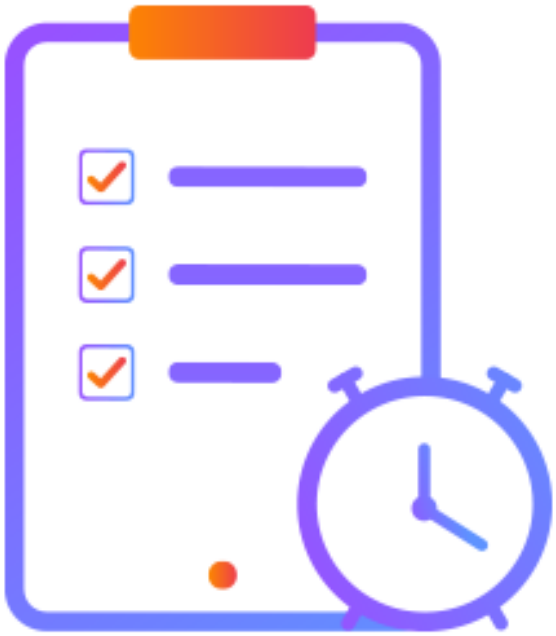
BYJU'S EXAM PREP



SNAP 2022 : Mock Test 2

Mock Test Questions & Solutions

Mock Test Solutions in English

Questions

1. **Direction: The given sentences have been divided into four parts that have been marked A, B, C, and D. Choose as your answer the option that contains the part with an error.**

A. Had she not been rescued,
B. she would die in solitude,
C. far away from the comforts of a complex, strongly bonded social group
D. of other females and their children.

2.

A. On the 18th of May 2022, Monica Miller
B. (consulting attorney with the Nonhuman Rights Project) walked into the New York Court of Appeals
C. and had argued that Happy should be granted legal personhood
D. by acknowledging her fundamental right to bodily liberty.

3.

A. There are vast differences between the social norms of technology
B. and the political economy of health care that separates
C. the medical use of the 19th-century telephone
D. from the health apps of the 21st-century smartphone.

4. **Direction: Fill in the blanks with the most appropriate word from the given options.**

A super app, or what Musk refers to as an ‘everything app’, has been described as the Swiss army knife of mobile apps, offering a _____ of services for users such as messaging, social networking, peer-to-peer payments, and e-commerce shopping.

A. suitor
B. suite
C. array
D. suit

5. Ernaux, 82, has seen a _____ increase in popularity in the English-speaking world since 2019.
   A. steep
   B. sharp
   C. declining
   D. rising
6. Do not lean _____ the boundary wall as it is weak.
   A. on
   B. against
   C. to
   D. behind
7. Which one of the following is not a compound word?
   A. Waistcoat
   B. Breakfast
   C. Display
   D. Railroad
8. **Direction: Fill in the blank with the option that completes the sentence correctly.**
   It is not easy to decipher what is going on in his mind as he always maintains _____.
   A. a smiling face
   B. a cat's face
   C. a poker face
   D. a long face
9. I cannot pardon you anymore as you have _____.
   A. cried wolf
   B. crossed the rainbow bridge
   C. called a spade a spade
   D. crossed the Rubicon
10. The authorities are trying to _____ by not revealing the details of the scam.
    A. sweep things under the carpet
    B. roll out the red carpet
    C. call it a day
    D. call it off
11. Match the words given in Column 1 with their antonyms.

Column 1	Column 2
1. Dunce	a) Imaginative
2. Distrait	b) Savant
3. Tyro	c) Heedful
4. Stolid	d) Veteran

A. 1-b), 2-c), 3-a), 4-d)
B. 1-d), 2-c), 3-b), 4-a)

C. 1-b), 2-c), 3-d), 4-a)

D. 1-c), 2-b), 3-a), 4-d)

12. The given sentences have been divided into four parts that have been marked A, B, C, and D. Choose the option that contains the part with an error as your answer.

A. When I reached the restaurant

B. and started looking for my friends,

C. I realised that

D. they finished their lunch

13. Identify the option that changes the voice of the given sentences correctly.

Strangers were helping the poor woman.

A. The poor woman helped the strangers.

B. The poor woman was being helped by strangers.

C. The poor woman was helped by strangers.

D. The poor woman has been helped by strangers.

14. Match the highlighted word or phrase in the sentences in Column 1 with their correct parts of speech in Column 2:

Column 1	Column 2
1. The tedious process **exasperated** everyone.	a) Pronoun
2. The **then**-Prime Minister implemented the policy.	b) Adjective
3. He paused **momentarily**.	c) Adverb
4. One must stay honest to **oneself**.	d) Verb

A. 1-b, 2-c, 3-a, 4-d

B. 1-b, 2-d, 3-b, 4-a

C. 1-d, 2-b, 3-c, 4-a

D. 1-d, 2-a, 3-b, 4-c

15. As which part of speech is the word ‘images’ used in the excerpt below?

A heap of broken images, where the sun beats,

And the dead tree gives no shelter, the cricket no relief,

A. Adverb

B. Adjective

C. Noun

D. Verb

16. F is the child of P, who is not the father of F. Q is the paternal grandfather of F. U is H's son and P's

brother. S and P are married. N and H are married. N is not a male. There are more than two females in the family. Who amongst the following is the father of P?

A. U
B. N
C. H
D. Q

17. What is the angle between the minute hand and hour hand of a clock at 2:40 p.m.?

A. Northeast
B. East
C. Southwest
D. Southeast

18. A statement is followed by 2 conclusions. Read the conclusions, and identify the ones that can be concluded from the statement. Mark according to the given code.

Statement: Along with the Iliad, the Odyssey was a cornerstone of the education of a polished young person for many centuries.

Conclusion I: The Iliad and the Odyssey were the foundation of literature and culture for hundreds of years.

