23161

Booklet Serial No.

DO NOT BREAK THE SEAL OF THE BOOKLET UNTIL YOU ARE TOLD TO DO SO

SERIES : I

QUESTION BOOKLET

Subjects : General English, General Knowledge & Aptitude and Arithmetic

Full Marks : 300   **Time Allowed : 2½ Hours**

Read the following instructions carefully before you begin to answer the questions.

INSTRUCTIONS TO CANDIDATES

1. This Booklet contains **150 questions** to be answered in a separate OMR Answer Sheet using Black Ballpoint Pen in the following three Parts :

    | Part—A | : | General English | : | 50 questions |
    | Part—B | : | General Knowledge & Aptitude | : | 50 questions |
    | Part—C | : | Arithmetic | : | 50 questions |

2. **All** questions are compulsory.

3. You will be supplied the Answer Sheet separately by the Invigilator. You must complete the details of particulars asked for.

4. Answer must be shown by completely blackening the corresponding circle in the Answer Sheet against the relevant question number by Black Ballpoint Pen. OMR Answer Sheet without marking Series shall not be evaluated.

   Example :

   Suppose the following question is asked :

   The Capital of Meghalaya is

   (A) Guwahati

   (B) Kohima

   (C) Shillong

   (D) Delhi

   You will have four alternatives in the Answer Sheet for your response corresponding to each question of the Question Booklet as below :

   Ⓐ Ⓑ Ⓒ Ⓓ

   In the above illustration, if your chosen response is alternative (C), i.e., Shillong, then the same should be marked on the Answer Sheet by blackening the relevant circle with a Black Ballpoint Pen only as below :

   Ⓐ Ⓑ ● Ⓓ

   The example shown above is the only correct method of answering.

5. Answer the questions as quickly and as carefully as you can. Some questions may be difficult and others easy. Do not spend too much time on any one question.

6. There will be NOT be any negative marking for wrong answers.

7. The Answer Sheet must be handed over to the Invigilator before you leave the Examination Hall.

8. No Rough Work is to be done on the Answer Sheet. Space for Rough Work has been provided in the Question Booklet.

SEAL

PART—A : GENERAL ENGLISH

(*Marks* : 100)

Each question carries **2** marks

Directions **(Q. Nos. 1–5) : Read the following passage and answer the questions by selecting the answer choice from the alternatives given. Mark the correct answer in your answer sheet.**

Have you ever failed at something so miserably that the thought of attempting to do it again was the last thing on your mind? If your answer is yes, then you should understand that you are not a robot. Unlike robots, we human beings have feelings, emotions, and dreams. We are all meant to grow despite our circumstances and limitations. Flourishing and trying to make our dreams come true feels great when life goes our way. But what happens when it does not? What happens when you fail despite all your hard work? Do you stay down and accept defeat or do you get up again? If you tend to persevere and keep going, you have what experts call 'grit'.

Falling down or failing is one of the most agonizing, embarrassing, and scary human experiences. But it is also one of the most educational, empowering, and essential parts of living a successful and fulfilling life. Did you know that perseverance (grit) is one of the seven qualities that has been described as the key to personal success and betterment in society? The other six are curiosity, gratitude, optimism, self-control, social intelligence, and zest. Thomas Edison is an example of grit for trying more than 1000 times to invent the light bulb. If you are reading this with the lights on in your room, you will realize the importance of his success. When asked why he kept going despite hundreds of failures, he merely stated that they had not been failures, they were hundreds of attempts towards creating the light bulb. This statement not only revealed his grit but also his optimism for looking at the bright side.

Grit can be learnt to help you become more successful. One of the techniques that helps is mindfulness. Mindfulness is a practice that makes an individual stay at the moment by bringing awareness of his or her experience without judgement. This practice has been used to quieten the noise of fears and doubts. Through this simple practice of mindfulness, individuals have the ability to stop the self-sabotaging downward spiral of hopelessness, despair, and frustration.

What did you do to overcome the negative and self-sabotaging feelings of failure? Reflect on what you did, and try to use those same powerful resources to help you today.

