought. The original price of the bag is
    (1) ₹ 125 (2) ₹ 150 (3) ₹ 175 (4) ₹ 200

14. A shopkeeper sells 25 articles at ₹ 45 per article after giving 10% discount and earns 50% profit. If the discount is not given, the profit gained is
    (1) 60% (2) $60\frac{2}{3}\%$ (3) 66% (4) $66\frac{2}{3}\%$

15. How long will it take a sum of money invested at 5% p.a. S.I. to increase its value by 40%?
    (1) 5 years (2) 6 years (3) 7 years (4) 8 years

16. A sum of ₹ 5150 was borrowed at 6% compound interest and was paid back in two equal yearly instalments. The amount of each instalment is
    (1) ₹ 2329 (2) ₹ 2565 (3) ₹ 2755 (4) ₹ 2809

17. A man, a woman and a boy can complete a job in 3, 4 and 12 days respectively. How many boys must assist 1 man and 1 woman to complete the job in one-fourth of a day?
    (1) 14 (2) 41 (3) 19 (4) 49

18. If $\sin\beta = A$ and $\tan\beta = B$, then the value of $\frac{1}{A^2} - \frac{1}{B^2}$ is
    (1) 0 (2) 1 (3) –1 (4) 2

19. The value of $\sin\theta\cos\theta(\tan\theta + \cot\theta)$ is
    (1) 0 (2) 1
    (3) $\cot\theta$ (4) $\sin\theta + \cos\theta$

20. The area of the incircle of an equilateral triangle of side 42 cm is
    (1) 231 cm² (2) 924 cm² (3) 223 cm² (4) 462 cm²

**Directions (21-23) :** *Study the graph to answer the questions.*

Number of people contributing towards helping tsunami victims from different cities.
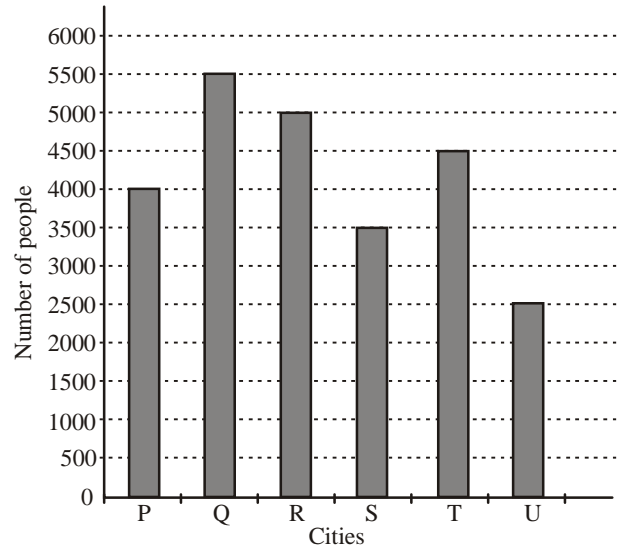
21. How many more people from city S would have made the ratio 11 : 9 of the number of people contributing from city S to that from city T?
    (1) 1500 (2) 2000 (3) 5500 (4) 3500

22. The number of people contributing from cities Q and U together is what percent of the total number of people contributing from all the given cities?
    (1) 30 (2) 36 (3) 32 (4) 38

23. The number of people contributing from how many cities is less than 18% of the total number of people contributing from all cities together?
    (1) 3 (2) 4 (3) 2 (4) 1

24. An equilateral Δ TQR is drawn inside a square PQRS. The value of ∠PTS is
    (1) 75° (2) 90° (3) 120° (4) 150°

25. In Δ ABC, the angle bisector of ∠A cuts BC at E. Find the length of AC, if lengths of AB, BE and EC are 9 cm, 3.6 cm and 2.4 cm?
    (1) 5.4 cm (2) 8 cm (3) 4.8 cm (4) 6 cm

General Intelligence

1. ASPERSION is coded as ONSIRPEAS in the same way CLOUD will be coded as –
   (1) UDOLC
   (2) UDOCL
   (3) LCODU
   (4) DUOLL