Conclusion II: No other literary work was considered as the cornerstone of education and culture.

A. Only Conclusion I follows.
B. Only Conclusion II follows.
C. Both conclusions I and II follow.
D. Neither conclusion follows.

19. Which of the following should come in the place of the question mark (?) in the series given below so that the same pattern is followed throughout the series?

Az, Cx, Fu, ?, Ol

A. Bv
B. Jq
C. Cd
D. Os

20. A is looking for his brother. He walks 90 metres to the east before turning to his left. He again walks 20 metres and then turns to his left. Now, he walks 30 metres from this point and reaches B's place. B is his cousin. From there, he went 100 metres to the south and met his brother in a shop. What is the shortest distance between the shop and the starting point of A?

A. 100 metres
B. 125 metres
C. 90 metres
D. 80 metres

21. What will come in the place of the question mark (?) in the following number series?

99, 97, 191, ?, 2271, 11349

A. 471 B. 569

C. 549 D. 491

22. A statement is followed by 2 assumptions. Read the statements, and identify the assumptions that are implicit in them. Mark according to the given code.

Statement: Children who watch cooking programs with healthy foods have a higher probability of selecting healthy food than children who watch cooking programs with unhealthy foods.

Assumption I: Children should not watch any cooking programs.

Assumption II: Cooking programs may affect the food choices of children and could be effective to improve their dietary intake.

A. Only assumption I follows. B. Only assumption II follows.

C. Both assumptions I and II follow. D. Neither assumption follows.

23. A statement is followed by two courses of actions, I and II. Consider the statement to be true, and mark the most appropriate option as the answer.

Statement:

Ceenu does not stop smoking despite repeated warnings from his mother.

Courses of action:

I. The mother should ask Ceenu to leave the house and stay on the streets if he doesn't stop smoking.

II. The mother should talk to Ceenu's friends to drill some sense into her son's head.

A. Only I follows. B. Only II follows.

C. Both I and II follow. D. None follows.

24. In this question, a question is followed by two statements. Read the given statements, and decide whether the data given in statements I and II are sufficient to answer the question or not. Choose the appropriate option as the answer.

In a building with six floors, the lowermost floor is numbered 1, the floor above it is numbered 2, and so on. On which floor does A live in this building?

I. Only one person lives above D, who does not live on the floor that is just below or just above A. A lives two floors above H.

II. A lives on the floor immediately above B, and at least two people live on the floors below B's floor.

A. The data in Statement I alone is sufficient to answer the question, while the data in Statement II alone is not sufficient to answer the question.

B. The data in Statement II alone is sufficient to answer the question, while the data in Statement I alone is not sufficient to answer the question.

C. The data either in Statement I alone or in Statement II alone is sufficient to answer the question.

D. The data in statements I and II together are insufficient to answer the question.

25. Directions: Study the following information, and answer the given question.

On an island, two types of people live: truth-tellers (who always speak the truth) and liars (who always lie). Three residents of the island, i.e., aa, bb, and cc have been asked the following question:

'Who amongst you always lies?'

Their responses are as follows:

aa: I am a truth-teller.

bb: aa is not a truth-teller.

cc: bb is not a liar.

If it is known that exactly one person amongst them is a liar and the other two are truth-tellers, then who amongst the following is lying?

A. aa

B. cc

C. bb

D. Inadequate data

26. Select the correct alternative that completes the series below from the given choices.

US, VT, WU, (?), YW

A. EL

B. XV

C. FH

D. XY

27. A statement followed by two arguments is given below. Consider the statement to be true under all

circumstances, and pick out the most appropriate answer option.

Statement: Should CCTV cameras be installed outside every girl's hostel across the city?

Arguments:

I. Yes; CCTV cameras are an effective way to identify as well as help nab anyone involved in an incident.

II. No; CCTV cameras are of use only after the crime has been committed. They are of no use in preventing the crime itself.

A. Only Argument I is strong.
B. Only Argument II is strong.
C. Either Argument I or Argument II is strong.
D. Neither Argument I nor Argument II is strong.

28. The following question consists of two words that are related in a certain manner. They are followed by four pairs of related words. Select the pair that has the same relationship as the pair in the question.

Stymie: Assist

A. Posit: Expound
B. Basic: Fundamental
C. Patient: Excitable
D. Proximate: Approximate

29. Seven boys, A, B, R, S, T, K, and I, are standing in a row facing north. I is standing immediately to the right of K. R is the only one standing between S and K. T stands exactly between A and B. Which of the following boys cannot be the immediate neighbour of A?

A. S
B. I
C. T
D. None of the above

30. 18 October 2006 was a Wednesday. On which day of the week was 18 January 2010?

A. Thursday
B. Tuesday
C. Monday
D. None of the above

31. **Direction:** In the following question, two statements that may have a cause-and-effect relationship are given. Determine whether the sentences have a causal relationship, and mark your answers according to the given code.

Statement I: Traffic jams are back to normal in the city especially in the mornings between 8 a.m. to 10 a.m.

Statement II: All schools, offices, and colleges have been reopened and are fully operational.

Mark:

A. if I is the cause and II is the effect
B. if II is the cause and I is the effect
C. if both are independent causes
D. if both are independent effects

32. Statement I: The state experienced heavy pre-monsoon showers with strong winds in many areas.

Statement II: Mangoes and grape crops were adversely affected with many fruits rotting on the trees and many falling off.

Mark:

A. if I is the cause and II is the effect
B. if II is the cause and I is the effect
C. if both are independent causes
D. if both are independent effects

33. Statement I: Mr. K, a prominent member of a leading party in the state, resigned from the primary membership of the party, citing personal reasons.

Statement II: Mr. K's friend had resigned from the party a few months earlier, citing health issues.