1. The reason, why you are not a robot, is that
   (A) you fail miserably at tasks
   (B) failure and success can affect your emotions
   (C) you work hard
   (D) you have limitations

2. To develop perseverance, one must
   (A) become more aware
   (B) work hard
   (C) be in the moment and be aware without judgement
   (D) seek guidance

3. What do you understand from the following line?

    "Falling down or failing is one of the most agonizing, embarrassing, and scary human experiences."

(A) Falling down makes us angry

(B) Failure can deeply affect our emotions

(C) Stay positive and be optimistic

(D) Self-control is empowering

4. How does mindfulness help?

(A) It creates awareness

(B) It quietens the noise of fears and doubts

(C) It helps one become successful

(D) It helps develop focus

5. What is the message conveyed in the last paragraph of the passage?

(A) Always aim for the best

(B) Live life king size

(C) Through mindfulness we can overcome the negative impact of failure

(D) Social intelligence is crucial for a successful life

Directions **(Q. Nos. 6–10) : For the given idioms, choose the best alternative which expresses the closest meaning of the idiom. Mark the correct answer in your answer sheet.**

6. Keep at bay

(A) keep at a distance

(B) keep at the seashore

(C) keep in mind

(D) keep thinking about something

7. A man of straw

(A) a man with no means

(B) a generous man

(C) a man of character

(D) a man of no substance

8. Pull your socks up

(A) to get ready

(B) to improve

(C) to start

(D) to finish

9. Cap it all

(A) to cover everything

(B) to seize everything

(C) to finish

(D) to occur

10. Spick and span

(A) spotlessly clean

(B) watch the weather

(C) to be wise

(D) deceive somebody

Directions (Q. Nos. 11–15) : In the following questions, substitute each with a single word from among the given alternatives. Mark the correct answer in your answer sheet.

11. A place to bury dead bodies
    (A) Catacomb
    (B) Crypt
    (C) Cemetery
    (D) Sepulcher

12. A person who studies stars, planets and other heavenly bodies
    (A) Astrologer
    (B) Raconteur
    (C) Flounder
    (D) Astronomer

13. A handwriting which cannot be easily read
    (A) Illegible
    (B) Lucid
    (C) Legible
    (D) Edible

14. Place where birds are kept
    (A) Zoo
    (B) Apiary
    (C) Armory
    (D) Aviary

15. One who is unable to read or write
    (A) Genius
    (B) Illiterate
    (C) Palisade
    (D) Pulverize

Directions (Q. Nos. 16–20) : In the following questions, choose a word that is opposite in meaning to the given word from among the given alternatives. Mark the correct answer in your answer sheet.

16. Demise
    (A) Death
    (B) Distance
    (C) Birth
    (D) Short

17. Prohibit
    (A) Allow
    (B) Outlaw
    (C) Failure
    (D) Achievement

18. Timid
    (A) Tired
    (B) Brave
    (C) Gentle
    (D) Snicker

19. Modern
    (A) Updated
    (B) Recent
    (C) Latest
    (D) Ancient

20. Amicable
    (A) Hostile
    (B) Unfriendly
    (C) Haughty
    (D) Unpleasant

Directions (Q. Nos. 21-25) : In the following questions, choose a word that is most similar in meaning to the given word(s) from among the given alternatives. Mark the correct answer in your answer sheet.

21. Massive

    (A) Strong
    (B) Little
    (C) Gaping
    (D) Huge

22. Stumbling block

    (A) Argument
    (B) Frustration
    (C) Hurdle
    (D) Advantage

23. Gratify

    (A) Appreciate
    (B) Indulge
    (C) Frank
    (D) Pacify

24. Comprise

    (A) Prescribe
    (B) Lack
    (C) Include
    (D) Provide

25. Stupid

    (A) Dull
    (B) Rude
    (C) Illiterate
    (D) Obstinate

Directions (Q. Nos. 26-30) : In the following questions, some sentences have errors and some do not. The underlined words are the key words where you can identify whether the sentence is erroneous or not. From the given set of choices, choose the correct alternative for the identified errors. Where there is no error, choose the specified option (D). Mark the correct answer in your answer sheet.