2. Two different positions of the same dice are shown. Which number will be at the top if 3 is at bottom?

   (1) 4
   (2) 6
   (3) 2
   (4) 2/4
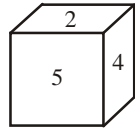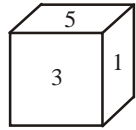
3. Change symbol and solve accordingly to find correct answer from the alternatives given below :
   $9 \times 8 \times 7 = 24$, $4 \times 7 \times 3 = 14$, $2 \times 1 \times 9 = ?$
   (1) 10
   (2) 18
   (3) 11
   (4) 12

4. Select the related word from the given alternatives.
   Giant : Dwarf : : Genius : ?
   (1) Gentle
   (2) Tiny
   (3) Wicked
   (4) Idiot

5. In the given diagram, rectangle represents players, square represents cricketers, triangle represents teachers and circle represents dancers, then which number represents the players, cricketers, teachers and dancers?

   (1) 2
   (2) 5
   (3) 6
   (4) 3
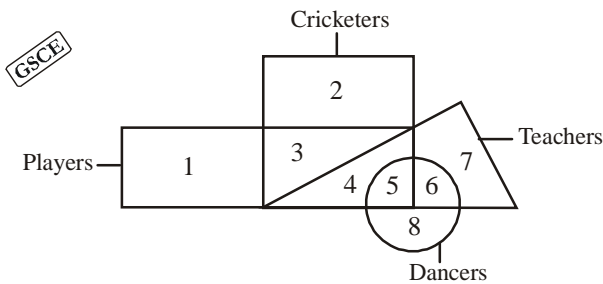
6. Raj travelled from a point X straight towards east to Y a distance of 80 meters. He turned right and walked 50 meters, then again turned right and walked 70 meters. Finally, he turned right and walked 50 meters. How far is he from the starting point?
   (1) 10 meters
   (2) 20 meters
   (3) 50 meters
   (4) 70 meters

7. In the following question, arrange the following words as per order in the dictionary.
   a. Electrolysis
   b. Electrotyping
   c. Electrician
   d. Electroplating
   e. Electrification
   (1) c, e, d, a, b
   (2) e, c, b, d, a
   (3) c, e, a, d, b
   (4) e, c, a, d, b

8. How many letters in the word 'PERSONIFICATION' occupy the same position in the word as they do in the English alphabet?
   (1) 3
   (2) 1
   (3) 4
   (4) 0

9. The statements below are followed by two conclusions labelled I and II. Without resolving anything yourself, choose the conclusion(s) that logically follow(s) from the given statements.
   Statements :
   Irregularity is a cause for punishment in jobs.
   Some irregular employees were fired from jobs.
   Conclusions :
   I. All fired employees are regular.
   II. Those employees who have not been punished are regular.
   (1) Neither conclusion I nor conclusion II follows.
   (2) Only conclusion II follows.
   (3) Both the conclusions follow.
   (4) Only conclusion I follows.

10. Study the given pattern carefully and select the number that can replace the question mark (?) in it

50	48	30
56	32	40
350	192	?

    (1) 150
    (2) 145
    (3) 140
    (4) 180

11. Select the number that can replace the question mark (?)
    C10G, H20L, L17E, L?Q
    (1) 19
    (2) 29
    (3) 27
    (4) 30

12. Select the option that is related to the third number in the same way as the second number is related to the first number.
    3 : 30 : : 4 : ?
    (1) 64
    (2) 66
    (3) 68
    (4) 70

13. Below are given statements followed by some conclusions. You have to take the given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follow(s) from the given statements.
    Statements :
    I. All egg are hens
    II. All hens are birds
    III. All birds are crows
    Conclusions :
    I. All egg are crows
    II. All hens are crows
    III. Some crows are birds
    (1) All conclusions follow
    (2) Only I and II follow
    (3) Only III follows
    (4) Only I follows

14. Select the combination of letters that when sequentially placed in the gaps of the given letter series will complete the series.
    kb_fg_k_df_tkbd_gtkbdf_t
    (1) d, t, g, f, b, g
    (2) d, t, b, g, f, g
    (3) t, d, b, g, f, g
    (4) t, d, g, b, g, f

15. Select the set in which the numbers are related in the same way as are the numbers of the following set.
    (7, 4, 65)
    (1) (5, 4, 40)
    (2) (7, 6, 72)
    (3) (11, 8, 99)
    (4) (9, 8, 145)

(5)

16. Mohan, Ritika, Janvi, Priya and Riya are friends. Janvi runs faster than Ritika but slower than Priya. Mohan is the slowest runner and Riya runs faster than Priya. Who runs the fastest among the five?