Mark:

A. if I is the cause and II is the effect
B. if II is the cause and I is the effect
C. if both are independent causes
D. if both are independent effects

34. Which of the following letters should come in the place of the question mark (?) in the series given below?

Z, A, U, F, N, ?

A. U
B. P
C. M
D. O

35. Find the wrong number in the given series:

5, 12, 39, 160, 815, 4836

A. 12
B. 39
C. 815
D. 160

36. A clock is placed such that at 5:30 p.m. its hour hand points towards the southwest. In which direction will its minute hand point at 10:20 p.m.?

A. East
B. South
C. Southeast
D. None of these

37. The following question consists of two words that are related in a certain manner. They are followed by

four pairs of related words. Select the pair that has the same relationship as the pair in the question.

Aegis: Support

A. Pliant: Rigid
B. Discordant: Harmonious
C. Rebellious: Defiant
D. Wunderkind: Old

38. Directions: Study the information given carefully, and answer the questions accordingly.

Q # S means Q is the only son of S.

Q & S means Q is married to S.

Q * S means Q is the father-in-law of S.

Q % S means Q is one of the parents of S.

If H % Y # E * L % G, then which of the following is definitely true?

A. G is the son of L.
B. There are more than two males.
C. G is the daughter of Y.
D. H is the grandmother of G.

39. Five friends, A, B, C, D, and E, are sitting in a row facing north. A is not an immediate neighbour of D. E is sitting immediately to the left of B. D and E are sitting at the two ends. Who is sitting in the middle of the row?

A. A
B. B
C. C
D. D

40. Which day of the week was 22 April 2006?

A. Monday
B. Saturday
C. Tuesday
D. Wednesday

41. If a man can type 100 pages each of which contains 210 words in 12 hours, find the time required by the same man to type 50 pages each of which contains 120 words.

A. $3\frac{1}{7}$ hours
B. $3\frac{3}{7}$ hours
C. $3\frac{2}{7}$ hours
D. $3\frac{4}{7}$ hours

42. A train crosses a platform of length ‘a’ metres in 20 seconds and it crosses a pole in 10 seconds at 54 km/h. If the speed of the train is the same in both cases, find the value of ‘a’.

A. 100
B. 175
C. 125
D. 150

43. If x and y are even numbers and z is an odd number, which of the following is even?
A. $2(x^2 - y) + z^2$
B. (x + z)y
C. 2x + 3z + 4y
D. 3(x + z + y)z

44. The ratio of the length, breadth, and height of a cuboid is 7 : 5 : 3 respectively. If the volume of the cuboid is 6720 cubic units, find the sum of its length and breadth.
A. 36 units
B. 48 units
C. 42 units
D. 60 units

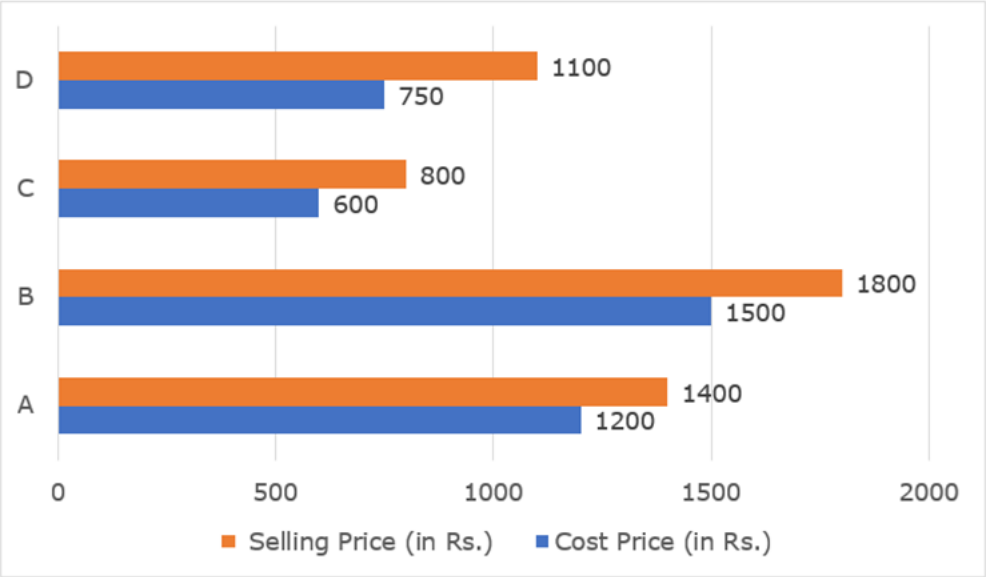
45. In how many ways can Sam select eight classes out of a total of 14 available classes if he will definitely select four particular classes to attend?
A. 252
B. 715
C. 1001
D. 210

46. Out of the 700 students in a class, 65% took the SNAP exam and 60% took the CAT exam. If 20% of the students did not take any of the two exams, find the number of students who took both the exams.
A. 315
B. 275
C. 345
D. 325

47. From a bag, the probability of randomly selecting two red balls out of n green balls and (n + 5) red balls is $\frac{7}{12}$. Find the total number of balls in the bag.
A. 12
B. 10
C. 9
D. 11

48. **Directions:** Study the chart given below and answer the question that follows.

A shopkeeper sells four different types of items, viz. A, B, C, and D. The bar chart given below shows the cost price and selling price of these four items.



On which of the following items does the shopkeeper earn the maximum percentage of profit?

A. A
B. B
C. C
D. D

49. Find the next term of the following series:

95, 119, 187, 307, 529, 865, ……

A. 1291
B. 1385
C. 1411
D. 1299

50. In triangle ABC, line PQ is drawn parallel to the side BC such that point P lies on side AB and point Q lies on the side AC. If the area of the trapezium formed by the points PQCB is 52 sq units and the lengths of sides BC and PQ are 7 cm and 6 cm, respectively, find the area of the smaller triangle APQ.