26. The white chairs in the sitting room is made of teak.

    (A) have
    (B) had
    (C) are
    (D) No error

27. He was asking my opinion for the film.

    (A) opinion in
    (B) opinion about
    (C) opinion with
    (D) No error

28. He has the guts to rise from the occasion.

    (A) rise for
    (B) rise to
    (C) rise at
    (D) No error

29. Robert wished he was rich enough to travel the world.

    (A) he is
    (B) he will be
    (C) to be
    (D) No error

30. People <u>are wanting</u> to see the home team win the game.

(A) want

(B) feel

(C) thought

(D) No error

Directions **(Q. Nos. 31–35) :** In the following questions, the sentences have blank spaces followed by four alternative answers. Choose the correct alternative from the given choices. Mark the correct answer in your answer sheet.

31. The teacher said disappointedly, "There is ____ in my class who can solve this problem".

(A) anybody

(B) somebody

(C) everybody

(D) nobody

32. Yesterday, it ____ raining so heavily.

(A) was

(B) as

(C) is

(D) had

33. The Mayor said that it ____ him great pleasure to be there that evening.

(A) gives

(B) gave

(C) was giving

(D) give

34. The house ____ I was born belongs to my grandparents.

(A) in

(B) which

(C) where

(D) when

35. She took it ____ of her bag.

(A) from

(B) out

(C) away

(D) in

Directions **(Q. Nos. 36–40) :** In the following questions, a sentence is given in Direct/ Indirect speech. Out of the four alternatives suggested, choose the one which best expresses the same sentence in Indirect/ Direct speech. Mark the correct answer in your answer sheet.

36. I said to him, "Why are you working so hard?"

(A) I asked him why he was working so hard.

(B) I asked him why was he working so hard.

(C) I asked him why had he been working so hard.

(D) I asked him why he had been working so hard.

37. "You can't bathe in the sea", he said to me, "It's very rough."

(A) He said that I can't bathe in this sea because it's very rough.

(B) He said that you couldn't bathe in the sea if it was very rough.

(C) He said that I couldn't bathe in that sea as it was very rough.

(D) He said that you can't bathe in this sea since it was very rough.

38. She exclaimed with sorrow that it is a miserable plight.

(A) She said with sorrow, "What a pity it is."

(B) She said, "What a mystery it is."

(C) She said, "What a miserable sight it is."

(D) She said, "What a miserable plight it is."

39. He said, "I saw a book here."

(A) He said that he saw a book here.

(B) He said that he saw a book there.

(C) He said that he had seen a book here.

(D) He said that he had seen a book there.

40. The father warned his son that he should beware of him.

(A) The father warned his son, "Beware of him!"

(B) The father warned his son, "Watch that chap!"

(C) The father warned his son, "Be careful about him."

(D) The father warned his son, "Don't fall into the trap."

***Directions* (Q. Nos. 41–45) : In the given questions, there are jumbled up sentence parts. Rearrange these parts, which are labelled (a), (b), (c), (d) and (e) to produce the correct sentence. Choose the correct sequence from the given set of alternatives. Mark the correct answer in your answer sheet.**

41. $\underset{(a)}{\text{children}}$ / $\underset{(b)}{\text{the}}$ / $\underset{(c)}{\text{were}}$ / $\underset{(d)}{\text{the animals}}$ /

$\underset{(e)}{\text{fascinated by}}$

(A) (b), (a), (c), (e), (d)

(B) (c), (b), (a), (e), (d)

(C) (e), (d), (c), (b), (a)

(D) (d), (c), (e), (b), (a)

42. plays an / upbringing / important /
     (a)   (b)   (c)

   personal progress / role in
           (d)   (e)

- (A) (e), (b), (a), (c), (d)
- (B) (b), (d), (a), (c), (e)
- (C) (d), (a), (c), (e), (b)
- (D) (b), (a), (c), (e), (d)