    (1) Priya   (2) Riya   (3) Ritika   (4) Mohan

17. Three of the following four letter-clusters are alike in a certain way and one is different. Select the odd one out

    (1) PAST   (2) ZOOM   (3) BIRD   (4) DECK

18. A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series.

    2, 10, 30, 68, ?

    (1) 130   (2) 135   (3) 140   (4) 120

19. Select the odd word from the given alternatives.

    (1) America   (2) India   (3) Bangladesh   (4) Pakistan

20. Akram is the son of Shahid. Shahid's sister, Julie has a son Zeeshan and a daughter Yana. Zeba is the sister of Zeeshan's mother. How is Yana related to Zeba?

    (1) Mother   (2) Granddaughter
    (3) Sister   (4) Niece

21. The question consists of four Problem Figures marked A, B, C and D and four Answer Figures marked 1, 2, 3 and 4. Select a figure from amongst the Answer Figures which will continue the series established by the four Problem Figures.

    Problem Figures :

    A   B   C   D

    Answer Figures :

    (1)   (2)   (3)   (4)

22. If 'A+B' means 'A is the son of B', 'A–B' means 'A is the daughter of B', 'A&B' means 'A is the father of B' and 'A@B' means 'A is the mother of B', then what does P+R&Q–S mean?

    (1) R is the daughter of Q   (2) P is the sister of Q
    (3) S is the brother of Q   (4) S is the mother of P

23. In a certain code, FISH is written as 2118819. How will POND be written as in that code?

    (1) 11121323   (2) 12213234
    (3) 1615144   (4) 1616164

24. Select the option that is related to the third letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster.

    FRAME : CUWQZ : : RICOH : _____ .

    (1) OLXSC   (2) OKXRC   (3) OLYSC   (4) OKYRC

25. Select the correct mirror image of the given combination when the mirror is placed to the right side of it.

    TECHNICALPOWER
    (1) ꓶECHИIC∀ГᎮOᴡEꓤ
    (2) ꓶECHИ∀CIГᎮOᴡEꓤ
    (3) ꓤEᴡOᎮГ∀CIИHCEꓶ
    (4) ꓤEᴡOᎮГ∀CIИHCEꓶ

English Language

1. (4)	2. (2)	3. (1)	4. (1)	5. (2)
6. (3)	7. (3)	8. (3)	9. (2)	10. (4)
11. (3)	12. (4)	13. (1)	14. (1)	15. (2)
16. (4)	17. (1)	18. (4)	19. (4)	20. (2)
21. (1)	22. (4)	23. (1)		

24. (3) Remove 'same' as the use is superfluous.

25. (2)

General Awareness

1. (1)	2. (3)	3. (2)	4. (4)	5. (1)
6. (4)	7. (3)	8. (1)	9. (4)	10. (1)
11. (1)	12. (1)	13. (2)	14. (2)	15. (3)
16. (2)	17. (2)	18. (1)	19. (2)	20. (3)
21. (4)	22. (1)	23. (1)	24. (1)	25. (3)

Quantitative Aptitude

1. (3) $\left(2-\frac{1}{3}\right)\left(2-\frac{3}{5}\right)\left(2-\frac{5}{7}\right)\cdots\left(2-\frac{997}{999}\right)$

$\Rightarrow \left(\frac{5}{3}\times\frac{7}{5}\times\frac{9}{7}\times\cdots\times\frac{1001}{999}\right)=\frac{1001}{3}$

2. (1) According to question
$10x + y - (10y + x) = 36$
$\Rightarrow 9x - 9y = 36$ $\Rightarrow x - y = 4$
∴ Required answer = 4