A. 121 sq units
B. 196 sq units
C. 169 sq units
D. 144 sq units

51. The roots of the equation $(p-q)x^2+(p-q)x-(p+q)$ when $p<q$ are:

A. Real and equal
B. Real and unequal
C. Imaginary
D. Cannot be determined

52. If $f(x)=x^2+2x+5$ and $g(x)=4x+3$, and $f(g(x))=20$ at the point x, what could be the value of x?

A. 1
B. 2
C. -1
D. -2

53. In an organisation of 42 employees, the ratio of the number of leads, managers, and associate directors is 7:5:2 respectively. In a month, 12 new leads have joined the team and three leads are promoted to the position of managers. What is the ratio of the number of leads, managers, and associate directors, if two managers are promoted to the position of associate directors?

A. $15:4:8$ B. $15:8:4$

C. $4:8:15$ D. $4:15:8$

54. The average number of runs scored by Shritej in the first n matches is 65. In the next three matches, he scored 385 runs. So, the average increased by 10. Find the total number of matches he must have played.

A. 16 B. 18

C. 19 D. None of the above

55. A shopkeeper bought two types of tea, Tea I and Tea II, costing Rs. 18/kg and Rs. 25/kg, respectively. After mixing the two in a particular ratio, he incurred a profit of 10% by selling the mixture at Rs. 29.7/kg. What is the ratio in which he must mix the two types of tea?

A. 2 : 9 B. 29 : 99

C. 99 : 29 D. Not possible

56. The total cost of 15 items of Type A and 11 items of Type B is Rs. 233, whereas the total cost of n items of Type A and 5 items of Type B is Rs. 101. Find the cost of 15 + n items of Type A. All the prices are integers.

A. Rs. 126 B. Rs. 90

C. Rs. 151 D. Cannot be determined

57. How many terms of the series $20+24+22+14+0-20.....\text{nterms}$ will be added to -2010?

A. 13 B. 14

C. 15 D. None of the above

58. Find the interval of x if $\log_2(x+2) > \log_4(x^2+3x+2)$.

A. $(-1, \infty)$ B. $(-2, -1)$

C. $-2 < x < 0$ D. $2 < x < 1$

59. A bolt manufacturing company produces three types of bolts, viz. A, B, and C. The total production of these three types of bolts in December 2021 is 78,000, which will increase by 20% next month. The production of A was 20% of the total production in December 2021 and that of B is 25% of the remaining

production. There is an increase of 10% and 20% in the production of A and B, respectively, in the next month. Calculate the percentage change in the production of C in the next month.

A. 26.66% decrease
B. 23.33% increase
C. 31.33% increase
D. 39.99% decrease

60. A shop owner purchased 2 articles, A and B, and sold article C at the same price. On selling article A, he earns a profit of 20%, which is equal to the profit percentage earned on article C. Also, Article B is sold by giving a discount of 11.11%. Find the marked price of article B if the overall profit percentage is 30%. Assume the cost price of article A as Rs. 2400.

A. Rs. 1335/8
B. Rs. 1335
C. Rs. 400
D. Rs. 4005

Solutions

1. B

Sol. The correct form should be ‘HAD SHE …, SHE WOULD HAVE DIED’. This is known as the third conditional, which is used to refer to an impossible condition and its probable result in the past. It represents a truly hypothetical and unreal condition, and it is now too late for the condition or its result to happen or exist.

2. C

Sol.

The error is in Part C. Past perfect tense should be used to indicate an action that had already completed by the time another action took place. Here, WALKED and ARGUED happened roughly at the same time in the past.

3. B

Sol.

The subject of the verb SEPARATES is DIFFERENCES, which is plural. It should be SEPARATE.

4. B

Sol. Suitor refers to ‘one that petitions or entreats’ or ‘one who courts a woman or seeks to marry her. So, option A cannot be the answer. Option C cannot be the answer because the array starts with a blank, but the article before the blank is ‘a’. Hence, option C can be eliminated. Option D can be eliminated because suit refers to ‘a set of garments’ or ‘an action or process in a court for the recovery of a right or claim’. Option B is correct because suite refers to ‘a group of things forming a unit or constituting a collection.’

5. B

Sol.

This question can be solved by eliminating the incorrect options. ‘Steep’ means ‘extremely or excessively high’, which doesn’t go well with ‘increase’. ‘Declining increase’ is illogical and ‘rising increase’ is repetitive in nature. So, the correct answer is option B (sharp).

6. B

Sol. The preposition ‘against’ is used with stationary objects/things.

7. C

Sol. Options A, B, and D have words made of two words that are grouped together and are, therefore, compound words. Option C has a single word and is, therefore, the answer.

8. C

Sol. A poker face implies an impassive face that hides true feelings. A long face is an expression of sadness.

9. D

Sol. The correct idiom is ‘cross the Rubicon’, which means cross the point of no return. To ‘cry wolf’ is to raise a false alarm. To ‘cross the rainbow bridge’ is to die. ‘To call a spade a spade’ is to speak plainly without avoiding anything.

10. A

Sol. To ‘sweep things under the carpet’ is to hide things. To ‘roll out the red carpet’ is to offer a grand and special welcome. To ‘call it a day’ is to decide to stop an ongoing action/process. To ‘call it off’ means to cancel.

11. C

Sol. ‘Dunce’ means a stupid or foolish person. So, ‘savant’, which means a learned person, is an antonym. ‘Distrait’ means distracted, so heedful is the antonym. ‘Tyro’ is a beginner. ‘Veteran’ is an experienced person. ‘Stolid’ means dull and unemotional. So, ‘imaginative’ is an antonym. Hence, option C is the correct answer.