43. an / him popular / made /
     (a)   (b)   (c)

   unexpected / victory
       (d)   (e)

- (A) (a), (e), (c), (b), (d)
- (B) (a), (d), (e), (c), (b)
- (C) (c), (b), (a), (d), (e)
- (D) (d), (c), (b), (a), (e)

44. the coastline / the rugged / they /
     (a)   (b)   (c)

   beauty of / admired
       (d)   (e)

- (A) (c), (e), (b), (d), (a)
- (B) (a), (c), (e), (b), (d)
- (C) (c), (a), (e), (b), (d)
- (D) (d), (c), (b), (a), (e)

45. free time / with / little / left her /
     (a)   (b)   (c)   (d)

   her job
     (e)

- (A) (a), (d), (e), (b), (c)
- (B) (d), (a), (b), (c), (e)
- (C) (e), (d), (b), (c), (a)
- (D) (d), (a), (c), (b), (e)

***Directions** (Q. Nos. 46–50) : In the following cloze passage, there are blank spaces which are numbered. Against each number, choose the most appropriate choice in meaning from the set of given alternatives. Mark the correct answer in your answer sheet.*

Childhood is a time when there are few responsibilities to make life difficult. If a child has good parents, he is fed, looked __46__ and loved, whatever he may do. It is improbable that he will ever again in his life be given so much without having to do anything in return. In addition, life is always __47__ new things to the child. A child finds __48__ in playing in the rain or in the snow. His first visit to the seaside is a marvelous adventure. But a child has his pains; he is not so free to do as he wishes; he is continually being __49__ not to do things or is being __50__. His life is therefore not perfectly happy.

46.
- (A) after
- (B) at
- (C) up
- (D) around

47.
- (A) donating
- (B) displaying
- (C) granting
- (D) presenting

48.
- (A) pain
- (B) progress
- (C) pleasure
- (D) pressure

49.
- (A) ordered
- (B) told
- (C) forbidden
- (D) restricted

50.
- (A) beaten
- (B) penalized
- (C) disturbed
- (D) punished

PART—B : GENERAL KNOWLEDGE AND APTITUDE

(*Marks* : 100)