3. (3) Required number is H.C.F of $(2011 - 9)$ and
$(2623 - 5) = 154$

4. (2) LCM of 12, 18, 21, 30 = 1260
∴ Required number = $1260 \div 2 = 630$

5. (3) Let the total number of workers be x

Then, number of women workers $=\frac{x}{3}$

and number of male workers $=\frac{2x}{3}$

Women having children $=\frac{1}{3}$ of $\frac{1}{2}$ of $\frac{1}{3}x$

$=\frac{1}{3}\times\frac{1}{2}\times\frac{1}{3}x=\frac{x}{18}$

Men having children $=\frac{2}{3}$ of $\frac{3}{4}$ of $\frac{2x}{3}=\frac{x}{3}$

Workers having children $=\left(\frac{x}{18}+\frac{x}{3}\right)=\frac{7x}{18}$

Workers having no children

$=\left(x-\frac{7x}{18}\right)=\frac{11}{18}x=\frac{11}{18}$ of all workers.

6. (4) $999\frac{1}{7}+999\frac{2}{7}+999\frac{3}{7}+999\frac{4}{7}+999\frac{5}{7}+999\frac{6}{7}$

$=(999\times 6)+\frac{21}{7}$

$= (1000 - 1) \times 6 + 3$

$= 6000 - 6 + 3 = 5997$

7. (3) Total parts = 22 parts + 2 parts = 24 parts.
Percentage of gold in alloy

$=\left(\frac{2}{24}\times 100\right)\%=\frac{25}{3}\%=8\frac{1}{3}\%$

8. (3) 40% sugar in 300 gm of solution $=\frac{40}{100}\times 300=120$ gm

Let x gm sugar may be added

$\frac{120+x}{300+x}\times 100=50$

$\Rightarrow x = 60$ gm

9. (2) Let the numbers be x and y. Then

$\frac{x}{12}=\frac{y}{4}\Rightarrow x=3y$

∴ required percentage

$=\left(\frac{x-y}{y}\times 100\right)\%=\left(\frac{3y-y}{y}\times 100\right)\%=200\%$

10. (4) New average $=\frac{50\times 38-(45+55)}{50-2}$

$=\frac{1900-100}{48}=37.5$

11. (1) Let the average for 10 innings be x, then
$11(x + 6) = 10x + 108$
$\Rightarrow 11x + 66 = 10x + 108$ $\Rightarrow x = 108 - 66 = 42$
∴ new average = 42 + 6 = 48 runs

12. (4) Let the earnings of A be 8x and that of B be 9x.

$8x\times\frac{150}{100}:9x\times\frac{75}{100}=16:9$

$\Rightarrow\frac{8x\times 150}{9x\times 75}=\frac{16}{9}\Rightarrow\frac{16}{9}=\frac{16}{9}$

∴ earnings of A can not be determined.

13. (1) Let the original price be x

C.P. $=\frac{80}{100}\times x$ $=₹\frac{4x}{5}$

C.P. + Profit = S.P.

$\Rightarrow \dfrac{4x}{5} + 50 = \dfrac{150}{100} \times \dfrac{4x}{5} \Rightarrow x = ₹\ 125$

14. (4) Let the marked price = ₹ x, then

S.P. = 90% of x = 45 × 25 = 1125

$\Rightarrow x = ₹\ 1250$

Now profit = 50%

C.P. $= \dfrac{1125}{150} \times 100 = ₹\ 750$

If no discount given then amount of profit = 1250 − 750
= ₹ 500

Profit % $= \left(\dfrac{500}{750} \times 100\right)\% = 66\dfrac{2}{3}\%$

15. (4) Let the sum be x

$A = \left(x + \dfrac{40}{100}x\right) = \dfrac{140}{100}x = \dfrac{7}{5}x$

S.I. $= \dfrac{7x}{5} - x = \dfrac{2x}{5}$

$T = \dfrac{S.I. \times 100}{P \times R}$

$= \dfrac{\dfrac{2x}{5} \times 100}{x \times 5} = \dfrac{2 \times 100}{25} = 8$ years

∴ required time = 8 years.