12. D

Sol. We need a HAD before ‘FINISHED THEIR LUNCH’. ‘REACHING THE RESTAURANT’ and ‘STARTED LOOKING’ took place later on. We need this part of the sentence to be in the past perfect tense as the friends had already had their lunch.

13. B

Sol. The first rule of ‘voice’ is that the tense remains the same. The tense here is past continuous.
‘Were helping’ is in the active voice.
‘Was being helped’ is in the passive voice.

14. C

Sol.
‘Exasperated’, which means ‘irritated’, is an action in Sentence 1 and is a verb. In Sentence 2, ‘then’ is an adjective that means existing at that time. ‘Momentarily’ is an adverb describing the verb ‘paused’. ‘Oneself’ is a reflexive pronoun. Hence, option C is the correct answer.

15. C

Sol. ‘Images’ is used as a noun here as it is the name of a thing.

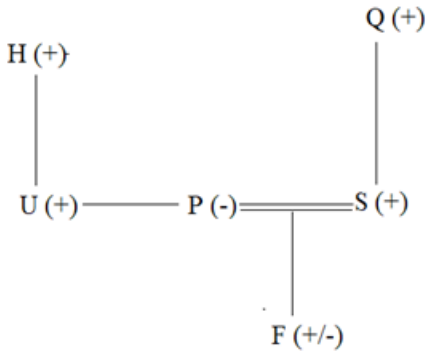
16. C

Sol.

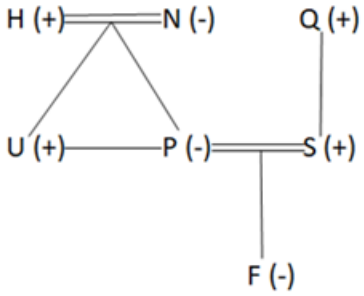
Symbol	Relation
+	Male
–	Female
———	Sibling
═══	Couple
|	Child

F is the child of P, who is not F's father.

S and P are married.
Q is the paternal grandfather of F.
U is H's son and P's brother.
N and H are married.
N is not a male.



There are more than two females.



Thus, H is the father of P.

Hence, option C is the correct answer.

17. B

Sol. Angle between the minute hand and hour hand of a clock at 2:00 p.m.

$= \frac{360}{12} \times 2 = 60$ degrees

Speed of the minute hand = $\frac{360}{60}$ = 6 degrees/minute

Speed of the hour hand = $\frac{30}{60}$ = 0.5 degrees/minute

Relative speed of the minute hand with respect to the hour hand

= (6 − 0.5) = 5.5 degrees/minute

Angle made at 2:40 p.m.

= 40 × 5.5 − 60 = 220 − 60 = 160 degrees

18. A

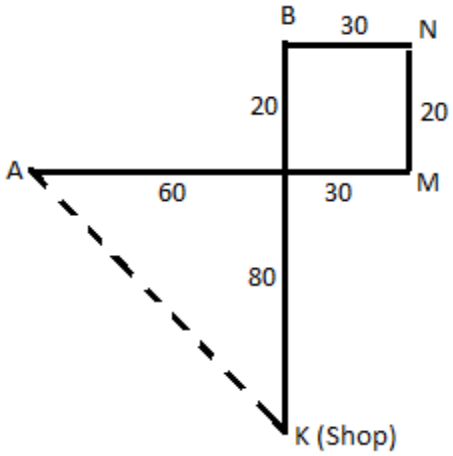
Sol. Since the statement says that the two literary works served as a cornerstone of the education of a polished youngster, we can conclude that they were the basis of education and culture. The statement does not mention anything about other works, hence II does not follow.

19. B

Sol. The pattern of the letter series is given below.
For the capital letters:
A + 2 = C
C + 3 = F
F + 4 = J
J + 5 = O
For the small letters, each capital letter's reverse letter in terms of rank according to the English alphabetical order is placed in a way that it corresponds to the capital letter.
Reverse letters of A, C, F, J, and O are Z, X, U, Q, and L, respectively.
So, ‘Jq’ will replace the question mark (?).
Hence, option B is the correct answer.

20. A

Sol. The movements of A are as shown in the figure given below (A to M, M to N, N to B, and B to K).



Let the shortest distance between the shop and the starting point be D.

By using the Pythagorean theorem, we get the following:

D^2 = (80^2 + 60^2) m

Or D^2 = 6400 + 3600 = 10000 m

Or D = $\sqrt{10000}$ = 100 m

So, the required distance is 100 metres.

Hence, option A is the correct answer.

21. B

Sol. The pattern of the series is as follows:

99 × 1 – 2 = 97

97 × 2 – 3 = 191

191 × 3 – 4 = 569

569 × 4 – 5 = 2271

2271 × 5 – 6 = 11349

So, 569 will come in the place of the question mark.

Hence, option B is the correct answer.

22. B

Sol.

The effect of cooking programs on children is not entirely detrimental. Hence, we cannot conclude that children should not watch any cooking program. So, Assumption I is eliminated.

The fact that the children are influenced to select good food after watching cooking programs on healthy food justifies the conclusion that cooking programs may affect the choice of food, and this factor could be used to make children choose healthy food.

Hence, option B is the correct answer.

23. D

Sol. None of the courses of action follow because asking one's son to stay on the streets because of smoking is cruel and asking a friend to counsel one's son is being irresponsible.

24. A

Sol.

From Statement I, we get the following:

Only one person lives above D.

D does not live immediately below and above A.

A lives two floors above H.

Floor No	Persons
6	
5	D
4	
3	A
2	
1	H

Thus, A lives on the 3rd floor of the building.

Hence, Statement I alone is sufficient.

From Statement II, we get the following:

A lives immediately above B.