Each question carries **2** marks

51. Which is the highest civilian award of India?

(A) Vir Chakra

(B) Bharat Bhushan

(C) Padma Shri

(D) Bharat Ratna

52. Who among the following decides whether a particular Bill is a Money Bill or not?

(A) The President

(B) The Speaker of the Lok Sabha

(C) The Chairman of the Rajya Sabha

(D) The Finance Minister

53. The full form of LED is

(A) Light Enhancing Diode

(B) Light Enhancing Device

(C) Light Emitting Diode

(D) Light Emitting Device

54. Which one of the following is the correct chronological order of the places in terms of sunrise time?

(A) Aizawl–Agartala–Imphal–Itanagar

(B) Imphal–Itanagar–Aizawl–Agartala

(C) Itanagar–Aizawl–Agartala–Imphal

(D) Agartala–Imphal–Itanagar–Aizawl

55. Which one of the following is called dry ice?

(A) Liquid carbon dioxide

(B) Solid carbon dioxide

(C) Liquid nitrogen

(D) Solid nitrogen

56. Which one of the following is a water-borne disease?

(A) Jaundice

(B) Tuberculosis

(C) Rabies

(D) Arthritis

57. Who amongst the following is also known as 'The Little Corporal'?

(A) Adolf Hitler

(B) Napoleon Bonaparte

(C) Subhas Chandra Bose

(D) Vladimir Lenin

58. Kalpakkam in Tamil Nadu is famous for

(A) oil refinery

(B) atomic power station

(C) tea production

(D) coffee production

59. Who was the first Governor of Meghalaya?

(A) Prakash Mehrotra

(B) Bhishma Narain Singh

(C) Lallan Prasad Singh

(D) Braj Kumar Nehru

60. What does an airbag, used for the safety of car driver, contain?

(A) Sodium bicarbonate

(B) Sodium azide

(C) Sodium nitrite

(D) Sodium peroxide

61. The term URL used in internet technology stands for

(A) Uniform Remote Locator

(B) Uniform Resource Locator

(C) Unique Remote Locator

(D) Unique Resource Locator

62. Money deposited at a bank that cannot be withdrawn for a preset fixed period of time is known as

(A) current deposit

(B) savings bank deposit

(C) term deposit

(D) no-frills account

63. Where was the first-ever Meghalaya International Film Festival held?

(A) Jowai

(B) Nongpoh

(C) Shillong

(D) Tura

64. Who among the following was a renowned musician in Akbar's court?

(A) Tansen

(B) Birbal

(C) Todarmal

(D) Abul Fazl

65. The term 'Bogey' is associated with

(A) cricket

(B) swimming

(C) golf

(D) boxing

66. Which country is the newest member of NATO?

(A) Belgium

(B) Finland

(C) Slovenia

(D) Sweden

67. The Cash Reserve Ratio is a tool of
    (A) agricultural policy
    (B) tax policy
    (C) monetary policy
    (D) fiscal policy

68. *Freedom in Exile* is a book authored by
    (A) Dalai Lama
    (B) Nelson Mandela
    (C) Mahatma Gandhi
    (D) Subhas Chandra Bose

69. The 'Pradhan Mantri Jan Arogya Yojana' is a government scheme that provides
    (A) LPG connections
    (B) health insurance
    (C) home loans
    (D) education for girls

70. Teak and Sal are the principal trees in the forest known as
    (A) tropical moist evergreen
    (B) dry evergreen
    (C) dry deciduous
    (D) tropical moist deciduous

71. Rakhal Das Banerjee discovered which of the following Indus Valley sites?
    (A) Harappa
    (B) Kalibangan
    (C) Mohenjo-daro
    (D) Lothal

72. A 'Black Hole' is a body in space that does not allow any radiation to come out. This property is due to its
    (A) very high density
    (B) very low density
    (C) very small size
    (D) very large size

73. Chenab Railway Bridge, the world's highest single arch railway bridge, is in
    (A) Jammu and Kashmir
    (B) Himachal Pradesh
    (C) Arunachal Pradesh
    (D) Uttarakhand

74. The United Nations Conference on Environment and Development is called
    (A) Environment Summit
    (B) Water Summit
    (C) Earth Summit
    (D) Air Summit

75. Which of the following words were added to the Preamble of the Indian Constitution by the 42nd Amendment?
    (A) Sovereign and Democratic
    (B) Secular and Democratic
    (C) Democratic and Republic
    (D) Secular and Socialist

76. Which of the following was a Leap Year?

(A) 1998

(B) 2002

(C) 2014

(D) 2004

77. An article is sold for ₹ 2,400 at a profit of 25%. What would have been the actual profit or loss if it had been sold at ₹ 1,800?

(A) 6·25%

(B) 6%

(C) 6·35%

(D) 6·5%

78. Choose the alternative which resembles the mirror image of the given combination :

BRISK

(A) BRISK

(B) BRISK

(C) BRISK

(D) BRISK

Directions (Q. Nos. 79–82) : **From the given responses, find the missing number in the series.**

79. 2, 6, 18, 54, ?

(A) 162

(B) 108

(C) 148

(D) 216

80. 80, 10, 70, 15, 60, ?

(A) 25

(B) 30

(C) 20

(D) 50

81. 14, 28, 20, 40, 32, 64, ?

(A) 56

(B) 52

(C) 96

(D) 128

82. 544, 509, 474, 439, ?