16. (4) Annual instalment

$= \dfrac{\text{Loan amount}}{\left(\dfrac{100}{100+R}\right) + \left(\dfrac{100}{100+R}\right)^2}$

$= \dfrac{5150}{\left(\dfrac{100}{106}\right) + \left(\dfrac{100}{106}\right)^2}$

$= \dfrac{5150 \times 53 \times 53}{2650 + 2500} = 53 \times 53 = ₹\ 2809$

∴ Amount of each instalments = ₹ 2809

17. (2) Man's 1 day work $= \dfrac{1}{3}$

Woman's 1 day work $= \dfrac{1}{4}$

Boy's 1 day work $= \dfrac{1}{12}$

Time taken by man and woman together $= \dfrac{3 \times 4}{3+4} = \dfrac{12}{7}$

Man's and woman's 1 day's work $= \dfrac{7}{12}$

Man's and woman's $\dfrac{1}{4}$ of day work $= \dfrac{7}{12} \times \dfrac{1}{4} = \dfrac{7}{48}$

Remaining work $= 1 - \dfrac{7}{48} = \dfrac{41}{48}$

Boy's $\dfrac{1}{4}$ of a day work $= \dfrac{1}{12} \times \dfrac{1}{4} = \dfrac{1}{48}$

∴ Number of boys $= \dfrac{41}{48} \times 48 = 41$

18. (2) $\dfrac{1}{A^2} - \dfrac{1}{B^2} = \dfrac{1}{\sin^2\beta} - \dfrac{1}{\tan^2\beta}$

$= \dfrac{1}{\sin^2\beta} - \dfrac{\cos^2\beta}{\sin^2\beta} = \dfrac{1-\cos^2\beta}{\sin^2\beta}$

Now $\dfrac{1-\cos^2\beta}{\sin^2\beta} = \dfrac{\sin^2\beta}{\sin^2\beta} = 1$

19. (2) $\sin\theta.\cos\theta(\tan\theta + \cot\theta)$

$= \sin\theta.\cos\theta\left(\dfrac{\sin\theta}{\cos\theta} + \dfrac{\cos\theta}{\sin\theta}\right)$

$= \sin\theta.\cos\theta\left(\dfrac{\sin^2\theta + \cos^2\theta}{\sin\theta.\cos\theta}\right)$

$= \sin\theta.\cos\theta \times \dfrac{1}{\sin\theta.\cos\theta} = 1$

20. (4) Radius of incircle $= \dfrac{42}{2\sqrt{3}} = 7\sqrt{3}$

area of incircle $= \dfrac{22}{7} \times 7\sqrt{3} \times 7\sqrt{3}$

$= \dfrac{22}{7} \times 49 \times 3 = 462$ cm²

21. (2) From the given graph, we get

$\dfrac{3500 + x}{4500} = \dfrac{11}{9} \Rightarrow x = 2000$

22. (3) The required percent

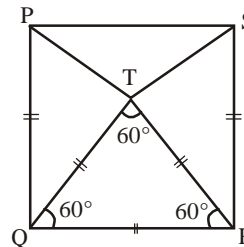$= \dfrac{5500 + 2500}{4000 + 5500 + 5000 + 3500 + 4500 + 2500} \times 100$

$= \dfrac{8000}{25000} \times 100 = 32\%$

23. (1) Total number of people coming from all the given cities
= 25000

Now, 18% of 25000 = 4500

For the three cities P, S and U the number of people
Contributing is less than 18% of 25000.

24. (4) In Δ SRT

∠SRT = 90° − 60° = 30°

∴ ∠RTS $= \dfrac{1}{2}(180° - 30°) = 75°$

Similarly, ∠PTQ = 75°

∵ ∠PTS + ∠PTQ + ∠QTR + ∠RTS = 360°

$\Rightarrow \angle PTS + 75° + 60° + 75° = 360°$

$\Rightarrow \angle PTS = 360° - 210° = 150°$

25. (4) In Δ ABC, if AE is the angle bisector, then according to the angle bisector theorem,
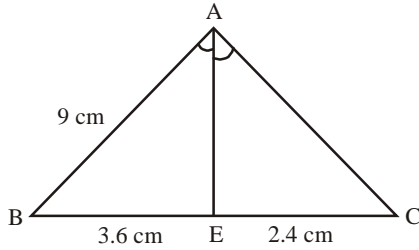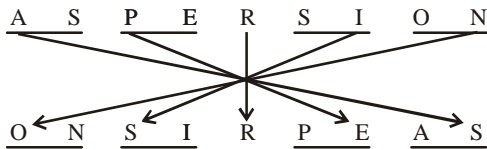