At least two people live below B.

	Case 1	Case 2	Case 3
Floor No	Persons	Persons	Persons
6			A
5		A	B
4	A	B	
3	B		
2			
1			

Clearly, from the above table, the floor on which of A lives cannot be uniquely determined.

Thus, Statement II alone is not sufficient.

The data in Statement I alone is, thus, sufficient to answer the question, while the data in Statement II alone is not sufficient to answer the question.

Hence, option A is the correct answer.

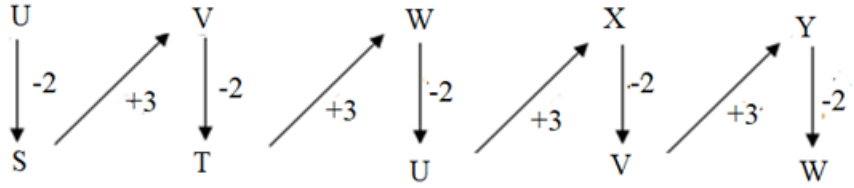
25. A

Sol. In the question, the following have been mentioned:
bb: aa is not a truth-teller.
cc: bb is not a liar.
If bb is a liar, then cc must be a liar.
If cc is a liar, then bb must be a liar.

Then, the given condition that only one person amongst them is a liar will be violated.
Therefore, aa must be a liar.
bb and cc are truth-tellers.
Hence, option A is the correct answer.

26. B

Sol. The pattern of the series is as follows:



Therefore, the required answer is XV.
Hence, option B is the correct answer.

27. A

Sol.
Argument I is strong as it provides a logical reason to install the CCTV cameras. Argument II is not strong as it cannot be said with certainty that they are of no use in preventing crime. This is an extreme statement without any basis; hence, it is not a valid reason to oppose the statement.

Hence, the correct answer is option A.

28. C

Sol.
‘Stymie’ means to impede or prevent. ‘Assist’ is an antonym. The only other antonym pair is patient and excitable.

‘Posit’ and ‘expound’ both mean ‘to put forward’.

‘Basic’ and ‘fundamental’ are synonyms.

‘Proximate’ means ‘close’ or ‘approximate’.

29. D

Sol. I is at the extreme right end of the row, and he is standing immediately to the right of K.
K I
R is standing between S and K.
S R K I
T stands exactly between A and B.
The following arrangements are possible:
Case 1: S R K I A T B
Case 1: S R K I B T A
Case 3: A T B S R K I
Case 4: B T A S R K I

S (case 4), I (case 1), and T can all be immediate neighbours of A.

Hence, option D is the correct answer.

30. C

Sol. Number of odd days from 19 October 2006 to 18 October 2007 = 1
Number of odd days from 19 October 2007 to 18 October 2008 = 2
Number of odd days from 19 October 2008 to 18 October 2009 = 1
Number of odd days from 19 October 2009 to 18 November 2009 = 3
Number of odd days from 19 November 2009 to 18 December 2009 = 2
Number of odd days from 19 December 2009 to 18 January 2009 = 3
Hence, total number of odd days = (1 + 2 + 1 + 3 + 2 + 3) = 12
Hence, total number of odd days = 5
18 October 2006 was a Wednesday.
Therefore, 18 October 2009 was a Monday.
Hence, option C is the correct answer.

31. B

Sol. Since all institutions are open, traffic jams are occurring during peak hours. Hence, II is the cause and I is the effect.

32. A

Sol. From the statement, it is clear that the pre-monsoon showers and strong winds caused damage to the crops.
Hence, option A is the correct answer.

33. D

Sol. There might be a connection between the two actions, but we do not have sufficient evidence given in the statements to infer that there is any connection.
Hence, option D is the correct answer.

34. C

Sol. The given series is a combination of two different combinations, which are as follows:
(1) Z, U, N
(2) A, F, ?
The series starts with the first letter of Combination (1). The letters of Combination (2) are placed one by one between two letters of Combination (1).
Combination (1) consists of the 1st, 6th, and 13th letters from the end of the English alphabet, while Combination (2) consists of the 1st, 6th, and 13th letters from the beginning of the English alphabet. Thus, the required letter is M.
Hence, option C is the correct answer.

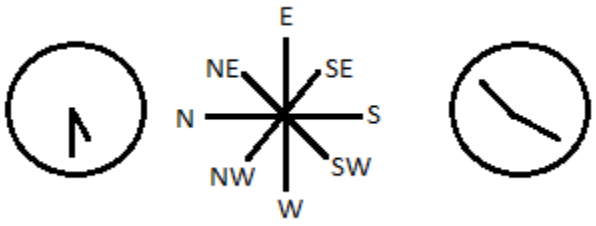
35. C

Sol. The pattern of the series is as follows:
$5 \times 2 + 2 = 12$
$12 \times 3 + 3 = 39$
$39 \times 4 + 4 = 160$
$160 \times 5 + 5 = 805$
$805 \times 6 + 6 = 4836$

So, 815 is the wrong number.
Hence, option C is the correct answer.

36. D

Sol.



So, at 10:20 p.m., its minute hand will point in the southwest direction. Hence, option D is the correct answer.

37. C

Sol.

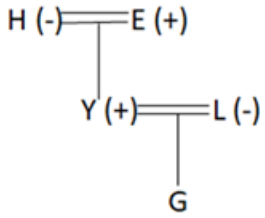
'Aegis' means support. So, we are looking for synonyms. 'Pliant' means flexible. So rigid is an antonym. 'Discordant' means lacking harmony. 'Rebellious' means someone who resists or defies authority. So, 'defiant' is a synonym. 'Wunderkind' means a wonder child or a person who achieves success at a relatively young age Only C fits and is, therefore, the answer.

38. D

Sol.