(A) 445

(B) 420

(C) 404

(D) 414

Directions (Q. Nos. 83–85) : **From the given responses, find the missing letters in the series.**

83. AA, BD, CI, DP, ?

(A) FY

(B) EY

(C) ER

(D) FR

84. GNPT, ETNN, CNLT, ?

(A) ANJT

(B) ATJN

(C) ANNT

(D) AJTT

85. PK, GT, XC, OL, ?

(A) FU

(B) EV

(C) HS

(D) GT

86. Nikita is 50 years old and Nazia is 40 years old. How long ago was the ratio of their ages 3 : 2?

(A) 30 years

(B) 40 years

(C) 20 years

(D) 25 years

87. If *A* is the sister of *C* and *C* is the wife of *D*, then how is *D* related to *A*?

(A) Sister-in-Law

(B) Brother

(C) Brother-in-Law

(D) Sister

88. Find the odd number in the series :
8, 27, 64, 100, 125, 216, 343

(A) 100

(B) 8

(C) 27

(D) 343

89. 'Flower' is related to 'Bud', in the same way as 'Fruit' is related to

(A) Seed

(B) Flower

(C) Tree

(D) Stem

90. 'Nun' is related to 'Convent', in the same way as 'Hen' is related to

(A) Cote

(B) Shed

(C) Nest

(D) Cell

***Directions** (Q. Nos. 91 and 92) : Select the word pair which has the same relation as the given word pair below.*

91. Lively : Dull

(A) Flower : Bud

(B) Employed : Jobless

(C) Factory : Labour

(D) Happy : Gay

92. Sound : Muffled

(A) Colour : Faded

(B) Moisture : Humid

(C) Odour : Pungent

(D) Despair : Anger

93. 1. Protect   2. Pressure
    3. Relief   4. Rain
    5. Flood

    (A) 2, 4, 3, 1, 5
    (B) 2, 5, 4, 1, 3
    (C) 2, 4, 5, 1, 3
    (D) 3, 2, 4, 5, 1

94. 1. Probation   2. Interview
    3. Selection   4. Appointment
    5. Advertisement   6. Application

    (A) 5, 6, 3, 2, 4, 1
    (B) 5, 6, 2, 3, 4, 1
    (C) 5, 6, 4, 2, 3, 1
    (D) 6, 5, 4, 2, 3, 1

95. 1. Yarn   2. Plant
    3. Saree   4. Cotton
    5. Cloth

    (A) 2, 4, 5, 1, 3
    (B) 2, 4, 3, 5, 1
    (C) 2, 4, 5, 3, 1
    (D) 2, 4, 1, 5, 3

96. 1. Wall   2. Clay
    3. House   4. Room
    5. Bricks

    (A) 2, 5, 1, 4, 3
    (B) 5, 2, 1, 4, 3
    (C) 2, 5, 4, 1, 3
    (D) 1, 2, 3, 4, 5

97. Cup : Lip :: Bird : ?
    (A) Bush
    (B) Grass
    (C) Beak
    (D) Forest

98. Flow : River :: Stagnant : ?
    (A) Rain   (B) Stream
    (C) Canal   (D) Pool

99. Paw : Cat :: Hoof : ?
    (A) Lamb
    (B) Horse
    (C) Lion
    (D) Elephant

100. Ornithology : Study of Birds
                :: Entomology : ?
    (A) Study of Fish
    (B) Study of Reptiles
    (C) Study of Insects
    (D) Study of Frogs

PART—C : ARITHMETIC

(*Marks* : 100)

Each question carries **2** marks

101. If the radius of a circle is doubled, then its area becomes

(A) 2 times

(B) 4 times

(C) 6 times

(D) 8 times

102. Given that HCF (2520, 6600) = 40 and LCM (2520, 6600) = 252k, then the value of k is

(A) 1650

(B) 1600

(C) 165

(D) 1625

103. If TP and TQ are the two tangents to a circle with centre O so that $\angle POQ = 110°$, then $\angle PTQ$ is equal to