$\dfrac{AB}{AC} = \dfrac{BE}{EC} \Rightarrow \dfrac{9}{AC} = \dfrac{36}{24}$
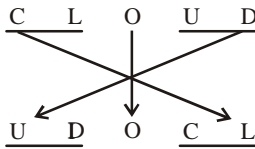
$\Rightarrow AC = \dfrac{9 \times 24}{36} = 6$ cm

General Intelligence

1. (2)

Similarly,

2. (1)

3. (4)
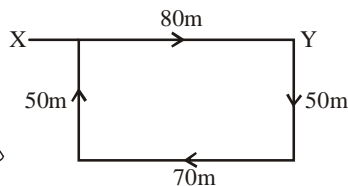   9 + 8 + 7 = 24
   4 + 7 + 3 = 14
   Similarly,
   2 + 1 + 9 = 12

4. (4)
   Antonym of Giant – Dwarf
   Antonym of Genius – Idiot

5. (2)

6. (1)

7. (3)

8. (2)

9. (1)

10. (1)

$50 \times \dfrac{56}{8} = 350$

$48 \times \dfrac{32}{8} = 192$

Similarly,

$30 \times \dfrac{40}{8} = 150$

11. (2)
    C + G $\Rightarrow$ 3 + 7 = 10
    H + L $\Rightarrow$ 8 + 12 = 20
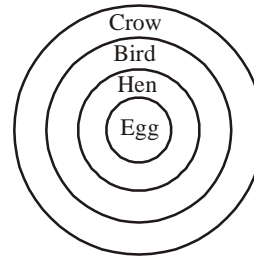   L + E $\Rightarrow$ 12 + 5 = 17
    Similarly,
    L + Q $\Rightarrow$ 12 + 17 = **29**

12. (3)
    $3^3 + 3 = 27 + 3 = 30$
    $4^3 + 4 = 64 + 4 = 68$

13. (1)

14. (2)
    The series is – kb<u>d</u>f<u>gt</u>/kb<u>d</u>fgt/kbd<u>f</u>gt/kbdf<u>gt</u>

15. (4)
    $(7)^2 + (4)^2 = 65$
    Similarly,
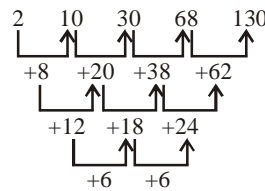 $(9)^2 + (8)^2 = 145$

16. (2)
    Riya > Priya > Janvi > Ritika > Mohan

17. (2)
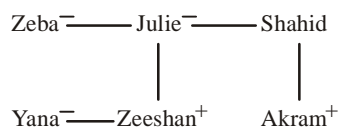   In word ZOOM, two vowels are there, while in other 3 words, only one vowel is there.
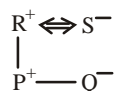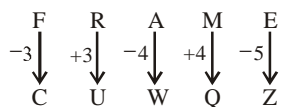
18. (1)

19. (1)

(9)

20. (4)

Zeba⁻——— Julie⁻——— Shahid

Yana⁻——Zeeshan⁺   Akram⁺

(diagram: Zeba–Julie–Shahid on top row; below Julie is Zeeshan, below Shahid is Akram; Yana connected to Zeeshan)

21. (4)

22. (4)

$R^+ \Longleftrightarrow S^-$
$P^+ \longrightarrow Q^-$

23. (1)

24. (3)

F	R	A	M	E
−3	+3	−4	+4	−5
C	U	W	Q	Z

Similarly,

R	I	C	O	H
−3	+3	−4	+4	−5
O	L	Y	S	C

25. (4)