Symbol	Relation
+	Male
-	Female
———	Sibling
═══	Couple
|	Child

H % Y # E * L % G
H % Y ⇒ H is one of the parents of Y.
Y # E ⇒ Y is the only son of E.
E * L ⇒ E is the father-in-law of L. So, E is male; H is female.
L % G ⇒ L is the one of the parents of G.



Thus, ‘H is the grandmother of G’ is true.

Hence, option D is the correct answer.

39. A

Sol. D and E are sitting at the two ends.

Case I:

D _ _ _ E

Case II:

E _ _ _ D

E is sitting immediately to the left of B.

Thus, Case I is eliminated.

E B _ _ D

A is not an immediate neighbour of D.

E B A C D

So, A is sitting in the middle of the row.

Hence, option A is the correct answer.

40. B

Sol. 22 April 2006 = (2005 years + Period from 1 January 2006 to 22 April 2006)

Odd days in 400 years = 0

Number of odd days in 2000 years = 0

Number of odd days in 5 years = 4 non leap years + 1 leap year

= (4 $\times$ 1 + 1 $\times$ 2) = 6 odd days

Total number of days from 1 January to 22 April 2006

= 3 (January) + 0 (February) + 3 (March) + 1 (April) = 7 days = 0 days

Total number of odd days = (0 + 6 + 0) = 6

The given day is Saturday.

Hence, option B is the correct answer.

41. B

Sol. Let the required time be t hours.

According to the question,

$\frac{100 \times 210}{50 \times 120 \times 12} = t$

$\Rightarrow t = 3\frac{3}{7}$ hours

Hence, option B is the correct answer.

42. D

Sol. It is given that the train can cross a pole in 10 seconds at 54 km/h.

Converting 54 km/h to m/s, we get

$54 \times \frac{5}{18} = 15$ m/s.

So, the length of the train = $10 \times 15 = 150$ m

According to the question,

$\frac{a + 150}{15} = 20$

$\Rightarrow a = 150$

Hence, option D is the correct answer.

43. B

Sol. We know the following:

Even + Even = Even

Even + Odd = Odd

Odd + Odd = Even

Even $\times$ Even = Even

Even $\times$ Odd = Even

Odd $\times$ Odd = Odd

$(\text{Even})^2$ = Even and $(\text{Odd})^2$ = Odd

From the above conclusions, we can see that only option B is even because (x + z) will be odd and it is multiplied by y, which is an even number. So, (x + z)y will be even.

All the remaining options are odd.

Hence, option B is the correct answer.

44. B

Sol. Let the length, breadth, and height of the cuboid be 7x, 5x, and 3x units, respectively.

Volume of the cuboid = 7x $\times$ 5x $\times$ 3x = 6720

$\Rightarrow x^3 = 64$

$\Rightarrow x = 4$

So, length, breadth, and height of the cuboid are 28, 20, and 12 units, respectively.

Required sum = 28 + 20 = 48 units

Hence, option B is the correct answer.

45. D

Sol. It is given that Sam will select eight classes out of 14 classes, and he will definitely select four particular classes.

So, he will select the remaining 4 classes from the 10 available classes.

Total number of ways = $^{10}C_4 = 210$

Hence, 210 is the correct answer.

46. A

Sol. Number of students who took the SNAP exam = 65% of 700 = 455

Number of students who took the CAT exam = 60% of 700 = 420

Number of students who did not take any of the two exams = 20% of 700 = 140

So, 700 - 140 = 560 students took at least one exam.

Let n be the number of students who appeared in both the exams.

So, 560 = 455 + 420 - n

$\Rightarrow$ n = 875 - 560

$\Rightarrow$ n = 315

Hence, option A is the correct answer.

47. C

Sol. Total number of balls in the bag = n + n + 5 = 2n + 5

Probability of selecting two red balls = $\frac{{}^{n+5}C_2}{{}^{2n+5}C_2} = \frac{(n+5)(n+4)}{(2n+5)(2n+4)} = \frac{7}{12}$

$\Rightarrow 12(n^2 + 9n + 20) = 7(4n^2 + 18n + 20)$

$\Rightarrow 12n^2 + 108n + 240 = 28n^2 + 126n + 140$

$\Rightarrow 16n^2 + 18n - 100 = 0$

$\Rightarrow 8n^2 + 9n - 50 = 0$

$\Rightarrow 8n^2 - 16n + 25n - 50 = 0$

$\Rightarrow 8n(n - 2) + 25(n - 2) = 0$

$\Rightarrow (8n + 25)(n - 2) = 0$

Since n cannot be negative or a fraction, n = 2

Thus, number of green balls = 2

Number of red balls = 7

Total number of balls = 2 + 7 = 9

Hence, option C is the correct answer.

48. D

Sol. Percentage profit earned on item A = $\frac{1400 - 1200}{1200} \times 100 = 16.67\%$

Percentage profit earned on item B = $\frac{1800 - 1500}{1500} \times 100 = 20\%$

Percentage profit earned on item C = $\frac{800 - 600}{600} \times 100 = 33.33\%$

Percentage profit earned on item D = $\frac{1100 - 750}{750} \times 100 = 46.67\%$

Thus, the shopkeeper earns the maximum percentage of profit on item D.

Hence, option D is the correct answer.

49. B

Sol. Pattern of the given series is:

$95 + (3^3 - 3) = 119$

$119 + (4^3 + 4) = 187$

$187 + (5^3 - 5) = 307$

$307 + (6^3 + 6) = 529$

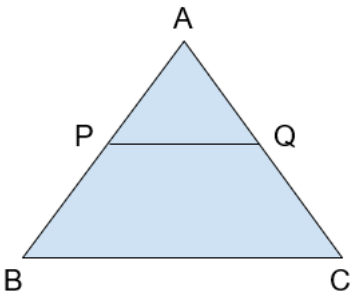
$529 + (7^3 - 7) = 865$

$865 + (8^3 + 8) = 1385$

Hence, option B is the correct answer.