(A) 60°

(B) 70°

(C) 80°

(D) 90°

104. If one of the zeroes of cubic polynomial $x^3 + ax^2 + x + 1$ is -1, then the product of other two zeroes is

(A) -1

(B) 0

(C) 1

(D) None of the above

105. The degree of the polynomial $x^4 - \sqrt{2}x^2 + 2$ is

(A) 0

(B) 2

(C) 4

(D) Degree cannot be defined

106. If r is the radius of a soap bubble, then the surface area of the bubble is given by

(A) $4\pi r^2$

(B) $3\pi r^2$

(C) $2\pi r^2$

(D) πr^2

107. A card is drawn from the set of 52 cards. Find the probability of getting a queen card.

(A) $\dfrac{1}{52}$

(B) $\dfrac{1}{13}$

(C) $\dfrac{1}{4}$

(D) None of the above

108. If the mean of a, $a + 3$, $a + 6$, $a + 9$ and $a + 12$ is 10, then a is equal to

(A) 1

(B) 2

(C) 3

(D) 4

109. A quadratic polynomial, the sum and product of whose zeroes are respectively −3 and 2, is

(A) $x^2 - 3x + 2$

(B) $x^2 - 3x - 2$

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

(D) None of the above

110. The lines $9x + 3y + 12 = 0$ and $18x + 6y + 24 = 0$ are

(A) coincident lines

(B) parallel lines

(C) intersecting lines

(D) None of the above

111. The quadratic equation $2x^2 - 4x + 3 = 0$ has

(A) real and equal roots

(B) real and unequal roots

(C) imaginary roots

(D) None of the above

112. The values of k for which the quadratic equation $2x^2 + kx + 2 = 0$ has equal roots are

(A) ±4

(B) ±5

(C) ±6

(D) ±8

113. The number of two-digit numbers which are divisible by 3 is

(A) 20

(B) 30

(C) 40

(D) 50

114. In a flower bed, there are 23 rose plants in the first row, 21 in the second, 19 in the third, and so on. There are 5 rose plants in the last row. Then, the number of rows in the flower bed is

(A) 5

(B) 10

(C) 15

(D) 20

115. The common difference of an AP in which $a_{18} - a_{14} = 32$ is

(A) 8

(B) −8

(C) 4

(D) −4

116. Which of the following **cannot** form a right triangle?

(A) 9 cm, 15 cm, 12 cm

(B) 2 cm, 1 cm, √5 cm

(C) 400 mm, 300 mm, 500 mm

(D) 9 cm, 5 cm, 7 cm

117. In a single throw of two dice, the probability of getting a total of 8 is

(A) $\dfrac{5}{36}$

(B) $\dfrac{1}{36}$

(C) $\dfrac{7}{36}$

(D) None of the above

118. If α and β are the roots of quadratic equation $x^2 + 5x + a = 0$ and $2\alpha + 5\beta = -1$, then a is equal to

(A) 3

(B) 5

(C) −24

(D) −20

119. The distance of the point $P(4, 3)$ from the origin is

(A) 4 units

(B) 3 units

(C) 5 units

(D) None of the above

120. The volume and surface area of a sphere are numerically equal, then the radius of the sphere is

(A) 0 unit

(B) 1 unit

(C) 2 units

(D) 3 units

121. The value of k for which x, $2x + k$ and $3x + 6$ are any three consecutive terms of AP is

(A) 3

(B) 4

(C) 5

(D) 6

122. The point on axis which is equidistant from points $(-1, 0)$ and $(5, 0)$ is

(A) (0, 2)

(B) (2, 0)

(C) (3, 0)

(D) (0, 3)

123. A number is selected at random from the numbers 1 to 30. The probability that it is a prime number is

(A) 2/3

(B) 1/6

(C) 1/3

(D) 11/30

124. If the nth term of an AP is $2n + 1$, then the sum of first n terms of the AP is

(A) $n(n - 2)$

(B) $n(n + 2)$

(C) $n(n + 1)$

(D) $n(n - 1)$

125. The perimeter of a triangle with vertices (0, 4), (0, 0) and (3, 0) is

(A) 9

(B) 5

(C) 10

(D) 12

126. If the perimeter of a circle is equal to the perimeter of a square, then the ratio of their areas is

(A) 22 : 7

(B) 14 : 11

(C) 7 : 22

(D) 11 : 14

127. If 11 times the 11th term of an AP is equal to 7 times its 7th term, then its 18th term will be

(A) 7

(B) 11

(C) 18

(D) 0

128. The total number of outcomes, if 2 dice and a coin are tossed simultaneously, is

(A) 36

(B) 72

(C) 24

(D) 216

129. Which of the following can be the probability of an event?

(A) 3/2

(B) 8/9

(C) 9/8

(D) 4/3

130. If $\tan A = \cot(30° + A)$, then A is equal to

(A) 45°

(B) 60°

(C) 30°

(D) 135°

131. If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then the value of k is

(A) 10

(B) −10

(C) 5

(D) −5

132. The area of the circle that can be inscribed in a square of side 10 cm is

(A) 100π cm^2

(B) 30π cm^2

(C) 25π cm^2

(D) 200π cm^2

133. The slant height of the frustum of a cone having radii of two ends as 5 cm and 2 cm respectively and height 4 cm is

(A) $\sqrt{26}$ cm

(B) 5 cm

(C) $\sqrt{65}$ cm

(D) 25 cm

134. The coordinates of the diameter of a circle are (2, –5) and (2, 9). Then the coordinate of the centre is

(A) (0, 2)

(B) (2, 3)

(C) (9, 4)

(D) (2, 2)

135. For what value of k, the pair of linear equations $2x - y - 3 = 0$ and $2kx - 7y - 1 = 0$ has a unique solution?

(A) $k = 7$

(B) $k = 1$

(C) $k \neq 7$

(D) $k \neq 1$

136. A die is thrown. What is the probability of getting a perfect square number?

(A) $\dfrac{1}{6}$

(B) $\dfrac{1}{3}$

(C) $\dfrac{1}{2}$

(D) $\dfrac{2}{3}$

137. The class mark of the class 10–20 is

(A) 5

(B) 10

(C) 15

(D) 20

138. If $\sin x = \cos x$, then x is equal to

(A) 30°

(B) 45°

(C) 60°

(D) 90°

139. The area of a triangle with vertices $A(3, 0)$, $B(7, 0)$ and $C(8, 4)$ is

(A) 14 sq. units

(B) 28 sq. units

(C) 8 sq. units

(D) 6 sq. units

140. If $P(a/2, 4)$ is the mid-point of the line segment joining the points $A(-6, 5)$ and $B(-2, 3)$, then a is equal to

(A) –8

(B) 3

(C) –4

(D) 4

141. The value of

$$\sin 15° \cos 75° + \cos 15° \sin 75°$$

is

(A) 0

(B) 1

(C) –1

(D) None of the above

142. The quadratic polynomial having zeroes as 1 and –2 is

(A) $x^2 - x + 2$

(B) $x^2 - x - 2$

(C) $x^2 + x - 2$

(D) $x^2 + x + 2$

143. If p and q are two prime numbers, then the HCF (p, q) is

(A) p

(B) q

(C) pq

(D) 1

144. The point P which divides the line segment joining the points $A(2, -5)$ and $B(5, -2)$ in the ratio $2 : 3$ lies in the

(A) 1st quadrant

(B) 2nd quadrant

(C) 3rd quadrant

(D) 4th quadrant

145. A pole 6 m high casts a shadow $2\sqrt{3}$ m long on ground, then the sun's elevation is

(A) 30°

(B) 45°

(C) 60°

(D) 90°

146. Which number among the following is irrational?

(A) 22/7

(B) π

(C) 0·33333...

(D) 6·212121...

147. The LCM of smallest two-digit number and the smallest composite number is

(A) 12

(B) 4

(C) 20

(D) 44

148. Which term of the AP 3, 8, 13,... is 78?

(A) 15

(B) 16

(C) 17

(D) 18

149. For what value of x are the points $A(-3, 12)$, $B(7, 6)$ and $C(x, 9)$ collinear?

(A) 2

(B) –2

(C) 1/2

(D) –3

150. The value of

$$\tan 5° \tan 25° \tan 30° \tan 65° \tan 85°$$

is

(A) 1

(B) 1/2

(C) $\sqrt{3}$

(D) $1/\sqrt{3}$