50. D

Sol. Consider the below triangle:



It is given that line PQ is parallel to line BC.

So, triangles APQ and ABC will be similar.

Thus, $\frac{\text{area of triangle ABC}}{\text{area of triangle APQ}} = \frac{BC^2}{PQ^2} = \frac{49}{36}$

Let the area of triangle ABC be 49k sq units and the area of triangle APQ be 36k sq units

Now, area of trapezium PQBC is given as 52 sq units

So, 49k - 36k = 52

$\Rightarrow$ k = 4

Thus, area of triangle APQ = 36k = 144 sq units

Hence, option D is the correct answer.

51. D

Sol. $\mathbf{D = b^2 - 4ac = (p - q)^2 + 4 \times (p - q) \times (p + q)}$

$= \mathbf{(p - q)^2 + 4 \times (p^2 - q^2)}$

Here, D can be positive or negative depending on the values of p and q.

Hence, option D is the correct answer.

52. D

Sol. $f(g(x)) = 20$

$f(4x + 3) = 20$

$(4x + 3)^2 + 2(4x + 3) + 5 = 20$

$16x^2 + 24x + 9 \quad + 8x + 6 = 15$

$16x^2 + 32x \quad = 0$

$16x(x + 2) \quad = 0$

$\Rightarrow x = 0 \text{ or } x = -2$

Hence, option D is the correct answer.

53. B

Sol. Let 7x, 5x, and 2x be the number of leads, managers, and associate directors, respectively.

$7x + 5x + 2x = 42 \Rightarrow x = 3$

The required ratio is $21 + 12 - 3 : 15 + 3 - 2 : 6 + 2 = 30 : 16 : 8 = 15 : 8 : 4$

Hence, option B is the correct answer.

54. C

Sol. $65 = \dfrac{\text{Sum}}{n} \Rightarrow \text{Sum} = 65n$

$75 = \dfrac{65n + 385}{n + 3} \Rightarrow n = 16$

Total number of matches played = 16 + 3 = 19

Hence, option C is the correct answer.

55. D

Sol. CP of the mixture $\frac{29.7}{1.1}$ = Rs. 27/kg

This case is not possible as the price of the mixture cannot be more than both the prices of Tea I and Tea II.

Hence, option D is the correct answer.

56. A

Sol. Let x and y be the unit prices of Type A and Type B, respectively.

$15x + 11y = 233$.....(1)

$nx + 5y = 101$.....(2)

Multiplying (1) by 5 and (2) by 11 and then subtract both equations, we will get the following:

$75x + 55y = 1165$

$11nx + 55y = 1111$

Simplifying the above two equations, we will get the following:

$75x - 11nx = 54$

$x(75 - 11n) = 54$

$x = \frac{54}{(75-11n)} \Rightarrow n = 6 \,\&\, x = 6$.

Cost of $15 + n = 15 + 6 = 21$ items of Type A $= 21 \times 6 = 126$

Hence, option A is the correct answer.

57. C

Sol. The series $20+24+22+14+0-20.....\text{nterms}$ can be written as

$S = 5 \times 4 + 8 \times 3 + 11 \times 2 + 14 \times 1 + ----------\text{n terms}.$

The Series S is a combination of two APs.

$tn = \{5 + (n-1)3\}\{4 + (n-1)(-1)\}$

$tn = \{5 + 3n - 3\}\{4 - n + 1\}$

$$tn = \{2 + 3n\}\{5 - n\}$$

$$tn = -3n^2 + 13n + 10$$

$$\Sigma tn = -3\Sigma n^2 + 13\Sigma n + \Sigma 10$$

$$\sum tn = -3\frac{n(n+1)(2n+1)}{6} + 13\frac{n(n+1)}{2} + 10n = -2010$$

By using options, the value of n satisfying the above equation is 15.

Hence, option C is the correct answer.

58. A

Sol. $$\log_2(x + 2) > \frac{1}{2}\log_2(x^2 + 3x + 2)$$

$$\log_2(x + 2)^2 > \log_2(x^2 + 3x + 2)$$

$$(x + 2)^2 > (x^2 + 3x + 2)$$

x^2+ 4x+4>(x^2+3x+2)

4x - 3x> 2- 4

x>-2

As for all the values of $-2 \le x \le -1$ the value of x^2+3x+2 is either zero or negative, which is not defined.

Hence, option A is the correct answer.

59. B

Sol. Total production of the company in the next month $= 1.2 \times 78000 = 93600$

Production of A in the next month $= \frac{78000}{5} \times 1.1 = 17160$

Production of B in the next month $= \frac{1}{4} \times \frac{4 \times 78000}{5} \times 1.2 = 18720$

Production of C in December 2021 $= 78000 - 15600 - 15600 = 46800$

Production of C in the next month $= 93600 - 17160 - 18720 = 57720$

The required percentage change $= \frac{57720-46800}{46800} \times 100 = 23.33\%$ increase

Hence, option B is the correct answer.

60. D

Sol.

	A	B	C	Total
CP	100	100	*100/1.2 = 250/3*	850/3
SP	*100 × 1.2 = 120*	*1105/3 – 220 = 445/3*	100	*850/3 × 1.3 = 1105/3*
Profit/Loss	20	145/3	50/3	85
Profit/Loss(%)	20% profit	145/3%	20% profit	30% profit

Let x be the marked price of article B.

$\frac{8}{9} \times x = \frac{445}{3} \Rightarrow x = \frac{1335}{8}$

The actual marked price of article B $= \frac{2400 \times 1335}{100 \times 8} = 4005$

Hence, option D is the correct answer.